

**INCLUSION OF STUDENTS WITH HEARING IMPAIRMENT IN
UNIVERSITIES IN DODOMA CITY, TANZANIA**

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20/X/GMSN/13094/WKD

**A DISSERTATION SUBMITTED TO THE DIRECTORATE OF
RESEARCH AND GRADUATE TRAINING IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR
THE AWARD OF A MASTER OF SPECIAL
NEEDS EDUCATION DEGREE OF
KYAMBOGO UNIVERSITY**

NOVEMBER, 2023

DECLARATION

I, Kaingo Richard Maarifa, declare that this dissertation is my original work, and that it has never been submitted to any institution of learning for any formal award.

Signature..... Date

APPROVAL

We, the undersigned supervisors, do hereby confirm that this study was done by the candidate under our supervision.

Approved by:

Signed.....Date.....

Dr. Eron Lawrence (**PRINCIPAL SUPERVISOR**)

Signed.....Date.....

Dr. Emong Paul (**SUPERVISOR**)

DEDICATION

I dedicate this dissertation to the late my father Mwl. Ernest Pius Kaguwa Maarifa for his good wishes for my career and life prosperity. May he rest in eternal Peace.

ACKNOWLEDGMENTS

This dissertation has come to completion, thanks to the enormous support that I received from God and various people whom I now heartily acknowledge: First of all, I thank God the Almighty for the precious gift of life, knowledge and guidance throughout the course of this dissertation: may His mighty name forever and always be praised!

My profound gratitude goes to my supervisors, Dr. Eron Lawrence and Dr. Emong Paul, for the dedicated and insightful supervision, support, guidance and mentorship throughout the course of this research. My debt to you both is beyond measure!

In a special way, I heartily acknowledge and honor the unrivalled love and support that I received from my beloved parents: firstly, to my beloved father, Mwalimu Ernest Pius Kaguwa Maarifa (RIP), whose responsible parenthood, informed guidance and wise-counsel spurred my intellectual curiosity and passion for special-needs education, from which I hope to make an enormous contribution to society as a professional. Secondly, to my loving mother, Suzana Yonas, for the envious spirit of motherhood—may you live longest to reap the rewards of your labour and investment in me!

Relatedly, I would also like to express deepest appreciation to my own family: my beloved wife, Magreth James Richard, who in my absence took a twin family responsibility as father and mother. Also, my lovely children—Beatrice (Pendo) Richard Maarifa and Bright Richard Maarifa. I can never thank you enough for the undefined tolerance you have made ever since I was far from you undertaking this study. Additionally, I heartily express special gratitude to the University of Dodoma for the generous financial support which enhanced me to pursue graduate education in Uganda which has culminated into this study—I am really appreciative!

I, also, would like to recognize the immense support and guidance that I received from the Faculty of Special Needs Education, Kyambogo University: I am particularly grateful to all the academic staff teaching the masters programme for the insightful guidance and mentorship throughout the course of the study.

Lastly, but not least, I thank my graduate colleague, Mr. Bahati Karusha John, for the priceless companionship, encouragement and sheer spirit of brotherhood.

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ABSTRACT

This study explored the inclusion of students with hearing impairment in universities in Tanzania. The study was framed on four objectives, namely: to examine the support services available in universities for enhancing inclusion of students with hearing impairment; to analyze the adaptations made in the teaching and learning for students with hearing impairment to enhance their classroom participation; to determine the lecturers' perceptions in teaching students with hearing impairment in inclusive educational settings and to find out the opinions of students with hearing impairment about their inclusion in the university environments. The study was guided by two theories, the social model of disability and the human right model of disability so as to understand the practice of inclusion of students with hearing impairment in universities. A qualitative research approach and case study research design were applied to obtain information through semi-structured interviews, observation and Focus Group Discussions. The target population was the students with hearing impairment, hearing students, lecturers, leader of Chama cha Viziwi Tanzania (CHAVITA), a member of Tanzania Commission for Universities (TCU), disability support personnel and representative of students with disabilities. The data obtained was analyzed both thematically and descriptively to derive meaning from them as per the objectives of the study. The findings discovered that support services provided in universities included: assistive devices and sign language interpretations were inadequate to meet the learning needs of these students; teaching and learning strategies were hardly adapted to meet the learning needs of students with hearing impairment; lecturers perceived teaching these students as being a burden that demands for extra attention, modifications and time. The students with hearing impairment perceived the learning-environment in all the universities as unfriendly, stressing that since they were not (initially) identified to have special-needs, the learning environment was not designed to suit their learning needs. Generally, the findings revealed that the inclusion of students with hearing impairment in universities was still a challenge due to the stakeholders' lack of awareness on matters related to students with hearing impairment. And lastly, the study makes a number of recommendations: Special needs and inclusive education component should be merged in teacher curriculum at all levels; both lecturers and hearing peers be adequately trained on sign language skills; universities should employ competent sign language interpreters; universities should make screening and identification of students with hearing impairment during registration. Also, universities should include in its structure a department of special needs education and establish resource rooms that should serve as a disability support center.

LIST OF ACRONMYS

AMUCTA	Arch-bishop Mihayo University of Tabora
AUSLAN	Australian Sign Language
CHAVITA	Chama cha Viziwi Tanzania
CART	Computer-Assisted Real-Time captioning
COVID-19	Corona Virus Disease 2019
CRPD	Convention on the Rights of Persons with Disabilities.
DUCE	Dar Es Salaam University College of Education
EFA	Education For All
HESA	Higher Education Statistical Agency
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICT	Information and Communication Technology
IEP	Individualized Education Plan
IT	Information Technology
MUCE	Mkwawa University College of Education
PWDs	Persons with Disabilities
SEN	Special Educational Needs
SEKOMU	Sebastian Kolowa Memorial University
SOPs	Standardized Operations Procedures
SWHI	Students with Hearing Impairment
TCU	Tanzania Commission for Universities
TDD	Telecommunication Devices for the Deaf
UDHR	Universal Declaration of Human Rights
UDOM	University of Dodoma
UDSM	University of Dar Es Salaam
UNICEF	United Nations International Children’s Emergency Fund
VRI	Video Remote Interpreters
WFD	World Federation of the Deaf
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter presents the background to the study, statement of the problem, purpose of the study, research objectives, research questions and scope of the study. It also explains the significance of the study, operational terms and describes the theoretical framework.

1.2 Background to the Study

Globally, 466 million people have hearing impairment of which 34 million (7%) are children (WHO, 2018). Two-thirds of the people with hearing impairment live in low and middle-income nations (WHO, 2018). Nearly 18 million children out of 34 million children with hearing impairment are in Sub-Saharan region (Iselin Ertzgaard et al., 2020), Tanzania inclusive. This implies that sub-Saharan region has over a half of the global population of children with hearing impairment. This figure is projected to rise to 630 million by 2030 and 700 million by 2050 (WHO, 2021). The increase in figures is attributed to changing of life style of many people such as excess use of earphones and long stay in music clubs.

According to Block (2016), a lengthy history of advocacy for change of attitudes—from negative perceptions about disability to positive perceptions—toward people with disabilities has given rise to some disability inclusion in societies. In the early 20th century, getting any special education in developing countries was the main obstacle for children with disabilities: even those with only mild disabilities were enrolled in ordinary schools and hardly provided

with any support services in their learning. In Africa, special schools emerged from 1950 and were owned by churches and parents who volunteered as teachers. The idea of special schools arose from the fact that most children with disabilities in schools required a particularly regulated, rigorous and special teaching environment and infrastructures that accommodate their learning needs. Additionally, there were no teachers with such required special educational knowledge and skills in ordinary schools that existed.

In 1975, a gradual transition of pupils with disabilities from special schools to special classes inside regular schools was observed as a mainstream emergency. Also, there was an observably increased effort to include children having disabilities in general education courses and other general school activities when it was deemed suitable, although it posed a challenge to a majority of the teachers—they found it difficult to decide when to integrate children with impairments into regular school programs, and how to support these learners in special programs. Based on global efforts towards the education of children with disabilities as embedded in the standards in Education For All (1990), the 1994 Salamanca Statement and the 2000 Dakar Framework for Action, inclusive education for all was arrived at.

The idea that all children, irrespective of their differences or impairments, should learn together is the foundation of the concept of inclusion in the educational context. The principle that each learner has unique talents, passions, skills, and learning requirements forms the cornerstone of inclusive education (Possi & Milinga, 2017). Additionally, learners with special educational needs access and obtain individualized accommodations within regular system of education (Regan, 2018).

The CRPD (2006), and more recently the 4th Sustainable Development Goal from the 2030 agenda, are providing a robust legal and policy framework of ensuring access to education for everyone who is barred from attending school because of various circumstances including those with disabilities (UNICEF, 2021). Tanzania, just like other countries, is committed to the principles and standards of inclusive education guaranteed in the international legal and policy framework on inclusive education Salamanca Statement (1994). The statement aimed at providing education to individuals with disabilities and unique special educational needs within inclusive educational settings. Commitment to the Salamanca Statement is a step forward towards the realization of Education For All (EFA).

Particularly for people who are deaf, the World Federation for the deaf estimates that 80% of 72 million of the deaf (globally) are in developing countries inclusively Tanzania, and finding it hard to access education—they are either not educated, or semi- educated (Hashim et al., 2018; Murray, 2013).

UNICEF estimates for 2021 indicate that approximately 40% of the 34 million children with hearing impairment (deafness) globally are out of primary schools and those who proceed to secondary schools (55%) hardly complete the secondary school education (Clark, 2021). This implies that there are very few inclusive primary and secondary schools to accommodate students with hearing impairment, along with overprotection by parents. Similarly, the transition of students who are deaf from secondary schools to universities is low: in the universities, evidence suggests that for all students with disabilities, universities generally lack a conducive inclusive environment (Emong, & Eron, 2016).

Evidence from literature further suggests that students with hard of hearing appear to be the most disadvantaged by the university disability non inclusive environment (Aljedaani et al., 2022). Globally, the number of people with hearing impairment in higher education is rare (Clark, 2021). Anecdotal estimates suggest that for those who join universities and colleges, 18% of them graduate (Johnson et al., 2021), indicating that universities are ill-equipped to welcome and assist students with hearing impairment (Kaba & Ellala, 2019). This, therefore, requires universities to put in place mechanisms and services needed by students with hearing impairment to enhance their inclusion, in line with the principle recommended by General Comment No. 4 of Article 24 of the CRPD (2016).

The same General Comment defines inclusion in education context as a process of systematic reform in education which involves adjustments and modifications to educational content, teaching methodologies, approaches, structures, and strategies to eliminate barriers and give all students of the relevant range of age with an equitable and participatory learning experience and environment that meet their needs and preferences.

Traditionally, according to the background of inclusion in the USA, the country has been practicing special needs education in an inclusion form (Hossain, 2014). Through history, USA had maintained long practice of special education, segregation and exclusion as forms of education for people with disabilities rather than inclusion (Dudley-marling & Burns, 2014). The Individuals with Disabilities Education Act (IDEA) of 2004 which integrates the requirements of the No Child Left Behind (NCLB) Act of 2001, enabled all children with disabilities to have access to a free, suitable education in general classrooms (ibid). Furthermore, the education for learners with disabilities including those

with hearing impairment in USA is promoted by several laws including; Americans with Disabilities Act (ADA) of 1990, Public Law 101-467, Individual with Disabilities Education Act of 1990, and its amendment in 1997. According to Garberoglio et al. (2019), Compared to 11% of hearing persons, national statistics shows that only 5% of deaf people in USA are now enrolled in postsecondary institutions for undergraduate programs. .

Basing on the background of inclusion in India, inclusive education has been a long term aspect promoted by culture, religion and the society in general (Makwana, 2022). Makwana further accounts that, the Equal Opportunities and Rights of Persons with Impairments Act of 1995 addresses that children with disabilities are entitled with a right to free education in a suitable inclusive environment. Ganeshan (2022) points out that, the practice of inclusive education in India is attributed by various initiatives including; the District Education Program (1985), the Persons with Disability Act (1995), and Sarva Shiksha Abhiyan (2000), The Mental Healthcare Act, 1987, revised in 2017 and right to Education Act-2009, revised in 2018, among others. In South Asia, 12.5 million primary school students and 16.5 million students in lower secondary were predicted to be out of school in 2018. It was estimated that children with impairments made up a sizeable portion (*Disability-Inclusive Education Practices in India*, n.d.). However, (Jameel, 2011) stated that, In the field of disability and higher education in India, it is discovered that not much has been done.

In the UK, a successful disability rights movement and development of rights disability policy including; Disability Discrimination Act (1995), Special Educational Needs and Disability Act (2001), Disability Equality Duty Act (2006) and Equality Act (2010) gave rise to inclusive education (Suanne,

2015). It adopted a pessimistic stance against "institutionalization" and "exclusion" in the work place.

Quinn (2013) in Suanne (2015) accounts that, though universities through their prospectus on their websites include students with disabilities successful, it is deeply not real in practice since there is high dropout rates, university transfer and negative feedbacks to students. In the UK, for the academic years 2015–2016, 11.7% of 2.3 million students enrolled in universities had various types of disability (HESA, 2017). 2.33% of 2.3 million students admitted to being deaf and hard-of-hearing.

The government of South Africa decided to follow international trends in inclusion by starting a process to create a more just, cohesive, and equal system for everyone. Doomen (2014) accounts that several policy and legislative frameworks promote inclusive education in South Africa. Article 4(d) of the National Education Policy Act (NEPA) of 1996 states that no person may be denied the chance to pursue education to the best of their abilities. Also, the National Development Plan (NDP) 2030 state that ‘Everyone should be able to participate fully in a free society through inclusive education’. Also, the White Paper on the Rights of Persons with Disabilities (WPRPD) of 2015 promotes inclusive education in South Africa.

Despite this progressive legislative and policy framework Students with disabilities are progressively faced with variety of hindrances in universities including; inaccessible environments, absence of reasonable accommodations, negative attitudes, biased application and admission procedures, and a lack of disability policies and resources that unnecessarily disadvantage disabled students (Bell & Swart, 2018). According to De Cesarei (2014) in (Bell et al., 2016), statistics in South Africa concerning the numbers of students with

hearing impairment, are not readily available because of various definitions of disability, misinterpretation of disability codes on university application forms. According to Emong & Zeyen (2023), the legislative and practical framework in Uganda supports inclusive education for people with disabilities. The framework seeks to achieve inclusive education for students with disabilities in two ways: first, it recognizes and guarantees the right of individuals with disabilities to an education on an equal footing with others (The Universities and Other Tertiary Institutions Act, UOTIA 2001-secs. 7, 24, and 38; PwDA 2020-sec. 6). This is done through the recognition of the National Objective and Directive Principles of State Policy, XVI and XVIII, art. 21.art.30, art. 32 (1). Second, the framework creates an educational infrastructure to change policies, practices, and delivery methods in education such that disabilities in learning are taken into consideration. According to Okech et al. (2021) ,the National Vision 2040 (2000–2040) in Uganda places inclusion at the center of its reform agenda for disability development. The National Housing and Population Census of Uganda (2014) reported that people with hearing disabilities in Uganda represented 9.2% out of 4.5 million people living with disabilities from five years of age and above.

In Tanzania, a sizeable portion of children and teens are in danger of dropping out of school and being excepted from the educational system due to their vulnerability. The government of Tanzania decided to create the National Strategy for Inclusive Education (2009–17). By adopting an inclusive approach to policy-making and service delivery planning, the Strategy sought to improve educational services for children with special needs, including the use of sign language and Braille. This ensured that teaching and learning are accessible to all (URT, 2017). The government also adopted a set of aims and indicators of

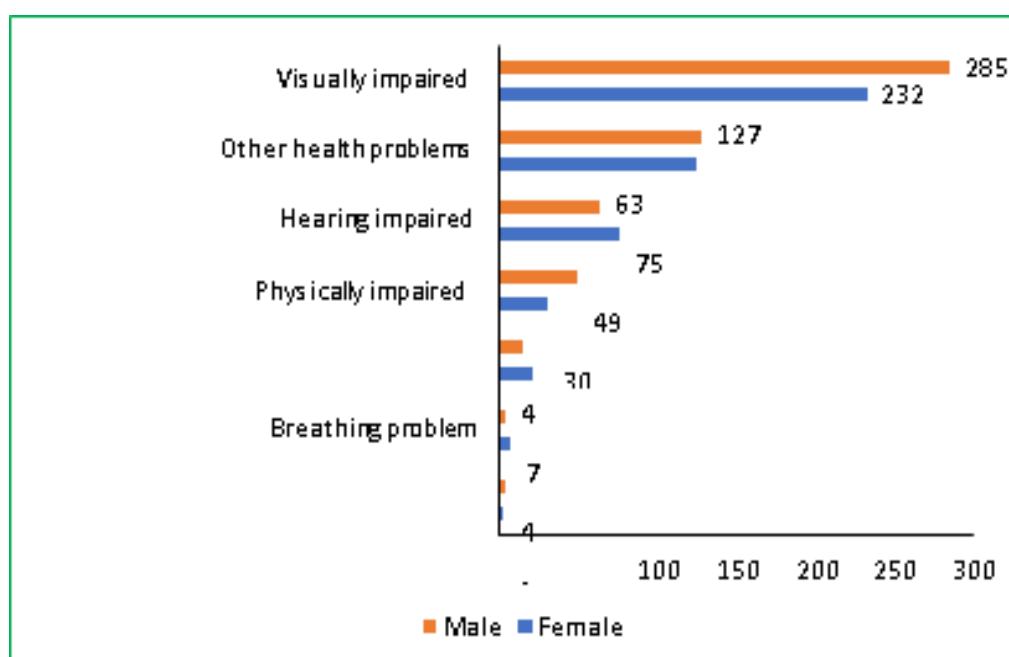
positive progress in developing a more equitable and inclusive education system through its Education Sector Development Plan 2016/17 - 2020/21 and National Strategy for Inclusive Education for the years 2018- 2021 (URT, 2017).

Additionally, more initiatives have been made to improve inclusive education in all levels of education. Among others, these include; Higher Education Policy (1999), Education and Training Policy (ETP) of 2014, Child Development Policy (1996), Higher Education Development Programme (HEDP) 2010-2015, Complementary Basic Education in Tanzania (COBET) and Science, Technology, Engineering, and Mathematics (STEM) (URT, 2017).

According to Possi & Milinga (2017), there are number of factors hindering attainment of inclusive education in all levels of education in Tanzania. They include; inadequate infrastructure, stigmatization, out-of-date policies, bullying, a lack of in-service training, segregation, and a lack of teaching and learning resources, inclusive education is currently not performing effectively in Tanzania. The increasing numbers of persons with disabilities, including students having hearing impairment, are reportedly attending secondary and university education. The numbers of these students attending universities are shown in figure 1 below;

Figure 1.1: Statistics for enrollment of students with various disabilities in

universities in Tanzania in the academic year 2021/2022



Source of data: Tanzania Commission for Universities (TCU, 2022).

By the 2021/2022 academic year, the enrollment of learners with hearing impairment in higher learning institutions, including universities, had reached 138 of which 63 are male, and 75 are female (Possi & Milinga, 2017).

The efforts towards accessibility to university education by students with disabilities, including those having hearing impairment, are strongly encouraged by the Education and Training Act of 1998 (United Republic of Tanzania, 1998). Following the productive inclusion sensitization for students with disabilities in universities in Tanzania, and the initiation of the government policies on inclusive education, various universities and university colleges were established, namely: Sebastian Kolowa Memorial University (SEKOMU), Arch-bishop Mihayo University College of Tabora (AMUCTA), the University of Dar Es Salaam (UDSM), the University of Dodoma (UDOM), Dar Es Salaam University College of Education (DUCE) and Mkwawa

University College of Education (MUCE) which have invested in the inclusion of students with disabilities, including students with hearing impairment, by opening the enrollment opportunity to them. According to TCU (2022), Tanzania has thirty (30) universities where twelve (12) are public, and eighteen (18) are privately-owned. Among the 30 universities, three universities are located in Dodoma city.

There are still some challenges facing inclusion practices of students with hearing impairment in universities worldwide. These challenges include; high dropout rate, information inaccessibility, unfriendly learning environment and low enrollment rate. Tanzania is not excluded from these challenges. The inclusion practice of students with hearing impairment in universities in Tanzania faces a lot of challenges. Negative perceptions among lecturers and peers, language and communication barriers, inadequate adapted teaching and learning materials, unmodified curriculum, inadequate provision of support services and poor implementation of available policies and strategies on inclusive education are among the challenges. From these challenges, this study was therefore inevitable to be conducted in order to explore the inclusion of students with hearing impairment in universities in Tanzania.

1.3 Statement of the problem

Tanzania is committed to abide by the principles and standards of inclusive education in all levels of education as espoused by the international policy and legal frameworks in education it has signed or/ and ratified. Therefore, as Mondal (2021) asserts, Tanzania should be enabling inclusion of all learners to their full individual participation in education. Although children having special needs are enrolled in over a half of Tanzanian primary and secondary schools,

the ability of teachers to facilitate instructions in inclusive settings is low hence, the transition of these children from one level to another level is still low (URT, 2017). There should be efforts towards the eradication of all forms of discrimination against children with disabilities in education and promotion of individual independence.

In Tanzania, the background to the efforts to implement inclusion in education is within the National Strategy on Inclusive education (2021-2026), arising from the Education and Training Policy (2014). However, despite these policy efforts, the inclusion of Students with hearing impairment in Tanzanian universities still remains a challenge that results into increase in dropout rates, denied participation and segregation of these students (Kisanga, 2017; Kisanga, 2019). Although there are existing studies on the phenomenon, little is reported on how these challenges have been solved in Tanzanian universities. The current study was, thus, designed to critically explore support services, perceptions of education stakeholders and delivery strategies on how they influence the inclusion of students with hearing impairment in Tanzanian universities.

1.4 Purpose of the study

To explore the inclusion of students with hearing impairment in universities in Dodoma City, Tanzania.

1.5 Objectives

1. To examine the support services available in universities for enhancing the inclusion of students with hearing impairment.
2. To analyze the adaptations in teaching and learning strategies to students with hearing impairment to enhance their classroom participation.
3. To determine lecturers' perceptions towards teaching students with hearing

impairment in inclusive education settings.

4. To find out the opinions of students with hearing impairment about their inclusion in the university environments.

1.6 Research questions

1. Which support services are available in universities for enhancing the inclusion of students with hearing impairment?
2. What are the adaptations in teaching and learning strategies to students with hearing impairment to enhance their classroom participation?
3. What are the lecturers' perceptions towards teaching students with hearing impairment in inclusive education settings?
4. What are the opinions of students with hearing impairments on their inclusion in university environments?

1.7 Scope of the study

1.7.1 Content scope

The study was conducted basing on exploring on the educational inclusion of students with hearing impairment in universities, in particular, the support services, adaptation in teaching and learning, and perceptions of both lecturers and students with hearing impairments on inclusion in universities.

1.7.2 Geographical Scope

This study was conducted in Dodoma city, Tanzania, and mainly focused on instructors/lecturers, students with hearing impairment (deaf and hard of hearing), hearing students, leader of Chama cha Viziwi Tanzania (CHAVITA) and a member of the Tanzania Commission for Universities.

1.7.3 Time Scope

This study was conducted within a time-period of one year from March 2022 to March 2023.

1.8 Significance of the study.

The findings of this study are significant because:

- i. The study findings may assist both policy developers and implementers, including teachers, to develop and implement inclusive education policies.
- ii. The findings of the study may increase awareness for students with hearing impairment in universities on their right to education.
- iii. The findings may bring sensitization to the university hearing community to recognize and accept students with hearing impairment and their educational needs within an inclusive educational setting.
- iv. The findings may increase both lobbying and advocacy for and of the people with hearing impairment in the communities.
- v. The findings may be integral to the Tanzania Commission for Universities towards policy measures regarding such vital aspects as modifications of university curriculum, infrastructures and environment to enhance the inclusion of students with hearing impairment.

1.9 Definition of Operational Terms

Inclusion: Refers to a method of intervention that aims to target and meet the individual specific learning needs regardless of differences, through boosting social engagement and lowering exclusion and isolation from education.

Hearing impairment: Implies impairment in hearing ability which occurs when a person has a hearing threshold of above 25 dB where a person perceives little or no sound stimuli. It comprises of deaf and hard of hearing.

deaf: Refers to a person who cannot hear sound stimuli even on amplification. Deaf can benefit mainly from using sign language.

Hard of Hearing: Refers to a person who has residual hearing on sound stimuli and can benefit from amplification of sound and using sign language.

Support Service: Refers to aids in form of material or services that support a person to complete certain activities that would be hampered by his or her disability.

1.10 Theoretical framework

The study was guided by both the Social Model of disability and the Human Rights Model of disability. The models were used in preference to the theories because they align properly with the study hence, they serve the purpose of the theory of guiding the study.

1.10.1 The Social Model of Disability

The Union of the Physically Impaired Against Segregation (UPIAS), which established the social model of disability, had British origins. It claims that "Disability is something imposed on top of our infirmities, by the way, we are needlessly excluded from full participation in society" (Beco, 2022). The social model of disability, however, does not take into account the very real effects of impairment on persons with disabilities, such as chronic pain and a shorter life span.

Basing on the social model of disability, reducing barriers is the main goal so that those with disabilities might enjoy the same opportunities for participation as everyone else. Society must change in order to remove the obstacles to community engagement provided by physical, social, and communication

limitations. The social model views disability as a component of society's diversity, rather than an "error" that must be corrected. The social model of disability is primarily concerned with removing those that are generated by mainstream society—assuming that once these barriers have been removed, people with disabilities will be able to receive the services they require.



According to Beco (2022), figure 1.2 illustrates the social factors that cause the disability in an individual.

The arguments for a social model of disability are based on what Anastasiou and Kauffman (2013) describe as providing a key difference between impairment and disability. They point to the fact that the postmodern perspective of the social model identified impairment as culturally-created and socially-built, while disability is not a result of physical disease, but rather of particular social and economic frameworks. They also argue that people with disabilities are an underrepresented social category, and yet, they argue further, that a person's disability isn't a personal disaster.

1.10.2 Relevance of Social Model of Disability to the Study and its Strength

The study relates to the core tenets of the social model of disability, which holds from a postmodern perspective of the social model that impairment is seen to be both culturally-created and socially-built. This idea connects to the philosophy of inclusion by pointing out the social limitations, such as, unfavorable learning environment and negative attitude of people towards persons with disabilities, which result in social exclusions of learners with hearing impairment in universities. The model highlights the importance of universities to remove these barriers. It also emphasizes universities to provide accessible support services to ensure equal access to education for students with hearing impairment.

Also, the social model of disability reveals the issues which students with disabilities face in universities are caused by social injustice and exclusion, rather than by a personal weakness. Moreover, the model advocates for the promotion of positive attitudes and awareness among faculty, staff, and students to foster a strong inclusion.

1.10.3 Criticisms and Weaknesses of the Social Model of Disability

Oliver (2013) accounts that the social model of disability is, in a sense, criticized for not including impairment, ignoring diversity, and portraying people with disabilities as a monolithic group. In actuality, however, our needs and lives are far more complex due to our race, gender, sexual orientation, and age. However, the social model of disability shows some weaknesses, including, being characterized by its simplicity which is also its fatal flaw. Also, it excluded some types of disabilities, such as those with mental health issues and learning challenges. Moreover, it shows weakness as it ignores the impairment, which many individuals with disabilities view as a significant component of their lives.

1.10.4 The Human Right Model of Disabilities

Based on fundamental human rights concepts, this paradigm aids in our understanding of disability. The framework outlines the actions that governments must do to uphold, advance, and safeguard the rights of individuals with disabilities (Lawson & Beckett, 2020). The UNCRPD is a significant international legal treaty which gave rise to the human rights model of disability and later, but only if required, on the individual's medical characteristics. It places the individual first in all decisions that affect them, and most importantly, it views society as the main "issue" rather than the individual. This viewpoint holds that the "problem" with impairments is that civil society and the government fail to acknowledge the distinctiveness that they stand for. In order to ensure that everyone is treated with respect and has access to the same rights, the state is required to eliminate any obstacles that society has put in place.

According to the Human Right Disability Model, people with disabilities are recognized to have the right to equal social opportunities and participation. Everyone has a responsibility to support, protect, and guarantee that this right is used. People with disabilities are also thought to be capable of standing up for their rights and making decisions that will impact their everyday lives. People with disabilities need a loud and united voice in society if everyone is created equal and has the same rights. This will help to prevent discrimination against them, hence, respecting their desires and rights is necessary.



According to Lawson & Beckett (2020), figure 1.3 illustrates the Right to Equal Opportunities for People with Disabilities.

The United Nations Convention on the Rights of Persons with Disabilities (CRPD), according to Lawson and Beckett (2020), is a significant international agreement that establishes the existence of the human right disability model and declares that: People with disabilities are entitled to the same rights as other members of society, and impairment cannot be used as a defense for limiting or denying people's rights. Being a natural part of the human diversity, disabilities must be accepted and reinforced in all of their manifestations.

1.10.5 Relevancy of Human Rights Model of Disability to the study and its strength

The model is relevant to the study in a way that it encourages society, and for the case of this study, the university societies, to value students with disabilities, including those with hearing impairment. The model calls for universities to provide rights to these students, including the right to education in inclusive settings without considering their disabilities.

According to Degener (2017), in (Retief1 & R, 2018) since it considers both first- and second-generation human rights, including civil and political rights as well as economic, social, and cultural rights, the human right model of disability is regarded as being robust. The approach works well because it gives disability policy a theoretical foundation that stresses the worth of people with impairments as human beings, going beyond simple explanation. The human right model of disability also stands out because it promotes cultural and minority identification and offers valuable advice for raising the quality of life for those with impairments.

1.10.6 Criticisms and Weakness of the Human Right Model of Disability

The human right model of disability is criticized basing on Sano and Broberg (2018) who account that the model lacks the ability to morph like the real object can. That is, because the model was developed outside of the context of development, it is attacked for "globalizing policy making" and using Western power. Also, despite the need for cultural sensitivity in the operationalization, human rights remain ambiguous and insensitive. It is further subjected into criticism since making decisions about priorities is difficult since the most marginalized people must come first. Moreover, the model is criticized for its interventionism.

Sano and Broberg (2018) pointed that the human right model of disability is weak as it promotes inequality and strife among various social groupings, sometimes even leading to the favoring of some groups over others. They also accounted that the model encourages the use of non-sustainable resource, where one group gains control of resources at the detriment of one or more other groups. Moreover, the human right model of weakness proves its weakness

by

encouraging ineffective governance since the acquisition of rights can be utilized to give some parties more power at the expense of the weaker organizations.

1.10.7 Relationship between Social Model of disability and Human Rights model of disability

By placing the major problem in society forces outside of the individual, this viewpoint draws similarities between the social models of disability and the human rights model of disability. The social model of disability is perceived as diverging from the human rights model of disability, although sometimes they are presented as competing models (Lawson & Beckett, 2020b). The relation of two models therefore, provide basis, focus and guidance through which, this study explores the inclusion of students with hearing impairment in universities.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter explored related literature on pertinent issues relevant to the topic of the study, inclusion of students with hearing impairment in universities in Tanzania. The discussion of the literature was based on the study objectives.

2.2 An Overview of the Status of Education of People with Hearing Impairment in Tanzania

The education system of Tanzania follows a structure of 2-7-4-2-3+, which imply two years of pre-primary education, seven year of primary education, four years of ordinary secondary education, two years of advanced secondary education and three to five years of university education, respectively (URT, 2016). However, the Musoma resolution of 1974 through its emphasis on the Universal Primary Education (UPE) provides for primary education as compulsory for every school-age going child for self-reliance. There is also a formal middle college education level after ordinary secondary level.

In Tanzania, children with disabilities do not necessarily have to follow the education system order: they are rather considered in terms of age, degree of disability, and academic improvement to be fitted in a certain level of education especially between pre-primary and primary levels of education (Khairuzzaman, 2016). However, it is customarily for them to follow the order of education system between secondary and university levels of education.

All people with disabilities have the legal right to inclusive education, as stressed in the UNCRPD whose emphasis is that inclusive education is a basic right for every child with disability (Desk Review, 2020). Initially, people with

disabilities in Tanzania were commonly enrolled in special schools especially at primary education levels. After primary education, they preferably joined secondary schools with units for special needs education (Mkongo, 2019). After the emphasis of the government and education stakeholders on shifting from special schools' perspectives to inclusive schools' perspective, most people with various disabilities are currently admitted to study in inclusive education institutions at all levels of the education system of Tanzania. However, still other people with disabilities are being admitted in special schools. The government of Tanzania in collaboration with other education stakeholders, such as, CHAVITA and TCU have been instrumental in ensuring that people with disability, including those with hearing impairment, receive quality education in modified inclusive educational settings. In spite of all these efforts, the needs of learners with disabilities who attend general classes in primary and secondary schools in Tanzania are not always met Grönlund et al., (2010) in Desk Review (2020).

In Tanzania, there are more than 500,000 (1.2%) people who are deaf and hard of hearing out of the total population (NBS, 2012). According to CHAVITA, People with hearing impairment in Tanzania face challenges which affect their education, including high probability of poverty, frequent denied access to social services and social protection, segregation and discrimination. Moreover, they are estimated to have lower education level. Due to these challenges, the performance of students with hearing impairment have been low, although their enrollment is gradually increasing (Nash, 2018). Despite these challenges, people with hearing impairment struggle to acquire education with the support from various legislatures, acts and convention on the right to education of

persons with disabilities.

The Article 24 of the CRPD mandates countries to guarantee the right to education for people with disabilities without discriminating them basing on opportunities (Beco, 2022), Tanzania inclusive. According to the United Republic of Tanzania (2010), the Person with Disability Act of 2010 in Part VII on Health care, education, rehabilitation, and employment in its sections (1) and (2) states that, (1) People with disabilities, regardless of age or gender, are entitled to the same opportunities for education and training in inclusive environments like other citizens. (2) Each child who has a disability is entitled to the same rights when applying to be admitted to government-owned or privately-owned schools. This Act grants children with hearing impairment a right to education.

The United Republic of Tanzania Constitution of 1977 Article 11 (2) as modified to 2005 provides a right to receive education for every person and each citizen shall have freedom for pursuing education in any chosen discipline to the maximum degree (Desk Review, 2020). Also, the National Strategy for Inclusive Education (NSIE, 2009–2017 & 2018–2021) which provides for inclusion of all children with impairments for education. Moreover, the Tanzania National Policy on Disabilities 2002 determine each child's educational needs towards developing an individualized education plan (IEP) with the required adaptations and accommodations.

Also, the Persons with Disability Act No 9, 2010 provides for school which are inclusive as areas where obstacles have been eliminated to allow students with disabilities to participate and learn successfully in the regular system of education. In addition, Article 27(1) of the Persons with Disability Act 2010

provides for PWDs regardless of gender and age to have equal access of rights to education and training in inclusive learning environment. Also, Tanzanian government implemented Universal Primary Education (UPE) in 1977, concerns about equity and access to education have brought much attention to right of education of a child.

According to Amoako (2019), “deaf education” was established late 16th Century in western countries such as France, Germany, Britain and the United States of America. It was introduced to Africa through missionary endeavors and colonization. Together with Kenya and South Africa, Nigeria is among the top nations that provides university opportunities to the deaf with the first university in Africa (Ibadan University) to create a special education department overseeing deaf education (Kiyaga & Moores, 2017). The University of Ghana also accept and admit students who are deaf (Amoako, 2019).

In East Africa, deaf education was through the support from external stakeholders in special needs education, such as the Danish Development Agency (DANIDA) which promoted deaf education in both Kenya and Uganda through the Educational Assessment and Resource Services (EARS) programme. According to Desk Review (2020), identification, assessment and teaching the PWDs in Tanzania was made through the Education Support and Resource Assessment Centers (ESRAC). Among other functions, ESRAC aimed to promote teaching to persons with hearing impairment. Moreover, the education for the deaf in Tanzania was contributed largely by the Finnish who geared special education and spread of sign language through the establishment of primary schools such as Njombe school for the deaf (1994) (Matonya, 2016).

The government of Tanzania had, however, established several primary schools for the deaf such as Tabora (1963), Buguruni (1971), Mwanga (1981), Mugeza (1981), Luhuwiko (1984), and Mtwivila (1993). All these schools contributed to the growth of the deaf education in Tanzania (TSL, 2010). Moreover, units for special needs education for the deaf were initiated at several secondary schools, such as Bwiru boys in Mwanza region. Similarly, some universities have also initiated departments, units, resource rooms and centres for students with disabilities to enhance their inclusion in the universities.

23 Support Services for Students with Hearing Impairment in Universities

Support services are things that assist the lecturers in delivering the lesson to the students with special educational needs, including those with hearing impairment. They also help students with special educational needs to learn. They include: guidance and counseling. Onuigbo et al. (2020) divided these support services into three categories. The first category includes those that can facilitate access to visual communication, such as sign language interpreters, scribes, note-takers, tutors, and assistive technology tools like video remote interpreters (VRI), TDD, video tapes, flashing alert devices, text representation of speech, and sound amplification tools. Second, tools include note-taking services, CART (Computer-Assisted Real-Time Captioning), and open or closed captioning for media displays that make it easier to access the text equivalent of voice. Thirdly, sound amplification-supporting gadgets include audio induction loops, radio microphones, hearing aid-compatible phones, and sound systems.

According to Lersilp (2016) students with physical and visual disabilities in Thailand used assistive technology at advanced level, where those with hearing

problems had moderate of them. Assistive technologies were highly provided to students with visual disabilities in preference to students with hearing impairment. The study was conducted in Thailand, hence, reflected the educational context of Thailand. The current study was, therefore, conducted in Tanzania to reflect the Tanzanian educational context. Setianingsih (2018) argues that the needs of children who are deaf at the tertiary level remain constant, including accessibility to sign language which is their first language. The proper cognitive development of deaf youngsters is anticipated to be aided by the sign language use at the university level. Learning about the connection between concepts and labels helps youngsters develop their language skills and cognitive abilities. The study reflected on the Indonesian Sign Language use by students with hearing impairment in Indonesian universities while the current study reflects the use of Tanzanian Sign Language by the students with hearing impairment in Tanzanian Universities.

There are resources that should support the education of the students with hearing impairment in universities (Faorin-Cruich, 2014). Faorin-Cruich further identified the resources that can be utilized to deliver teaching to students with hearing impairment in universities which include: captioned images, typewriters, and printers. With the help of Communicator, a speech recognition programme, students with hearing impairment may comprehend complicated sentences that can be challenging to sign. Faorin-Cruich argument is limited only to resources for teaching students with hearing impairment while the current trend that was compounded by COVID-19 is E-learning and the use of ICT in learning. Puspawati (2021) reported that the teachers claimed using therealia to assist them to describe difficult ideas to

students with hearing impairment. Findings by Puspawati identified the following ICT devices as IT boards, LCD projectors, E-book, and You Tube videos as relevant to students with hearing impairment. The findings therefore, revealed that, support services, including the assistive devices, were available and used for both teaching and learning processes. However, the study concentrated to teachers as participants, while for the current study's bid to address this gap, it considered lecturers as participants to explore the available support services in universities.

The interpreters are support service providers who act as a voice for students whose speech was difficult to understand by translating teacher speech (Cawthon, 2017). Students with hearing impairment occasionally spoke only by sign, which the interpreters voiced for the teacher and the rest of the class. Therefore, interpreters are markedly essential in providing interpretation as support services to students with hearing impairment. This study however, was carried out six years back, which may signify the poor available sign language and interpretation services low advancement in support service provision. There was, therefore, need for a new study to critically explore the contemporary issues on sign language use and interpretation as support services to enhance students with hearing impairment access instructions in inclusive classrooms, hence, this study.

The Person with Disability Act of 2010 of Tanzania in Part VII sections 3 and 4 states that, (3) every child who has a disability must attend a general public or private school, unless special communication is required. (4) a teacher qualified for that purpose shall provide a child covered by paragraph (3) with support services or other essential learning services relevant to the disability by the

assigned disability support personnel. The act provides the right for a student with disability admitted in education institution to receive support services from specialized disability support personnel. Whereas the act specifically pointed out the provision of support services at schools, the current study was designed to specifically address the provision of support services in universities. Also, the act is of 2010, while the current study was designed to address current issues of 2023 (United Republic of Tanzania, 2010)

Daramola (2022) in Nigeria, found that assistive devices for students with hearing impairment are available and functional to these students at the Federal College of Education. The assistive devices were reported as among the support services available to enhance smooth learning of students with hearing impairment. Daramola however, conducted his study at Nigerian college level context, whereas the current study was conducted for the Tanzanian university level context. According to Rekkedal (2014) for students with hearing residual, assistive listening aids like teacher and student microphones can create a better listening environment, which will increase their level of engagement in the lesson. Microphone are common assistive device used in inclusive classrooms to enhance learning of students with hard of hearing. Rekkedal considered the use of microphone as an assistive device at school level whereas, the current study explores the use of microphone at university level.

Sign language as alternative means of communication with pupils with hearing impairment include providing the patient with crucial information, such as directions for taking medications by writing it down (Newton, 2013). The study based on alternative means of communicating with a patient with hearing impairment other than sign language during health prescriptions, whilst this

study dealt with sign language as a means of communication to students with hearing impairment. (De Meulder, 2021) accounts that, the morals and ideologies of sign language interpretation being a social institution which is also a component of a professional complex with specialized competence. The study, however, sought to provide interpretation support service as a profession rather than a local skill for anybody. Moreover, the previous study was carried out in Oslo Metropolitan University, a foreign context, while the current study was carried out in two universities in Tanzania to offer a significantly local perspective on the phenomenon being investigated.

Baart and Taaka (2017) accounted that access to a range of in-home, residential, and other community support services that include the personal help required to facilitate living and inclusion in the community is a right for people with disabilities. Consequently, students with hearing impairment in universities therefore have to be enabled to access support services including sign language interpreters, and assistive technologies to enhance their inclusion. The study was, however, too general to persons with disabilities. The current study, therefore, addresses specifically persons with hearing impairment. While the CRPD of 2006, in its articles, 4 (g), (h), and (i) promote the advancement and utilization of modern technologies such as ICT aids for mobility, assistive devices and technologies at reasonable costs to support and enhance information accessibilities to the PWDs on support services, as well as enabling professional training, it does not specify the category of PWDs to receive the mentioned support services, and their purpose. The current study, however, sought to investigate the support services for students with hearing impairment within inclusive environment.

Students with hearing impairment in universities are supposed to benefit from the support services provided in Article 9(e) of the CRPD for easy communication and accessibility of information in and out of the class in the process of teaching and learning, and during interaction with peers. Moreover, article 13(2) of the International Covenant on Economic, Social and Cultural Rights (ICESCR) recognizes that higher education shall be made equally accessible to all. The students with hearing impairment, therefore, are given chance to attend university education and receive all the support services for equal education like their hearing peers. However, the CRPD in its Article 13(2) did not clearly spell out the necessary adjustments and modifications for students with hearing impairment to get advantage of higher education. This gap was, however, addressed by the current study by suggesting certain adjustments and modifications to favor both the teaching and learning process of students with hearing impairment in universities.

A study conducted in Kenya by Kigotho (2016) found that lecturers speak very quickly, go over the material quickly, and may be inconsiderate of the requirements of students who struggle to hear the lesson through sign language interpretation. The study, further, pointed out that sign language interpretation was not well delivered to students with hearing impairment since other lecturers ignored the presence of the students with hearing impairment and their interpreter during lecture sessions. Kigotho's study was, however, conducted based on only one public university in Kenya, while the current study opted two public universities in order to get more detailed, valid and reliable information. Mahmood and Shah (2020) revealed the importance of support services, such as, assisting the students for improving their learning and enhanced the students

to participate actively in social matters. Students with hearing impairment in universities, therefore, require the support services including interpretation service to enhance their inclusion and full participation in the academic arena. Mahmood and Shah regarded students with hearing impairment in all higher educational institutions, while the current study was more specific by considering students with hearing impairment in universities where the problem seems much more pronounced due to the fluid nature of a university setting.

Terlektsi et al. (2019) assert that intervention support service that enhances educational outcomes for learners who are deaf in different levels of educational institutions. The outcomes can be determined by considering a broad area of 'accessibility to learning' where differentiation and practice in inclusive manner assure the environment of the child in a structured and modified way to favor inclusion, learning and access to the core curriculum. The study was rather too specific as it includes all learners who are deaf. The current study, however, generally considers learners with hearing impairment in general. Also, Tomlinson et al. (2021) in Thota et al. (2022) add that the extensive and inclusive intervention concentrates on eliminating the hindrances to participation in all spheres of life and on creating supportive settings for children with disabilities. The study devoted to children with disabilities in general, while this study devotes itself in students with hearing impairment specifically. Anderson (2017) and Terlektsi et al. (2019) accounted that assessment accommodation or modifications provide support to students with deafness to access formal testing like examinations without overlooking their linguistic difficulties. They pinpoint the following range of access plans for assessment for learners with deafness; additional time during examination/assessment,

auditory/listening training skills, Individualized Educational Plan (IEP), adapted instructions with adapted curriculum and methodologies, assistive technology, structured sentences according to the grammar of the deaf and sign language interpreters use. The modifications favor the inclusion of students with hearing impairment in universities since they ensure the easiness of their learning. Moreover, Anderson et al. (2017) explains that assessment as a support service for students with hearing impairment may be administered by clinicians in rehabilitative services such as audiologists and by educational specialists such as instructors. However, Terlektsi et al. (2019) regarded assessment only for students who are deaf. This study considered assessment for students with hearing impairment in general.

A study conducted in Islamabad universities by Mahmood and Shah (2020) explain counselling which is among the services which support students in higher educational institutions. According to them, counselling support services enable the students to address their needs, educational development, helps them build self-confidence and self-acceptance against inclusion situations facing them such as; segregation, isolation, labelling, and denial by either their peers, staff, administrators, or education policies or career development hence attain their academic goals. The study employed a quantitative approach, while the current study used qualitative approach to ensure availability of deep and quality information about the inclusion of these students.

2.4 Adaptation to Teaching and Learning Strategies for Students with Hearing Impairment in Universities

As more students who face hearing challenges join university education, there are adaptation that universities have to comply with to enhance the fully classroom participation of these students. The adaptation is premised on the legal framework including the UNCHR, Constriction, and Disability Acts. Various literatures discussed on adaptation of delivery teaching and learning strategies for these students as follows:

Majoko (2018) reports that all students are treated equally by lecturers in terms of learning rate, style, and delivering modality, they just employ the lecture format. Majoko, however, found that most lecturers do this because they are ignorant of inclusive education. In Pakistan Abdul Hameed and Qurrat- ul-Ain (2020) found that few Higher Education Institutions (HEIs) in the Punjab province receive and welcome students with hearing impairment, but even these few HEIs lack the essential technical and financial resources to provide adequate support. Challenges associated to adaptation, including how to differentiate the curriculum and how to use hearing assistive technologies such as Frequency Modulated Systems during lecture delivery for these students during lecture. Hameed and Qurrat- ul-Ain further pointed out the limitations of lecturers in delivering instructions to these students, but did not state the adaptive delivery strategies to teach the students with hearing impairment. The current study addressed the gap by exploring the adaptive teaching and learning strategies for students with hearing impairment.

Ishrat (2021) suggests to motivate all students with hearing impairment to sit on the on-front benches in lecture halls so that they have a direct and unhindered line of view to the lecturer. Also, the study suggests that they should be provided with hearing devices, interpretation services, and written handouts to accompany

them during lecture sessions. The study, by encouraging students with hearing impairment to sit in front of lecture halls, is limited in a way that it does not provide solutions for labeling which faces them. The current study, however, filled the gap by exploring adapted teaching and strategies that fits the requirements of students with hearing impairment.

A study conducted in South Africa by Bell and Swart (2018) revealed that HEIs in South Africa accept and register students with hearing impairment, but they do not provide enough academic support or inclusive curricula including teaching and learning. Moreover, the study findings showed that the practice of some lecturer talking while writing on the board and not using audio equipment are inaccessible methodologies to students with hearing impairment. The study was based on n HEIs while, this study was based on universities.

A study conducted in Australia revealed that the methods used to deliver services in higher education are insufficient for use in community or other educational settings. The prevalent support approaches of Australian Sign Language (AUSLAN), taking notes and interpretation do not adequately meet the complex linguistic and conceptual requirements of higher education (Brett, 2010). For students in Australian higher education institutions with profound hearing problems, live captioning is currently the predominate kind of learning support to the students which enhance their participation in the classroom. The study explored the use of Australian Sign Language during interpretation services, while the current study investigates on the use of Tanzanian Sign Language.

Higher Education Institutions should stay updated with advancements and they must regularly assess their instructional approaches (Firat, 2020). Lecturers

should adapt new pedagogies of content delivering to students with hearing impairment including assistive technologies use, and sign language use. The study was confined to explore adapted teaching and learning strategies in HEIs while this study confined itself in exploring the inclusion of students with hearing impairment in universities.

The study findings conducted by Tshabalala (2013) and Onuigbo et al. (2020) in Nigeria asserted that teaching methods which are effective, teacher trainings and materials are crucial for satisfying the delivery of instructional information needs of students with hearing impairment. The results showed that very high needs were found for resources in an inclusive university classroom for effective delivery of instructions, including interpreters, note takers, overhead projectors, hearing aids, and telecommunication devices for the deaf. The study explored the situation in Nigerian context, while this study explored the situation in Tanzanian context. Furthermore, Onuigbo et al. (2020) accounted that a lecturer should employ a variety of techniques to guarantee that the informational requirements of students with hearing impairment are delivered appropriately within the classes. Lecturers should be considerate of the unique characteristics of each student, get to know their names, and address them by names. Students with hearing impairment should be given front-row seats in lectures. The study employed the descriptive research design while in the current study, the researcher used a case study design to freely explore the inclusion of students with hearing impairment in universities.

Onuigbo et al. (2020) account that during delivery of instructions, the lecturer must be able to capture and hold the entire class's attention especially by; facing the students to enable them read the lips movements easily and using visual aids

like projectors. The lecturer can accomplish this by creating a communicative setting that promotes engagement from students with hearing impairments. The study reflected instruction delivery mode in Nigerian context, while the current study intended to reflect the instruction delivery mode in the Tanzanian context. Aseery (2016) carried out a study in Saudi Arabia and revealed that several lecturers admitted that they lacked the skills and confidence necessary to instruct students who are deaf and hard of hearing in normal classes. Aseery aimed to investigate teacher's perceptions towards including students who are deaf and hard of hearing within general classrooms, while the current study explored the inclusion of these students in universities.

International et al. (2014) showed that majority of Zimbabwean university lecturers lacked adequate training in deaf teaching. This implies that, lecturers in Zimbabwean universities lacked delivery strategies adapted for students with hearing impairment. However, the study did not show why the lecturers lacked adequate trainings in deaf teaching, the reason why the current study interested itself finding out how lecturers can be equipped with adapted teaching strategies for these students in universities. Al Hashimi et al. (2021) conducted in Bahrain suggests the adapted teaching strategies for learners who are deaf and hard of hearing that lecturers should mind the effects of light on their faces that would obstruct lipreading or facial expression by the students with hearing impairment. However, the study gives no way forward for lecturers to implement the suggested adapted teaching strategies. The current study, however, laid out adapted strategies to be used by the lecturers to teach students with hearing impairment.

Almomani et al. (2021) acknowledge that hearing loss can adversely affect

cognitive capacities and communication, causing children to lag behind their peers in development of language. Additionally, students who are deaf and hard of hearing exhibit poor and short-term memory compared to hearing students (Talli et al., 2018). Therefore, according to Al Asim (2018); Wapling (2016), the teacher must repeat the concepts for them and provide educational activities that are match with their learning needs and abilities. Adapted teaching strategies include learning in small groups, reducing the curriculum, and supporting their education with visual, tactile, and various motor experiences. The study was designed to address teachers the best teaching methodologies used to teach students with hearing impairment at schools. However, the current study was designed to address lecturers on the adapted teaching and learning strategies for students with hearing impairment in universities.

According to Tanzania Commission for Universities (2015), students are unable to organize their study because of results release delays, which serves as a deterrent to their diligence and commitment to educational concerns. Therefore, universities should set up procedures for the publication of results as soon as the assessment is finished, preferably no later than one month later. However, the study does not state which assessments mode are adapted to students with hearing impairment. The current study, therefore, the researcher identified the nature of assessment adapted to students with hearing impairment.

2.5 Perceptions of lecturers in teaching students with hearing impairment in inclusive classrooms

Lecturers in universities have different perceptions towards students with hearing impairment. However, their perceptions vary due to their

understanding, knowledge and experience on these students. The following literatures have discussed on different perceptions of lectures:

Stevens et al. (2018) noted that lecturers in America perceive that their inability to teach and attend students with hearing impairment is due to lack awareness and preparedness on receiving students with disabilities. Lecturers are not trained to attend students with hearing impairment in terms of attitude, and teaching methodologies. The study reflects the situation of lecturers to learners with hearing impairment in the American context, whereas in the current study, the situation is reflected in Tanzanian context to make a comparison of the situation between the developed and developing countries.

According to International et al. (2014) and Valle-Flórez et al. (2021), the nature of the disability and educational issues being addressed have a significant impact on attitudes of lecturers toward integration. Professors and lecturers are upbeat about integrating only those students whose degrees of hearing impairment are unlikely to require the teacher to use additional management or teaching skills. They perceive admitting students with severe or profound hearing impairment would necessitate them to incur cost for reasonable accommodation including hiring live assistants like sign language interpreters, assistive technologies and curriculum modifications. Therefore, they opt to enroll students with mild to moderate hearing impairment who can survive with less attention. The study was based perception of lecturers and professors on integration of students with disabilities in general, a meaningful departure from the perception of lecturers on inclusion of students with hearing impairment in the current study.

Kumatongo and Muzata (2021) carried out a study in Zambia and found that

lecturers thought student teachers with hearing difficulties were below-average hence achieved average academic performance. Some lecturers do perceive students with hearing impairment as slow learners who deserves low performance in their academics. This perception of these lecturers may rely on their negative attitudes towards students with hearing impairment or their little experiences with the students. Moreover, some lecturers have similar perception due to lack of competence on handling the students with hearing impairment such as poor sign language skills for communication. The study employed descriptive case study design, while a case study design was used to obtain detailed information from the participants in the current study.

Carlos et al. (2020) carried out research in Brazil and found that the lecturers' perception of themselves as an integral part of the institution and their lack of readiness to welcome the deaf student led to the conclusion that many feelings and emotions, including concerns, fears, and obstacles, emerged. Students who are deaf needed to be welcomed with open arms, and significant efforts needed to be made to guarantee an inclusive education for them. This corresponded to the Convention on the Rights of Persons with Disability (CRPD) of 2006, which provides mandatory obligations to the United Nations treaties concerning human rights to fulfil the unique needs of Persons with Disabilities (PWDs) by ensuring that education is 'available, acceptable, accessible and adaptable. However, the study by Carlos et al. (2020) regarded the perceptions of lecturers to students who are deaf only ignoring those with hard of hearing. Therefore, the current study addressed the gap by exploring the perception of lecturers to students with hearing impairment, both who are deaf and hard of hearing.

A study conducted in Spain by Pérez-Jorge et al. (2021) account that lecturers'

perceptions toward inclusion were favorable and that they expressed a concern for giving a suitable response to the students with hearing impairment. They believed in significant advancements in teacher preparation and expertise in the area of inclusion are necessary for education service delivery. This hence, contributes to successful inclusion of students with hearing impairment. This is in line with Article 13 of the International Covenant on Economic, Social and Cultural Rights (ICESCRs) which provides for the significant correlation of the 4As that a quality education service delivery should base on. Furthermore, the Universal Declaration of Human Rights (UDHR) of 1948 provides for inclusion as a fundamental human right. Pérez-Jorge et al., examined the perception of lecturers in Spain context, while the current study explores the perception of lecturers to students with hearing impairment in Tanzanian context.

A study carried out by Alajlan (2017) in Saudi Arabia found out that lecturers and instructors had negative perception towards inclusion of students with hearing impairment (deaf and hard of hearing). This was due to factors including; the inability to communicate with deaf or hard-of-hearing students and inadequate instructional approaches. The study was carried out in Sudi Arabia, while the current study was carried out in Tanzania. Kasap et al. (2022) points that lecturers found it challenging to instruct students with exceptional needs. Lecturers perceive teaching students with hearing impairment increases their workload as it requires preparation of special notes and more time for classroom preparations. However, because they have had little to no prior experience with people with impairments, lecturers frequently struggle to provide instruction and make educational arrangements (Yalçin & Aslan, 2021). Kasap et al. (2022) talked on students with exceptional needs in general whilst

the current study talked specifically on students with hearing impairment.

Kasap et al. (2022) add that the lecturers were unaware of the demands of the special needs students. However, they made the idea that they receive training on teaching students with special needs. On this opinion, lecturers agree that they are less competent in teaching students with special needs, therefore they need competence-based trainings so as to equip them with strategies for teaching the students with special needs. The study was general to students with special needs, while the current study is specific to students with hearing impairment to address the gap.

According to Molina et al. (2016), some of students remark that lecturers frequently act suspiciously when students introduce themselves and inform them of their impairment, which they view as having a negative attitude. Students expressed their worries though, is the barrier lecturers create when they consciously distance themselves from their students' reported difficulties. Some lecturers, according to these students, tell them they cannot make exceptions and that they should expect to be treated like all other students. Other lecturers reportedly neglect students' requirements entirely (Molina et al., 2016). The study report negligence of teachers to make necessary adjustments and modifications. However, the policies and curriculum do not provide room for teachers to make the adjustments and modifications. The current study, was therefore, designed to explore the how the policies and curriculum are designed to enhance teachers make necessary adjustments and modifications for students with hearing impairment.

The perception of lecturers towards students with hearing impairment is therefore both positive and negative. Lecturers differ in perception due to

various reasons, such as, attitude towards students with hearing impairment, working experience and interactions with the students with hearing impairment.

2.6 Opinions of Students with Hearing Impairment about their Inclusion in Universities

Hearing impairment can occasionally cause difficultness for students to interact in a welcoming classroom environment. For the purpose of improving inclusive education at the level of university far better for students with hearing impairment, it is crucial to learn about their opinions on it.

Forlin (2013) in Ishrat (2021) accounts that, it is acknowledged that inclusive education is a basic human right and the cornerstone of a fair and impartial society. According to Messiou et al. (2016), all students must receive a high-quality educational response under inclusive education, which expanded the procedures that lead to full involvement. However, according to prior research, students who are deaf, teachers, and hearing peers perceive the inclusion of deaf pupils as a novel event, leading to initial bewilderment and unease. Moreover, students with hearing impairment enrolled in regular classes alongside hearing students face a variety of scholastic difficulties during the teaching-learning process and in securing specialized support services. It is, therefore, the intention of this study to address this gap by suggesting appropriate teaching and learning strategies for students with hearing impairment.

A study carried out by Pérez-Jorge et al. (2021) in Spain found that among the main demands of students with hearing disabilities is to feel recognized, included and accepted in their school context. They need to be valued similarly to their hearing peers in their inclusive learning settings. The study addressed the opinions of students with hearing impairment in school context, while in the

current study, the researcher intended to address the opinion of students with hearing impairment in a university context. Ishrat (2021) points out that students with hearing impairment enrolled in regular classes explained that attitudes are crucial to fostering positive social interactions across different teacher and student groups and gaining their support for the necessary educational approach in the area of inclusive education. The study used a quantitative approach with a descriptive design, whereas in this study, the researcher used a qualitative approach with a case study design in order to be free to explore in-depth and quality information from the participants on the inclusion of students with hearing impairment in universities.

Oppong et al. (2018) in Ghana revealed that, there were no interpreters of sign language available in the exam rooms, hence the student who are deaf viewed assessment and evaluation to be difficult. Also, they claimed the absence of note-takers in the lecture rooms to be a barrier to their inclusion. The study considered only students who are deaf, while this study considers both students who are deaf and hard of hearing so as to establish a solution to students from any categories of hearing impairment. Pitman et al., (2022) accounted that for all Australians, higher education is not equally accessible. People with disabilities in particular have faced reduced access, achievement, and post-graduation outcomes rates. The study findings indicate that inclusion of students with disabilities in higher education is still a challenge. The study explored inclusion of students with disabilities in general, but the current study is specific to inclusion of students with hearing impairment so as to explore their in-depth information on their inclusion.

According to Ishrat (2021), students with hearing impairment opine that, the

absence of resource centers made them to lack support services including assistive devices. These lacks cause them to feel not included in their educational settings because they find difficulties to explore the learning environment. However, the study by Ishrat did not include the disability support personnel to find out the challenges towards the establishment of the resource centers. The current study filled the gap by including the disability support personnel as participants to provide detailed information about resource centers and the support services for students with hearing impairment.

A study conducted by Ishrat (2021) revealed that, out of a total of 50 responders, 1 (2%) indicated disagreement, 15 (30%) indicated agreement to some extent, and 34 (68%) indicated agreement as they responded to the problem "the concept clarification is impacted by the sign language interpreter's experience". This shows that majority of students with hearing impairment in universities perceive language barrier due to insufficient interpretation skills of sign language interpreters as a hindrance to inclusion. In most universities including in Tanzania, sign language interpreters are selected among the continuing students with at least sign language fluency to interpret for their deaf peers. Some students with sign language course in their education degrees are recruited as sign language interpreters. This modality produces unexperienced, and less competent sign language interpreters when compared to professional sign language interpreters who have attended sign language interpretation trainings with certification. The study used quantitative approach, while in current study opted for qualitative to explore deep information on the aspect of experience of sign language interpreters.

A study carried out in Zambia by Kumatongo and Muzata (2021) revealed that

students with hearing impairment s had conflicting opinions about their academic performance in inclusive settings. Most of students with hearing impairment believed that they lag behind in their academic performance because of absence of proper sign language interpretation services, assistive technologies for learning. The study explored the academic challenges facing students with hearing impairment in a Zambian context, while the researcher in this study explored the academic challenges facing the students with hearing impairment in a Tanzanian context. A study conducted by Kigotho (2016) in Kenya revealed that, due to poor levels of accessing the interpreting services and a lack of understanding of the requirements of students with hearing impairment among academic staff, students with hearing impairment frequently do not feel belonging to the "university family" in a social inclusive setting. The study however was limited to barriers faced by students with hearing impairment generally, in inclusive learning environment. The current study is, however, wide on inclusion of students with hearing impairment, specifically in universities.

Milano et al. (2016) revealed that students with hearing impairment s all over the country opined to have positive attitudes and improved academic performance. This is possible if they feel comfortable in an inclusive learning setting. The study included participants from all the country, an approach that may limit the efficiency of the data obtained while this study was confined to two universities and the data were exhaustively collected from the participants. Kumatongo and Muzata (2021) students with hearing impairment reported that they did not perform as well as their hearing classmates and expressed unhappiness and less-satisfactions being in inclusive settings due to

communication barrier. Effective communication and positive social contact between students with hearing impairments and their hearing peers are essential for the successful inclusion of students with hearing impairments. The study was, however, conducted in a Zambian context, while the current study was done in Tanzanian context.

A study by Kigotho (2016) carried out in Kenya showed that students with hearing impairment view interpreters to be crucial since they serve as a third party for them to obtain information through interpretation and/or real-time captioning during class sessions, or through notes (note taking or printouts) outside of class. Despite the significance of sign language interpreters, the degree to which they are conversant with the subject matter has not yet been examined. The current study sought to address this gap by finding out the factors affecting the interpretation services and their solution.

2.7 Summary of the Findings from Literature

The review of related literatures led to identification of pertinent gaps from the previous studies, which the current study fully addressed. The gaps provided an opportunity for other researchers to conduct more studies in order to fill them.

These gaps include: Some studies discussed inclusion of learners with hearing impairment at different education levels such as primary, secondary and higher education institutions in general as in (Bell & Swart (2018); Pérez-Jorge et al., (2021); Pitman et al. (2022)). However, the current study focused on inclusion of students with hearing impairment at universities only to address the gap.

Some studies were limited to inclusion of students who are deaf only as in ((Oppong et al., (2018); Terlektsi et al., (2019) Carlos et al., (2020)) while this

study in order to address this gap, focused on the inclusion of students with hearing impairment in general, which includes those who are deaf and hard of hearing. Some studies including (Kasap et al., 2022) discussed inclusion of students with special needs in general while the current study opted to address this gap by discussing inclusion of students with hearing impairment in specific. Also, some studies discussed the inclusion of students with disabilities in general such as in ((International et al., (2014); Valle-Flórez et al., (2021)) whilst, this study attempted to address this gap by focused more specifically to the inclusion of students with hearing impairment. Some studies reviewed were found to use quantitative approach as in Mahmood and Shah (2020) Ishrat (2021). The current study opted to use qualitative approach so as to address this gap. Various studies reviewed were carried out in the context outside Tanzania like in Kigotho (2016); Bell and Swart (2018); Kumatongo and Muzata (2021); Pérez-Jorge et al. (2021)). The current study was conducted in Tanzania to reflect the real situation of inclusion of students with hearing impairment in universities within the country. Some studies followed descriptive case study design as in Onuigbo et al. (2020) and Ishrat (2021). To address this gap, the current study used a case study design. Some studies carried out considered only one university as a case as in Kigotho (2016) while the current study considered two universities as a case in order to address this gap. Moreover, some studies dealt with investigating teachers about inclusion of students with hearing impairment as in Aseery (2016) while the current study dealt with lecturers.

Across all the literatures reviewed, it was found that there was scanty, and in some instances, almost no studies conducted to show how inclusion of students with hearing impairment was practiced in public and private universities in Tanzanian context. Hence, validating the need for the current study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presented on the methodology. It described the research design and approach, study location, population of the study, sample size and sampling techniques. It also discussed the data collection methods and data collection

instruments, data collection procedures, pilot study, data analysis, trustworthiness, ethical considerations and limitation and delimitation of the study.

3.2 Research Approach

A qualitative research approach was used in this study in an attempt to explore the inclusion of students with hearing impairment in universities in Tanzania. Qualitative research approach entails the use of interviews and Focuses Group Discussions (Creswell & Creswell, 2018), which were appropriate in this study. The approach sought to enhance interaction with the participants so as to explore in-depth views and specific information from the participants (Ismail, 2021). The information targeted to be obtained included participants' perceptions, feelings, opinions and experiences about the practices of inclusion of learners with hearing impairments in universities in Tanzania. Qualitative approach therefore, was ideal in this study since it enhanced the researcher to get specific and detailed views and experiences from the participants within their natural environment.

3.3 Research Design

A research design is the use of proven procedures, guidelines, and protocols that give the tools and framework for doing research (Majid, 2018). This study used a case study design to explore the inclusion of students with hearing impairment in universities in Tanzania. Patnaik and Pandey (2019) define a case study as an approach appropriate for investigating phenomena studied in real- world environments usually for qualitative exploration. Therefore, a case study design was suitably preferred to be used in this study since it enhanced the researcher to get deep information from the participants from the real environment about the phenomenon under exploration.

3.4 Study Location

This study was carried out in two selected universities located in Dodoma city in Tanzania. The universities were preferably chosen because they enroll students with hearing impairment. Dodoma city is bordered by the Manyara region in the North, which has no any university, Morogoro region to the East, which has three universities, Iringa region to the south, which has three universities and Singida region to the West which has no any university. The study location was selected in preference to other locations because it has three universities of which two of them practice inclusion of students with hearing impairment.

3.5 Population of the study

Majid (2018) defines the population of the study as the target of the study that aims to treat. The population of the study was drawn from TCU, CHAVITA and the department of Educational Psychology and Curriculum Studies at university X and from the Faculty of Arts and Humanity Education at university Y. The population of the study involved the following: students with hearing impairment (deaf and hard-of-hearing), hearing students, representatives of students with disabilities in the student government, member of Tanzania Commission of Universities (TCU), disability support personnel and lecturers of students with hearing impairment and leader of CHAVITA.

The students were of great importance in the study because they were expected to provide information on how they perceived inclusion practices in universities. Lecturers were of significance during the study because they were responsible for implementing the policies and strategies for inclusive education in universities. The disability support personnel provided the status of the

accessibility of support services to the students with hearing impairment. TCU member was important to provide data on how the commission assures quality of universities and their learning environment. The representative for students with disabilities was selected since he was rich of information regarding students with hearing impairment. CHAVITA leader was a significant participant who advocates students with hearing impairment, hence, provided detailed information about their inclusion in universities.

3.6 Sample size and sampling techniques

Sample size refers to a value of an empirical study aiming to create inference on a population of the sample (Taherdoost, 2018). The sample size, therefore, points out the number of participants (sample) from the population to be involved under investigation to obtain data Creswell (2018). The study considered a sample size of 21 participants. The idea of Creswell (2018) of choosing a limited number of participants from the entire population enabled the researcher to concentrate and gather detailed data from the few selected participants about inclusion of students with hearing impairments within universities.

The study used purposive sampling techniques, snowball sampling technique and simple random sampling techniques. Purposive sampling is a nonrandom sampling strategy where a researcher asks people with desired characteristics to take part in a study. A simple random sample is one that is chosen using a process in which each potential sample of a particular size has an equal chance of being chosen from the population. In snowball sampling, each volunteer research subject is invited to name one or more additional subjects who fit particular criteria and could be interested in taking part in the research project

(Brier & lia dwi jayanti, 2020).

The hearing students were selected by using snowball sampling technique where, each hearing student was asked to bring a fellow hearing student who was a close friend to student (s) with hearing impairment. The obtained students were included in the sample. Snowballing sampling technique was preferred because the researcher didn't know other participants with the same characteristics hence each participant was used to determine others with desired characteristics (Brier & lia dwi jayanti, 2020). Students with hearing impairment were selected by using simple random sampling. In university X, they were allowed to pick piece of papers numbered 1 to 5 and those who picked 1, 3 and 4 were included in the sample. In university Y, students with hearing impairment were allowed to pick one piece of paper per each numbered 1, 2, and 3. Those who picked 1 and 3 were included in the sample. The TCU member was selected also by simple random sampling technique by following the same procedures. A simple random sampling technique was preferably chosen because it provided an equal chance for every member of the population to be selected as a sample of the study (Jamil, 2020). Lecturers, disability support personnel, representative of students with disabilities, and CHAVITA leader were selected and included in the sample through purposive sampling techniques. Purposive sampling technique was used since it enables the researcher to obtain the most appropriate participants whom he/she feels will provide information pertinent to the study's objectives (Creswell and Creswell, 2018).

Table 3.1: Population, Sample Size and Sampling Technique applied

Participants	Population	sample size	Technique
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Students with hearing impairment	University X	8	3	Simple random sampling
	University Y	3	2	
Hearing Students	University X	10	5	Snowballing
	University Y	7	2	
Lecturers	University X	11	3	Purposive sampling
	University Y	9	2	
Disability support personnel	University X	1	1	Purposive sampling
	University Y	-	-	
Representative of students with disabilities	University X	1	1	Purposive sampling
	University Y	-	-	

TCU Member	TCU	1	1	
CHAVITA leader	CHAVITA	1	1	Purposive sampling
TOTAL		52	21	

Source: primary data

3.7 Data collection methods and data collection instruments

Data collection refers to techniques for acquiring the data physically to be analyzed during the study (Thomas et al., 2022). The Data were collected by using the following methods; interview, observation and Focus Group Discussion.

3.7.1 Interview

Interview refers to common tools used in planning, monitoring and evaluation which can be carried out with one individual at a time or with a group of persons (Intrac, 2017). The interview method was used in data collection because it allowed interaction between the researcher and the participants during data collection. Particularly, the study employed a type of interview called a semi-structured interview. The participants were interviewed one by one and face to face, where the conversations were recorded with the consent of the participants. A recorder was used to record audio information and video recorder was used to record information from articulated signs from participants with hearing impairment. The interview session used a time range of between 20 minutes to 30 minutes for one participant.

Specifically, the semi-structured type of interview was used in preference to structured and unstructured interview. The semi-structured interview consists of

a set of prepared questions but also allows supplementary questions from the researcher (Intrac, 2017). A semi-structured interview was preferably used as it allows the researcher to be more flexible to add probing questions or make more clarifications during the interview session (Canals, 2017).

Additionally, it permitted the informants the ability to articulate their opinions in their own words. As a result, it provides the secret information that might be important for the research. Semi-structured interview was used to interview the lecturers, students with hearing impairment and the disability support personnel. A semi-structured interview guide consisting of open-ended questions was used. Moreover, probing questions were also used to supplement more information.

3.7.2 Focus Group Discussions

According to Taherdoost (2021), Focus Group Discussions are used to understand the opinions, activities, and responses of participants to a certain idea. This in-depth field approach gathers a group of people—typically 6–12 individuals per group—to discuss a certain subject area, sometimes with a shared characteristic like sex, age, or level of education. (Taherdoost, 2021). This method incorporated discussion on thoughts, ideas, and reactions to the research themes between the researcher and a group of participants. This method was chosen mostly because it allowed informants to freely communicate with the researcher and among themselves, allowing the researcher to gather a lot of information quickly.

Focus groups were designed for hearing students because this method of data collection allowed hearing students to discuss and express their thoughts, ideas, and experience on the inclusion of students with hearing impairment in universities. The hearing students from both university X and Y were brought together in group of 7 and questions were asked by the researcher. The students

were allowed to discuss and answer the questions one after another. The responses were recorded with the consent of the participants. A Focus Group Discussion guide was used, which consisted of some open-ended questions which were asked to the participants.

3.7.3 Observation

According to Intrac (2017), observation means seeing things including processes, relationships, objects, and events, while recording the information. Observation was preferred to be used because it allowed the researcher to collect data by using all the sense organs which are tasting, touching, smelling, seeing and hearing (Creswell & Creswell, 2018). The study used direct observation in collecting the data. This type of observation involves recording the observed information based on the agreed checklist (Intrac, 2017). Direct observation suited the study in the way that it helped the researcher to collect first-hand data observed directly from the field.

An observation schedule was employed during the ongoing process of collecting data. A pen and notebook were used to record the observed behaviors. The direct observation method was used in lecture sessions and outside the classrooms. The method was specifically used to lecturers, students with hearing impairment and disability support personnel. An observational guide which consisted of areas to be observed was used. The observational guide allowed the researcher to focus on important aspects under observation.

3.8 Pilot study

A pilot study was carried out in one of the Universities in Dodoma City, Tanzania which had similar conditions to the case studies. However, a pilot study is purely conducted to help realign the instruments and then adjust accordingly

in order to be used during the main study. The sample under the pilot study included 3 students with hearing impairment, 4 hearing students, 2 lecturers and 1 disability support personnel to make a total number of 10 participants. After the data were collected, feedback on the efficiency of the research instruments was sought from the participants to make modifications and improvements to the instruments.

3.9 Data collection procedures

The research proposal was approved by the supervisors and the Department of Special Needs Studies (SNS) at Kyambogo University before beginning the actual investigation in the suggested area. The introductory letter from Kyambogo university was submitted to the office of the Dodoma Regional Director of Education for seeking permission for data collection. A letter of permission was written to allow the researcher to meet the participants and collect data from them. The researcher also submitted an introductory letter from Kyambogo University to the two universities for seeking permission to collect data. Letters were written from both universities in response to the introductory letter to allow the researcher to meet and interact with the participants for collecting the data from them.

Interviews were then scheduled and carried out with each participant following their consent. Students with hearing impairment from university Y were the first to be interviewed. The interview was carried out from 10: 20 AM to 12 noon in one of the department's offices where it was prepared for the purpose. The participants were interviewed individually. At university X, students with hearing impairment were individually interviewed from 2PM to 5PM in one of the offices in the college of education library building. In both universities, the participants were interviewed by using Tanzanian Sign Language where both

the interviewer and interviewees conversed by using sign language without an interpreter. Video recordings of the interview's discourse in sign language were also made.

Lecturers in university Y were interviewed individually in their own offices where the researcher visited them. In university X, lectures were individually interviewed 1st and 2nd January 2023 in their offices where the researcher visited them. In both universities X and Y, Kiswahili language was used to interview the lecturers because they felt free and comfortable to respond by using the language. Additionally, the researcher took notes during the conversation. The researcher made an appointment for interview with the CHAVITA leader and planned for the interview session. CHAVITA leader was then interviewed from 5PM to 5:30PM at a convenient public open space where she suggested since she had another meeting there nearby.

The CHAVITA leader came with her interpreter who clarified some concepts although both participant and researcher used sign language during the interview. The interview session was video recorded with the consent of the participant. TCU member was interviewed after writing a letter to request for an appointment for the interview session. However, the response for the appointment delayed but the researcher kept on calling and visiting the TCU office to find out the response. However, the interview was not successful as planned according to the interview guide. The representative of students with disabilities and the disability support personnel were visited into their offices and interviewed. The interview to every participant took 20 minutes and was carried on between 9AM and 10 AM. Kiswahili language was also used during the interview session.

For the hearing peers, Focus Groups Discussions (FGDs) were conducted on 11th December 2022. FGDs involved a total of 7 participants from both university X and Y who met together with the researcher at a convenient center. Participants contributed in the discussion one after another. In both universities X and Y, the participants gave their consent for the conversation to be audio recorded. Kiswahili language was used during FGDs since it was familiar to them that they felt free and comfortable in expressing their ideas.

Observation method was used to collect data by through direct observation. The researcher entered the lecture rooms during lecture session and sat at convenient place suitable to make observation. Observation method was also used to collect data outside the lecture rooms during various activities such as interaction of students with hearing impairment and their peers. The data observed was recorded by using a pen and notebook. The observation guide was used to guide the data collection process.

3.10 Data Analysis

The process of gathering, modeling, and evaluating data to derive knowledge for decision-making (Calzon, 2022). Descriptive data analysis and thematic data analysis methods were applied basing on the objectives of the study. Descriptive analysis means to describe and summarize data (Sarmiento & Costa, 2017). Thematic analysis is a strong and non-rigid way of analyzing qualitative data expected to be used in different paradigms (Kiger & Varpio, 2020). Thematic analysis was used to explain the themes and subthemes of the study. Thematically, data was analyzed by looking for important themes in the participants' reflections and thoughts.

The main themes were delivered from the objectives of the study while the subthemes were delivered from common recurring responses from the

participants. Descriptive analysis was used to provide deep descriptions of the participants and objectives during data analysis. The following procedures were used during analyzation of semi-structured interview data: The data was first translated from Swahili to English, and secondly, the data were coded. Thirdly, data relating to the objectives were identified. Fourth, sub themes were created from the data, which were then summarized to help with data interpretation.

The data gathered through Focus Group Discussion was analyzed as follows; firstly, the data was translated from Swahili to English. Secondly, the data obtained was then coded. Thirdly, various themes that arose under each major theme were noted. Then the data was repeatedly organized and reorganized into themes and sub themes. The significance of each theme and sub themes, as held by participants, was consequently summarized and evaluated in relation to the study's goals. Data gathered through observation method was analyzed following these procedures; data were translated from Swahili to English and coding. Then, the themes with parallels and differences were determined. After sorting and rearranging the data into themes, the final stage was to summarize and analyze the themes.

3.11 Ethical Considerations

Ethical consideration involves providing informed consent to the participants of the study by assuring them with the privilege to deliberately agree or refuse to participate in the study (Ubi et al., 2020). The researcher obtained an introductory letter from Kyambogo University to introduce him to the field. Confidentiality was assured to the participants on the data they provided and their names were not taken for the purpose of protecting their privacy instead; coding was used to refer to the participants. Appropriate names and terminologies related to persons with disabilities were used to participants with

disabilities to avoid embarrassment and labeling.

In an effort to uphold these ethics, the participants were made aware of the study's objectives, duration, and intended use, as well as their right to withdraw participation if they so desired. In order to avoid infringing on their rights in any way, informed consent from the participants was obtained by a written message asking them to supply the information required for the study, including recording their views. The researcher, moreover, acknowledged any other source of information used to contribute to the information of this study.

3.12 Trustworthiness

Trustworthiness implies set of procedures followed to make the findings of the study valid (Creswell & Creswell, 2018). The following steps were observed to ensure the credibility, reliability, validity, and authenticity of the research findings: The research tools were created, evaluated, and discussed with my research supervisors to ensure that they are well framed according to the objectives. The pilot study was carried out to pretest the instruments used for collecting data. This ensured the linguistics and content of the tools were well designed in order to ensure the validity of the information.

Triangulation was used, where data was gathered from many participant groups using a combination of Focus Group Discussions, semi-structured interviews and observation. The real participant narratives have been included in the data analysis as confirmation of what actually happened in the field.

Member checking was used to assess the accuracy of the findings. This was done through returning the final report or particular descriptions or themes to participants and asked them whether they believed they were correct or not correct. To communicate the findings, the researcher employed a rich thick,

descriptive technique. By putting the readers in the scene, this description added a shared-experiences component to the conversation. The setting was then described in great detail by the researchers. This increased the results' richness and realism, which increased the validity of the findings.

The researcher spent a lot of time in the field during data collection. By doing so, the researcher gained a thorough understanding of the phenomenon being studied and was better able to describe the location and the participants in the narrative account with accuracy. The more interactive experience of the researcher with the participants in the field, the more the findings were valid and accurate.

To improve the account's accuracy, peer debriefing was used. A peer debriefer other than the researcher, was chosen and sent to meet the participants. This aimed at making the qualitative study's narrative relatable to individuals other than the researcher.

3.13 Limitations of the Study

During the process of conducting this study, there were some limitations that faced the progress of the study as explained below;

The impact of COVID-19 limited the progress of this study in various ways including; variation of closing and opening terms for students and other participants. Also, the lockdowns kept away the participants out of reach by the researcher. This affected the availability of the participants hence, the researcher delayed to go for data collection process. Also, the impact of the EBOLA outbreak in Uganda hindered the timely conduct of the study due to a ban on free movement and transportation in some of districts. This affected the movements to and from the fields.

Generally, the outbreak of both the COVID-19 pandemic and the Ebola epidemic worsened the already existing economic situation which affected the timely availability of funds for the research work. Working efforts on the study was increased to compensate the lost time due to the pandemic eruptions. Standardized Operations Procedures (SOPs) were observed to comply with the health requirements which, enhanced the health of the researcher which enabled completion of carrying out this study.

Since the study was conducted in two universities which are located in one region, there was a notion of generalization: the idea that findings obtained might not fit the real situation of other universities about the phenomenon under investigation. However, the study approach selected was qualitative approach so as to avoid generalization of the study findings.

Delay of permission to collect data by some of the institutions. Some institutions delayed to provide permissions to allow the researcher to collect data, affecting the time frame proposed for data collection process. To cope with such, the researcher used extra time for data collection when the permissions were out so as to compensate the lost time.

Language barrier to the participants: the language proposed for use in data collection was English. However, most of the participants did not seem familiar and competent in the language, hence, hindering access to potential participations. To remediate this limitation, Kiswahili language was opted to be used during interview and Focus Group Discussions during data collection, which enhanced the respondents' freedom of expression and of in-depth information on the subject.

The study was limited to only the inclusion of students with hearing impairment, and left out inclusion of students with other disabilities. Therefore, the study recommended for further researches on inclusion of students with other disabilities in universities to be conducted.

CHAPTER FOUR

PRESENTATION, INTERPRETATION, AND DISCUSSIONS

4.1 Introduction

The study explored the inclusion of students with hearing impairment in universities in Tanzania. In particular, it examined the support services delivered to the students, analyzed the adaptations of delivering of teaching and learning to these students, determined the perception of lecturers in teaching these students and perceptions of these students about their inclusion in the universities.

This chapter presents, interprets analyzes and discusses the findings of the study. The chapter is divided into three sections: Section one, provides the introduction, section two describes the participants and section three presents, interprets and discusses the findings on inclusion of students with hearing impairment in universities.

4.2 Description of the participants

The study intended to obtain information from 18 participants. However, 21 participants were reached and interviewed. The involvement of 3 additional participants was to ensure that relevant information is collected from participants. Those three were the hearing students who were not part of the sample but were constantly being referred to by student with hearing impairment as their leaders and were influencing inclusion of these students in universities.

Table 4.1: Demographic characteristics of participants

Category	Gender		Total
	Male	Female	
Students with hearing impairment	2	3	5
Hearing students	3	4	7
Lecturers	4	1	5
Representative of students with disabilities	1	-	1
disability support personnel	1	-	1
A leader from CHAVITA	-	1	1
A Member of TCU	1	-	1
Total number of Participants	12	9	21

Source: Primary data

Participants in this study have not been identified by their real names in order to maintain confidentiality of the information they have provided. Participants have been assigned with letters based on their following categories:

- i. Students with hearing impairment were identified with letters (SHI).
Because they were 5, they were identified individually as SHI1, SHI 2, SHI 3, SHI 4 and SHI 5. The data from SHI were collected through interview. SHI1 was 23 years old, a female student. She was pursuing a degree in special education and was in her third year at university X. She was deaf and she communicated through sign language

SHI 2 was a 24 years old female student pursuing a degree in special education and she was in her second year at university X. She was deaf and she communicates through sign language. SHI3 was 26 years old male student. He was studying a degree in special education and he was in his third year at university X. He has hard of hearing and he communicate through lip reading, amplified voice and sign language. SHI4 was 21 years old, a male student studying a degree in adult education and community development and was in his first year at university Y. He has hard of hearing and communicated through sign language and amplified voice. SHI 5 was 22 years old, a male student studying a bachelor degree in guidance and counseling and was in second year at university Y. He had total deafness and he communicated through sign language.

ii. Hearing Students. They had been identified with letters (HS). Because they were 7, they had been identified individually as HS 1, HS 2, HS 3, HS 4, HS 5, HS 6, and HS 7. The data from the Hearing Students were collected through Focus Group Discussion. HS 1 was 24 years old, a female student studying a degree in education. She was a third-year student at university Y. HS 2 was 26 years old, a male student studying a degree in education. He was a third-year student at University Y. HS 3 was 27 years old, a male student who studied a degree of education in special needs at university X. He was in his third-year. He sometimes interpreted for the students who were deaf during lectures. HS 4 was 23 years old. A female student who studied bachelor of education in special needs at university X. She was a third-year student. HS 5 was 24 years old, a male student who studied a degree of education in special needs at university X. He was in second year. He was also a volunteer sign language

interpreter. HS 6 was 26 years old, a male student studying a degree of education in special needs at university X. He was a third-year student. HS 7 was 22 years old, a female student who studied education in guidance and counseling at university X. She was a first year.

- iii. Lecturers. They had been identified with letter (L). Because they were 5, they had been identified individually as L1, L2, L3, L4, and L5. L1 was a male lecturer with 42 years old. He was an Assistant Lecturer of special needs education at university X. He taught courses attended by students with hearing impairment. L2 was a male lecturer with 32 years old. He was an assistant lecturer in faculty of arts, humanity and education in university Y. He was involved in the study because it was probed that his faculty would be accommodating students with hearing impairment. He had 1 year of work experience. L3 was a male with 31 years old. He was an assistant lecturer in faculty of arts, humanity and education in university Y. He was involved in this study because it was expected that his faculty would be hosting students with hearing impairment. He had 3 years of work experience. L4 was a male lecturer with 33 years old. He was an assistant lecturer at university X. He taught special needs education courses, had 3 years of work experience. L5 was a female assistant lecturer from university X with 31 years old. She taught special needs education courses. She had 4 years of work experience.
- iv. Disability support personnel. He was identified with letters (SSP). He was an administrator with 34 years old. He provides support service to students with hearing impairment at university X including sign language interpretation and educational audiological assessment. He had two years of work experience. University Y had no disability support personnel.
- v. Representative of students with disabilities. He was identified with letter P.

He was 26 years old. He was a graduate of bachelor degree of special needs at university X. He was a leader of students with disabilities in university X. In university Y, there was no representative of students with disabilities.

vi. A leader of “Chama cha Viziwi Tanzania (CHAVITA) in Dodoma region. She was identified with letters (LC). LC was a lady who was deaf. She had a degree in special needs education and had more than 6 years work experience. Her work experience and education make a participant with rich information about inclusion of students with hearing impairment in universities.

vii. Member from the Tanzania Commission for Universities. He had been identified with letters (MT). MT was a male with 45 years old. As his position in the Commission, he was rich in information regarding quality assurance and learning environment of universities in Tanzania and therefore had relevant information for the research. Unfortunately, the member of TCU insisted not to be compatible with the study topic. He reported that the commission does not deal with students as per study topic but rather with the universities. MT claimed two functions of the commission which are; quality assurance and overseeing training environment.

4.3 The Support Services in Universities for Students with Hearing Impairment

The study analyzed the support services universities in Dodoma city have for students with disabilities. The inquiry was whether support services were available in universities for students with hearing impairment. The following emerged about support services for these students in universities: teaching sign language, shortage of interpreters, communication barriers, inadequate support

services, inadequate use of sign language, delivered personal assistance to students with hearing impairment, and shortage of assistive devices. Each was analyzed and discussed below.

Note: The interviews were carried out in Kiswahili language where most of the participants used “aah”, “Mmmh”, and “Eee” which are exclamatory Kiswahili terms and also expression/speech time-buyers.

4.3.1 Communication Barriers

The findings showed that communication barrier occurred due to inadequate sign language skills, shortage of interpreters and lack of assistive technology. Also, communication barrier was reported to exist between organizations and between hearing students/ lecturers and students with hearing impairment.

Participants (LC, P and HS1) replied as follows;

Participant LC reported that:

Mhh, aaah, we have not yet started to cooperate with the Tanzania Commission for Universities (TCU). This is because there is still a communication gap to link the two institutions. May be latter we shall start cooperating.

Another participant from university X commented that:

There is no Personal assistance, let's say it is very minimum because the challenge here at the university is language barrier where if a person sees a student with hearing impairment, avoid the student just because he/she cannot communicate to him/her by using sign language. P

Moreover, a participant from university Y reported that:

Failing of students with hearing impairment is due to communication barrier due to the language used. This leads to failure to hear audio instructions in the classroom. Also, is caused by failure of students with hearing impairment to follow oral instructions provided by lecturers. Another, challenges are inadequacy of assistive devices example, hearing aids and microphones. HS1

The researcher observed that lecturers in the class did not respond to the questions asked in sign language by the students who are deaf on absence of an interpreter because lecturers did not have sufficient understanding of sign language. The findings imply that sign language was the bridge that united the students with hearing impairment, lecturers and their hearing peers. Lack of sign language skills among lecturers led into communication barrier. The study findings relate to a postulate of the human right model of disability which states that impairment cannot be a justification for restricting or denying people's rights. The findings correlate with Stevens et al. (2018) who revealed that lecturers perceive that their inability to teach and attend students with hearing impairment is due to absence of awareness and preparedness on receiving students with disabilities. According to the findings, the hearing peers and lecturers when they saw or were asked for an appointment by a student with hearing impairment, they diverged simply because they have no skills to communicate with the student. This act is to deny a person with hearing impairment a right including right to get services from offices and to make interaction.

To promote sign language as mode of communication and interaction, findings revealed that universities had sign language clubs where students with hearing

impairment who had no formal skills in sign language and hearing students who wished to learn sign language, were taught the formal sign language skills. This equipped them with sign language skills hence minimized communication barrier. Three participants pointed out that sign language was taught to enable communication between students with hearing impairment and hearing students. They also said that the teaching of sign language to those interested enhanced inclusive participations between the hearing students and those with hearing impairment. This was affirmed by one of the participants from university X who reported that:

Of course, aaah we teach them sign language in their clubs. However, still there are some universities whose awareness about the special needs of students with hearing impairment is little. Hence, cooperation with those universities is minimum. LC

Another participant from university X said that:

Eee, there is no Personal assistance, let's say it is very minimum because the challenge here at the university is language barrier where if a person sees a student with hearing impairment, avoids the student just because he/she cannot communicate to him/her. This is the reason we started a class for sign language so that people can learn the language so that they can assist these students. P

Moreover, participant SSP from university X explained that:

Aaa, first we have those students and the service delivered the first is teaching of sign language to those who reached universities without having correct skills of sign language especially the standardized sign language. Therefore, we do trainings. SSP

The researcher also observed that during lectures, some students with hearing impairment failed to understand some signs provided by the interpreter. This was either because some students with hearing impairment were not competent in sign language to understand all the sign vocabularies, or the sign language interpreters, especially their fellow students who interpreted for them, had no competence in the language.

The expressions from the participants revealed that sign language in universities was still not well emphasized. Some people communicate using local signs which in turn brings misunderstanding, hence, causing language barrier. According to Kigotho (2016), some people in the universities had no opportunities to learn sign language, hence, the initiation of the training. Also, the findings showed that students with hearing impairment lacked support services such as personal assistance from hearing peers and lecturers due to communication barriers. The findings relate to an assumption of the social model of disability which accounts that; people with disabilities are an underrepresented social category. This was shown when the students with hearing impairment were not given appropriate assistance by their hearing peers or lecturers due to communication barrier and their inability to hear and understand vocal language.

The existence of the services of the sign language clubs enhances universities' efforts to ensure communication and accessibility of information in and out of the classroom during the teaching and learning process, and during interaction with their peers. This is in line with requirements of Article 9(e) of the CRPD which provides that, institutions ensure accessible communication for people with disabilities. The findings were however relevant to Kigotho (2016) who revealed that, due to poor levels of access to interpreting services and a lack of understanding of the requirements of students with hearing impairment among

academic staff, students with hearing impairment frequently do not experience the sense of belongingness as part of the "university family" in a social setting as their hearing peers.

The hearing peers and university staffs lacked sign language skills for communication when approached by the students with hearing impairment. They ended up not attending them or isolating them. It is the opinion of the researcher in this study that, academic staffs should be given trainings in sign language skills similarly to the students who are taught in sign language clubs.

Furthermore, participants (HS3, HS6, and HS1) explained on the use of sign language for various reasons including interaction. Two participants expressed their interests of using sign language to interact with their friends with hearing impairment. One participant admitted that he did not know sign language and that he did not use sign language to communicate to his friends with hearing impairment. The participants reported as follows:

One of the participants from university X replied that:

Because I like very much to use sign language therefore, I feel proud to have friends with hearing impairment since I get an opportunity to use sign language when I am communicating with them. HS3

Another participant from university X reported that: *"I like having a friend who is a student with hearing impairment because I like to socialize with them by using sign language."* HS 6

Also, participant HS1 from university Y commented that:

I like to have a friend who has hearing impairment here at the university because I do not face any challenges from her. Although I do not know to use sign language but we

communicate well, I use a pen and paper to write when communicating with her. HS1

The findings implied that sign language was the common mean of communicating and interacting with the students with hearing impairment in universities. However, the findings revealed that some other means apart from sign language, such as, writing on a paper can be used to communicate with a person with hearing impairment if sign language is not found to a person. The findings were related to Newton (2013) who accounted that, other than sign language, alternative ways of communication with students with hearing impairment include; to write down important information. Lack of sign language communication skills should not prevent socialization with persons with hearing impairment.

Moreover, seven participants (HS6, SSP, and HS7) expressed that there was lack of interpreters while others accounted the shortage of sign language interpreters. They reported that the peers of students with hearing impairment were used to interpret as an alternative to the shortage of professional interpreters. However, an aspect of lack of interpretation skills and sign language knowledge to the peer interpreters was claimed. The following were the expressions from the participants:

One participant from university X reported that:

Professional and experienced interpreters should be employed. The one present now fear to interpret science subjects such as biology. I also advise that more interpreters should be employed. HS 5

Another participant from university X reported that:

Challenges are there, the big challenge is shortage of human resource. The human resource in this area is very few, hence it affects the delivery of these services. For example, now, there are only two interpreters apart from professionals who are teachers. SSP

Participant HS 7 from university X added that:

My views on interpretation are; here at the university, students are the ones volunteering to interpret for the students with hearing impairment. Those students have no qualities of sign language interpretation to enable the students with hearing impairment to understand well. Generally, interpretation service in sign language here at the university is not satisfactory.

It was observed that some lecture sessions missed interpreters, while in some sessions fellow hearing peers volunteered to make interpretations. The findings showed that, there were limited number of interpreters who therefore, did not meet the demands of students with hearing impairment. The claims showed that the present interpreters in the universities were overwhelmed by the population of students with hearing impairment. They failed to cope with schedules and population of the students; hence the universities opted to use their fellow students to interpret for them. The shortage or lack of professional sign language interpreters was seen a barrier towards effective learning of students with hearing impairment in universities. However, the participants reported the inadequacy skills in these peer interpreters.

The findings relate to the postmodern perspective of the social model of disability which state that impairment is both culturally-created and socially-built. The practice of using un professional interpreters was an act of disabling

these students more chronic since they could not benefit from instructions in the classrooms, and more dangerous, can lead them to receive wrong and harmful medical treatments due to misinterpretation from un professional interpreters. The study findings relied on the findings by Ishrat, (2021) who found that clarification of concepts is impacted by the sign language interpreter's experience. This means that a person with hearing impairment relies on the interpretation of the concept from the interpreter, who in turn is determined by skills and experience to deliver the exactly information. Moreover, similar opinion was given by participants P, LC, HS4 and HS3, who accounted that sign language interpreters in universities were few and some of them lacked interpretation skills and knowledge.

From the findings, participants (HS3, HS6 and SSP) reported that the support services provided to students with hearing impairment was poor, inadequate and did not fulfill the actual needs of the students. The ratio of the disability support personnel to the number of students with hearing impairment available at the universities was claimed not to balance. The shortage of disability support personnel and inadequate skills of personnel was reported. The following were the claims from the participants:

One participant from university X reported that:

Services which the university offer are not bad, but just that they are supposed to add. As they started in recruiting lecturers of special education. they should also add sign language interpreters, assistive devices, and sign language dictionaries. HS3

Also, participant HS6 from university X claimed that:

The services which are provided to our fellow students with hearing impairment are poor. They don't meet the number of

the students with hearing impairment. Example the assistive devices like tablets provided, did not meet their number. Also, they should be trained on how to use the assistive devices. Also, the assessment modes should be modified according to their needs.

Another participant from university X said that:

Aah, the efficiency is there but to meet the needs is in very low percentage because the need which is present is huge compared to the resource available to address those needs. example, the available assistive devices truly they help but they don't meet still the needs, still there are more demands.

SSP

Moreover, participants (HS2 and HS1) from university Y reported the lack of provision of support services especially assistive devices at the university. They claimed that support services were not provided to students with hearing impairment because the university did not recognize their presence.

The following was a report from participant HS2 from: *“Truly, there are no any service the university offers to students with hearing impairment because still it has not identified the presence of those students”.*

Participant HS1 noted that;

Lecturers in this university have no readiness to identify the students with hearing impairment, therefore, the students make their own efforts to accommodate themselves such as; buying assistive devices for themselves.

The findings revealed that, most universities in Tanzania were on the journey to the recognition and appreciation of the needs of students with disabilities including those with hearing impairment. However, low sensitization, poor identification skills and inadequacy of awareness on educational issues related to persons with hearing impairment among the university personnel are the factors that hamper service provision to the students with hearing impairment.

The findings showed a need to improve the support services provision, especially employing at least one support service provider in university Y. The findings matched with the idea of the human right model of disability which states that; disabilities are a natural component of variety of human and must be identified and promoted in all of their manifestations. This idea calls upon identification of students with hearing impairment so as to recognize them and afford them with their educational and social needs that accommodate them in their learning social being at the universities.

The suggestions of the findings were in line with Baart & Taaka, (2017) who accounted that people with disabilities have right to access a variety of in-home, residential and other support services which involve the personal assistance important to support living and inclusion in the community. Moreover, the Article 9(e) of the CRPD provides for students with hearing impairment in universities to benefit from support services for easy communication and accessibility of information in and out of the classroom during the process of teaching and learning, and during interaction with their peers. The universities should not end at enrolling the students with hearing impairment only, but also providing them with support services. This is supported by Abdul Hameed & Qurrat- ul-Ain, (2020) who accounted that, few universities in the Punjab province accept students with hearing impairment though these few universities lack the necessary technical and financial resources to provide adequate support. Therefore, universities are supposed to look out for the minority group of students with hearing impairment—the findings call upon their attention in terms of identifying them and improving the provision of the support services they need.

4.3.2 Delivered Personal Assistance to Students with Hearing Impairment by their Peers

From the findings, various personal assistances were found to have been given to the students with hearing impairment by the hearing peers. From this sub theme, there were various emerging issues which included; interpretation services, note taking and provision of information. The following emerging issues were reported:

Participants (HS5, HS6, and HS3) reported that students volunteered to provide personal assistance including interpreting for their peers inside and outside the classroom. However, they volunteered on several circumstances including when socializing with them and helping them in class or out especially when the employed interpreter (s) was not around or in case of inadequacy. The following information were reported by the participants:

One of the participants from university X said; *“I offer interpretation service by volunteering when the employed sign language interpreter is not around.”* HS 5

Another participant from university X reported that: *“I volunteer to help them to interpret in the class and outside the class example, at church and hospital.”* HS 6

Participant HS3 from university X replied that:

The personal assistance which I give them mainly are two; first one is sign language interpretation for the deaf. Second service which I deliver is being near to them as their friend, that is all. HS3

Form the findings, students with hearing impairment obtained interpretation services more easily from their peers. This might be because they were close and got used to them in such a way that even with the lack or shortage of

employed interpreters, still they could get services. Moreover, sign language united them with their peers, hence, it enhanced their socialization skills. However, the findings contradict with De Meulder and Haualand (2021) who accounts that sign language interpretation's ethics and ideologies as a social institution and part of a professional complex: "a complex of occupational groups that, via the exercise of high-level and specialized competence, execute some rather specialized duties for others ('laymen')". A question of competence and skills of interpretation comes in among the peers interpreting for the students with hearing impairment. Therefore, peers although were used as alternative way to cover the shortage of sign language interpreters, still they proved to have inadequate interpretation skills and shortage of sign language vocabularies especially in science related courses. Hence this marked the lack of interpretation competence among them. This practice of using peers for interpreting for students with hearing impairment should be discouraged since it denies them a right to concentrate with studies during lecture session.

Participants (HS7 and HS2) expressed that they always helped their peers with hearing impairment to copy the notes during lectures. They volunteered to help their colleagues because there were no note-takers employed by the universities to help the students with hearing impairment. Participant from university X reported the following, *"I help them to copy the notes during lesson"* HS 7

Another participant from university Y replied that:

Aaah, the personal assistance I deliver to students with hearing impairment includes helping them to copy lesson notes and talking to them so that they don't feel lonely because in most of the time they are being isolated. HS2

Note taking is a very crucial live assistance that aid students with hearing impairment during lecture to obtain lesson notes. The findings implied that there were no or limited number of employed note taker personnel in universities. This is in line with Oppong-Alexander et al. (2018) who claimed the absence of note-takers in the lecture rooms to be a barrier to their inclusion. Therefore, the hearing peers volunteer to take notes for their friends with hearing impairment during lecture sessions.

From the findings, participants (SH1 and HS4) reported to provide information to their peers with hearing impairment as soon as the information was out. This was found to be very useful to students with hearing impairment who always have been the last to receive information. The participants reported the following:

Participant SH 1 from university Y reported that;

The personal assistance I offer to students with hearing impairment frequently is to give them basic information delivered by the university, example dates for tests and exams and deadlines for collecting assignments, because if I don't give them the information, they are always the last persons to receive information. Therefore, I ensure that they get the information. HS1

Another participant from university X reported that; *"I help them by giving them information immediately when they are out because in most cases, they become the last to get the information."* HS 4

The findings showed that accessibility to information by students with hearing impairment was still a challenge in universities. There are limited formal systems such as the use of ICT technology like applications, mobile phones and social networks legalized for information related to university affairs, which are

officialized in a modified way to assist students with hearing impairment to get the first-hand information. The main option was of their peers to volunteer giving them information to update them of what was going on in the university premises. The findings are supported by Article 9(e) of the CRPD which provides for students with hearing impairment in universities to benefit from the support services provided for easy communication and accessibility of information in and out of the classroom. Information as a support service enhances these students to keep updated, stay attention, and be alerted for any emergency.

The researcher intended to find out if there were support services the universities provided to students with hearing impairment. However, there were some emerging issues which included, absence of support services provided by the university, provision of interpretation and shortage of assistive devices. The following were the findings noted by the participants:

Participants (HS2 and HS1) reported that the university Y did not provide support services special for students with hearing impairment. The noted reason was that the university did not recognize the presence of students with hearing impairment since it had not conducted identification process to find out students with disabilities who needed special attention. The participants responded as follows:

One participant from university Y reported that; *“Truly, there are no any service the university offers to students with hearing impairment because still it has not identified the presence of those students.”* HS 2.

Another participant from university Y replied:

Mmmh, myself I have never seen support services special for students with hearing impairment here at the university. The

support services example, assistive devices like projectors and microphones are meant for all students although students with hearing impairment also benefit from them. Even that, sometimes, the lecturer can use them or not, doesn't care. HS

1

Participants in university Y expressed having not seen any such service provided to students with hearing impairment by the university although this category of students were admitted in the university. It was however observed that there were no sign language interpreters in the classroom during lectures. The findings, however, revealed that lecturers and university authority at university Y did not recognize the presence of students with hearing impairment. This was because they had not made efforts to identify those students. The findings relate to the idea of the human right model of disability which states that disabilities are a natural component of human variety and must be acknowledged and given support in all of their manifestations. The findings related to Carlos et al. (2020) who pointed that the lecturers' perception of themselves as an integral part of the institution and their lack of readiness to welcome the deaf student led to the conclusion that many feelings and emotions—including concerns, fears, and obstacles—emerged. This implies that the lack of readiness among the university personnel to welcome students with hearing impairment, including lack of readiness to identify them, affected the inclusion of those students. The findings, however, contradicted with the Universal Declaration of Human Rights (UDHR, 1948) which provides for inclusion as a fundamental human right. Hence, the denial of support services to students with hearing impairment affects their inclusion automatically.

Participants (HS7, HS6 and HS 4) reported the provision of interpretation as a common service provided in university X. They expressed as follows:

One participant from university X explained that; *“Since I joined first year, the service which I have seen the university offering to students with hearing impairment is the sign language interpretation services.”* HS 7

Another participant from university X commented that: *“The service that I have seen given to students with hearing impairment is interpreters who help them in learning in the class”* HS 6

Also, participant HS 4 from University X expressed that: *“First service is the sign language interpretation for students with hearing impairment”*. HS 4

The findings indicated that sign language interpretation was the common service offered by university X to students with hearing impairment. Unlike university Y where the presence of students with hearing impairment was not recognized, personnel including lecturers and administrators in university X recognized the presence of students with hearing impairment and addressed support services to them including interpretation service. It also implies that personnel in university X can pay attention to the educational needs of these students.

The findings were in line with Pérez-Jorge et al. (2021) who accounted that, lecturers' attitudes toward inclusion were favorable and that they expressed concern for providing a suitable response to the students with hearing impairments. The findings indicated that the communication needs of these students therefore were met through provision of sign language interpreters. The findings however contradict with the study by Oppong et al. (2018) in Ghana who revealed that there were no sign language interpreters available in the exam rooms, hence the student who are deaf viewed assessment and evaluation to be difficult. The findings of the current study revealed the presence of interpreters, who played part on the successful assessment and evaluation of the students with hearing impairment.

Participants (HS2, SHI5, and SHI1) reported the shortage of assistive devices in the universities. They reported the common assistive devices available were, projectors and microphones. The following were the responses of the participants:

One participant from university X reported that: *“students make their own efforts to accommodate themselves such as; buying assistive devices for themselves”* HS2

Another participant from university X replied that: *“Yet not have I seen any assistive device here at the university. The only device which helps me in the class is the projector which, is for all students in the university”*. SHI 5

Moreover, participant SHI 1 from university Y said that: *“The assistive devices are present although not many. For example, there are projectors, and microphones, which help me to learn when I am in the class”*. SHI 1

Similar opinion was given by SH6, SSP, SHI4, SHI3, SHI2, SH5 and SH3, L5, L4, L1 accounting the shortage of assistive devices at the universities. The findings revealed that there was limited supply of assistive devices for students with hearing impairment in universities. However, the available assistive devices named projectors and microphones were very common and were probably for the purpose of general students. The participants requested for addition of the assistive devices that suit the learning requirements of students with hearing impairment. Lersilp (2016) found that, students with physical and visual disabilities used assistive technology at a maximum level, while those with hearing problems used it at an average level. Assistive technology was mostly provided to students with visual disabilities. Since hearing impairment is a silent disability, it is always ignored in many aspects including provision of assistive devices. Therefore, students with hearing impairment should be equally considered in the distribution of assistive technology. This will be possible by identifying them first.

The study aimed to find out whether the universities identified the students as with hearing impairment for the purpose of providing support services. Participants (L1, HS2 and SSP) responded on identification of these students.

One of the participants from university X reported that: *“The major challenges are; first, failure to identify the students with hearing impairment since it is a silent disability.”* L1

Also, another participant from university Y responded as follows:

Truly, there are no any service the university offers to students with hearing impairment because still it has not identified the presence of those students. Also, lecturers in this university have no readiness and skills to identify these students, therefore, the students make their own efforts to accommodate themselves such as; buying assistive devices for themselves. HS2

Moreover, participant SSP added that: *“To add there, first the institution is supposed to get awareness to deliver identification trainings, that is awareness on the presence of these students with hearing impairment”*

Similarly, other participants including; L2, and L1 reported the same. The findings interpreted that, identification of students with hearing impairment in universities was not done thoroughly. According to the findings, lack of identification skills and identification readiness among the university personnel were the factors hampering the identification of these students in universities. However, it signifies that, lecturers and university managements in university X and Y were not well sensitized on the right to education of students with disabilities and other disability related issues hence, they had no zeal to identify and recognize them. The findings were relevant to the idea of a human right model of disability which states that, disabilities are a natural component of human variety and must have recognition and support in all of their

manifestations. Sensitization to lecturers thus should be emphasized in order to create awareness for them on disability related aspects.

The findings of this study relate to the results of a research conducted in Spain by Pérez-Jorge et al. (2021) who found that students with hearing impairments have a number of needs, one of which is to be acknowledged and accepted as part of their educational community. However, the similar situation cut across students with hearing disability in Tanzania, who claim not to be identified and recognized within their learning settings. The findings relate to a study by Onuigbo et al. (2020). A lecturer should employ a variety of techniques to guarantee that the informational requirements of students with hearing impairment are delivered appropriately in the classroom. Some lecturers however, are not trained with techniques on how to identify and obtain details of these students that would require special support services. Inservice lecturers should be trained on how to identify the students. Identification process should be cooperated in the teacher curriculum to prepare the preservice lecturers on identification techniques.

4.4 Adapted Teaching and Learning Strategies for students with Hearing Impairment

The researcher intended to find out the adapted strategies of teaching and learning which suite students with hearing impairment. The researcher investigated the teaching strategies adapted to be used by lecturers to teach students with hearing impairment, and adapted learning strategies for these students. Sub themes and emerging issues were discussed under this theme as follows:

The researcher intended to find out the adapted strategies for teaching and learning for students with hearing impairment in an inclusive classroom. The findings showed that some lecturers reported to be using a sign language interpreter as a third part person to convey the instructions to these students. Participants (L1, L4, and L5) reported to use a sign language interpreter during teaching.

Participant from university X explained that: *“I use sign language interpreter method where, the interpreter elaborates for the student with hearing impairment what I am teaching”* L1

Another participant from university X said that: *“One of the strategies I use is interpretation, by using those few interpreters present. If the interpreters are not around, I always ask their fellow students to interpret for them]”* L4

Moreover, participant L5 from university X reported that:

Aah, strategies I use, first there are discussion where you give them opportunity to discuss by using the interpreter. You give them opportunity of asking question and giving their answers through interpreter. And sometimes I use projector to demonstrate. L5

It was observed that in university X there were sign language interpreters during some of the lesson sessions who interpreted for the students with hearing impairment. In university Y however, no sign language interpreter was observed in lecture sessions. The findings imply that, lecturers in university X used sign language interpreter as an adapted teaching and learning strategy to translate audio instructions to signs for students with hearing impairment in inclusive classroom. In university Y, the findings mean that lecturers had no idea of interpretation strategy hence, students with hearing impairment especially the deaf did not benefit from the instructions. The use of sign language interpreters however was regarded an important teaching strategy in university X from

which students were observed to enjoy the lesson in the classroom. The findings are relevant to the human right disability model in its postulate which states, “impairment cannot be a justification for restricting or denying people's rights”. These observational findings are in line with Kigotho (2016) who showed that students with hearing impairment view sign language interpreters to be crucial since they serve as a third party for them to obtain information through interpretation.

The findings are relevant to Cawthon (2017) who accounted that the interpreters provided a voice for students whose speech was difficult to understand by translating teacher speech. Students with hearing impairment occasionally spoke only by sign which the interpreters voiced for the teacher and the rest of the class. However, during observation, the researcher noted that some lecturers in university X did not care whether the sign language interpreter was present or not during the lecture session. They continued teaching even on absence of the interpreter. The findings contradict to Oppong M. Alexander et al. (2018) who revealed that, there were no sign language interpreters available in the exam rooms, hence the student who are deaf viewed assessment and evaluation to be difficult. The literature however was written five years back hence, probably the findings of the current study showed improvement lecturers had made.

Participants (L5 and L1) from university X expressed that they used group works and group discussion as a teaching strategy adapted to students with hearing impairment. Participant (L5 and L1) noted that:

One participant from university X said that: *“Aah, strategies I use, is discussion by using an interpreter in their groups.”* L5

Another participant from university X replied: *“Another strategy I use is group*

work'' LI

However, during observation, the students with hearing impairment were observed to form small groups of two or three of themselves within the large group. More observation was made to find out the reason of that. It was revealed that, the hearing peers were not fond of sign language hence spoken language dominated during discussion. Likewise, students with hearing impairment were observed not to understand the spoken language, hence opted to discuss themselves in sign language in the small groups they formed within the general group where they were placed. The general group was observed to lack a sign language interpreter.

The findings imply that lecturers placed the students with hearing impairment in groups with their peers for discussion and works. However, the observational findings imply that, lecturers did not make follow up during group discussions to ensure effective participation of students with hearing impairment. Also, the formed groups were not friendly to accommodate the learning needs of these students such as, absence of an interpreter and amplification devices. The observational findings relate to a postmodern perspective of the social model of disability which states that, "impairment is also seen to be culturally created and socially built" where, the negligence of peers to use sign language limited the students with hearing impairment from participating in discussion. The results are supported by Cawthon, (2017) who accounted that, the interpreters helped deaf students react in a group discussion and take part in class conversation in this way. Lecturers who opt to use group works or discussions must ensure the presence of interpreter who will intermediate the hearing students and the students with hearing impairment.

Participant (L1) noted that, giving lecture notes to students with hearing impairment is one of the adapted teaching strategies used for the students. He claimed to give the notes either before or after the lesson. However, both students with and without hearing impairment reported relevant data as a challenge affecting inclusion of students with hearing impairment. The following were the responses from the participants (L1, HS5, and SHI4):

Participant L1 from university X reported that: *“Through giving them lesson notes before or after teaching. Although giving them before the lesson they don’t come to class.”* L1

Another participant HS6 reported that: *“The students with hearing impairment are not given notes prior to the lesson.”*

Another participant from university X replied that: *“The lack of lesson notes before even after the lesson. Also lack of assistive devices such as microphones.”* HS 5

Also, another participant from university Y replied that:

Aah, lecturers do not care about special educational needs for students with hearing impairment, example, when the lecturer is teaching, we are busy with interpretations so we are not writing, after the lesson when we ask for notes, the lecturer says he/she does not have. Therefore, we get trouble looking for lesson notes for reference. SHI 4

Moreover, participants SHI 3 and SHI 4 reported similar information claiming not to have received lecture notes from lecturers.

During observation, lecturer entered the class without lecturer notes for students with hearing impairment. The students were observed to concentrate to the interpreters only with no hand out for notes. The findings from participant L1 claim that the lecturer provide notes to the students with hearing impairment.

However, the findings from the student indicated that lecturers did not provide lecture notes even on claiming by the students. These findings mean lecturers do not care how students with hearing impairment get lecture notes for reference. The findings from the students relate to the study findings conducted by Abdul Hameed & Qurrat- ul-Ain (2020) & Majoko (2018)) in Pakistan and South Africa respectively which revealed that, students with hearing impairments are not given lecture handouts or notes from lecturers prior to their presentations. The literature supports the findings from students and contradict findings from lecturer. Therefore, lecturers do not provide lecture notes either prior or after the lesson. They fear that after giving the notes, the students will share them to the hearing students and hence, a large number of students do not attend lectures in steady they concentrate on the notes. However, lecturers should understand that, during the lesson, students with hearing impairment concentrate looking at the interpreter or lip reading from the teacher hence, they are unable to take lesson notes like other ordinary students. Therefore, lecturers should provide lecture notes to the students with hearing impairment prior to the lesson so that they follow as the lecturer is teaching.

Participants (L4 and SHI1) responded on the sitting arrangement of students with hearing impairment within the classrooms. Participant L4 from university X suggested that these students should sit on front benches in the classroom. However, participant SHI1 who was a student from university Y suggested on this strategy. The following were their responses:

Participant L4 said that: *“May be another way, I am not sure if it helps them, I always encourage them to sit in front seats.” L4*

Participant SHI 1 from university Y lamented that:

First challenge is that, people don't care. When I enter the class, I find hearing students are already sited in front benches, when I ask them to leave the seat for me as I can't afford understanding the lecturer from back seats, they refuse. Even though, front seats are reserved for students with hearing impairment, but people don't care. SHI 1

However, during observation, some students with hearing impairment seated at front benches with an interpreter before them, while at the middle of the lecture hall a student was observed to sign for another student, probably was a deaf. Also, although the front benches had a label “reserved for persons with disabilities”, still it was observed that hearing students were seated on the benches. The interview response showed that other lecturers were not sure whether students with hearing impairment benefit when they sit in front of the class, although they suggested for the strategy. The findings also show that, students are not satisfied with how the lecturers use the strategy when they are teaching hence suggest the lecturers to pass near them so that they can easily lip read when they are talking the stud findings re relevant to Ishra (2021) who suggests to motivate all students with hearing impairment to sit on the front row of benches in the lecture halls so that they have a direct and unhindered line of view to the lecturer.

Similarly, Onuigbo et al. (2020) states that lecturer should employ a variety of techniques to guarantee that the informational requirements of students with hearing impairment are delivered appropriately in the lecture rooms such as giving the students front-row seats in lectures. The literatures line up with the study findings by suggesting students with hearing impairment to be reserved special seats in front of the classrooms. However, from my opinion as a

researcher, I suggest students with hard of hearing to be given freedom to choose any place in the lecture hall that they feel comfortable to access the instructions. Example, the students can choose to sit near a speaker located at any point of the class. This will help to reduce labeling and the students will feel not isolated but part of their peers. For students who are deaf should be reserved their front seats.

The findings suggested the proper use of lip reading by lecturers as a teaching strategy so that the students with hearing impairment can easily understand the concept being taught. The participant (SHI 4) suggested that;

Aahh, the use of lip reading when the lecturer is teaching. The lecturer is supposed to consider the presence of students with hearing impairment in the class. The lecturer is supposed to pass nearby seats of students with hearing impairment to enhance them make lips reading to understand what he/she is teaching SHI 4

Lecturers were observed to stand far from the seats where students with hearing impairment were seated. That could not enable the students grasp the meaning from the lip's movement of the lecturers. Onuigbo et al. (2020) supports these findings by accounting that, during delivery of instructions, the lecturer must be able to capture and hold the entire class's attention especially by; avoiding random movement in classroom, speaking clearly, and giving a clear view of the mouth during speaking and facing the students so that they can lip-read easily. In addition, Al Hashimi et al. (2021) suggests the following as adapted teaching strategies for students who are deaf and hard of hearing; lecturers should be aware of the light source that is shining directly on them casting of shadows on their faces, which could obstruct their student's vision and make it difficult for deaf and hard of hearing students to read lips. Lecturers therefore,

should understand the skills that enable the students with hearing impairment to grasp their lips movement such as facing the students when talking and avoiding mouth exaggerations when talking.

The study intended to find out the available assistive devices for teaching and learning of students with hearing impairment. Four participants claimed that there was no assistive device at the universities for students with hearing impairment while four other participants reported that projector was commonly available as a main teaching assistive devices and two participants reported microphone to be the common assistive device for teaching and learning of students with hearing impairment. The following emerging issues were reported: - projectors, microphones and absence of teaching and learning assistive devices.

Participants (L2, L4 and SHI4) reported that, projector was a common teaching and learning assistive device available at the university X and Y. Projector was commonly used in large classes in both universities X and Y. The following were the responses of the participants:

One participant from university Y replied that;

The university has not identified the assistive devices for teaching and learning as being for students with hearing impairment or with other disabilities but those devices which include projectors and microphones are for all students here at the university. L2

Another participant from university X said that: “*Mmmh, first when they are in the classroom and the interpreter is not around, I opt to use a projector but am not sure if they understand.*” L4

Participant SHI 4 from university Y answered that:

Here at the university, I have never seen any other assistive device except only the projector, which also is not meant for students with special educational needs but for helping lecturers to simplify teaching many students in the class.

Moreover, participants L1, L3, SHI5, SHI 2, L5, and SHI 4 also provided the same information that is, projector to be the common available assistive device for teaching and learning in university X and Y.

During classroom observation, projector was seen to be used nearly all lectures with large number of students especially in university Y more than in university X where the projectors were there, but some were not functioning. The findings relate to the study by Onuigbo et al. (2020) that during delivery of instructions, the lecturer must be able to capture and hold the entire class's attention especially by using visual aids like overhead projectors. However, in both university X and Y, were not used in seminar rooms which consisted of small population of students. The observational results showed that, even though the projector was available, it was favourably used by lecturers not mainly for the purpose of helping students with hearing impairment, but for simplifying the lecturer's task to address materials to a class consisting of large number of students. These study results relate to the study findings reported by Puspawati(2021) that ICT tools used in the classroom to teach students with hearing impairment included the projectors. Projectors should be used for the purpose of benefiting students with hearing impairment as a visual teaching and learning assistive device rather than only being used for the general classroom purposes.

Some participants (SHI1, SHI2, L4 and L2) explained to be using microphone

as a common teaching and learning assistive device. One participant from university Y reported that: *“The assistive devices are present although not many. For example, there are microphones, which help me to learn when I am in the class.” SHI 1*

Another participant explained that: *“The university has microphones. Still yet there are no more assistive devices to meet the demands of the students with hearing impairment.” SHI2*

Moreover, participant L4 from university X reported that: *“For the years I have stayed there, one thing is the presence of microphones which help those with residual hearing to be able to learn.” L4*

Also, another participant from university Y said that:

The university has not identified the assistive devices for teaching and learning as being for students with hearing impairment or with other disabilities but those devices which include microphones are for all students here at the university. L2

During lecture session in the classrooms, the researcher observed the presence and frequent use of microphones in university Y. However, in university X, the microphones were present, but they were not working due to several reasons, such as, lack of batteries to power them on, therefore, lecturers were observed not to be using the microphones in some lecture halls.

This finding is similar to the study findings obtained by Rekkedal (2014) which found that 40% of the microphones supplied were not utilized. The findings from the interviewed participants imply that, microphones are common teaching and learning assistive devices available and mostly used. However, the findings show doubt whether the microphones were meant for students with hearing impairment especially the hard of hearing but rather for the general

students. The study findings correspond to Rekkedal (2014) who states that for students with hearing impairment, assistive listening aids like teacher and student microphones can create a better listening environment, which will increase their level of engagement in the lesson. The findings are supported by an assumption of the human right model of disability which states that; the same rights apply to people with disabilities as to other society members. Regardless of their hearing impairment, the students have the same right to benefit from the instructions just like the hearing students in a modified way. Microphones are considered important to amplify the voice of the lecturer so that it can be heard well by the students with residual hearing. The findings showed that there were no teaching and learning assistive devices for students with hearing impairment in both universities Y and X.

The participants (L1, L3, and L4) noted that assistive devices for teaching and learning were absent.

A participant from university X said that: *“The assistive devices for teaching and learning for students with hearing impairment still are absent.”* L1

Another participant from university Y commented that: *“There are no specific teaching and learning assistive devices for the students with hearing impairment provided by the university, they are generally for all students.”* L3

Participant L4 from university X added that; *“Mmmh, the availability of the devices still is a challenge”* L4

The classroom environment was observed to have no assistive technologies special for students with hearing impairment, apart from projectors and microphones, which are commonly used in both university X and Y. This finding contradicts with Daramola (2022) who accounts that study on the accessibility and use of assistive technology among people with disabilities in

Nigeria, hearing aids and conventional cell phones are the most popular assistive technology tools used by students with hearing impairment in the educational environment in Nigeria. Moreover, students with hearing impairment in university X were observed not to wear hearing aids in and outside the classroom. The findings from the interviewed participants showed that; assistive devices are not present for students with hearing impairment in university X and Y. The findings of this research oppose the findings of the study conducted in Nigeria in Federal College of Education by Daramola (2022) who concluded that, assistive devices for students with hearing impairment were functional and available at the college. However, the findings reflect Nigerian context where, the availability of assistive devices might be readily due to advancement of science and technology compared to Tanzania.

4.5 Lecturers' Perceptions towards Teaching the Students with Hearing Impairment.

The researcher intended to investigate the perception of lecturers towards teaching students with hearing impairment. The lecturers were interviewed and observed to get their perceptions. The findings identified that lecturers perceive students with hearing impairment as having below average capacity to understanding concepts, having communication difficulty and were not aware of the presence of these students. Others observed that students with hearing impairments were not different from hearing students, and that there were negative perceptions of regular lecturers and leaders while lecturers trained in special needs education had positive perception.

In relation to lecturers' perception of students with hearing impairment as

having below- average capacity to understand concepts, findings indicated that Participants (L1 and L5) reported the perception among lecturers who considered students with hearing impairment to have difficultness in understanding concepts. Participant (L1) noted that some are abnormal hence needs to be taught alone. One participant from university X noted:

Some lecturers see students with hearing impairment as abnormal and cannot learn like ordinary students or, as a person who is different and cannot learn like ordinary students hence, they think that students with hearing impairment could be segregated and be taught by special lecturers. L1

Another participant from university X said that: *“Other lecturers consider the students with hearing impairment to have problems in understanding or having mental problems.]” L5*

The findings indicate that, some lecturers do not believe that students with hearing impairment can learn and understand just like the ordinary hearing students. They see students with hearing impairment having difficulty ability to grasp and understand concepts being taught, hence, are likely to perform below average. The findings relate with the study findings obtained by Kumatongo and Muzata (2021) in Zambia who found that lecturers thought student teachers with hearing difficulties were below-average and achieved average academic performance. Some lecturers go far and regard these students as having mental problems. Based on the above argument, it can be observed that regular lecturers lack the competence to teach these students. Their perception on the students was due to lack of training to adapt teaching skills to make students with hearing impairment understand the taught concepts.

To provide opportunities for inclusive teaching, communication and in this

particular case, sign language, is key. Findings revealed that there is communication difficulty with Students with hearing impairment. Participants (L2, L5 and LC) claimed that communication with these students is difficulty. The mode of communications for the students including the use of sign language are not understood by the lecturers to interact with students with hearing impairment, hence they perceive the communication to be difficulty. The participants responded as follows:

Participant L2 from university Y commented that:

Myself, I do not have alternative ways to teach students with hearing impairment, I do not know their language of using gestures, it is very difficult, I have never and I couldn't manage. L2

Another participant from university X said that: *"I think there is difficulty communication between lecturers and students with hearing impairment because of language barrier". L5*

Moreover, participant LC added that: *"Lecturers do not use sign language during teaching in the classrooms hence, this discourages the students with hearing impairment and finally lead them into failure in their studies."* LC

The findings showed that, lecturers perceive sign language and other modes of communication for students with hearing impairment as difficult to learn and understand, hence they regard communication between them and these students to be difficulty, and time consuming hence affecting their performance. The findings are in line with Abdul Hameed & Qurrat- ul-Ain. (2020) whose study findings revealed that, if the lecturer does not approach the classroom with current material, effective teaching methods, and flexible communication, academic performance will not be present. Most lecturers fail to interact and help students with hearing impairment from this perception because they lack

adapted methodologies for instructing students with hearing impairment hence, denying the students with hearing impairment opportunity to learn freely.

The study findings exposed that some lecturers perceived students with hearing impairment to be similar to the ordinary students hence, they can learn in a similar way their peers do. Participants (L3, L1 and HS3) reported on the above perception. One participant from university Y replied that:

I see students with hearing impairment can learn just like other students, therefore, if they could be in my class, I could teach them equally to other students. It helps not to segregate them. L3

Another participant from university X said that: “*Lecturers, we don’t consider hearing impairment like other disabilities just because it is a silent disability*”.
L1

Moreover, participant HS3 from university X replied:

Some of the lecturers associate students with hearing impairment and those with who are blind in a way that because students with hearing impairment can see, they assume that the students understand what they teach.

From the findings, lecturers treat students with hearing impairment normally—like other students in various aspects, such as, teaching methodologies and modes of assessment. They consider the students more physically than physiologically just because hearing impairment is a hidden disability. Some lecturers think that since the student with hearing impairment can see them, therefore they assume that the student can also hear them. The findings are opposed by the assumption of the human right model of disability which states that, disabilities are a natural component of variety of human and must be identified and promoted in all of their manifestations. Lecturers have to identify

the disability and offer respective adapted intervention. The findings correlate with the study results of Valle-Flórez et al. (2021) and international et al. (2014) which show that the nature of the disability and educational issues being addressed have a significant impact on attitudes of lecturers toward integration. Some lecturers are ruined by the silence of the hearing disability hence develop no difference between students with and without hearing impairment in teaching them.

Moreover, the findings are in line with Majoko (2018) who argues all students are treated equally by lecturers in terms of learning rate, style, and delivering modality. Lecturers therefore, should be given trainings to develop skills which help them to identify the students with hearing impairment hence, accommodate them basing on their learning needs. According to study findings by Molina et al. (2016), students with hearing impairment who reported their challenges to lecturers complained that, some lecturers told them they cannot make exceptions and that they should expect to be treated like all other students; other lecturers reportedly neglected students' requirements entirely. This shows that some lecturers have no idea on the unique learning requirements of students with hearing impairment. They therefore required awareness building seminars and workshops, moreover, counseling so that they develop positive perceptions towards these students.

Participants reported that some lecturers lacked awareness on matters related to students with hearing impairment hence perceived them negatively. The participants (L5, L4, and L2) reported that the lack of awareness is commonly due to inadequate understanding on issues pertaining to students with hearing impairment. Participant L5 from university X reported that;

Mhhh, lack of awareness among lecturers about students with hearing impairment and their needs. Even in leadership, very few of them have understanding of the students with hearing impairment, even employing is difficult. This cause their teaching and learning to be weak because even the availability of the devices still is a challenge.

Another participant from university X claimed that:

My perception is that, lack of knowledge among lecturers to help the students with hearing impairment, example: marking wrong in their exams when they write according to their grammar. L4

Another participant from university Y said that: *“Myself, I don’t know if there are students with hearing impairment in the class, I use normal strategies for all students in the class” L2*

Similarly, participants L1 and L3 reported the same information that is, lecturers had negative perception as a result of lack of awareness about students with hearing impairment. The findings imply that lecturers were not well prepared to attend these students. They lacked identification skills, tolerance and understanding on the students with hearing impairment and on disability related matters. However, the findings also reflected gaps in teacher curriculum which seemed to miss components of special and inclusive education. The findings relate to Stevens et al. (2018) who revealed that lecturers perceive that their inability to teach and attend students with hearing impairment is because of lack of awareness and preparedness on receiving students with disabilities. Lecturers should be made aware on how to attend students with hearing impairment through seminars, workshops, teacher curriculum reviews, and through sensitization. Since the findings leads into exclusion of students with hearing impairment from participating in educational settings Pérez-Jorge et al. (2021)

make clear that, to feel included and accepted in their educational environment is one of the key needs made by students with hearing impairments. This can be done through awareness raising and sensitization among the lecturers and hearing peers and whole university community.

The findings indicated that other lecturers perceived positively while others perceived negatively towards students with hearing impairment. However, some participants commented that, lecturers with special needs education background showed positive perception while other participants answered that, lecturers without special needs education background showed negative perceptions to students with hearing impairment. The following were the responses from the participants (SHI1, SHI2, L1):

A participant from university X reported that:

The perception of lecturers varies, lecturers with special needs education have love and are caring so much, but the ordinary lecturers don't care, they don't listen. We fail to understand each other because they lack sign language skills, they end chasing us from their offices. SHI1

Another participant from university X expounded that:

There are about three perceptions of lecturers; first is for lecturers who studied special education and those with at least little awareness on special education. These make efforts to include and provide special needs to students with hearing impairment so that they can learn like other ordinary students. Second perception is for lecturers who think that students with hearing impairment could be segregated and be taught by special lecturers. Third perspective, some lecturers are neutral, they see students with hearing impairment as normal and can learn just like ordinary students or, as a person who is different and cannot learn like ordinary

students hence, these lecturers have no stand. L1

In addition, participant SHI 2 from university X replied that:

Mmmh, the perception of many lecturers is that, students with hearing impairment are different from hearing students. They fail to consider all students as equal. Many lecturers do not care about the needs of students with hearing impairment. They believe there are special lecturers for students with hearing impairment, not themselves. SHI 2

The findings revealed that, lecturers in inclusive universities are divided according to perception point of view. Lecturers who studied special education are regarded to have awareness and understanding on students with hearing impairment hence showed care and love when attending the students. This finding corresponds to the finding obtained by Pérez-Jorge et al. (2021) who account that lecturers' perceptions toward inclusion were favorable and that they expressed concern for providing a suitable response to the students with hearing impairments. Lecturers with no background in special education were reported to act strangely to the students with hearing impairment since they lacked awareness and understanding on the learning needs of the students. Alajlan (2017) in Saudi Arabia found out that lecturers and instructors had negative perception towards inclusion of students with hearing impairment hence, the findings by Alajlan relate to the findings of the current study. The findings of this study are in line with the suggestions made in Ishrat (2021) who states that, students with hearing impairment enrolled in regular classrooms explained that perceptions are crucial to fostering positive social interactions across different teacher and student groups and gaining their support for the necessary educational approach in the area of inclusive education. Therefore, regular lecturers should be encouraged to develop positive perceptions to students with

hearing impairment. This can be possible through giving them awarenessraising trainings on disability related issues.

4.6 Opinions of Students with Hearing Impairment about their Inclusion

The researcher intended to investigate the opinions of students with hearing impairment about their inclusion in the aforementioned universities. This theme is divided into the following sub- themes: care to students with hearing impairment, sign language as main means of communication, importance of interpreters, use of assistive devices. The participants reported the following basing on the sub themes:

Participants (SHI2, SHI2, and SHI3) expressed a need of students with hearing impairment to be shown care on various learning and social aspects so that they feel included within educational settings. The participants reported about how lecturers and people around them care for students with hearing impairment.

One participant from university X said that: *“Many lecturers do not care about the needs of students with hearing impairment.” SHI 2*

Another participant from university X reported that: *“people don’t care. When I enter the class, I find hearing students are already sited in front benches” SHI1*

Moreover, participant SHI 3 from university X commented that:

Many lecturers have dehumanizing perception. When teaching in the classroom, they give examples which labels the students with hearing impairment without caring how we feel. This pains so much. SHI 3

Also, participant SHI 4 from university X reported similar information on opinions of students with hearing impairment toward their inclusion. The results showed that, lecturers and peers at universities do not care about these students and their learning needs. Even if they understand the needs and the presence of

the students, still they violate them. Generally, the findings show that the inside and outside classroom environment are still not favoring the students with hearing impairment. The findings relate to Molina et al. (2016) who recounts that other lecturers reportedly neglect students' requirements entirely. Lecturers feel an extra load to attend students with hearing impairment in an adapted way. They and peers consider the students with hearing impairment as a minority group which can be ignored. Therefore, sensitization and advocacy for students with hearing impairment should be emphasized in university community to enhance the university members understand and care these students and their needs.

The findings revealed that students with hearing impairment perceived sign language as the main means of communication, especially to those who are deaf. Participants (SHI2, SHI3, and SHI5) reported to benefit with the instructions when taught through sign language interpreters.

Participant SHI 2 responded that: *“As a student with hearing impairment, the teaching and learning strategy that help me is through the sign language interpreter. The interpreter is my guide in my learning.” SHI 2*

Another participant from university X replied that: *“I like being taught by using sign language, there should be a sign language interpreter or a lecturer who uses sign language for teaching.” SHI 3*

Participant from university Y reported that: *“If the teacher will use sign language to teach in the class, I will be very happy” SHI 5*

Also, participant SHI1 from university X reported similar information, that is, she prefers sign language to be used as a language of instructions and communication. The findings imply that, students with hearing impairment especially the deaf benefit more from instructions when sign language is used. The findings also revealed that students with hearing impairment opined that

the use of interpreters during the teaching and learning process is the best strategy for them to understand the instructions. The findings are supported by the human right model of disability in its postulate which states that, impairment cannot be a justification for restricting or denying people's rights. Despite the hearing impairment, students access their right to education through the use of sign language during classroom instructions. The needs of children who are deaf at the tertiary level remain inevitable including sign language accessibility as their first language (Setianingsih, 2018). Sign language therefore is the key language of communication and instructions preferred by students with hearing impairment. Also, educational interpreting is a support service that gives many students who are deaf or hard-of-hearing enrolled in general education equitable access to teaching so they can benefit from the overall educational experience (Schools, 2016). Interpretation for students with hearing impairment is of significant for helping them to study and participate in the lesson effectively.

Participants (SHI1, SHI2, and SHI 3) reported the opinions on the aspect of assistive devices in universities. They expressed their opinions as follows:

A participant from university X reported that:

My perception is, assistive devices are present although not many. For example, there are projectors, and microphones, which help me to learn when I am in the class. SHI 1

Another participant from university X said that:

Eee, of course the university has projector, microphones, and audiometer. I think still yet there are no more assistive devices to meet the demands of the students with hearing impairment. SHI2

Participant SHI 3 from university X commented that:

Assistive devices are not yet given out up-to now although we

had a meeting and they promised to give out the devices, but now they claim until we make hearing tests is when they will bring the assistive devices, but up to now, nothing is going on. In my perception, the university is not serious with this matter.

SHI 3

It was observed in university X's resource room to have more assistive devices including 100 Perkin's Brail machines, 24 computers and 154 pairs of slates and stylers for students with visual impairment compared to assistive devices for students with hearing impairment, which had only four audiometers, and 4 head phones.

The findings obtained revealed the shortage of assistive devices in university X. The participants perceived that universities are still not yet ready to provide adequate assistive devices to them since they promise to provide but they do not fulfill the promise. (Lersilp, 2016) found that while students with hearing issues used assistive technology at a moderate level, those with physical and visual disabilities used it at a high level. Students with visual impairments received the majority of the assistive technology. In most inclusive universities, there are fewer or no assistive devices available for students with hearing impairment than there are for students with other visible disabilities. This might be either due to the reason that hearing impairment is invisible and it is a silent disability hence easily ignored or due to negative perception that a student with hearing impairment is normal and can learn like other ordinary students. The findings therefore are significant to the universities to improve the provision of assistive devices to students with hearing impairment, which will enhance their learning and life independent.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, conclusion and recommendations as per the objectives of the study.

5.2 Summary of the findings

Available Support services in universities for students with hearing impairment:

The key findings are: there was communication barrier between students with hearing impairment and the hearing people within the universities. This was contributed by language barrier where, most of the hearing lecturers and peers were seem not to understand sign language used by students with hearing impairment. However, the findings showed that efforts were being made to ensure that sign language is understood, especially for the hearing peers where sign language was taught in clubs. It was also expressed that; sign language was preferred to be used by students with hearing impairment and hearing peers. The shortage of sign language interpreters was also reported.

The available interpreters were not meeting the demands of the students with hearing impairment since they were few. However, it was reported that some interpreters lacked interpretation skills and competences, especially in science subjects. The findings reported that students were used to interpret for their peers with hearing impairment to cover the shortage of interpreters. Findings revealed that support services provided in university X were poor. However, in university Y, there were no support services provided to students with hearing impairment because the students were not identified. From the findings, personal assistance provided to these students included; interpretation services, copying notes, and provision of information.

The findings on adapted teaching and learning strategies for students with

hearing impairment revealed that lecturers preferred using sign language interpreters during teaching to convey the audio instructions to these students. Provision of lecture notes, lip reading, placing the students in front benches and use of group discussion were among the teaching and learning strategies lecturers reported to use when teaching students with hearing impairment.

However, students with hearing impairment reported that lecturers did not give them lecture notes even on stressing their (notes') necessity. Also, it was reported that, hearing peers did not care on the reserved front benches in the classroom instead, they used them whereas the students with hearing impairment had to find alternative seats. The findings revealed the shortage of teaching and learning assistive devices special for students with hearing impairment at university Y and X. However, projectors and microphones were reported to be the common teaching and learning devices which were, in fact, meant for all students at the universities.

Findings on lecturers' perceptions in teaching the students with hearing impairment showed that some lecturers perceived these students to be abnormal and below average compared to their hearing peers. Lecturers perceived that students with hearing impairment cannot learn normally as ordinary students. Some lecturers perceived them as different from other ordinary students. They thought students with hearing impairment can learn in similar ways like ordinary students without any modifications. The unawareness on the needs of these students among lecturers made them to perceive the students negatively. This sometimes caused some lecturers to use general teaching strategies in an inclusive classroom, and be unable to attend and help the students with hearing impairment when they seek for consultation. The negative perception was revealed to be among lecturers without special needs education background.

However, lecturers with a back ground in special needs education were found to have positive attitude, caring, loving and helpful to students with hearing impairment. The regular lecturers thought that, teaching students with hearing impairment is the responsibility of lecturers with special needs education.

Moreover, the findings on the opinions of students with hearing impairment about their inclusion in universities exposed that, many regular lecturers and hearing students do not care about the needs of students with hearing impairment. Lecturers use general delivery strategies, which are not friendly to students with hearing impairment. These findings also point that hearing peers would sit on the front seats reserved for students with hearing impairment thus denying them to benefit from the lesson. Students with hearing impairment perceived sign language to be the best preferred language of communication and instructions. The students also, perceived that, the lack of assistive devices was due to the universities to ignore their learning needs.

5.3 Conclusion

It can be seen, then, that, there was a communication barrier between students with hearing impairment with some of their hearing peers, and some of the lecturers. This was due to difficulties in the use of sign language by some of the hearing peers and lecturers. Moreover, it is concluded from the findings that sign language was a preferable mode of communication and instructions for students with hearing impairment at both of the universities. In universities X and Y, it was concluded that there was a shortage and lack of interpreters respectively. Additionally, the incompetence and inadequate skills among sign language interpreters was reported. More research is required to explore on sign language as a major means of communication on how can be spready taught to the hearing community. Acceptance of the Deaf culture by the hearing

community including learning and using sign language will enable communication with the students with hearing impairment hence, remove communication barrier.

From the findings, it is, therefore, concluded that there was no support service personnel and representative for students with disabilities in university Y, hence inadequate provision of support services to students with hearing impairment. This was attributed by the failure of the lecturers and university authority to identify the students with hearing impairment and their educational needs that would require support services. This was because they lacked skills to identify the students with hearing impairment. However, generalization of the findings was guided by the law from the Persons with Disability Act (2010) of Tanzania in its Part VII: 27 (4) which requires every child with disability to be provided with appropriate and related support services or other similar learning services from qualified teacher or personnel assigned for that purpose, in this case, the SSP and P. The university X provided unsatisfactory support service to these students due to lack of awareness and sensitization on the educational needs of students with hearing impairment.

From the findings, it was, thus, concluded that students with hearing impairment preferred to be taught by using sign language although, most of the lecturers were not conversant with the language. It was also concluded that, lipreading, provision of notes, front seats and the use of sign language interpreters were the teaching and learning strategies used by most lecturers to teach students with hearing impairment. However, findings drew that, the students claimed not to be given lecture notes, which could help them to follow what is being taught.

From the findings, it was also concluded that lecturers with special education knowledge had positive perception towards students with hearing impairment.

This was unlike to the regular lecturers without special education knowledge who showed negative perception to the students with hearing impairment. Most of the lecturers and hearing peers did not consider the needs of these students. This led the students not to get services in a modified way that would fit their unique learning needs.

5.4 Recommendations

Basing on the findings and conclusion, the study made the following recommendations:

1. Lecturers and hearing peers should be given trainings on sign language skills so as to enhance them to communicate with the students with hearing impairment—the training should aim to provide competence, sensitization, positive perceptions and acceptance of these students.
2. Special needs and inclusive education components should be included in the teacher curriculum in order to prepare teachers with positive attitudes towards attending learners with various unique educational needs in inclusive educational settings.
3. Universities should employ competent sign language interpreters to help students with hearing impairment to learn comfortably in inclusive settings, thus, discourage students to volunteer for interpretation hence give them their right and opportunity to learn fully.
4. The universities should make screening and identification of students with hearing impairment during registration mandatory to enable planning for the necessary support services.
5. Universities should include in its structure a departments of special needs education and establish resource rooms that should serve as a disability support-centres in universities in order to enable the students with various

disabilities to access support services.

5.5 Recommendations for Further Studies

1. Future research should be done on inclusion of students with other disabilities, including, visual impairment, physical impairment, speech impairment and intellectual impairment in universities.
2. Further studies should be conducted on sensitization of hearing peers and lecturers towards acceptance of students with hearing impairment in universities.
3. Moreover, further studies should be carried out on inclusion of students with hearing impairment in schools and colleges.

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APPENDICES

APPENDIX I: Interview Guide for a member of Tanzania Commission for Universities

I am Richard Maarifa Kaingo with registration number 20/X/GMSN/13094/WKD. I am pursuing a Master of Special Needs Education degree of Kyambogo University, Uganda. I am conducting an interview on my research, entitled, “Inclusion of students with Hearing Impairment in Universities in Dodoma City, Tanzania”. I humbly request you to accord me your consent and precious time to provide for me information as per the questions below:

1. In your views, do the students with hearing impairment access quality and reasonable education in their universities where they study? How do you ensure this?
2. In your views how does the TCU ensure the quality of programs offered by universities to meet the unique learning requirements of students with hearing impairment?
3. In your experience, how does the TCU involve the stakeholders of disability education in curriculum development?
4. How does the TCU protect the right to education of students with hearing impairment when is abused by their universities where they study?
5. How does TCU ensure quality and friendly university environment for learning of students with hearing impairment?

Kiambatanisho I. Hojaji kwa afisa wa tume ya Vyuo Vikuu Tanzania

Mimi ni Richard Maarifa Kaingo mwenye namba ya usajiri 20/X/GMSN/13094/WKD. Ninasoma shahada ya uzamili ya elimu maalumu

katika chuo kikuu cha Kyambogo, Uganda. Ninafanya mahojiano ya utafiti wangu wenye maada “ujumuishwaji wa wanafunzi Viziwi vyuo vikuu jijini Dodoma Tanzania”. Kwa unyenyekevu ninaomba ridhaa na muda wako adhimu unipatie taarifa kutokana na maswali yafuatayo.

- 1. Kwa maoni yako, je wanafunzi Viziwi wanapata elimu bora na stahiki kwenye vyuo wanavyosoma? Mnasimamia vipi hili?*
- 2. Kwa maoni yako, ni jinsi gani tume ya vyuo vikuu Tanzania ina hakikisha ubora wa programu zinazotolewa vyuo vikuu ili kukidhi mahitaji pekee ya ujifunzaji kwa wanafunzi Viziwi?*
- 3. Kwa uzoefu wako, ni jinsi gani tume ya vyuo vikuu ya Tanzania inawahusisha wadau wa maswala ya elimu ya wenye ulemavu katika kukuza mitaala?*
- 4. Ni kivipi tume ya vyuo vikuu inalinda haki ya kupata elimu kwa wanafunzi Viziwi pale ambapo inahujumiwa na vyuo wanavyosoma?*
- 5. Ni kivipi tume ya vyuo vikuu inahakikisha ubora na mazingira rafiki ya kujifunzia kwa wanafunzi Viziwi?*

Thank you for participating in this interview
Asante kwa kushiriki kwenye mahojiano hay

APPENDIX II: Interview Guide for CHAVITA Leader

I am Richard Maarifa Kaingo with registration number 20/X/GMSN/13094/WKD. I am pursuing a Master of Special Needs Education degree of Kyambogo University, Uganda. I am conducting an interview on my research, entitled, “Inclusion of students with Hearing Impairment in Universities in Dodoma City, Tanzania”. I humbly request you to accord me your consent and precious time to provide for me information as per the questions below:

Much of our interview is based on the support services which are available for students with hearing impairment at the university.

1. What support services does the organization provide for facilitating the inclusion of students with hearing impairment in universities?
2. In your opinion, do students with hearing impairment get opportunities to enroll in universities?
3. In your view, what are the perception of students with hearing impairment towards university environments to enable their inclusion?
4. As an organization of the deaf, how do you relate with the universities and Tanzania Commission for Universities to ensure inclusion and the right to education for students with hearing impairment?
5. Any information you have about support services in facilitating the inclusion of students with hearing impairment in universities?

Kiambatanisho II. Hojaji kwa kiongozi wa CHAVITA

Mimi ni Richard Maarifa Kaingo mwenye namba ya usajiri 20/X/GMSN/13094/WKD. Ninasoma shahada ya uzamili ya elimu maalumu katika chuo kikuu cha Kyambogo, Uganda. Ninafanya mahojiano ya utafiti wangu wenye maada “ujumuishwaji wa wanafunzi Viziwi vyuo vikuu jijini

Dodoma Tanzania’’. Kwa unyenyekevu ninaomba ridhaa na muda wako adhimu unipatie taarifa kutokana na maswali yafuatayo.

Mahojiano yetu yatajikita Zaidi kwenye huduma saidizi zinazopatikana kwa wanafunzi Viziwi vyuoni.

- 1. Ni huduma saidizi zipi asasi inatoa kwaajili ya kuwezesha ujumuishwaji wa wanafunzi Viziwi vyuoni?*
- 2. Kwa mtazamo wako, je wanafunzi Viziwi wanapata fursa ya kuandikishwa vyuo vikuu?*
- 3. Kwa mtazamo wako, wanafunzi Viziwi wana mtazamo gani kuhusu mazingira ya vyuoni katika kuwezesha ujumuishwaji wao?*
- 4. Kama asasi ya Viziwi, mnahusiana vipi na vyuo vikuu Pamoja na tume ya vyuo vikuu ya Tanzania kuhakikisha ujumuishwaji na haki ya wanafunzi Viziwi kupata elimu?*
- 5. Una taarifa yoyote kuhusu huduma saidizi zinavyoweza ujumuishwaji wa wanafunzi Viziwi vyuo vikuu?*

Thank you for your participation (***Asante kwa ushiriki wako***)

APPENDIX III: Interview Guide for Lecturers

I am Richard Maarifa Kaingo with registration number 20/X/GMSN/13094/WKD. I am pursuing a Master of Special Needs Education degree of Kyambogo University, Uganda. I am conducting an interview on my research, entitled, “Inclusion of students with Hearing Impairment in Universities in Dodoma City, Tanzania”. I humbly request you to accord me your consent and precious time to provide for me information as per the questions below:

Much of our interview will be about adapted strategies for the delivery for students with hearing impairment to enable their participation in the classroom.

1. As a lecturer, what strategies for teaching and learning are you applying to teach students with hearing impairment?
2. In your views, what devices does the university have for facilitating teaching and learning for students with hearing impairment?
3. In your experience, what are the limitations of the universities to include students with hearing impairment?
4. In your opinions, what are the limitations caused by lecturers which hinder inclusion of students with hearing impairment in universities?
5. In your views, what is the perception of lecturers in teaching students with hearing impairment?

Kiambatanisho III. Hojaji kwa Wahadhiri

Mimi ni Richard Maarifa Kaingo mwenye namba ya usajiri 20/X/GMSN/13094/WKD. Ninasoma shahada ya uzamili ya elimu maalumu katika chuo kikuu cha Kyambogo, Uganda. Ninafanya mahojiano ya utafiti

wangu wenye maada “ujumuishwaji wa wanafunzi Viziwi vyo vikuu jijini Dodoma Tanzania”. Kwa unyenyekevu ninaomba ridhaa na muda wako adhimu unipatie taarifa kutokana na maswali yafuatayo.

Mahojiano yetu yatajikita Zaidi kwenye mbinu rekebifu za kufundishia na kujifunzia kwa wanafunzi Viziwi ili kuwezesha ushiriki wao darasani.

- 1. Kama mhadhiri, ni mbinu zipi za kufundishia na kujifunzia unatumia kuwafundisha wanafunzi Viziwi?*
- 2. Kwa mtazamo wako, ni vifaa saidizi vipi chou kinavyo ambavyo vinawezesha ufundishaji na ujifunzaji wa wanafunzi Viziwi?*
- 3. Kwa uzoefu wako, ni vikwazo gani vinakikabiri chuo katika kuwajumuishawanafunzi Viziwi?*
- 4. Kwa mtazamo wako, ni vikwazo vipi vinavyosababishwa na wahadhiri ambavyo vinazuia ujumuishwaji wa wanafunzi Viziwi vyo vyo?*
- 5. Kwa maoni yako, wahadhiri wana mtazamo gani kuhusu kufundisha wanafunzi Viziwi?*

Thank you for participating in this interview
Asante kwa ushiriki wako kwenye mahojiano haya

**APPENDIX IV: Interview Guide for a Representative for Students with
Disabilities**

I am Richard Maarifa Kaingo with registration number 20/X/GMSN/13094/WKD. I am pursuing a Master of Special Needs Education degree of Kyambogo University, Uganda. I am conducting an interview on my research, entitled, “Inclusion of students with Hearing Impairment in Universities in Dodoma City, Tanzania”. I humbly request you to accord me your consent and precious time to provide for me information as per the questions below:

Much of our interview will be about support services available for students with hearing impairment at the university.

1. In your views, why are you interested in being a representative to students with hearing impairment?
2. In your opinions, what support services have you seen a university providing to students with hearing impairment?
3. Using your experience, what are your views about these services and how do you ensure their availability?
4. In your experience, what challenges do students with hearing impairment face during lectures and when interacting in university?
5. In your experience, what kind of personal assistance do you provide to students with hearing impairment?

Kiambatanisho IV. Hojaji kwa Mwakilishi wa wanafunzi wenye ulemavu

Mimi ni Richard Maarifa Kaingo mwenye namba ya usajiri 20/X/GMSN/13094/WKD. Ninasoma shahada ya uzamili ya elimu maalumu katika chuo kikuu cha Kyambogo, Uganda. Ninafanya mahojiano ya utafiti wangu wenye maada “ujumuishwaji wa wanafunzi Viziwi vyuo vikuu jijini Dodoma Tanzania”. Kwa unyenyekevu ninaomba ridhaa na muda wako adhimu unipatie taarifa kutokana na maswali yafuatayo.

Mahojiano yetu yatajikita Zaidi kwenye huduma saidizi zinazopatikana kwa wanafunzi Viziwi chuoni.

- 1. Kwa maoni yako, kwanini unapendelea kuwa mwakilishi wa wanafunzi Viziwi?*
- 2. Kwa maoni yako, ni huduma saidizi zipi umewahi kuona chou kikitoa kwa wanafunzi viziwi?*
- 3. Kwa kutumia uzoefu wako, una maoni gani kuhusu hizi huduma saidizi na una hakikisha vipi upatikanaji wake?*
- 4. Kwa uzoefu wako, ni aina gani ya misaada ya kibinadamu unatoa kwa wanafunzi Viziwi?*
- 5. Kwa uzoefu wako, ni changamoto zipi wanafunzi Viziwi wanakutana nazo wakati wa mihadhara na kujamiiana hapa chuoni?*

Thank you for participating in this interview
Asante kwa kushiriki kwenye mahojiano haya

APPENDIX V: Interview Guide for Students with Hearing Impairment

I am Richard Maarifa Kaingo with registration number 20/X/GMSN/13094/WKD. I am pursuing a Master of Special Needs Education degree of Kyambogo University, Uganda. I am conducting an interview on my research, entitled, “Inclusion of students with Hearing Impairment in Universities in Dodoma City, Tanzania”. I humbly request you to accord me your consent and precious time to provide for me information as per the questions below:

Much of our interview will be about adapted strategies for the delivery for students with hearing impairment to enable their participation in the classroom.

1. As a student with hearing impairment, what teaching and learning strategies do you prefer to be used by lecturers?
2. In your views, what devices/technologies does the university have for facilitating teaching and learning for students with hearing impairment?
3. In your experience, what are the limitations you face for your inclusion in the university?
4. As students with hearing impairment, what are the limitations you face from lecturers that affect your inclusion at the university?
5. In your view, what is the perception of lecturers in teaching students with hearing impairment?
6. Give any additional information about the inclusion of students with hearing impairment in universities.

Kiambatanisho V. Hojaji kwa wanafunzi viziwi

Mimi ni Richard Maarifa Kaingo mwenye namba ya usajiri 20/X/GMSN/13094/WKD. Ninasoma shahada ya uzamili ya elimu maalumu katika chuo kikuu cha Kyambogo, Uganda. Ninafanya mahojiano ya utafiti wangu wenye maada “ujumuishwaji wa wanafunzi Viziwi vyuo vikuu jijini Dodoma Tanzania”. Kwa unyenyekevu ninaomba ridhaa na muda wako adhimu unipatie taarifa kutokana na maswali yafuatayo.

Mahojiano yetu yatajikita Zaidi kwenye mbinu rekebifu za kufundishia na kujifunzia kwa wanafunzi Viziwi ili kuwezesha ushiriki wao darasani.

- 1. Kama mwanafunzi mwenye uziwi, ni mbinu zipi za kufundishia na kujifunzia unapendelea zitumiwe na wahadhiri?*
- 2. Kwa maoni yako, ni vifaa/teknolojia zipi chou kinazo ili kuwezesha ufundishaji na ujifunzaji kwa wanafunzi Viziwi?*
- 3. Kwa uzoefu wako, ni vikwazo gani unakumbana navyo katika ujumuishwaji wako chuoni?*
- 4. Kama mwanafunzi kiziwi, ni vikwazo gani unakumbana navyo kutoka kwawahadhiri ambavyo vinaathiri ujumuishwaji wako hapa chuoni?*
- 5. Kwa maoni yako, wahadhiri wana mtazamo upi kuhusu kufundisha wanafunzi Viziwi?*
- 6. Toa taarifa zozote za nyongeza kuhusu ujumuishwaji wa wanafunzi Viziwivyuoni.*

Thank you for participating in this interview
Asante kwa kushiriki kwenye mahojiano haya

APPENDIX VI: Interview Guide for Disability Support Personnel

I am Richard Maarifa Kaingo with registration number 20/X/GMSN/13094/WKD. I am pursuing a Master of Special Needs Education degree of Kyambogo University, Uganda. I am conducting an interview on my research, entitled, “Inclusion of students with Hearing Impairment in Universities in Dodoma City, Tanzania”. I humbly request you to accord me your consent and precious time to provide for me information as per the questions below:

Much of our interview is based on the available support services for students with hearing impairment at the university.

1. In your experience, what support services does the university have for facilitating the participation of students with hearing impairment in the process of teaching and learning?
2. Explain the limitations of the available support services to facilitate the inclusion of students with hearing impairment in universities.
3. In your view, what are the perceptions of students with hearing impairment towards the use of the available support services?
4. In your view, how is the efficiency of the available support services to meet the educational requirements of students with hearing impairment?
5. What other information do you have about support services in facilitating the inclusion of students with hearing impairment in universities?

Kiambatanisho VI. Hojaji kwa mtoa huduma kwa wenye ulemavu

Mimi ni Richard Maarifa Kaingo mwenye namba ya usajiri 20/X/GMSN/13094/WKD. Ninasoma shahada ya uzamili ya elimu maalumu katika chuo kikuu cha Kyambogo, Uganda. Ninafanya mahojiano ya utafiti

wangu wenye maada “ujumuishwaji wa wanafunzi Viziwi vyo vikuu jijini Dodoma Tanzania”. Kwa unyenyekevu ninaomba ridhaa na muda wako adhimu unipatie taarifa kutokana na maswali yafuatayo.

Mahojiano yetu yatajikita Zaidi kwenye huduma saidizi zinazopatikana kwaajili ya wanafunzi Viziwi chuoni.

- 1. Kwa uzoefu wako, ni huduma saidizi zipi chou kinazo ili kuwezesha ushiriki wa wanafunzi Viziwi katika mchakato wa ufundishwaji na ujifunzaji?*
- 2. Eleza vikwazo vya upatikanaji wa huduma saidizi zinazoweza ujumuishwaji wa wanafunzi Viziwi vyo.*
- 3. Kwa maoni yako, wanafunzi Viziwi wana mtazamo upi kuhusu matumizi ya huduma saidizi zinazopatikana?*
- 4. Kwa maoni yako, ufanisi wa huduma saidizi zilizopo ukoje katika kukidhi mahitaji ya kielimu ya wanafunzi Viziwi?*

Ni taarifa gani zingine unazo kuhusu huduma saidizi ili kuwezesha ujumuishwaji wa wanafunzi Viziwi vyo?

Thank you for your participation
Asante kwa ushiriki wako

APPENDIX VII: Focus Group Discussion for Hearing Students

I am Richard Maarifa Kaingo with registration number 20/X/GMSN/13094/WKD. I am pursuing a Master of Special Needs Education degree of Kyambogo University, Uganda. I am conducting an interview on my research, entitled, “Inclusion of students with Hearing Impairment in Universities in Dodoma City, Tanzania”. I humbly request you to accord me your consent and precious time to provide for me information as per the questions below:

1. Why are you interested in being a friend to students with hearing impairment?
2. In your experience, what services have you seen a university providing to your friends with hearing impairment?
3. In your views, what is your perception about these services?
4. In your opinions, what kind of personal assistance do you provide to students with hearing impairment?
5. According to your experience, which challenges do your friends meet during lectures and when participating in various university activities?
6. In your views, what other information would you like to provide regarding the inclusion of students with hearing impairment in universities?

Kiambatanisho VII. Majadiliano kundi mlengo kwa wanafunzi wanaosikia

Mimi ni Richard Maarifa Kaingo mwenye namba ya usajiri 20/X/GMSN/13094/WKD. Ninasoma shahada ya uzamili ya elimu maalumu katika chuo kikuu cha Kyambogo, Uganda. Ninafanya mahojiano ya utafiti wangu wenye maada “ujumuishwaji wa wanafunzi Viziwi vyo vikuu jijini Dodoma Tanzania”. Kwa unyenyekevu ninaomba ridhaa na muda wako adhimu unipatie taarifa kutokana na maswali yafuatayo.

1. *Kwanini unavutiwa kuwa na rafiki mwanafunzi kiziwi?*
2. *Kwa uzoefu wako, ni huduma saidizi zipi umewahi kuona chou kikitoa kwarafiki zako wenye uziwi?*
3. *Kwa maoni yako, una umtazamo upi kuhusu hizi huduma?*
4. *Kwa mtazamo wako, ni aina gani ya msaada wa kibinadamu unatoa kwa wanafunzi Viziwi?*
5. *Kwa uzoefu wako, ni changamoto zipi rafiki zako wanakutana nazo wakatiwa mihadhara na wanaposhiriki mbalimbali shughuli chuoni?*
6. *Kwa maoni yako, ni taarifa gani zingine ungependa kutoa kuhusu ujumuishwaji wa wanafunzi Viziwi vyuoni?*

Thank you for your participation
Asante kwa ushiriki wako

APPENDIX VIII: Observation Guide

CRITERIA UNDER OBSERVATION	ASPECT OBSERVED	RESULTS
Language Used	<ul style="list-style-type: none"> • Language of instructions • Sign language use • Oral aural approach 	
Teaching and learning strategies	<ul style="list-style-type: none"> • Delivery strategies • Learning Strategies • Classroom involvement and participation of students with HI 	
Socialization/ interaction	<ul style="list-style-type: none"> • Interaction of students with HI with lecturers and their peers 	
Support Services available in and out of the classroom	<ul style="list-style-type: none"> • Personal assistance • Assistive devices • Classroom assistive technologies 	
Perceptions of lecturers and peers toward students with hearing impairment	<ul style="list-style-type: none"> • Lecturer-student interaction • Academic response and feedback • Curriculum modifications • Students' group discussions 	

APPENDIX IX: Consent Form

Kyambogo University
Faculty of special needs and Rehabilitation
Department of special needs
CONSENT FORM

Dear participant

I am Richard Maarifa Kaingo with registration number 20/X/GMSN/13094/WKD. I am pursuing a Master of Special Needs Education degree of Kyambogo University, Uganda as one of the requirements to complete my study program. My study is entitled “Inclusion of Students with Hearing Impairment in Universities in Tanzania”. I am hopeful that the findings of this study will help to inform respective authorities including universities, Tanzania Commission for Universities, policymakers and police implementers on how to enhance the inclusion of students with hearing impairment in universities. The study results may provide information to the government through the relevant ministries dealing with education and affairs for PWDs as well as other stakeholders for policy formulation, planning, developing and providing appropriate support services to students with hearing impairment in universities.

You were identified by virtue of your status and responsibilities as one of the participants who can inform the study through an interview/focus group discussion. The interview will focus on the inclusion of students with hearing impairment. The interview is probably to last from 20 to 30 minutes. The purpose of this form is to kindly request you to participate in the study. The data you will provide will be used for the purpose of this study and academics only and will be kept confidential and will be destroyed immediately after the completion of the study. You will also be free to withdraw from the study in case you feel uncomfortable proceeding with the participation.

Thank you very much for your support and cooperation in advance.

Yours sincerely
.....
Richard Maarifa Kaingo

Confirmation of acceptance

I have read and understood the purpose of this study and I hereby consent to participate.

Signature..... Date.....

APPENDIX X: Introductory letter



THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
THE UNIVERSITY OF DODOMA



Our Ref. No. MA.84/261/01/17

23rd December, 2022

To: All Principals
Deans
Directors
The University of Dodoma

Re: Introduction Letter for Mr. Richard Maarifa Kaingo

The heading above is in reference.

The aforementioned is a bonafide student of the Kyambogo University-Uganda, he has been granted research clearance by the Head of Department of Special Needs Studies and he intends to conduct research at the University of Dodoma (UDOM).

On the basis thereof I kindly introduce him to you and request your esteemed office for any necessary support that he may require in conducting his research at your College/School and Institute. The title of his study is *"Inclusion of Students with Hearing Impairment in Universities in Tanzania"*. He will conduct his research from 23rd December, 2022 to 23rd May, 2023.

Kindly do not hesitate to contact the undersigned in case of any queries.

Sincerely,

Dr. Peter J. Kirigiti
For: Director-Research, Publications and Consultancy

C.C: Vice Chancellor
Deputy Vice Chancellor-Academic, Research and Consultancy

APPENDIX XI: Data Collection Form

**DATA COLLECTION BY EXTERNAL PARTIES
REPORT FORM**

(To be filled on completion of data collection by Dean or Director and submitted to DRIC)

Name of faculty/School/Directorate:

FACULTY OF HUMANITIES AND EDUCATION (FAHE)

This is to confirm that RICHARD MARIKA KAINGO from KYAMBOGO

UNIVERSITY collected data under the supervision of this faculty

between 08/12/2022 and 12/12/2022 and has successfully completed

the task. The data collector was directly supervised by Dr. Alexander Kavungu

The data collector can be issued with a clearance certificate.

Comments by direct supervisor (if any):

Signature: *Alexis*

Date: 13/12/2022

Comments by Dean/Director (if any):

The faculty wishes to thank the Director of research for putting trust on us to assist the researcher

Signature: *Alexis*

Date: 13/12/2022



APPENDIX XII: Permit for Data Collection



ST JOHN'S UNIVERSITY OF TANZANIA
Deputy Vice Chancellor, Academics
Directorate of Research Innovation and Consultancy

Date: **8th December 2022**

To: **Dean, FAHE**
.....
.....

PERMIT FOR DATA COLLECTION

The management, vide **Director of Research and Consultancy F118**, has permitted the following person to collect data in our university.

Name: **Richard Maarifa Kaingo**

Institution: **Kyambogo University Uganda**

Subject: **Inclusion of Students with Hearing Impairment in Universities in Tanzania**

Research period: **December 2022**

The data collector is directed to you for guidance and supervision. On completion of the exercise you are required to fill the attached report form and send the data collector back to our directorate for clearance. In case you are not in a position to offer the necessary support to the data collector please complete the section below and return the letter to DRIC.

The request/clearance letter from his/her institution is attached.


DIRECTOR
RESEARCH, INNOVATION AND CONSULTANCY

To: Director of Research, Innovation and Consultancy,
The faculty/school/directorate is not in a position to host the above-mentioned researcher for the following reasons:-

.....
.....

.....
Name Signature School/faculty Date

APPENDIX XIII: Certificate of Data Collection



ST JOHN'S UNIVERSITY OF TANZANIA

Deputy Vice Chancellor, Academics
Directorate of Research Innovation and Consultancy

Date: 13th December 2022

Vice-Chancellor

Kyambogo University

Kampala, UGANDA

DATA COLLECTION CERTIFICATE

This is to certify that **Richard Maarifa Kaingo**

collected research data at our university between **08/12/2022** and **12/12/2022**

and has successfully completed the exercise. The data collector was directly supervised by

Dr. Alexander Kavina


Dr. Joseph R. Mhando
Director of Research, Innovation and Consultancy

APPENDIX XIV: Permission for Data Collection in Dodoma City Council



JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA JIJI LA DODOMA



Unapojibu tafadhali taja:

Kumb. Na. HJD/F.10/5/217

06 Disemba, 2022

Watendaji wa Kata,
Kata ya Ng'ong'ona na Majengo,
Halmashauri ya Jiji,
S.L.P 1249,
DODOMA.

YAH: KIBALI CHA UTAFITI/KUKUSANYA TAARIFA

Husika na somo tajwa hapo juu.

2. Namtambulisha kwako Ndg. RICHARD MAARIFA KAINGO kuja kufanya utafiti katika Halmashauri ya Jiji la Dodoma. Utafiti huo unahusu ***"INCLUSION OF STUDENTS WITH HEARING IMPAIRMENT IN UNIVERSITIES IN TANZANIA"***. Utafiti huo utafanyika kuanzia **07 Novemba, 2022** hadi **03 Januari, 2023**. Utafiti huo utafanyika kwenye Kata husika.
3. Kwa barua hii, naomba apokelewe na kupatiwa ushirikiano ili aweze kufanikisha utafiti wake kama ilivyoielezwa hapo juu.

Ahsante.


Patrick Bashemera

Kny: MKURUGENZI WA JIJI

DODOMA

Kny: MKURUGENZI WA JIJI
HALMASHAURI YA JIJI LA DODOMA
S.L.P. 1249,
DODOMA

3 Mtaa wa CDA, S.L.P. 1249, 41183 Dodoma, Simu: +255262354817, Nukushi: +255262321550, Barua
Pepe: cd@dodomacc.go.tz, Tovuti: www.dodomacc.go.tz

APPENDIX XV: Letter for Requesting to Collect Data

RICHARD MAARIFA KAINGO

P.O.BOX 523,

DODOMA.

7TH December 2022

EXECUTIVE SECRETARY,
TANZANIA COMMISSION FOR UNIVERSITIES,
P.O.BOX 2600,
DODOMA.

Dear Sir/Madam,

REF: REQUEST TO COLLECT DATA FOR EDUCATIONAL RESEARCH

Kindly consider the heading above,

I am Richard Maarifa Kaingo, a student of Kyambogo University in Uganda. I am pursuing a master degree program in special needs education.

I kindly request from your esteemed office a permission to collect data on my study topic "INCLUSION OF STUDENTS WITH HEARING IMPAIRMENT IN UNIVERSITIES IN TANZANIA", as a requirement for the fulfillment of my study program.

With the letter I attach copies of introductory letter from Kyambogo University and a permission letter from the city director. I look forward my request to be considered.

Yours faithfully



Richard Maarifa Kaingo

0755674986

APPENDIX XVI: Introductory letter



21st November 2022

To whom it may concern

Dear Sir/Madam,

SUBJECT: INTRODUCTORY LETTER FOR DATA COLLECTION

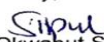
This is to introduce the bearer... RICHARD MAARIFA KAINGO

Reg. No: 20/X/GMSN/13094/WK who is a bonafide student of Kyambogo University in the Department of Special Needs Studies. As partial fulfillment of the requirements for the award of a Master of Special Needs Education, she/he is required to undertake a research on the approved area of study.

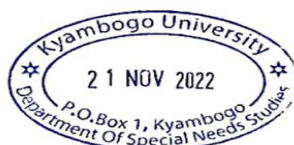
The purpose of this letter is to request you to allow him/her to collect data for his/her research study.

Kyambogo University will be grateful for any assistance rendered to the student.

Sincerely,


Dr. Okwaput Stackus

HEAD OF DEPARTMENT



APPENDIX XVII: Map of Tanzania showing the Study Area

