

**LIBRARY SERVICES' PROVISION FOR PEOPLE WITH VISUAL  
IMPAIRMENTS AND IN WHEELCHAIRS IN ACADEMIC LIBRARIES IN  
TANZANIA**

**REBECCA MGUNDA MAJINGE (BA., MA)**

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College of Humanity, University of KwaZulu-Natal, Pietermaritzburg,  
South Africa

Supervisor: Prof. Christine Stilwell

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Submitted: February 2014

## DECLARATION

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## **ABSTRACT**

This study examined library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. It looked into access to the information resources available and the layout of library buildings in five universities. The universities studied were University of Dar es Salaam (UDSM), Open University of Tanzania (OUT), Dar es Salaam University College of Education (DUCE), Sebastian Kolowa Memorial University (SEKOMU) and St. John's University of Tanzania (SJUT). The broader issues in this study were drawn from issues relating to the importance of access to information as a fundamental human right.

The main research question the study sought to answer was what services do academic libraries provide for people with visual impairments and in wheelchairs? Specific subsidiary research questions were what is the physical layout of academic libraries in Tanzania? what information resources are provided by academic libraries for people with visual impairments ? what are the challenges facing people with visual impairments and in wheelchairs in accessing and using library services? what is the role of information and communication technology (ICT) in facilitating provision of information resources to people with visual impairment and in wheelchairs? and what challenges are experienced by the library in seeking to provide services to people with visual impairments and in wheelchairs?

The study was guided by the social model of disability of Oliver and used the International Classification of Functioning (ICF) framework to address the research problem in the context of the academic library. The pragmatism paradigm was employed in the study. Both quantitative and qualitative methods were used. Regarding the respondents 113, (of a population of 139) were surveyed by questionnaire and 57 of 67 were interviewed. The population of the study involved library directors, professional library staff, disability unit staff, and people with visual impairments and in wheelchairs. Snowball sampling was used to identify the people with visual impairments and in wheelchairs. In order to obtain good measures of validity and reliability three data collection methods were employed:

questionnaires, interview schedules and an observation checklist. The overall response rate from the questionnaires was 81%. Data gathered through the questionnaires were analyzed using descriptive statistics facilitated by SPSS and data gathered through interviews were analyzed using thematic analysis. The research conformed to the research ethics policy of University of KwaZulu-Natal.

Access to information is a fundamental right of every human being and academic libraries exist to support learning, teaching, research and consultancy to all in a university's community of users, including people with visual impairments and in wheelchairs. The study confirmed that academic libraries in Tanzania provide services to people with visual impairments and in wheelchairs which are not inclusive or universal. The study put forward a new non-recursive interactive model for application and testing. It offered guidelines for academic libraries in providing inclusive and universal services to people with visual impairments and in wheelchairs.

For academic libraries to provide services which are inclusive and universal, the layout of library buildings need to include working lifts and ramps for people with visual impairments and in wheelchairs so that they can easily access the information resources housed in the library. In addition, information resources which are in Braille and large print are required for people with visual impairments to read easily as well as assistive equipment to help them read the information resources available.

Furthermore, having staff trained and experienced in special needs requires university programmes and curricula to include components, at all levels of qualification, on special needs for people with disabilities. Positive attitudes to both library staff and people with visual impairments and in wheelchairs are needed to allow access and use of information resources. In addition policy addressing library services for people with disabilities is important for the library, to not only guide the provision of universal services, but also to ensure adequate allocation of funds to support library services to people with visual impairments and in wheelchairs.

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## **DEDICATION**

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

ADA	American Disabilities Act
ALA	American Library Association
API	Application programme interface
CCTV	Closed Circuit Television
DES	Disability Equality Scheme
DPSA	Disabled People South Africa
DUCE	Dar es Salaam University College of Education
GDP	Gross Domestic Product
ICF	The International Classification of Functioning
ICT	Information and Communication Technology
IFLA	International Federation of Library Associations and Institutions
IFM	Institute of Finance Management
ILO	International Labour Organization
INASP	International Network for the Availability of Scientific Publications
LIASA	Library and Information Association of South Africa
MoEVT	Ministry of Education and Vocational Training
OPAC	Online Public Access Catalogue
OUT	Open University of Tanzania
PEPUDA	The Promotion of Equality and Prevention of Unfair Discrimination Act
PERii	Programme for Enhancement of Research Information
PhD	Doctor of Philosophy
SARUA	Southern African Regional Universities Association
SEKOMU	Sebastian Kolowa Memorial University
SEKUCO	Sebastian Kolowa University College of Tumaini
SJUT	St. John's University of Tanzania
TCU	Tanzania Commission for Universities
TLB	Tanzania League of the Blind
TSB	Tanzania Society for the Blind
UDSM	University of Dar es Salaam
UKZN	University of KwaZulu-Natal

UNESCO	United Nations Educational, Scientific and Cultural Organization
UPIAS	Union of the Physically Impaired Against Segregation
URT	United Republic of Tanzania
WHO	World Health Organization
WIPO	World Intellectual Property Organization

## **CHAPTER ONE**

### **BACKGROUND TO THE STUDY**

#### **1.1 Introduction**

Information is essential to all human beings and every library's aim is to provide the right information at the right time and in the right format to its patrons regardless of race, religion, age, nationality and language. This core function includes the provision of information to people with disabilities. Bagandanshwa (2006a) emphasizes that all persons have a right to information regardless of disability. He further stresses that information is power because it is the source of knowledge and facts. The American Library Association (2001) insists that libraries must not discriminate against individuals on the basis of disability and should ensure that every learner and/or patron has equal access to library resources. In the same vein the international library body, International Federation of Library Associations and Institutions (IFLA) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the Public Library Manifesto (1994) emphasize that, libraries must not discriminate on the basis of age, race, sex, religion, nationality, language or social condition. Every library must also provide proper services for those who do not have easy access to them, such as the mentally and physically disabled, the ill and the imprisoned.

Arko-Cobbah's (2006) study carried out in South Africa, confirmed that libraries are essential to the functioning of a democratic society; libraries are "the great symbols of freedom of the mind" (Arko-Cobbah 2006:349). Arko-Cobbah (2006:355) further states that the library must be open to all, irrespective of age, profession, race or colour. There must be free access to any literature required. In line with this Bagandanshwa (1998), in his study carried out on library services for the visually impaired and blind in Tanzania, insisted that library services are very important in any community. Their importance lies in the fact that they facilitate individuals' interests and efforts in the search for knowledge and bettering skills. The need to improve one's skills and acquire knowledge is paramount in all people regardless of gender, age, race or disability. Library services therefore, are necessary to all people, and must be made available and accessible to all.



The South African Community Library and Information Services Bill (2010) asserts that

- Library and information services must be provided on the basis of equal access for all regardless of race, gender, sex, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, consciences, belief, culture, language or birth;
- Special measures must be taken to ensure equitable access to library and information services, including measures to ensure access to library and information services by people with disabilities and other categories of persons disadvantaged by unfair discrimination;
- Library and information services must be provided in a manner that is accessible by the public and that complies with the principles of administration service delivery as stipulated in section 195(1) of the constitution;
- Library and information services must facilitate and promote the development of information literacy and electronic communication and technology skills of library users, especially people with disabilities, women and young children;
- Library and information services must promote awareness of cultural heritage, appreciation of the arts, scientific achievements, innovations, inter-cultural dialogue and cultural diversity.

Therefore academic libraries should be well equipped with information resources which are in Braille and large print as well as assistive equipment which enables people with visual impairments and in wheelchairs to access information independently. In addition, the layout of library buildings should be accessible to allow easy access to information resources kept in the library for the purpose of providing universal services to all users including people with visual impairments and in wheelchairs.

## **1.2 Background to the research problem**

Throughout the world people with disabilities face numerous difficulties as they seek to assert their position in a modern, complex and competitive world dominated by able-bodied individuals. People with disabilities are often excluded from social activities and are not treated in the same way as their able-bodied equals. The fact is that in one way or another, their physical state means that they live a life that is perceived to be different from that of able-bodied people (Ochoggia 2003a:307). Valleman (1990 cited in Ochoggia 2003a:307) highlights this point stating that, “how one looks often influences how one is treated”. In the same vein Mandesi (2007) states that people with disabilities face numerous challenges to opportunities equal to those of their peers in day to day life. Environmental, physical, legal and institutional barriers are found throughout society, and people’s negative attitudes to persons with disabilities often cause social exclusion and are the hardest to overcome. Persons with disabilities are often assigned a low social status and in some cases are considered worthless; viewed by those around them with feelings of shame, fear and rejection. There is also the common belief that people with disabilities are cursed or may place a curse on others (Mandesi 2007). Mandesi further insisted that for people with disabilities to be treated equally, physical barriers to accessing resources and attitudes need to change.

Oliver and Barnes (1998:35) concur with Mandesi’s (2007) statement that there has been a “consistent cultural bias against people with impairments throughout recorded history. However, it was following the socio-economic changes of the eighteenth and nineteenth centuries, with their emphasis on economic performance, medical science and individualism, that this discrimination became even more extreme”. In the nineteenth and early twentieth centuries, state policy was exclusionary in that it saw “the systematic removal of disabled people from the mainstream of economic and social life through institutionalization and segregated education” (Oliver and Barnes 1998:35).

It has been difficult throughout the world for people with disabilities to cope well with life, and sometimes they lack the necessary assistance and services. For instance

in Tanzania, employment for people with disabilities is hampered by the number of challenges inherent in the society. Parents, who are supposed to prepare children who are disabled to be independent and responsible adults, often do not know what to do for their children. Occasionally, the birth of a child with a disability is seen as a calamity, a misfortune, a shame, and as a result the child is neglected, hidden from the public, and sometimes left to die (*Daily News* 1992 cited in Bagandanshwa 1998:3). In line with this, Shimweya (1990 cited in Bagandanshwa 1993) states that in Africa, the presence of a child with a disability is usually associated with witchcraft, punishment, and a calamity to the family who must subsequently bear the blame. As a result of this, the community does not provide services to people with disabilities. In Lesotho some families actually hide their children from the public because they are ashamed of them, an attitude which is typical practice in most African countries (Chitereka 2010). Chitereka further claimed that, the excessive overprotection of some people with disabilities by society leads to the development of a dependency syndrome which further prevents them from accessing social and economic services. This overprotection affects them and their families as well. In the majority of cases, people with disabilities are treated as sick people who deserve sympathy, care and cure. The end result is that these people are marginalized.

The Tungaraza (2010) study carried out at the University of Dar es Salaam on “Accomplishments and challenges facing students with disabilities at the University of Dar es Salaam: thirty years of navigating the hill” recommends that people with disabilities have the right to live in a just society that recognizes their needs and helps to reduce or eliminate all the challenges confronting them. However, due to ignorance or prejudice, persons with disabilities are prevented from participating fully in the life and activities of their communities. Therefore society should know that people with disabilities have the right to live peaceful and respectable lives to the full like non-disabled people. Mandesi (1995), in his study on “The legal status of the visually handicapped in Tanzania: a case study of Dar es Salaam”, discovered that, Tanzanian family law and government policy did not protect people with disabilities adequately. They had challenges in accessing health services and education, needed specialized legal aid, and were left behind both socially and

economically. In short, they needed the same opportunities and rights as other Tanzanians.

In recent years many countries throughout the world have adopted policies aimed at promoting the rights of people with disabilities, and promoting their equal participation in society (ILO 2004). This was also supported by Yokoyama (2012) who carried out a study on a comparative analysis of institutional capacities for implementing disability policies in East African countries. Yokohama further noted that the function of national councils for disabilities in developing countries have shown positive attitudes towards the implementation of disability policies. ILO (2004) states further that some countries in Africa have made progress in introducing disability-related legislation, but many of these laws have not yet been implemented. In other African countries, existing national laws need to be reviewed in order to achieve equalization of opportunities for persons with disabilities. In addition, improving legislation and implementation strategies has been identified as one of the main issues to be tackled in the African Decade of Disabled Persons 1999 to 2009 (ILO 2004).

Academic libraries, as the providers of information and the heart of higher learning institutions, should be at the forefront in removing all the barriers hindering access to information. In addition the social model of disability of Oliver (1990) requires society to provide equal services by removing barriers which hinder access to education, employment, transport, health, information and so on. In line with this statement, Lee (2007:105) insisted that libraries are an important part of society and reflect social trends. Anti-discrimination acts in many countries require mainstream library services to be accessible to people with disabilities. Libraries must be designed to be universally accessible and to accommodate individuals with disabilities (Burgstahler 2002:421), with this being the norm rather than an add-on to existing services. Libraries should have equipment in place that facilitates both easy mobility and easier intellectual access for those that are challenged by visual impairments and are in wheelchairs. Such provision would enable all users to get the

maximum benefit from the library's materials and services (Deines-Jones 2007: 145).

In 1979 the Library Association of Australia adopted a policy statement on library services for people with disabilities stating that the association believes that everyone has the right of access to library services and materials to meet their needs for information, inspiration, education and recreation. Furthermore, the Americans with Disabilities Act (ADA) passed in 1990 in the United States of America (USA), and now fully implemented, holds information specialists in all types of setting responsible for assuring equal access to all the information they provide. With the passage in 2001 of a revision to section 508 of the Rehabilitation Act, equal access has been extended to the web pages of an expanding array of institutions and agencies. Equal access is implemented in large part through accessible web design and appropriate adaptive technology (Walling 2004:137).

The United Kingdom (UK) Parliament (2005) has expanded the definition of disability and introduced new statutory duties on public bodies (including universities and their libraries) to eliminate unlawful discrimination, promote equality of opportunity for people with disabilities and publish a Disability Equality Scheme (DES). In addition a new emphasis on combating social exclusion (whether arising from class, poverty, race, gender, disability or other forms of discrimination) through library and information services was introduced in the UK at the beginning of the century. The UK Department for Culture, Media and Sports (1999) set out policy guidelines for libraries on social inclusion, and these naturally have considerable implications for cultural minorities (Sturges 2005:299; Forrest 2007: 708).

Moving to the African continent, Disabled People South Africa (DPSA) (2001) argues that disabilities are imposed by society when a person with impairments is denied access to full economic and social participation. The Promotion of Equality and Prevention of Unfair Discrimination Act (PEPUDA) No. 4 of 2000, according to The Office of the President (2000), compels institutions of higher learning to make

sure that visually impaired students are able to consult whichever information source or services they require without barriers or discrimination, and that such services should be provided equitably (Seyama 2009:16). Rowland (2008) cited in Babalola and Haliso (2011), noted that of all the countries in Africa, only South Africa has a well-developed, functional library for people with visual impairments. Despite Rowland's assertions and strong support at national level for such provision, many people with disabilities are still denied access to full economic and social participation in South Africa. Not all South African libraries have JAWS, a software programme for people who are visually impaired, and so many universities make it necessary for students to buy it for themselves.

Ndinda's (2005) study highlighted that people with disabilities in Kenya not only represent a crucial sector of the marginalized population but also face special problems as a result of their disabilities. Many lack access to basic services such as education, information, medical health care, employment, transport and rehabilitation. The majority of disabled people experience hardship as a result of cultural and economic prejudice, stigmatization and more often exclusion, abuse and violence, as well as a disability-unfriendly environment.

Recognizing the fact that Kenyans with disabilities, in trying to meet their daily needs, are faced with numerous problems the Kenyan Government has proposed to enact the Persons with Disabilities Act. This act attempts to correct some of the anomalies and misconceptions held by society about disabled people. The act seeks to provide enabling legislation for this group of citizens to realize their full potential as Kenyans. The Persons with Disabilities Bill 2002 further seeks to provide for the rights and rehabilitation of persons with disabilities to enable them to enjoy opportunities equal to those of other more able-bodied persons (Ochoggia 2003a: 25).

Tanzania has initiatives to address the situation of people with disabilities in areas such as health, education and employment. The National Policy on Disability of 2004 tackles the challenges of disability from various angles including national

health initiatives to eradicate the childhood diseases that cause disablement (United Republic of Tanzania 2004). In addition the Constitution of the United Republic of Tanzania firmly states that all human beings are equal and are entitled to equal rights irrespective of colour, tribe, gender and region. United Nations Resolution No. 27(a) (iii) of 20 December 1948 states that all human beings are born free with equal rights and dignity. In line with this resolution human beings have the right to use society and its resources for their development and protection. Since a person with a disability is also a human being he/she is equally entitled to these rights (United Republic of Tanzania 2004). Furthermore Tanzania has implemented a number of laws, policies and standards pertaining to people with disabilities, including their right to productive and good jobs suited to their skills, vocational training and basic services (ILO 2009:1).

In 2009, Tanzania ratified the Convention on the Rights of Persons with Disabilities, 2006. The purpose of the convention is to promote, protect and ensure the full and equal enjoyment of all human rights by persons with disabilities. It covers a number of key areas such as universal accessibility of services, personal mobility, health, education, employment, habilitation and rehabilitation, participation in political life, equality and non-discrimination. The convention marks a shift in thinking about disability from a social welfare concern, to a human rights issue, which acknowledges that societal barriers and prejudices are themselves disabling. Moreover, the convention does not create new rights; rather, it addresses the needs of the people with disabilities in a more special way (Mpandikizi and Maro 2010:92).

Furthermore, the issue of disability has been the subject of various seminars in Tanzania. A special programme was launched in 2011 aimed at teachers and students with impaired vision. The programme looked at ways to help people with such disabilities to access knowledge and use information and communication technologies (Rugonzibwa 2011). Another two-day capacity building seminar attended by participants from Kilimanjaro, Tanga and Arusha regions was organized by Rumbi Shani, a national structure which represents people with disabilities.

Members deliberated on unfriendly attitudes to people with disabilities and the lack of essential infrastructure in the education sector (*Guardian* reporter in Moshi 2011).

There have been notable international guidelines for inclusive services. The Tanzanian examples in the last three paragraphs reveal a level of awareness of these issues in Tanzania. However, despite the 1977 Constitution, National Policy of Disabilities, Convention on the Rights of Persons with Disabilities and all the other related policies underpinning the rights of people with disabilities in accessing public services such health, education, employment, freedom of expression and participation in political life, no initiatives have been taken to address the issues of people with disabilities relating to the use of libraries and information resources. There appears to be only one library that provides services for people with disabilities, the Tanzania Library Services Board. These services are for people with visual impairments and not for people with other disabilities, and although this library provides services to people with visual impairments, the layout of the library building is not disability-friendly for people with visual impairments and in wheelchairs. For them, access to the information resources kept in the library remains limited.

In addition, collections do not seem to be sufficiently well stocked with information resources for such patrons; neither do libraries appear to be employing competent, trained staff with the experience to provide services to people with disabilities. To support this assertion Kaijage's (1991) study, "An assessment of library and information services for the visually impaired: with particular reference to information needs of visually impaired university students and information plans for Tanzania" revealed that there was a lack of properly trained staff. Such staff would be expected to consider and understand people with visual impairments and their information resources and also provide them with quality services. In addition Bagandanshwa (1998) in his study "On library services for visually impaired and blind people in Tanzania" observed that materials available in libraries are not generally accessible for users with visual impairments. All the available journals,



periodicals and books were in normal print only and large print materials for the partially sighted were not available.

### **1.3 Statement of the problem**

Personal experience in Tanzanian academic libraries suggests there is a lack of access to services that meet the needs of users with visual impairments and in wheelchairs. The World Health Organization (2008) describes a wheelchair as a device providing wheeled mobility and seating support for a person with difficulty in walking or moving around. This study specifically addressed the situation of people in wheelchairs with physical disabilities such as paraplegia but did not include those with mental impairments. It also addressed access for those who were totally blind or partially sighted.

Bagandashwa (1998), in his study carried out on library services for visually impaired and blind people in Tanzania, noted that library services for people with visual impairments are significantly lacking in Tanzania. In line with this, Ndumbaro's (2009) study observed that in Tanzania generally, library and information services were planned without considering the needs of people with visual impairments. These services appeared to be based on the assumption that people with visual impairments do not exist, or even if they exist they do not need these services. In addition the United Republic of Tanzania (2004) policy states openly that the education system in Tanzania does not allow equal access for children with disabilities. Almost all school facilities, at all levels are physically inaccessible. Teacher education and the curriculum do not incorporate the needs of those with disabilities. The government document, however, supports the need for all public buildings to be built to cater for the needs of those with disabilities but stairs, narrow doorways and toilets remain inaccessible for the majority of disabled persons in most academic library buildings and schools. Adetoro (2011:6) noted that the availability of information material for use by persons with visual impairment in many countries is premised on equal access with the sighted, although what is available the world over is far from ideal. Brazier (2003) and Brunson (2005) cited in Adetoro (2011:6) offer evidence that the availability of information material for

use by people with disabilities in advanced countries is grossly inadequate. In a similar way Stilwell (2007:87) claimed that access to information is a global problem and not one peculiar to less developed countries.

This study sought to explore this apparently anomalous situation of the gap between apparent policy and practice by focusing on library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. The study investigated the layout of library buildings, access to key facilities, the resources available, and whether the staff were equipped to assist such patrons in the selected universities in Tanzania with regard to the two groups described above.

#### **1.4 Purpose, objectives and research questions of the study**

This section presents purpose, specific objectives and research questions guided the research study.

##### **1.4.1 Purpose**

The purpose of this study was to investigate library services provision for people with visual impairments and in wheelchairs, with physical disabilities such as paraplegia, in academic libraries in Tanzania. The study investigated the information resources that were available, access to these resources and the physical layout of the library buildings.

##### **1.4.2 Specific objectives**

The specific objective of the study were as follows:

- To examine the physical layout of academic libraries in Tanzania.
- To find out information resources provided by academic libraries for people with visual impairments.
- To establish the challenges facing people with visual impairments and in wheelchairs in accessing and using academic library services.

- To examine the role of ICT in facilitating provision of information resources to people with visual impairments and in wheelchairs.
- To identify challenges experienced by the academic library in seeking to provide services to people with visual impairments and in wheelchairs.

### **1.4.3 Research questions**

The study was guided by research questions which follow the objectives :

- What is the physical layout of academic libraries in Tanzania?  
In asking this question the researcher wanted to know if the physical building of these libraries allows access for people with visual impairments and in wheelchairs.
- What information resources are provided by academic libraries for people with visual impairments?  
With this question the researcher wanted to know if the printed information resources available in these libraries met the needs of people with visual impairments, for example, whether software, such as JAWS that makes access possible, was available in the libraries.
- What challenges do people with visual impairments and in wheelchairs face in accessing and using academic library services?  
The question addresses the specific challenges that are encountered by people with visual impairments and in wheelchairs in accessing and using information resources.
- What is the role of information and communication technology (ICT) in facilitating provision of information resources to people with visual impairments and in wheelchairs?  
The researcher wanted to know how ICT could assist in the provision of library services to people with visual impairments and in wheelchairs.

- What challenges are experienced by the academic library services in seeking to provide services to people with visual impairments and in wheelchairs?

In this question the researcher wanted to know the challenges which the academic library faces in seeking to provide services to people with visual impairments and in wheelchairs.

Having addressed these research questions the researcher assessed the suitability of the model chosen for the study. Drawing on the study findings and the revised model the researcher put forward suggestions and recommendations from both users of libraries and information providers on how they could address the challenges which people with visual impairments and in wheelchairs face in accessing and using information resources.

### **1.5 The significance of the study**

The study investigated library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. This study was significant as it bridges the gap between theory and actual practice in Tanzanian university libraries. The findings of the study could influence decision makers by creating awareness among them about people with visual impairments and in wheelchairs and by recommending policy which would focus on access to and use of information resources by these groups. This research has established the many possible choices for accessing information by people with visual impairments and in wheelchairs and it can be used to improve the quality of academic life for them. In addition the study throws light on the factors which hinder access to information and the challenges which face those with visual impairments and in wheelchairs in accessing information resources. In terms of its contribution to theory the study endorses the applicability of the social model and ICF framework, but also puts forward a new model, the applicability of which can be tested in further studies.

### **1.6 Assumptions of the study**

This study was based on the following assumptions:

- Access to information is a fundamental human right

- The library service should be universal for all users.
- The institutional infrastructure should allow access to the information housed in the library
- Information resources should be in a format which people with visual impairments can read.
- The library staff should be trained to assist people with disabilities.
- The library budget should provide for people with disabilities.
- ICT equipment should be available to facilitate library services to people with visual impairments and in wheelchairs,
- Policy formulated for people with disabilities should be implemented so that people with visual impairments and in wheelchairs will not face unnecessary challenges in accessing information.

### **1.7 Scope and limitations of the study**

This study focuses on library services' provision for people with visual impairments and in wheelchairs with regard to the layout of library buildings and access to information resources. The study addresses people who are partially sighted and totally blind and in wheelchairs with physical disabilities such as paraplegia.

The study covered three administrative regions in Tanzania: Dar es Salaam, Dodoma and Tanga. In these regions five universities were investigated. The universities were University of Dar es Salaam (UDSM), Open University of Tanzania (Dar es Salaam centre), Dar es Salaam University College of Education (DUCE), St. John's University of Tanzania (SJUT) and Sebastian Kolowa Memorial University (SEKOMU). The selection of the universities was based on the fact that these universities were attended by students with visual impairments and in wheelchairs and also were accessible to the researcher and willing to be part of the study.

During the investigation the researcher faced the following challenges:

- Data collection and the pace of returning the questionnaires were slow. The researcher followed up with the respondents several times and was eventually

able to collect sufficient completed copies of the questionnaires to reach a percentage of return that made proceeding with analyzing the data feasible.

- The list of library staff which the researcher was given in two university libraries among the five university libraries prior to the fieldwork being undertaken included secretaries, accountants, library attendants and drivers which gave the impression of the library having a larger number of likely respondents among the staff. Later, this problem was solved after consultation with the library directors. The researcher managed to get the actual number of library staff who had library qualifications.
- Respondents were not willing to fill in their names on the consent letter although the researcher managed to convince them by assuring them that the information they provided was for academic purposes and would be treated as confidential and would not be disclosed.
- The researcher was not able to carry out the study in all academic libraries in Tanzania due to financial and other constraints, although she managed to conduct it in five academic libraries. At least one institution was not willing to participate. The libraries surveyed represented a fair selection of Tanzanian academic libraries and provided what is seen to be an accurate true picture of the challenges facing people with visual impairments and in wheelchairs in access library services.

## **1.8 Methodology**

The study combined both quantitative and qualitative methods. In order to obtain good measures of validity and reliability three data collection methods were employed. Questionnaires, an interview schedule and observation instruments were used to collect data. The elements of analysis were people with visual impairments and in wheelchairs, library staff, library directors and staff from special needs education for disabilities. The data collected was analyzed using descriptive statistics supported by SPSS for quantitative data, and thematic analysis for qualitative data. The method and procedures used are explained in more depth in chapter five.

## **1.9 Ethical issues**

Ethics are a set of moral principles which are suggested by an individual or group, are subsequently widely accepted, and which offer rules and behavioural expectations about the most correct conduct with regard to experimental subjects and respondents, employers, sponsors, other researchers, assistants and students (De Vos, Strydom, Fouche and Delport 2011:114). A researcher is responsible for carrying out research in an ethical manner; therefore the researcher followed the research ethics policy of University of KwaZulu-Natal (UKZN 2007), and respondents were informed of the purpose and procedures of the research study prior to the data collection commencing. A consent form was attached and signed by all respondents in the study areas before they engaged with the study. This aspect is also elaborated on in the methodology chapter (Chapter five).

## **1.10 Definition of key terms**

This section provides definitions of key terms and concepts used in the study; these are libraries, academic libraries, library services, disabilities, impairment, and visual impairment, person with low vision, wheelchair users and information and communication technology

### **1.10.1 Academic libraries**

Reitz (2007:5) defines an academic library as “an integral part of a college, university, or other institution of post-secondary education, administered to meet the information and research needs of its students, faculty, and staff.” Academic libraries are those of universities, polytechnics, colleges and all other institutions forming part of, or associated with educational institutions (Prytherch 1995:3) that is, apart from school libraries. An academic library is a part of the university or other higher education institution where books and non-book materials are kept for users. It is a building containing reading materials that staff and students can consult. It can also be considered to be an organized collection of published books and journals and other reading materials and includes the services of staff able to provide and interpret research, educational, recreational and cultural needs of its users (Igun 2006:18).

### **1.10.2 Disabilities**

Carson (2009:7) defines a disability as “any restriction or lack, resulting from impairment of ability to perform any activity in the manner or within the range considered normal for a human being.” According to Ochoggia (2003a:307) disability is a physical sensory, mental or any other impairment including visual, hearing or physical disability, with a substantial long-term adverse effect on a person’s ability to carry out day-to-day activities. Oliver (1996:22) defines disability as “the disadvantages or restriction of activity caused by contemporary social organization which takes no or little account of people who have physical impairments and thus excludes their participation in the mainstream of social activities.” In this study disability means restriction which denies or hinders access to the services provided by the library or to the information housed in the library.

### **1.10.3 Impairments**

According to Oliver (1996:22) impairment is the condition of lacking part or all of a limb, or having a defective limb, organ or mechanism of the body. Deines-Jones (2007:2) defines impairment as a deviation from the generally accepted norm of the body function and structure as a result of loss or abnormality. “Body function” refers to both the physiological and psychological functions of the body and “body structure” includes limbs and organs. In this study impairment is the state of deviation from the generally accepted norm of bodily function as a result of loss or abnormality.

### **1.10.4 Information and communication technology (ICT)**

Yu and Li-Hua (2010:1) define ICT as any communication device or application, including radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various associated services and applications. According to Nwachukwa (2007) information and communication technology is the application of computers and other technologies to the acquisition, organization, storage, retrieval and dissemination of information. ICT include electronic networks which embody complex hardware and software linked by a vast array of technical protocols (Adeya 2001:1). Gutlerman, Rahman, Supelano, Thies



and Yang (2009:34) and World Bank (2002) define ICT as hardware, software, networks and media for the collection, storage, processing, transmission and presentation of information (voice, data, text, and images) as well as related services. Osakwe (2012:39) states that ICT is an electronic device for managing and processing information with the use of soft and hardware to convert, store, manipulate, protect, transmit, manage, control and retrieve information for enhancement and productivity of personal and organizational activities.

#### **1.10.5 Libraries**

A library is a building or room containing a collection of books, records, photographs and so on, organized to facilitate consultation or borrowing by private individuals or the public (Crystal 2004:894). According to Prytherch (1995:377) a library is a collection of books and other literary material kept for reading, study and consultation. A place, building, room or rooms set apart for the keeping and use of a collection of books and so on. A library is a place in which books, manuscripts, musical scores or other literary and artistic materials are kept for use but not for sale. It is an institution oriented towards collections and their custody, where people may make use of the facilities (Sharma and Vishwanathan 2001:10).

Atkinson and Dhiensa (2007:1) define a library as a collection of books and journals. They elaborate further that the ready availability of books, journals papers, maps, artwork and other formats in libraries today allows the user to access a vast amount of information. This is further increased by electronic technologies that enable information to be stored in a range of formats.

#### **1.10.6 Library services**

Library services are the facilities provided by a library for the use of books and the dissemination of information (Prytherch 1995:387). For the purposes of this study the term refers to the facilities provided by the library to all users including people with visual impairments and in wheelchairs. These facilities include information resources which are in Braille and large print, assistive technology devices and a library design that includes lifts and ramps which allow people with visual

impairments and in wheelchairs to obtain access to the information resources housed in the library.

#### **1.10.7 Visual impairments and persons with low vision**

Visual impairment or blindness means people with vision less than 3/60 (0.05) or corresponding to visual field loss in the better eye with the best possible correction. Low vision in a person corresponds to vision less than 6/18 (0.3) but equal to or better than 3/60 (0.05) in the better eye with the best possible correction (World Health Organization 1997). In this study the term visual impairment is applied to the people who cannot read normal print or ink print (World Health Organization 1997). In the library context according to Kinnell, Yu and Creaser (2000:5) the term visual impairment refers to anyone who has difficulty in reading an ordinary font size on paper or on screen. For the purpose of this study the researcher adopts the definition of Kinnell, Yu and Creaser (2000). Visual impairment is the term used for people who have some degree of sight, but who have, for example, a limited range of sight and focus that cannot be easily corrected with spectacles, who are squint, who need special lighting to be able to see, who have blurred vision sometimes as a result of cataracts, or who have tunnel vision (Howell and Lazarus 2003).

The World Health Organization (WHO 1997) adds more detail and defines a person with low vision as one who has an impairment of visual functioning even after treatment, and/or standard refractive correction, and has a visual acuity of less than 6/18 to light perception or a visual field of less than 10 degrees from the point of fixation, but who uses, or is potentially able to use, vision for the planning and/or execution of a task. In this study a person with low vision refers to as one who cannot read materials which are not in large print and therefore he /she needs equipment like magnifiers or Closed Circuit Television to enlarge so he/she can read.

The difference between visual impairment and low vision in the context of this study is that the former cannot read normal print information resources except information resources which are in Braille while the latter needs a magnifier or Closed Circuit Television to enlarge the normal print information resources so that he/she can read.

#### **1.10.8 Wheelchairs and wheelchair users**

The World Health Organization (2008:11) defines a wheelchair as a device providing wheeled mobility and seating support for a person with difficulty in walking or moving around. The wheelchair has been the primary method of mobility for the majority of persons with physical or mobility impairments (Wisniewski and Sedlak 1992:306), that is a person who has difficulty in walking or moving around and uses a wheelchair for mobility (WHO 2008:11). User refers to people who already use a wheelchair or who benefit from using a wheelchair because their ability to walk is limited (WHO 2008:21). According to Moseid (2006) a wheelchair user is a person who is unable to walk because of a spinal injury for instance.

#### **1.11 The structure of the thesis**

This section highlights different chapters and components. The thesis contains eight chapters:

**Chapter one:** This chapter comprises the introduction and background to the research problem, statement of the problem, purpose and specific objectives of the study, research questions, significance of the study, assumptions of the study, scope and limitation of the study, methodology, ethical issues and definitions of key terms and concepts used in the study.

**Chapter two:** The chapter presents an overview of the history of Tanzania, a map and the study areas where the research was conducted.

**Chapter three:** This chapter provides theoretical framework and model used in the study, and gives a brief explanation of medical model and International Classification of Functioning (ICF) and the social model of disabilities used for the study.

**Chapter four:** This chapter provides a review of the relevant literature related to library services' provision for people with disabilities and the methodologies applied

in related research. The literature review is arranged in accordance with the main research problem and sub research questions and the model of disabilities used.

**Chapter five:** The chapter gives an account of the research methodology, procedures and methods used in the study which consist of the research design, area of the study, population, sample size and sampling techniques, data collection and instruments used, validity and reliability, pre-testing of research instruments, data collection procedures, data analysis and presentation of data, ethical issues and evaluation of the research methodology.

**Chapter six:** This chapter provides the results of the study. Data were presented in the form of figures and tables and the analysis was explained briefly.

**Chapter seven:** The chapter presents a discussion of the findings which resulted from the analysis of data presented in chapter six in relation to the research questions and the body of literature examined.

**Chapter eight:** This chapter provides a summary of findings, conclusion and recommendations based on research questions of the study and suggests areas for further research. In addition it puts forward a revised model. Appendices appear at the end of the thesis and they include letters related to the study, questionnaires, interview schedule and observation checklist.

## **1.12 Summary**

Chapter one laid down the foundation for other chapters. It provides the introduction and background to the research problem, statement of the problem, purpose of the study together with specific objectives and research questions. In addition this chapter presents the significance of the study, assumptions of the study and definitions of key terms and concepts used in the study. Furthermore the chapter discusses the delimitation of the study, methodology and ethical issues.

Key issues which emerged in this chapter are access to information being one of the most fundamental human rights and that library services should be universal to all users. In addition challenges facing people with disabilities in the society are discussed in this chapter. Furthermore initiatives taken by government and various notable organizations in different countries addressing issues of equal access to services, such as education, health, employment, and transport by people with disabilities were presented.

## **CHAPTER TWO**

### **CONTEXT OF THE STUDY**

#### **2.1 Introduction**

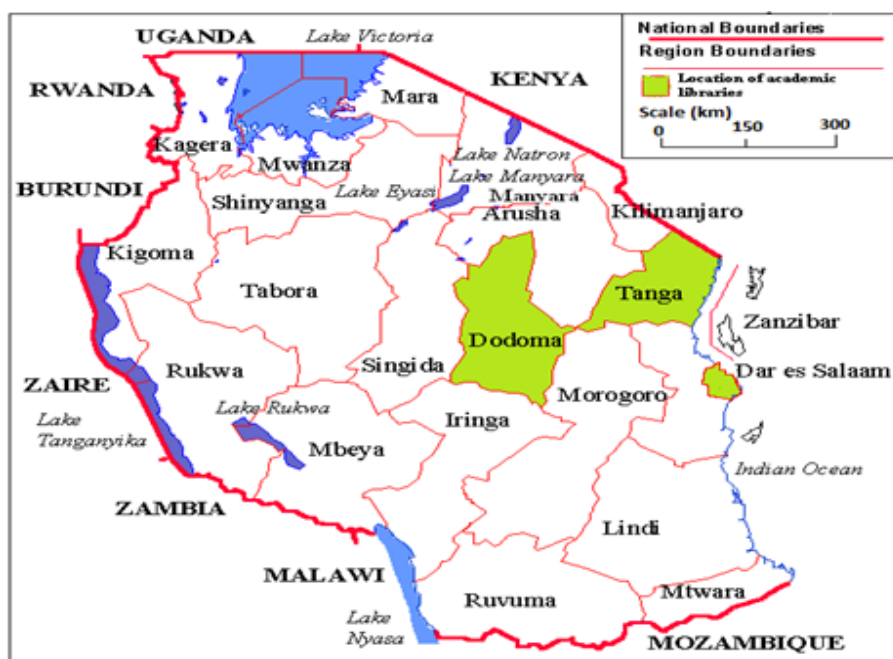
This chapter presents the area of the study, and includes an overview of the United Republic of Tanzania (URT), and then describes the climate, rainfall, population, government, parliament, judicial system, and economy. Figure 1 contains a map of Tanzania. The chapter also provides background information on the five universities as well as the ministry involved in the study.

#### **2.2 The area of the study**

The geographic scope of the study was limited to Tanzania, covering three administrative regions: Dar es Salaam, Dodoma and Tanga. The Ministry of Education and Vocational Training (MoEVT) as well as five universities in these regions were studied. These institutions are the University of Dar es Salaam, Open University of Tanzania (OUT), Dar es Salaam University College of Education (DUCE), St. John's University of Tanzania (SJUT) and Sebastian Kolowa Memorial University (SEKOMU).

##### **2.2.1 Overview of Tanzania**

The United Republic of Tanzania is in East Africa, bordered in the North by Kenya and Uganda, in the West by Burundi, Rwanda and Congo, in the South by Mozambique, Zambia and Malawi and in the East by Indian Ocean. It is the largest country in East Africa and covers 945,087 square kilometers. It includes the Tanzania Mainland and the Islands of Zanzibar (URT 2007a). Tanganyika and Zanzibar attained their independence in 1961 and 1963 respectively. They united in 1964 to form the United Republic of Tanzania (Nawe 2001:139).



**Figure 1:** Map showing location of regions selected for study  
**Source:** Map of Tanzania (United Republic of Tanzania 2011)

### 2.2.2 Climate and rainfall patterns

The climate in Tanzania varies according to the geographical location. In the coast regions and off-shore islands the average temperatures range between 27<sup>0</sup>c and 29<sup>0</sup>c, while in the Central, Northern and Western parts temperatures range between 20<sup>0</sup>c and 30<sup>0</sup>c and above between the months of December and March. In the Northeast and Southwest which are mountainous and include the Makonde Plateau, the temperature occasionally drops below 15<sup>0</sup>c at night during the months of June and July. In some parts (Southern Highlands) temperature can reach as low as 0<sup>0</sup>c – 6<sup>0</sup>c (United Republic of Tanzania 2007a).

The rainfall patterns in the country are subdivided into: tropical on the coast, where it is hot and humid (rainy season March – May): semi- temperate in the mountains with the short rainy season in November to December and the long rainy season in February to May and drier in the plateau region with considerable seasonal variations in temperature. The mean annual rainfall varies from 500 millimeters to 2,500 millimeters and above. The average duration of the dry season is 5 to 6 months. However, recently, a rainfall pattern has become much more unpredictable with

some areas/zones receiving extremely minimum and maximum rainfall per year (United Republic of Tanzania 2007a).

### **2.2.3 Population**

According to the Census of 2002, Tanzania had a population of 34.4 million people. Of these, 33.5 million or 97.1 percent lived in Tanzania mainland and 982,000 or 2.9 percent in Tanzania Zanzibar. The total population almost tripled between 1967 and 2002. In the most recent inter-censal period of 14 years from 1988 to 2002, the total population increased from 23.1 million in 1988 to 34.4 million in 2002, an increase of 11.3 million or 49.1 percent. The average annual rate of growth during this period was 2.9 percent (URT 2006). The census of 2012 showed that Tanzania had a population of 44,928, 923 people. Of these, 43,625,354 and 1,303,569 people reside in the Tanzania Mainland and in Zanzibar respectively (United Republic of Tanzania 2013b; Faustine's Baraza n.d).

### **2.2.4 The government**

The United Republic of Tanzania Executive comprises the President, the Vice-President, the President of Zanzibar, the Prime Minister and the Cabinet Ministers. The President of the United Republic is the Head of State, the Head of Government and the Commander-in-Chief of the Armed Forces. The Vice President is the principal assistant to the President in respect of all matters in the United Republic generally and in particular is responsible for assisting the President in following-up on the day to day implementation of union matters; performing all duties and functions of the Office of the President when the President is out of the office or out of the country. The Prime Minister of the United Republic is the leader of government business in the National Assembly and has authority over the control, supervision and execution of the day to day functions and affairs of the government. The Prime Minister also performs any matter or matters that the President directs to be done. The President of Zanzibar is the Head of Executive for Zanzibar, Head of the revolutionary Government of Zanzibar and the Chairperson of the Zanzibar Revolutionary Council. The cabinet, including the Prime Minister is appointed by the President from among members of the National Assembly. The Government



executes its functions through Ministries led by Cabinet Ministers. Each minister is charged with a sector portfolio (United Republic of Tanzania 2007b).

#### **2.2.5 The parliament**

The parliament is the third organ of the government. It is responsible for making laws. The parliament has authority on behalf of the people to oversee and advise the government of the United Republic of Tanzania and all its organs in the discharge of their respective responsibilities (United Republic of Tanzania 1998; 2007b). The National Assembly comprises members elected directly to represent constituencies. Other members of the National Assembly include the Attorney General, members nominated by the president with women members being not less than 15 per cent of the members of all categories on the basis of proportional representation among those parties in the parliament. The parliament is headed by the Speaker assisted by the Deputy Speaker and the Clerk of the National Assembly as Head of the Secretariat of the National Assembly (United Republic of Tanzania 1998; 2007b).

#### **2.2.6 The judiciary**

The judiciary in Tanzania comprises three organs; the Court of Appeal of the United Republic of Tanzania, the High Court for Mainland Tanzania and Tanzania Zanzibar, the Judicial Service Commission for Tanzania Mainland, Magistrates Courts and Primary Courts. The Judicial Services Commission for Tanzania Mainland consists of the Chief Justice of the Court of Appeal of Tanzania (Chairman); the Justice of the Court of Appeal of Tanzania; the Principal Judge of the High Court; and two members appointed by the President. The head of Judiciary is the Chief Justice, with the Registrar of the Court of Appeal as the Chief Executive Officer (United Republic of Tanzania 2007b).

#### **2.2.7 Tanzania's economy**

Tanzania's economy is highly dependent on agricultural productivity. Agriculture is the most important sector in Tanzania's economy. It employs nearly 80 percent of the work force population and accounts for about 50 per cent of the Gross Domestic Product (GDP) and 75 per cent of foreign exchange (Masilingi n.d). GDP growth is

estimated to have increased to 7.5 per cent in 2008 from 7.1 per cent in 2007. The increased GDP is mostly driven by the service economic activities which were expected to contribute 43.3 per cent to total GDP in 2008. Agricultural economic activities were expected to have grown by 3.3 per cent in 2008. This decline from the 4.0 per cent growth rate realised in 2007 reflects the sharp decrease in food crop production in 2008 caused by inadequate rainfall in some parts of the country. Livestock, hunting and forestry sub- activities are expected to have grown at a slightly higher pace as a result of improved livestock extension services, measures to curb the illegal export of logs, and reductions in licence fees for forestry and hunting (United Republic of Tanzania 2009).

### **2.3 The universities where the study was conducted and their libraries**

This section presents background information of all universities and their libraries involved in the study. These universities are university of Dar es Salaam (UDSM), Open University of Tanzania (OUT), Dar es Salaam University College of Education (DUCE), Sebastian Kolowa Memorial University (SEKOMU) and St. John's university of Tanzania (SJUT).

#### **2.3.1 The University of Dar es Salaam and the University Library**

The University of Dar es Salaam (UDSM) is the oldest and biggest public University in Tanzania. It is situated on the western side of the city of Dar es Salaam, occupying 1625 acres on Observation Hill, and is 13 kilometres from the city centre (Southern African Regional Universities Association 2012).

The University of Dar es Salaam was established on 1<sup>st</sup> July 1970, through the Parliamentary Act no. 12 of 1970 and all the enabling legal instruments of the constituent colleges prior to 1970. The University was first established as the College of Dar es Salaam on 1<sup>st</sup> July 1961. It was an affiliate college of the University of London. It had only one faculty, with 14 students. In 1963 it became a constituent college of the University of East Africa together with Makerere University College in Uganda and Nairobi University College in Kenya. Since 1961, the University of Dar es Salaam has grown in terms of student intake, academic units

and academic programmes (Southern African Regional Universities Association 2012).

The University of Dar es Salaam library is located within the university. It is the largest library in Tanzania which serves more than 7000 users comprising academic staff, researchers and students. It also serves a significant number of local users, ministries, research institutes and other institutions of higher learning, as well as regional and international researchers. The University of Dar es Salaam Library automated its services in 1998. About 90 percent of its manual catalogue database can be accessed electronically through the Online Public Access Catalogue. The library has also organized 12 faculty / departmental /institute libraries and has integrated the bibliographic information held by these libraries in a union catalogue in order to facilitate access to the information available on campus (Nawe 2003:419).

The mission of the library is to become the centre of excellence in information provision in the country, and to provide scholarly information resources to its current and future academic community to support the core functions of the university, which are teaching, research and service to the community. Currently the library has two sister libraries located at the two constituent colleges of the University of Dar es Salaam namely Dar es Salaam University College of Education (DUCE) and Mkwawa University College of Education (MUCE). The library provides technical expertise to college, school and departmental libraries established at the main campus (University of Dar es Salaam 2013).

Since its establishment, the University of Dar es Salaam has expanded not only in academic programmes but also in student enrollment. For example, student enrolment rose from 2000 in the 1980s to almost 10,000 in 2003 and currently it is over 15,000. Due to the changes that are taking place the library expanded its services and reading materials, both print and electronic. The library has about 600,000 volumes of books and 2, 800 journals of which 146 are current print journals, manuscripts, macro materials, and maps and so on. The library also subscribes to full text electronic journals and bibliographic databases. The latter two

items are made available at a price negotiated through the International Network for the Availability of Scientific Publications (INASP) under the Programme for Enhancement of Research Information (PERii) (University of Dar es Salaam 2012).

In addition the library has developed local content databases. Materials that are not available in the library can be obtained from other libraries through inter-library loan or electronic document delivery services. The library is a member of Database of African Theses and Dissertation Network (DATAD). To date the UDSM Library has contributed over six thousand records of abstracts of theses and dissertations to the DATAD database (University of Dar es Salaam 2013).

The new library organization structure has three departments namely Reader Services, Technical Services and Research and special collections. These are subdivided into sections; Acquisitions, Reference, ICT, Social Sciences, Science and Engineering, Law and East Africana. In addition to the provision of information services, the university library also conducts Library and Information Science training at Master's and PhD levels. Furthermore, senior library staff are also involved in teaching, research and consultancy services (University of Dar es Salaam 2013).

The University of Dar es Salaam Library is a National Depository of materials published in Tanzania and has a rich collection of Tanzanian publication materials which are housed in the East Africana Collection, including government and university publications. There is also a concerted effort to collect materials on Tanzania published outside Tanzania, which form the core of the East African Community, the Liberation Movement and the Southern African Development Community (SADC) (University of Dar es Salaam 2013).

### **2.3.2 The Open University of Tanzania (OUT) and the University Library**

The Open University of Tanzania (OUT) was established by an Act of Parliament in 1992, and officially launched in 1994. The establishment of OUT was based on the need to expand higher education. The need arose because of the high secondary

school output each year and the limited number of places in the existing universities. The Open University of Tanzania is the only institution offering degree courses through the distance learning system in Tanzania. Since 1994, distance education has been an integral part of the higher education system in Tanzania. The Open University of Tanzania offers degree courses in the following areas; art, commerce, science, law and education. The Open University of Tanzania's headquarters are located at Kinondoni area in Dar es Salaam (Msuya and Maro 2002:183).

The main library of the Open University of Tanzania is located at OUT's headquarters in Dar es Salaam. It provides library and information services to staff and students residing in Dar es Salaam. In those regions where there are branches of the Tanzania Library Services (Public library) the university has placed books and other reading materials. These collections are specifically for Open University of Tanzania students and are managed by Tanzania Library Services Staff. The University has established Information Units in all regional centres. Some reading materials and course manuals are placed there for the students. When the students join the university for the first time, they are issued with an information pack consisting of background information on the Open University of Tanzania. Regional centres also conduct orientation programmes every year to equip students with basic information on how to study through distance learning (Msuya and Maro 2002:185).

### **2.3.3 Dar es Salaam University College of Education (DUCE) and the University Library**

Dar es Salaam University College of Education (DUCE) was established as a constituent college of the University of Dar es Salaam through the Government Notice No. 202 published on 22<sup>nd</sup> July 2005, under section 55(1) of the University of Dar es Salaam Act No. 12 of 1970. The college is located at Chang'ombe near the National Stadium where the former Dar es Salaam Teachers College was located (UDSM 2007, Dar es Salaam University College of Education library 2013).

The college was established to address the acute shortage of graduate teachers and experts in the education sector in Tanzania which resulted from the expansion of

primary education enrolments through the Primary Education Development Programme (PEDP) and the creation of the new secondary schools through Secondary Education Development Programme (SEDP). The College comprises three faculties: Faculty of Humanities and Social Sciences (FoHSS), Faculty of Science (FoSc) and Faculty of Education (FoED) (UDSM 2007, Dar es Salaam University College of Education 2013).

Dar es Salaam University College of Education Library was established in September 2005, following the establishment of DUCE. It is a learning resource centre which provides various information resources and services to the community of the university to support learning, teaching, consultancy and the general pursuit of knowledge. The mission of the library is to satisfy the user's community information needs through developing relevant collection information resources in all formats such as print and electronic resources. Dar es Salaam University College of Education library has four sections: these are reader services; technical services; Information and Communication Technologies; and research, publication and training (UDSM 2007, Dar es Salaam University College of Education 2013).

Reader services promotes the welfare of the community users of DUCE. It makes sure that user's information needs are met through proper shelf arrangement, reference services, circulation of information resources, user guidance on the use of information resources and implementation of library rules and regulations. In addition it maintains user statistics, facilitates interlibrary lending services, stocktaking, library collection evaluation and marketing of services and information resources (UDSM 2012, Dar es Salaam University College of Education 2013).

Technical services deals with selection and acquisition, classification and cataloguing of information resources of the library, in addition it involves library collection development management and planning, weeding of information resources of the library, preserving and conserving library information resources by providing technical support such as book repairs, binding of newspapers and official gazettes (UDSM 2012, Dar es Salaam University College of Education 2013).

Information and Communication Technologies maintains library computers and coordinates internet services, develops reviews and implements the library ICTs policy and guidelines to ensure use and application of ICT facilities in the library. In addition it administers the library's Online Public Access Catalogue, bibliographical data entry and is also responsible for selection, acquisition and installation of library software and hardware. As well it maintains the website, blog and other library web based pages available on social networks (UDSM 2012, Dar es Salaam University College of Education 2013).

Research, Publication and Training is a section which prepares technical proposals for training and funding in the area of information management, designing and maintaining library newsletters, books and other document reviews, conducting research in the area of library use, organizing various training for the library staff and users of the library such as information literacy, customer care, editing and reviewing library documents (UDSM 2012, Dar es Salaam University College of Education 2013).

#### **2.3.4 Sebastian Kolowa Memorial University (SEKOMU) and the University Library**

Sebastian Kolowa Memorial University is in Lushoto, Tanga region, situated at Magamba in Usambara Mountains. SEKOMU started as a constituent college of Tumaini which then was called Sebastian Kolowa University College of Tumaini (SEKUCO). In February, 2006 renovation of Campus A started. On 6 July, 2007 the Tanzania Commission for Universities (TCU) granted Sebastian Kolowa University College a certificate of provisional registration and on 28 October, 2007 it was inaugurated. In October, 2008 the buildings of former Magamba secondary school started being used as Campus B. On 02 November, 2010 Tanzania Commission for Universities granted Sebastian Kolowa University College full registration. On 28 June, 2012 Tanzania Commission for Universities granted Sebastian Kolowa University College approval to be known as Sebastian Kolowa Memorial University (SEKOMU) (Sebastian Kolowa University College 2012).

On 28<sup>th</sup> October, 2007, the first students were received at Sebastian Kolowa University College and registered under the programme of Bachelor of Education Special Needs. Bachelor of Laws and Bachelor of Sciences in Eco-tourism and Nature Conservation were added in 2008/2009 and 2009/2010 academic years respectively. During the past four years, the number of registered students has been rising as follows: in 2007/2008, 138 students; 2008/2009, 438 students; in 2009/2010, 850 students; and in 2010/2011 there were a total of 1331 students (Sebastian Kolowa University College 2012).

Sebastian Kolowa Memorial University is a Christian University that offers all its programmes through the guidance of and obedience to the Word of God and by conducting and promoting higher education, learning, research and consultancy through scientific fact-finding and enquiry. Sebastian Kolowa Memorial University aims to develop “the potential and talent of everybody, including those who have disabilities”. Joining Sebastian Kolowa Memorial University is meant to be “a unique opportunity to learn that disability is not inability” (Sebastian Kolowa University College 2012).

Sebastian Kolowa Memorial University Library is located on campus B within the university. The library supports the core functions of the university which are teaching, research and consultancy. The library has a collection of 28,000 volumes of books, 1000 print journals and 2,000 audio visual materials such as CD-ROMS. The library also subscribes to full text electronic journals and databases (Sebastian Kolowa University College 2012).

The services provided by Sebastian Kolowa Memorial University Library are lending services, reference services, and current awareness services (CAS) and selective dissemination of information (SDI). In addition photocopy services and newspaper reading services are provided. The library can accommodate 420 users at a time (Sebastian Kolowa University College 2012).



### **2.3.5 St. John's University of Tanzania (SJUT) and the University Library**

St. John's University of Tanzania (SJUT) is located at the heart of Tanzania, in Dodoma, the capital and the seat of the parliament of the United Republic of Tanzania. Dodoma is also home to the headquarters of the Anglican Church of Tanzania. The main campus is located in Kikuyu area, about 1.5km southwest of the town centre on the Mtera-Iringa highway. The university also has a centre in Dar es Salaam; St Mark's Centre at Buguruni Malapa and centres within Dodoma Municipality; DCT Msalato Centre on the Dodoma to Arusha road to the north of Dodoma and sites within Dodoma town where the extension education programmes are based (St. John's University of Tanzania 2011).

The idea to establish and operate a university by the Anglican Church of Tanzania started at the Synod meeting held in 1999. Archbishop Donald Mtetemela emphasized the importance of establishing an Anglican Church University to provide higher education in a range of disciplines that would respond to Tanzania's need to eradicate extreme poverty, hunger and disease and thus provide greater life expectancy and quality to its people (St. John's University of Tanzania 2011).

The main campus library is located within the university. It is an essentially part of students' academic life and the general academic community as a whole. St. John's University of Tanzania library was moved to new premises in 2009, thus raising the seating capacity from 200 to over 500 readers at a time. The library serves a population of approximately 3,000 students as well as over 100 academic staff members and some external borrowers. The library has 110,000 volumes covering a diversity of scholarly information resources to meet the teaching and learning needs of both students and lecturers (St. John's University of Tanzania 2011).

Facilities offered by the library to the user's community are lending stock, a special reserve collection, reference collection and E-library. Lending stock refers to books which are borrowed for home reading. Special reserve collections are materials which are on high demand and are used within the library. The reference section contains materials which are for reference and not reading cover to cover such as

dictionaries, encyclopaedias, handbooks, manuals, atlases, directories, compendiums, almanacs and bibliographies. An e- library is the section which houses computers connected to the internet. The computers are intended for academic purposes only and users of the section are authenticated. There are 46 network ports available within the library for students to access the internet using their own laptop computers (St. John's University of Tanzania 2011).

## **2.4 The Ministry of Education and Vocational Training**

The Ministry of Education and Vocational training for Tanzania Mainland and the Ministry of Education and Vocational Training in Zanzibar coordinates education activities in Tanzania Mainland and Zanzibar respectively (United Republic of Tanzania 2008a).

The Government of Tanzania gives high priority to the provision of quality education to all Tanzanians given its fundamental role in bringing about the nation's, social, culture and economic development. This priority is emphasized in the National Strategy for Growth and Reduction of Poverty (NSGRP/ MKUKUTA II), the Tanzania Development Vision 2025, the Five Year Development Plan (5YDP), the Election Manifesto 2010, the Millennium Development Goals (MDGs), as well as Education for All (EFA) goals and other international commitments (URT 2012). The United Republic of Tanzania regards education as one coherent entity, from basic through to higher education. This vision is based on the reorganization of government ministries, decided in February 2008, when the Higher and Technical Education Divisions became part of the Ministry of Education and Vocational Training (MoEVT) (United Republic of Tanzania 2008b).

Tanzania's education sector includes pre-primary, primary, secondary, folk education, technical and vocational training, and higher education. All sub- sectors fall under the parent ministry, the Ministry of Education and Vocational Training (MoEVT) except for the folk education sub-sector which falls under the Ministry of Community Development, Gender and Children (MCDGC). The Ministry of Education and Vocational training is responsible for education policy formulation

and for following up on implementation, regulations, standard setting, quality control and assurance, examination administration, curriculum development and teacher education. The MoEVT is also responsible for education monitoring and evaluation of the entire sector performance, undertaking educational research, planning, coordinating education programmes and capacity building of education managers and practitioners for quality delivery of education at all levels (United Republic of Tanzania 2008b).

Within the MoEVT there is the Department for Vocational and Technical Education. In technical and vocational education (TVET), there are alternative educational and training opportunities available after primary, ordinary (O level) and advanced (A level) secondary education levels, which lead to careers as skilled workers, technicians and professionals who are able to work in different sectors of the economy. The focus is on imparting knowledge and skills that are necessary to enable youth to contribute to the social-economic development of their communities and to the country in general (United Republic of Tanzania 2008b).

Since February 2008, the whole education sector from primary to higher education was placed under one ministry (MoEVT). However, the delivery of pre-primary, primary and secondary education falls under the local Government Authorities directly accountable to the Prime Minister's Office-Regional and Local Government (PMO-RALG). Folk education focuses on the development and advancement of adult knowledge, skills and abilities to enable citizens to participate in democratic, economic and cooperate endeavours. Folk education also promotes knowledge and skills in agriculture, handicrafts, domestic science and health science. This serves to broaden the knowledge of the population as a whole, and also prepares adults for self-employment (United Republic of Tanzania 2008b).

The Ministry of Education and Vocational Training (MoEVT) comprises the Office for the Commissioner of Education and the following units: higher education division; technical and vocation education training division; adult and non-formal education division; teachers education division; school inspectorate division; special

needs education unit; diversity unit; education by media unit; school registration unit; pre-primary and primary education unit; secondary education unit; policy planning division; administration and human resource management division; procurement management unit; finance and account unit; internal audit unit; government communication unit; legal services unit; information and communication technology unit; National Commission for United Nations Educational, Scientific and Cultural Organization (UNESCO) and zonal and district offices (United Republic of Tanzania 2013a).

In the Ministry of Education and Vocational Training (MoEVT), the researcher investigated the special needs education unit because this unit was especially pertinent to the study as is the unit responsible for people with disabilities. The researcher wanted to find out if policy addressing the issue of disability on the use of library and its information resources had been formulated. In addition the researcher wanted to know if the ministry had data on people with disabilities enrolled in various universities and if they allocated a budget for academic library services for people with disabilities. Furthermore the researcher wanted to establish if they provided any training relating to people with disabilities for the purpose of making the community aware of all issues regarding people with disabilities. The researcher also wanted to identify challenges facing the unit in providing services to people with disabilities.

The Special Needs Education Unit was established in the office of the Commissioner for Education (CED) in 1989. The objective of the unit is overseeing and coordinating special education programmes carried out by all departments in the MoEVT. The roles and functions of the unit are the planning and supervision of expansion and consolidation of special needs education services; planning and supervision of assessments and placement of learners with educational needs; co-ordination of examinations and selection of learners with special education needs (to join secondary and higher learning institutions); co-ordinating of curricula and training programmes for learners with special needs; recommending and ordering of equipment and materials for learners with special education needs; liaising with

associations of and societies for learners with special education needs, co-ordinating programmes for house parents and teacher aids; printing and distributing text and supplementary books in Braille for the blind and learners with low vision; preparing and distributing teaching and learning materials for learners with special needs; liaising with other ministries, departments and donor agencies which help in the provision of special needs education service in the strengthening and expanding special needs education services as well as advising the commissioner for education (CEO) and other ministerial departments on matters concerning special needs education (United Republic of Tanzania 2013a).

The special needs education unit in the Ministry of Education and Vocational Training (MoEVT) is currently providing educational services for learners with special needs through special schools, integrated units and inclusive schools for the following categories of learners with disabilities; the blind and visually impaired, the deaf and hearing impaired, the intellectually impaired/mentally handicapped, the physically handicapped, the deaf and blind, autistic children and albinos (United Republic of Tanzania 2013a).

The researcher investigated all the above universities and the Ministry of Education and Vocational Training regarding library services' provision for people with visual impairments and in wheelchairs. The study investigated the layout of library buildings, access to the key facilities, the resources available, and staff equipped to assist such patrons. In these university libraries and ministry, library staff, staff of the disability unit, library directors, and people with visual impairments and in wheelchairs were involved in the study. Either questionnaires or interview schedules were used as well as observation to collect data. Having surveyed these universities and ministry staff the researcher was able to know which facilities were provided by the libraries and challenges facing people with visual impairments and in wheelchairs and to come up with suggestions and recommendations regarding the challenges facing these groups.

## **2.5 Summary**

This chapter provides an overview of Tanzania, background information on the five universities involved in the research study. The chapter briefly explained the special needs education unit in the Ministry of Education and Vocational Training (MoEVT), its objectives and roles and functions relating to people with disabilities. In addition the chapter presents the categories of learners with disabilities in which the unit is involved in the provision of educational services.

## **CHAPTER THREE**

### **THEORETICAL FRAMEWORK AND MODEL**

#### **3.1 Introduction**

This chapter provides the theoretical foundation for the study and the model used. The presentation of the theoretical framework for the study covers the research paradigm and approach used as well as the model selected; the social model of disability and the International Classification of Functioning.

#### **3.2 The theoretical framework and model used in the study**

A theoretical framework is a general theoretical system with assumptions, concepts and specific social theories (Neuman 2006:74). In a similar vein Brink, van der Walt and Van Rensburg (2012) claimed that, a theoretical framework is based on propositional statements resulting from an existing theory. Manda (2002:95) states that theoretical definitions (that is conceptualization) of the key concepts are an integral component of the development of theories in any discipline and consequently central to any scientific research. Therefore the theoretical framework provides an orientation to the research study, and positions the research in the discipline or subject to reflect the research goals (Henning, van Rensburg and Smit 2004:25). The purpose of a theoretical framework is to make research findings meaningful and generalizable. They help to stimulate research and the extension of knowledge by providing both direction and impetus (Polit and Beck 2004:119).

Creswell (2009:51) defines theory as an interrelated set of constructs (variables) formed as propositions or hypotheses that specify the relationship among variables. A theory may be viewed as a system which orders concepts in a way that produces understanding or insights. A theory includes more than one concept and links the concepts together (Welman, Kruger and Mitchell 2005:21). Theory is a set of interrelated constructs (variables), statements, definitions and propositions that present a systematic view of a phenomenon by specifying relations among variables, with the purpose of explaining natural phenomenon (Kerlinger 1973:64; Welman, Kruger and Mitchell 2005:21). The theoretical perspectives that guided this study are presented in section 3.2.2.

A model is frequently described as a symbolic depiction of reality. It provides a schematic representation of certain relationships among phenomena, and it uses symbols or diagrams to represent an idea. A model helps us to structure the way we can view a situation, event or group of people (Brink, van der Walt and Van Rensburg 2012:26). A model can be simple, and sometimes a simplistic representation to help grasp the more difficult properties of a real life situation, or to explain or interpret a phenomenon (Shava 2008). It possesses five different characteristics, namely: levels of analysis, boundaries, specificity, a construct relationship statement and assumptions. A good model can enable us to see something which we do not understand because in the model it can be seen from different viewpoints (not available to us in reality) and it is this multidimensional replica of reality that can trigger insights which we might not otherwise develop (Finkelstein 2002:13 cited in Barnes and Mercer 2004:3). According to Krishnaswami and Ranganatham (2010:16) a conceptual or theoretical model is a simplified systematic conceptual structure of the interrelated elements of a body of knowledge in some schematic form such as a narrative statement or mathematical equation. It describes relationships between and among concepts and variables. The social model of disability of Oliver (1990) used in this study is presented in section **3.2.4**.

### **3.2.1 The use of a theoretical framework in quantitative and qualitative methods studies**

In quantitative studies, theory is used deductively and the relevant theory is placed towards the beginning of the plan for the study (Creswell 2009:55). When quantitative research is performed within the context of a theoretical framework, is when previous theory is used as a basis for generating predictions that can be tested through empirical research, the findings may have a broader significance and utility (Polit and Beck 2004:49 ). The objective is the testing or verifying of a theory rather than developing it. The researcher advances a theory, collects data to test it, and reflects on its confirmation or disconfirmation by the results. The theory becomes a framework for the entire study, an organizing model for the research questions and/or hypotheses and for the data collection procedure (Creswell 2009:55).



Qualitative methods use theory as an inductive process for building from the data to broad themes to a more generalized model or theory (Creswell 2003:133). The participants' input is the starting point from which the researcher begins to conceptualize, seeking to explain patterns, commonalities and relationships emerging from researcher-participant interactions. In other words the researcher uses information from the participants inductively as the basis for developing a theory firmly rooted in the participants' experiences (Polit and Beck 2004:29). The researcher begins by gathering detailed information from participants and changes this information into categories or themes. These themes or categories are developed into broader patterns, theories or generalizations that are then compared with personal experiences or with the existing literature on the topic. The development of themes and categories in patterns, theories or generalizations suggest varied end points for qualitative studies (Creswell 2003:133). This study used both quantitative and qualitative research methods because the nature of the study demands a combination of approaches to soliciting and analyzing data. Ngulube (2005:131) states that both qualitative and quantitative methods have something to offer. Respondents with visual impairments were more easily interviewed while those in wheelchairs, the disabilities unit and library staff were thought to prefer to answer a self-administered questionnaire in their own time.

### **3.2.2 The theoretical perspectives that guided the study**

This research was conducted within the paradigm of pragmatism. Babbie and Mouton (2001) define a paradigm as a model or framework for observation and understanding, shaping both what we see and how we understand it. A paradigm is a way of looking at natural phenomena that encompass a set of philosophical assumptions and that guide one's approach to enquiry (Polit and Beck 2004:13). According to Creswell (2009:10) pragmatism is a world view arising out of actions, situations and consequences rather than antecedent conditions. It concerns the application of what works and in finding solutions to problems. Punch (2009:291) explains that pragmatism has two implications: firstly, the research question(s) is more important than the method used or the paradigm underlying the method and secondly, the decision regarding the use of either qualitative, quantitative methods or

mixed methods depends on the research questions being asked. Therefore the researcher used this paradigm because the intention was to solve the problem concerning what challenges people with visual impairments and wheelchairs face in seeking to access information in academic libraries in certain Tanzanian institutions by applying different approaches to data gathering. In this study the main research question together with subsidiary questions were put forward to answer the research problem. Both quantitative and qualitative research methods were used to gather information because the nature of the study demands a combination of research methods and comes up with suggestions about how to address the challenges facing people with visual impairments and in wheelchairs in accessing information resources in these libraries in Tanzania.

### **3.2.3 Medical and social model of disability**

The prevailing model of disability has gone through a transitional gradual shift during the last thirty years from a medical to a social model of disability. This shift is of extreme importance as the two models represent two opposing approaches. The shift also relates to activities on the international level where the United Nations has, since the Second World War, developed a comprehensive global human rights' system. The human rights' influence is evident in the social model of disability (Grobbelaar-du Plessis and van Reenen 2011: xxiii).

#### **3.2.3.1 Medical model of disability**

Historically disability has been regarded as a health and welfare issue. Medical and social interventions were taken care of by medical practitioners and welfare associations and the care and treatment of persons with disabilities was the responsibility of civil society (Grobbelaar-du Plessis and van Reenen 2011: xxiii).

The medical model is based on scientific views and practices, typically in the medical and health knowledge base. The "problem" is located within the body of the individual with a disability. The context of the medical model is the clinic or institution. People with disabilities assume the role of patient, a role that may be of either short-term or long-term duration depending on several factors, including the

individual's condition, policies related to institutionalization and community support, and professional and social attitudes about disability. Authority lies with the professionals (Seelman 2004).

According to World Health Organization (2002) the medical model views disability as a feature of the person, directly caused by disease, trauma or a health condition, which requires medical care provided in the form of individual treatment by professionals. Disability, in this model, calls for medical or other treatment or interventions, to "correct" the problem with the individual. According to Chitereka (2010) the medical model of disability tends to view people with disabilities first and foremost as having physical problems to be addressed. People with disabilities are treated by professional experts where the desired effect is a cure. This model basically focuses on the lack of physical, sensory or mental functioning, and uses a clinical way of describing an individual's disability.

From the above discussion it can be seen that the focus of the medical model was to cure people with disabilities. This was undertaken by medical professionals and not by creating an environment which allowed them to participate fully in society. This approach is regarded as limiting by the researcher because people with disabilities can participate in and contribute to society if the environment created by others allows them to do so. However at the same time it is important to note that the impairment will not be cured by enabling changes to the environment. This remains the task of medical professionals.

The medical model of disability also faces criticism from people with disabilities whose philosophy is that a disability is a social construction rather than a viewpoint that seeks to "fix" a person or to separate him or her from the rest of society. In addition, the medical model of disability has been rejected by people with disabilities because they argue that it results in emotions such as fear or pity because society has not recognized the needs of people with disabilities as "rights." Where their needs have been met, it has often been through charitable giving that reinforces the idea of people with disabilities as passive recipients (Ndinda 2005).

### **3.2.3.2 Social model of disability**

The social model of disability re-defines disability as a social construct which emphasizes the relationship between law and disability. That means the relationship of disability and law should determine how effectively the law protects the rights of those with disabilities in all aspects of society. In addition the social model of disability shows that environmental barriers, prejudices and exclusions from society eventually determine who is regarded as disabled and who is not (Grobbelaar-du Plessis and van Reenen 2011: xxv).

The social model of disability has been used by people with disabilities in their campaigns for anti-discrimination legislation and independent living. The model has also been used to analyze the way in which societal structures create barriers which exclude people with disabilities (Newton, Ormerod and Thomas 2007:611). With this model, responsibility for the rights of those with disabilities lies with society; it recognizes that there are various social and physical challenges which hinder the lives of people who have disabilities. In relation to this assertion, Radermacher (2006:20) claimed that impairment is something imposed by environmental structures and the implications of how society reacts to people with disabilities and intervenes in their lives. In practice it means that interventions may have to focus on removing challenges in society to accelerate the facilitation of access to all sorts of amenities for people with disabilities in the communities.

The focus of the model is on the community's conception of disability that must be changed and not primarily on the treatment of the person's disability. This approach requires a mind shift within the community with regard to obvious shortcomings within the community. For instance, environmental challenges such as the inadequate design of common appliances, inaccessible buildings, limited alternative means of communication, and the inability of schools and similar public institutions to accommodate and manage the different forms of disability (Grobbelaar-du Plessis and van Reenen 2011:xxv). Grobbelaar-du Plessis and van Reenen further claimed that the successful implementation of the social model of disability requires the realization that it is necessary to organize society in such a manner that the

aspirations of people with disabilities are able to develop within an inclusive framework. In the same vein Mackelprang and Salsgiver (2009) insist that a social model considers a need for assistance to be a part of human existence for all people. No one person is completely independent in today's society.

### **3.2.3.3 The human rights perspective on disability within the social model of disability**

Worldwide disability policy has changed its focus from the functional recovery of people with disabilities to the guaranteeing of human rights and social participation by this group of persons. Approaches to ensure the human rights and social participation of people with disabilities have been made since 2000. These include the adoption of the United Nations (UN) Convention on the Rights of Persons with Disabilities, and the launch of the regional Decade of Persons with Disabilities (Yokoyama 2012:23).

Human rights are moral and legal entitlements which are fundamental to people's well-being, dignity and the pursuit of their full potential (Mikkelsen 2005:201 cited in Meredith 2009: 28). In relation to this assertion the human rights approach typified by Disability Rights Promotion International (2008:1) cited in Caga (2011 : 8) views disability as a human rights issue, emphasizes that people with disabilities are holders of rights, not objects of charity and are entitled to enjoy the same rights and freedom as all other people. As the construct of disability shifted from a medical to social model, disability issues shifted from care and welfare to human rights and the new paradigm began to be reflected in the international literature and the international human rights framework (Meredith 2009:28).

The human rights perspective within the social model of disability focuses on the essential human dignity of people with disabilities. This emphasis on human dignity is indicative of the essential value of people with disabilities who are seen as being on an equal footing with all other people. This view implies that the "problem of disability" does not lie with the people with disabilities but with the absence of equal protection, which must be afforded to all. The solution to the problem of the

formerly limited option of those with a disability must be found in communities (Grobbelaar-du Plessis and van Reenen 2011: xxvi).

In addition the human rights' perspective requires a community that is inclusive and respects human dignity and guarantees equality, notwithstanding differences. It is therefore obvious that the social model of disability also has human rights' implications which include respecting human dignity and guaranteeing the equal treatment of people with disabilities (Grobbelaar-du Plessis and van Reenen 2011: xxvi). Based on the social model of disability access to information is a human right and academic libraries, in providing for these rights should make sure that information resources housed in the library are accessible to people with disabilities, such as those with visual impairments and in wheelchairs. In relation to this assertion The Gaborone Declaration (1994:143) cited in Kiondo (1998:83) claimed that access to information services is a basic human right. Governments should ensure that this right applies to all citizens and especially to rural communities, the disadvantaged, disabled and the illiterate.

#### **3.2.3.4 The International Classification of Functioning (ICF) model**

The ICF Model is an interactive model that focuses mainly on health and functioning rather than disability. It is a tool for measuring functioning in society. It is broader than the medical and social model of disability and emphasizes the level of health rather than the individual disability. The ICF model is used as a framework to measure health needs, health of populations, health policies, and research and clinical needs. The ICF model has been developed to address the inadequacies of the two major models in disability, the medical and the social models. The medical model has been criticised for being too personal and personalizes disability as an individual problem, while the social model is criticized as seeing disability only from a social perspective. The ICF model therefore perceives disability as an interaction of personal and societal factors and thus argues that both personal and medical responses are appropriate. The ICF model synthesizes and integrates the medical and social models of disability to describe relationships in which various factors can operate on an individual's impairment. It expands the number of factors affecting the

individual to include the larger society. The integration of the medical and social models gives rise to the term **biopsychosocial** model. This model provides different perspectives of health, biological, individual and social aspects of disability. In a nutshell the **biopsychosocial** model views disability as the outcome of interaction between health conditions and contextual factors. The ICF model can therefore be used at different levels: individual (for example treatment, communication); institutional (for example education, training, resource development) and societal (for example social benefits; social policy and needs assessment in general).

### **3.2.3.5 The International Classification of Functioning (ICF) model and the social model of disability**

According to the International Classification of Functioning model and the social model, disability arises out of the interaction between functional limitations and an unaccommodating environment. In the ICF model people are not identified as having a disability based upon a medical condition, but rather are classified according to a detailed description of their functioning within various domains: body function and structure, activities, and participation (Mont and Loeb 2008:2).

Body structure and function is the domain most closely related to the medical model as it refers to the physiological and psychological functions of body systems. Body structures are defined by the ICF as anatomic parts of the body such as organs, limbs and their components. This domain relates to very specific capabilities, for example being able to lift one's arm over one's head or produce articulate speech sounds (Mont and Loeb 2008:2).

Activities pertain to a wide range of deliberate actions performed by an individual. They are basic deliberate actions undertaken in order to accomplish a task, such as walking or climbing stairs. Participation refers to activities that are integral to economic and social life and the social roles that accomplish that life, such as being able to attend school or hold a job (Mont and Loeb 2008:2).

### **3.2.4 The model adopted for the study**

This study is grounded in the social model of disability of Oliver (1990) and builds on the ideas of the United Kingdom (UK) Union of the Physically Impaired Against Segregation (UPIAS) founded in the mid-1970s, while drawing on the ICF model. Barnes (1998) cited in Shava (2008) also supports the view that

the solution to the problem of disability lies in changing society. This can be achievable through the principle of universal design. Universal design relates to measures which simplify life for everyone by making products, communications and the built environment more usable by as many people as possible at no extra cost (Barnes 1998 cited in Shava 2008:17).

This design may include “constructing ramps alongside stairs, installing automatic doors, providing information in Braille and other accessible formats, providing appropriate accessible technology and putting in place many other measures that will ensure the empowerment and full inclusion of disabled people in mainstream society” (Shava 2008:17).

In the same vein Barnes and Mercer claim that

the social model is not about showing that every dysfunction in our bodies can be compensated for by a gadget, or good design, so that everybody can work an 8-hour day and play badminton in the evenings. It’s a way of demonstrating that everyone, even someone who has no capacity for movement, no sensory functionality and who is going to die tomorrow, has the right to a certain standard of living and to be treated with respect (Barnes and Mercer 2003:13).

Oliver states that

the social model depicts all the things that impose restrictions on people with disabilities; ranging from individual prejudice to institutional discrimination, from inaccessible public buildings to unusable transport systems, from segregated education to excluding work arrangements, and so on. Further, the consequences of this failure do not simply and randomly fall on individuals



but systematically upon people with disabilities as a group who experience this failure as discrimination institutionalized throughout society (Oliver 1996:33).

The starting point for the social model was the publication of *Fundamental Principles of Disabilities* by the Union of the Physically Impaired against Segregation (UPIAS) in 1976. It stated that:

In our view it is society which disables physically impaired people. Disability is something imposed on top of our impairments by the way we are unnecessarily isolated and excluded from full participation in society (UPIAS 1976 in Oliver 2004:19).

Oliver (2004:19) turned understanding of disability completely on its head by arguing that it was not impairment that was the main cause of the social exclusion of people with disabilities but the way society responded to people with impairments. Scotch (2009:173) states that all people with disabilities experience disability as a social restriction, whether those restrictions occur as a consequence of an inaccessibly built environment, perceived questionable notions of intelligence and social competence, the inability of the general population to use sign language, the lack of reading materials available in Braille or hostile public attitudes to people with non-visible disabilities.

Thanem argues that

The social model defines disability as social oppression caused by social and material barriers in the environment. Thus it assumes that disability is socially constructed and that people with disabilities are subjected to how power relations in social, institutional and material environments are played out. Conversely, it assumes that the experience of disability can be alleviated by removing barriers in the social and material environment (Thanem 2008: 586).

Therefore the social model

interprets disability not as a result of impairment but as a direct consequence of the failure of society to take account of the differing needs of people with disabilities and remove the challenges they encounter. These challenges range from (but are clearly not limited to) individual prejudice to institutional discrimination, inaccessible public buildings to unusable transport systems, segregated education to excluding work arrangements (Shava 2008:16).

For Seelman (2004) the social model is based on

knowledge of the experience, views and practices of people with disabilities. The model locates the problem within society, rather than within the individual with a disability. From the perspective of the social model, disability is conceived more as diversity in function or the result of discrimination in policies, practices, research, training, and education. Individuals with disabilities are the authorities. They assume a range of roles, especially the advocate role, to pursue full expression of educational and employment opportunities and citizenship. Rules are determined within a framework of choice and independent living with strong support from organized disability communities.

With this model people with disabilities are viewed as having the capacity to contribute meaningfully to social development and society is blamed for imposing cultural, material, structural and attitudinal challenges that prevent them from reaching their potential. The model advocates equal rights and opportunity for people with disabilities in terms of access to education, health services, employment, information and other public services (Babalola and Haliso 2011:143). In the same vein Carson (2009:9) claimed that the social model of disability is about the barriers that people with disability face, for example, as a wheelchair-user cannot climb stairs, a ramp or a stair lift should be fitted. If people with visual impairments cannot read written information then the solution is to provide an alternative format such as audio or Braille.

Therefore according to the social model of disability, in the higher education context academic libraries should remove all barriers which hinder access to information and create an environment which allows equal access to the information housed in the libraries. To enable access to information libraries should have a lift and ramps for people in wheelchairs together with information resources which are in large print and Braille for people with visual impairments. In line with this Todaro (2005:254) believed that the creation of the Braille system library would allow people with visual impairments to enhance their intellectual awareness to be better able to face difficulties in life. The social model of disability demands a political response as the problem is created by an unaccommodating physical environment brought about by attitudes and other features of the social environment (WHO 2002). WHO (2002) further illustrates that:

- A man with two fingers on one hand has no impairment, but this becomes a disability when he is expected to use a swipe card to enter a locked room in the library.
- A blind woman experiences a disability if important study materials are only available in print form and the library cannot or will not provide her with the necessary texts in Braille or audio formats.
- A man in a wheelchair does not experience a problem until he arrives at steps leading up to the library's front door; and
- A female student with poor hearing but the ability to lip read receives poor service if a library staff member turns away while speaking to her so that she cannot see the staff member's lips.

The focus of WHO (2002) is on society removing all the barriers which hinder access to those services by creating an environment which allows people with disabilities to access all services without any challenges. Therefore academic libraries should create an environment which is suitable for people with visual impairments and in wheelchairs in terms of the information resources and layout of the library buildings, and which allow access to the information housed in the library.

In addition WHO (2002), through its International Classification of Functioning, seeks to shift the focus from cause to impact. It is not a disability that affects an individual, it is that person's interaction with the environment that causes the problem. As a result, in the social model the problem of disability is a creation of society and not an attribute of the individual. This is why some people say that they are not disabled, rather they have impairment. They only have a disability when they try to do something that the standard-built environment makes difficult for them, and this "applies in a library as much as anywhere else" (Hernon and Calvert 2006:4).

Hutchinson et al. (1998) cited in Caga (2011:5) who confirms the view that the social model of disability recognizes the fact that individuals may have impairments but many problems experienced are located in the way the environment is organized. Hutchinson further explains that within the ideology of the social model, the following are required for people with disabilities to function optimally:

- The removal of physical and environmental barriers;
- The changing of attitudes and;
- The absence of institutional barriers.

The White Paper on Integrated National Disability Strategy, South Africa (1997) cited in Caga (2011:5) concurs with the above and indicates that the social model of disability implies a paradigm shift in terms of how we construct disability. The paper highlights the following principles of the social model:

- It is the stairs leading into a building that disable the wheelchair users rather than the wheelchair;
- It is defect in the design of everyday equipment that cause difficulties, not the abilities of people using it;
- It is society's lack of skill in using and accepting alternative ways to communicate that excludes people with disabilities;
- It is the inability of the ordinary schools to deal with diversity in the classroom that forces children with disabilities into special schools.

The social model emphasizes two things: the shortcomings of society in respect of disability and the abilities and capabilities of people with disabilities (Caga 2011:

6).The focus of the social model of disabilities is to change the negative attitude of society towards people with disabilities to a positive attitude and create an environment which simplifies life for them and allows participation in all aspects of the community's activities.

The social model of disability “perceives disabled people not as individual victims of tragedy, but as collective victims of an uncaring oppressive society. In accordance with this model, environmental challenges like lack of lifts, steps, narrow doorways are examples of this social construction of disability; they are what limit persons with functional impairments, not the impairments themselves” (Oliver 1990 cited in Chitereka 2010:84-85). The social model proposes that “systematic challenges, negative attitudes and exclusion by society, purposely or unintentionally, are the ultimate factors defining who is disabled and who is not in a particular society” (Oliver 1990 cited in Chitereka 2010:85). This model therefore focuses on the changes required in society. These might be in terms of:

- Attitudes, for example, a more positive attitude towards certain mental traits or behaviours, or not underestimating the potential quality of life of those with potential impairments;
- Social support, for example dealing with the above challenges, resources, aids or positive discrimination to overcome them;
- Information, for example using suitable formats such as Braille or the simple form of a language and explaining issues others may take for granted;
- Physical structures, for example buildings with sloped access and elevators (Chitereka 2010:85).

From the above discussion it can be seen that the emphasis of the social model of disability is on the society which has to change its attitude towards people with disabilities by creating an environment which is inclusive, in the sense that people with visual impairments and in wheelchairs are not discriminated against in any way in their daily lives. This change involves providing information which is in a format suitable for their needs, as well as building an infrastructure which allows access to

the information resources required by them. In relation to this Kerkmann and Lewandowski (2012:609) claim that “inclusion is the guiding idea of the disability rights movements. It denotes active welcoming and support for the participation of people with disabilities rather than their physical presence alone. In addition it suggests that barriers in physical and digital environments should be removed as well as social attitudes being changed”.

The main criticism of the social model is that, taken to an extreme, it suggests that disability would be eradicated if society was changed in the appropriate ways. For example, it has been seen to imply that people with disabilities could do any job if attitudes changed, the environment was accessible and work was organized appropriately. It also does not acknowledge the limitations which may result from impairment (for example pain) that no amount of change to the social context could remove (Chitereka 2010).

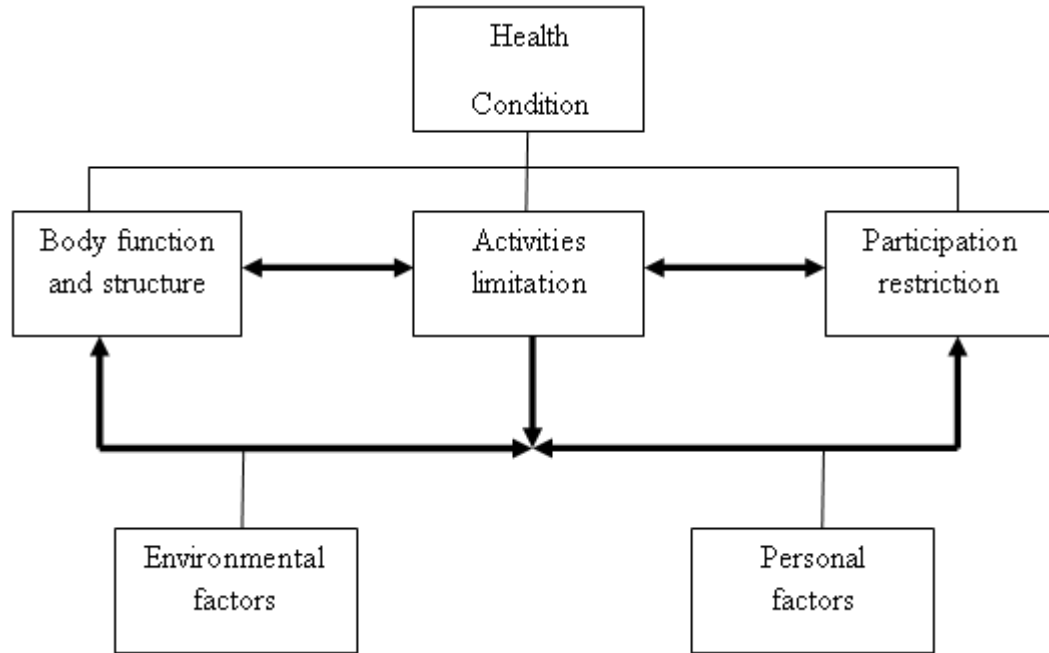
Shava (2008) argues that the social model does not suggest that if all the barriers were removed, impairments would disappear. He acknowledges that there are some impairments that affect the daily lives of some people with disabilities which may therefore require medical intervention from time to time, but he strongly argues that, in this model the emphasis is on the real challenges which affect participation and people with disabilities’ right to choose and control their own lives. In a similar way, the social model “requires all societies to think about the things we have in common, and the challenges that we all face. Of course, some of those challenges are impairment specific: for example, people with visual impairments might have information challenges; people in wheelchairs might have access challenges, deaf people - communication challenges and so on” (Barnes and Mercer 2004:25-26). There is a great deal of support for the approach embodied in the social model. For instance, Joint (2005:449) agrees that the social model of disability does not attribute disability as a problem to the individual, but rather sees it as a result of society refusing to adapt itself to the nature of certain groups (“the disabled”) who therefore become socially excluded. Libraries are part of society and can contribute to a

disabling environment. Libraries therefore also have a part to play in empowering the disabled to take their full and rightful place in community life.

The social model was developed in the context of people with disabilities campaigning for change in societal attitudes. The model focuses on the need for society to change policies and attitudes, and to eliminate economic discrimination against people with disabilities. The social model has undoubtedly been the dominant model in searching and understanding disability in recent years: “redefining disability in terms of a disabling environment, repositioning people with disability as citizens with rights, and reconfiguring the responsibilities for creating, sustaining and overcoming disablism” (The Open University 2008 in Seyama 2009:22). The Glasgow City Council supports the social model of disability (Union of the Physically Impaired Against Segregation 1976) recognizing that people may be denied access to full participation in society as a result of barriers created by, for example attitudes, organizational arrangements and the physical environment, rather than by specific impairments (Beaton 2005:473).

In the same vein moving to the policy frameworks that guide the environment of the current study, the 1977 Constitution of Tanzania states that all human beings are born free and are all equal and entitled to recognition of respect for this dignity. The document further explains that no person shall be discriminated against by any person or any authority acting under any law or in the discharge of the functions or business of any state office. In addition the Convention on the Rights of Persons with Disabilities, 2006 ratified by Tanzania in 2009, promotes, protects and ensures the full and equal enjoyment of all human rights by persons with disabilities. Furthermore the convention marks a shift in thinking about disability from a social welfare concern to a human rights issue, which acknowledges that societal barriers and prejudices are themselves disabling. Moreover, it does not create new rights; rather, it addresses the needs of the people with disabilities in a more special way (Mpandikizi and Maro 2010:92).

Based on the above discussions the social model of disability and International Classification of Functioning are applicable to the study because the emphasis are placed on universal access and captures the complexity of the relationships and circumstances around disability. These factors are depicted in Figure 2 which presents the ICF model.



**Figure 2:** International Classification of Functioning model (World Health Organization 2001:18)

The International Classification of Functioning (in Mackenzie, Hurst and Crompton 2009) describes disability as a complex set of relationships in which various factors can impact on an individual's impairment, both directly and indirectly; it also expands the number of factors affecting the individual to include the larger society. These factors include; the everyday activities the individual undertakes (**activities**); individual characteristics, such as education, income, family and friends, motivation and so on (**personal factors**); their involvement in social and community relationships and events (**participation**); and their general environment, which includes the physical, social, financial and political elements that makes it easier or harder to function day-to-day (**environment**).



The driving force behind the social model of disability is to include people with disabilities in society by removing barriers which hinder their access to services. Therefore libraries, as part and parcel of society, should remove all barriers which hinder access to information. As noted, this model requires the provision of alternative formats for materials. In addition the social model of disability requires library buildings to be accessible to people with visual impairments and in wheelchairs. Libraries should have disabled parking spaces, disabled toilets, shelves which allow people with wheelchairs to locate documents, automatic doors and so on.

Therefore the social model of disability of Oliver (1990) was adopted to guide the current research study and used the International Classification of Functioning (ICF) framework to address the research problem in the context of the library. The researcher used the ICF framework because deviation or loss of organs of people with visual impairments and in wheelchairs could not be removed by the social model of disability. The social model of disability focuses on a more general view of society and the need to remove barriers which hinder access to facilities by people with disabilities. This focus applies to all aspects of communities for example, access to health, education, employment, transport, information and other social services. The researcher used this model in the library context to address the research problem because of its focus on removing barriers to access. The social model of disability was tested in the context of the study and a new non-recursive interactive model was suggested and presented in chapter eight section **8.7.1**

### **3.3 Summary**

This chapter presented the theoretical framework and model used in the study, the use of a theoretical framework in quantitative and qualitative methods studies, theoretical perspectives that guided the study, medical model of disability, social model of disability, the human rights perspective on disability within the social model of disability, the International Classification of Functioning model, the International Classification of Functioning model and the social model of disability and the model adopted for the study.

## **CHAPTER FOUR**

### **LITERATURE REVIEW**

#### **4.1 Introduction**

This chapter provides a review of the literature, comprising published and unpublished theoretical and empirical reports, theses, dissertations, books, and journal articles in both print and electronic resources from international, African and Tanzanian sources. The literature review was organized in accordance with the main research problem and sub research questions. It covers the following issues: library services' provision for people with visual impairments and in wheelchairs, the layout of library buildings together with the information resources for people with visual impairments. In addition challenges facing people with visual impairments and in wheelchairs in accessing and using information resources are covered as well as the role of ICT in facilitating the provision of resources. Furthermore challenges experienced by libraries in seeking to provide services for people with visual impairments and in wheelchairs are explained.

#### **4.2 Literature on library services' provision for people with visual impairments and in wheelchairs**

This section reviews the existing literature on library services' provision for people with visual impairments and in wheelchairs. The reason for reviewing the existing literature for this study was to position the study within other similar studies and to explore the available knowledge in the study area, and therefore to understand the relationship between the problem and the body of knowledge in the area. In addition the review was undertaken to establish the need for this kind of research and inform the researcher by means of a review of the methodologies that have been used by other researchers to find answers to research questions similar to the one investigated in this study.

Researchers seldom conduct a study in an intellectual vacuum; their studies are usually undertaken within the context of an existing knowledge base. Researchers undertake a literature review to familiarize themselves with that knowledge base

(Polit and Beck 2004:88). The review of literature is focused on specific purposes. It is also selective and the process starts with the selection of the problem for research, continues through the various stages of the research process and ends with report writing (Krishnaswami and Ranganatham 2010:64). A literature review provides a comprehensive summary by identifying and evaluating a body of writings in relation to one's research study (Kaniki 2006:19; Knopf 2006:127). A researcher has to select the kinds of literature to be reviewed and determine the purposes for which s/he has to study them.

Burns and Grove (2005:93) define a literature review as an organized written presentation of what has been published on a topic by scholars. The purpose of the review is to convey to the reader what is currently known regarding the topic of interest. Conducting a literature review has the benefit of giving a general overview of a body of research pertinent to the study; it reveals what has already been done, so that the researcher does not waste time "reinventing the wheel". It also gives the researcher new ideas which he/she can use in his/ her own research. In addition it helps researchers to determine where there are problems or flaws in existing research, and it enables him/her to place the research in a larger context, so that the researcher can show what new conclusions might result from the research (Knopf 2006). Creswell (2009:25) states that the literature review provides a framework for establishing the importance of the study as well as a benchmark for comparing the results with other findings.

A literature review is a systematic, explicit, and reproducible method for identifying, evaluating, and synthesizing the existing body of completed and recorded work produced by researchers, scholars, and practitioners (Fink 2010:3) on the subject under investigation. Thus, the literature review establishes information sources and evaluates their methodological characteristics and content in relation to the research problem (Ngulube 2003:29). Methodological characteristics refer to study methods which include research design, data collection and data analysis, whereas the content consists of the objectives, findings and conclusions (Fink 2010:63). A review of the

methodologies used in related studies is helpful for justifying the approach taken in the current study.

#### **4.2.1 Policy formulation and implementation**

According to Montviloff a policy is a

set of principles and strategies which guide a course of action for the achievement of a given goal. Policies may be developed at the organizational or institutional level (micro policies), or at the national, regional or international level (macro policies). Policies are embodied in the so-called policy instruments. These can be of the following kinds: legal instruments (constitutions, parliamentary Acts, laws, regulations, international treaties and so on). Professional instruments (codes of conduct, professional ethics and so on) and cultural instruments (customs, beliefs, traditions, social values and so on) (Montviloff 1990:7).

Menou (1991:50) adds that a policy is a

set of principles which guide a regular course of action. A policy consists of:

- An image of the desired state of affairs, as a goal or set of goals, which are to be achieved or pursued;
- Specific means by which the realization of the goals is to be brought about;
- The assignment of responsibilities for implementing the means;
- A set of rules or guidelines regulating the implementation of the means.

In the Tanzanian situation Nyerembe defines policy as a

Written document or statement that is both a planning tool and a communication device, meant to clarify objectives and to facilitate coordination and cooperation within a library or library system. This policy needs to be examined and revised when necessary to reflect new conditions (Nyerembe 2004:2).

In this study, policy is regarded as a written document or statement which guides all library operations and services provided by a library to all users including people with disabilities. It is envisaged that academic libraries should formulate policy through links to government initiatives which are focused on universal library services to all users. In relation to this statement Needham (1977) recommended as far back as the 1970s that one area that could be given immediate attention was planned library services for people with disabilities. This need is still critical today. Basic to such service is a statement of policy on the library's philosophy of service to people with disabilities. This statement may be part of a general statement for the entire library, but having it in writing is essential for a clear understanding by staff and for the continuity of services. There should also be a review of policies and procedures governing details of operations such as academic reserve or reference materials, use of special equipment, special orientations, and coordination with other libraries.

Policy formulation consists of a general set of concepts, assumptions, frames of reference, mental models and activities directed towards some perceived area (De Greene 1993:7 cited in Chailla 2001:26). De Greene further states that policy formulation must reflect the complexity and uncertainty of the environment within which choices are being made. The focus of policy formulation and implementation in this study implies that the process of decision making in the government to set guidelines or directives for all government sectors in the country includes libraries. Libraries need to implement national policy to ensure efficiency in the provision of equal services to all citizens including people with disabilities. The policies formulated must be implemented adequately in order to meet the intentions of the government when the policy was set. As Castley (1996:22) states, "a good plan/policy produces nothing unless it is effectively implemented".

Mandesi insisted that there should also be a system of policy monitoring and evaluation. Recommendations and policy implementation needs to be followed up to ensure efficiency and effectiveness of operations (*Guardian* reporter, 2011; Chailla 2001:58). In relation to this assertion Power and Lebeau (2009) insisted that library

personnel must be familiar with policy guidelines and the established law that mandates the way services and resources for people with disabilities are offered. Kinnell, Yu and Creaser (2000:44) claimed that there was evidence that having a dedicated policy for people with visual impairments has made an impact on spending on specialist materials, on relationship building with external agencies, and on the provision of specialist equipment. Kinnell, Yu and Creaser further state that where authorities had a written policy they were more likely to focus on meeting a wider range of the special needs of people with visual impairments.

#### **4.2.1.1 National Policy on Disability**

According to the Tanzania League of the Blind (2012) historically in Tanzania, people with disabilities have generally been marginalized with regard to most government services, creating a dependency syndrome, which segregates people with disabilities from mainstream society. Moreover, they have limited knowledge of national legal systems, International Human Rights instruments and, therefore, are uninformed about their basic rights. This lack of knowledge not only is a threat for them as individuals, but also limits their attempts to advocate and lobby government regarding the implementation of these rights. In addition, the number of people with disabilities, especially people with visual impairments, in senior positions in government or public institutions is very low and their full involvement in decision-making at community level or in public life is still very limited (Tanzania League of the Blind 2012) hence the need for awareness raising through progressive policy initiatives.

Tanzania League of the Blind (2012) further explained that despite this critical scenario, the country has made progress in efforts to include people with disabilities in the development of services for the past few years. Good examples of this were National Policy on Disability, which was passed by the Cabinet in 2004, and emphasized equal opportunities, the ratification of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) and the signing of the optional protocol in 2009, followed by the National Disability Bill which was tabled in Parliament in 2010. The National Bill translates the above policy guidelines into law,

which enforces and, to a large extent, paves the way for the domestication of the UNCRPD. These are all efforts by government to respond and promote the rights of persons with disabilities. The main goal of government now, is to ensure that those legal instruments are known by the general public and by the community of people with disabilities so as to guarantee that they are implemented in the country (Tanzania League of the Blind 2012).

The policy provides guidelines and sets parameters for service delivery, with a strong focus on the development, rights and dignity of people with disabilities. This policy aimed at providing an environment conducive for people with disabilities to engage in productive work for their own development and in the utilization of the available resources for improved service delivery. In addition the policy also aimed at improving the life situation of people with disabilities by undertaking the following actions:

- Encouraging the development of people with disabilities;
- Empowering families with disabilities;
- Reviewing / amending legislation that is not disability friendly;
- Allowing the participation of people with disabilities in decision making and implementation of important activities in the society;
- Enabling families of people with disabilities and the society at large to participate in decisions and implementation of important disability friendly activities (United Republic of Tanzania 2004).

In relation to the social model of disability of Oliver (1990) the focus of National Policy on Disability of 2004 is to help people with disabilities to participate in all activities in the society. In addition the policy guides different sectors to provide inclusive services to people with disabilities such as education, health, transport, employment as well as access to information. Academic libraries, through the guidelines of National Policy of Disability and social model of disability are required to provide universal services by building or modifying the infrastructure which allows access to the information resources housed in the library and acquiring

information resources which are in Braille and large print. In addition these guidelines require that library staff should be trained for the purpose of assisting people with visual impairments and in wheelchairs as well as acquiring assistive equipment to access information resources easily and independently.

#### **4.2.1.2 The Persons with Disabilities ACT, 2010**

This Act makes provision for the health care, social support, accessibility, rehabilitation, education and vocational training, communication, employment or work protection and promotion of basic rights for persons with disabilities and to provide for related matters. The sections of the Act are described below.

#### **Section 35 Access to public buildings**

**Section 35(1)** the Minister shall, in consultation with the Minister responsible for buildings and as far as practicable, ensure that every public building and other buildings which provide services to the public are accessible to all persons with disabilities.

**Section 35(2)** The Minister shall, in consultation with the council, prepare regulations prescribing accessibility of public buildings for the purpose of giving guidance to public and private bodies.

#### **Section 38 Access to Information**

**Section 38(1b)** If the communication is a written one, and the person or persons aforesaid have a visual impairment and so requests, as far as practicable, the contents of the communication shall be communicated in a form that is accessible to the person concerned.

**Section 38(2)** Where a public body communicates in electronic form with one or more persons, the head of the body shall, as far as practicable, ensure that the contents of the communication are accessible to persons with visual impairments to whom adaptive technology is available.



**Section 48 (1)** All persons with disabilities shall be entitled to a barrier free and disability friendly environment to enable them to have access to public premises and facilities for public use, roads, communications and other amenities to assist and promote their mobility.

**Section 48(2)** Architects, construction engineers and other persons who are involved in design and construction of the physical environment shall observe and comply with accessibility requirements to ensure that all new buildings, roads, play grounds, transport facilities and renovation of the old ones, conform to designs aimed at creating access for persons with disabilities.

**Section 49(2)** information service and documentation shall be made accessible to different groups of persons with disabilities in such form as:

- (a) Braille, tactile services and large print;
- (b) Spoken information and appropriate technologies and sign language; and
- (c) Computerized information.

**Section 50: Prohibition of denial to public premises**

It shall be an offence for a person with a disability by reason of his disability, to be denied:

- (a) Admission into any premises to which members of public are ordinarily admitted
- (b) Access to any building providing public service, road transport and other indoor and outdoor, facilities including school, housing, banks, medical facilities, sport facilities and work places.
- (c) The provision of any service ordinarily provided to members of the public; or
- (d) Access to public facilities, services, information and communication including new information and communication technologies, and systems open or provided to the public both in urban and rural areas.

In general the intention of Person with Disability Act 2010 is to engage people with disabilities in the society in such as a way as to enable them to participate fully in all

aspects of life and to take measures to ensure that people with disabilities access services on an equal basis with others. In this study the Person with Disabilities Act 2010 is regarded as playing an important role in that it requires libraries to remove all barriers of access for people with visual impairments and in wheelchairs and to provide universal access to library buildings and information resources. Following the social model of disability, library staff should be proactive in examining their policies and practices to identify and remove any barriers that might prevent people with disabilities from using library services (Robertson 2001:33).

#### **4.2.1.3 National Library policy**

Tanzania Library Services Board submitted a National Library Policy document to the Ministry of Education in May 1983 for consideration and adoption. The major aims of the policy were:

- To lay down new principles and pointers on the development of library services in Tanzania,
- To ensure that civil servants, parastatals, employees and the general public have access to library facilities and make use of them,
- To ensure that all public institutions build, develop and efficiently manage their own libraries,
- To ensure that each public institution is given responsibilities to implement in an effort to expedite overall national library development,
- To promote resource sharing and cooperation between libraries,
- Generally to enhance economic and social development by ensuring that officers in government, parastatals and the general public use up-to-date information for decision making and performing their daily work (Kaungamno and Ilomo 1989:156).

The intention of the National Library Policy was to set guidelines and give responsibilities to all libraries established in different sectors to manage and make sure that all users are able to use the information resources available in the library to the maximum and for the benefit of the society and development of the nation in general.

#### **4.2.2 Non-governmental organizations for people with visual impairments**

Non-governmental organizations have been established in Tanzania by people with visual impairments. These are the Tanzania Society for the Blind (TSB), Tanzania League of the Blind (TLB) and Tanzania National Institute of the Blind. These organizations were established by people with visual impairments themselves to speak for them and to protect their rights and interests in the society (Bagandanshwa 2006a).

##### **4.2.2.1 Tanzania Society for the Blind (TSB)**

TSB is a non-governmental organization established in 1959 to promote the standard of living of people with visual impairments. It collaborates with government ministries, partners, hospitals and the community. It is a non-profit making organization. Activities of the Tanzania Society for the Blind are education, the provision of eye care and rehabilitation services (TSB 2012).

##### **4.2.2.2 Tanzania League of the Blind (TLB)**

Tanzania League of the Blind was established in 1964 to promote the equality for all, including people with visual impairments, in all aspects of human development. TLB is a registered non-governmental organization that is committed to improving the quality of life of people with visual impairment in Tanzania through lobbying and advocacy, awareness raising, information sharing, facilitating access to education and vocational training and economic empowerment (TLB 2012).

Activities of Tanzania League of the Blind are directed towards social inclusion for the blind and visually impaired persons. Their actions are divided into four main categories:

- Lobbying and advocacy aims to ensure that the disability rights, particularly those with impaired people are promoted by encouraging the government of Tanzania among other things, to implement the United Nations convention on Disability Rights (UNCRPD) and the 2010 National Disability Bill. In addition it seeks to guarantee that demographic data and the requirements of people with visual impairments are secure in Tanzania.

- Education and vocational training aims to guarantee the enrolment, retention and completion rate of students with visual impairments and well-resourced education is increased from 0.5% to 1% by 2011. Furthermore to establish demonstration centers appropriate for vocational and training development for economic empowerment of people with visual impairments in partnership with relevant central and local government departments towards community inclusion.
- Community awareness raising is aimed at enlightening the communities at local and national levels to the causes, potential abilities and special needs of visual impairment, so that people with visual impairments are respected, fully included and supported accordingly in all aspects of community life. In addition the League is trying to form Tanzania League for the Blind branches in small community awareness working groups to carry out awareness activities from ward to district level. It also seeks to conduct training workshops to the groups on community awareness-raising skills, causes of visual impairment, potential abilities and special needs of people with visual impairments.
- Capacity building aims to strengthen the Tanzania League for the Blind's capacity at both headquarters and branch level to enable the organization to implement its formulated and agreed strategies within 2007-2011 (TLB 2012).

Despite the initiatives taken by government of Tanzania to formulate the National Policy on Disability of 2004, the Convention of Human Rights of 2006 ratified in 2009, the Persons with Disability Act 2010 together with the Non-Governmental Organizations established by people with disabilities, most of the services provided by the academic libraries in Tanzania are inaccessible to these people. To support this statement the Tanzania Human Rights Report (2010) argued that, although there was no official discrimination against persons with disabilities, in practice, persons with physical disabilities were effectively restricted in their access to education, employment, and other state services due to physical challenges. The Government did not mandate that access to public buildings, transportation, or government

services for persons with disabilities be provided. In relation to this Mandesi cited in *Guardian* reporter (2011) stated that Tanzania has signed a number of global conventions in relation to the rights of people with disabilities, but their rights have not been granted as required.

In the same vein, Mackay (2007:2) contends that although the existing human rights' instruments, such as the Universal Declaration of Human Rights (which is the universal foundation document for human rights), the International Covenant on Civil and Political Rights, and the International Covenant on Economic Social and Cultural Rights applying to everyone, in practice these rights have not been universally applied to all people equally. This is also observed by Schmetzke (2007) who criticized the American Library Association (ALA) because the library services for people with disabilities policy does not convey this information. It does recommend, in general terms using strategies based upon the principles of universal design to ensure that library policy, resources and services meet the needs of all people but it fails to explain adequately what that means for particular areas. For example under the "collections" subheading, it states that library materials must be accessible to all patrons including people with disabilities.

The Tanzania Human Rights Report (2010) claimed that the Government of Tanzania provides only limited funding for special facilities and programmes. In the same vein Mpandikizi and Maro (2010) claimed that 2009, the year Government ratified the Convention of Human Rights, did not bring about any difference in terms of increased budgetary allocations to ensure the availability of facilities for children with disabilities. Instead, the Tanzania Education Authority (TEA) begged the public to contribute to the provision of teaching and learning facilities. Moreover, it was found by HakiElimu in April 2009 that 95 percent of the school buildings, even those built during the implementation of Primary Education Development Plan (PEDP) did not take into account the provision of facilities for people with disabilities and other needs of pupils/ students with disabilities. The PEDP also did not put, or put little effort into the construction of new special schools for children with disabilities (HakiElimu 2009).

#### **4.2.3 Challenges facing people with visual impairments and in wheelchairs in accessing and using library services**

No matter where they live in the world, people with disabilities face a number of challenges. The Commission of the European Communities has identified these challenges throughout the European Union: finding and keeping a job, finding accessible transportation; physically accessing buildings and facilities; gaining access to education and training needed for a job, and gaining access to technologies that would help them to become more fully involved both at work and in society at large (Lilly 2001). In similar way Yokohama (2012) in the study carried out on a comparative analysis of institutional capacities for implementing disability policies in East African countries and focusing on the functions of National Councils for Disability, noted that people with disabilities in East African countries still do not have easy access to social services such as primary education, employment placement and basic health care. In the same vein Grobbelaar-du Plessis and van Reenen (2011: xvi) observed that, for a large majority of people with disabilities in Africa, public facilities, transport, training, working opportunities, communication and access to information are unavailable and inaccessible.

Many educational institutions as observed by Wright (1981) were built with the typical able-bodied individual in mind. Only a minority of institutions have a history of providing easy access for people in wheelchairs, people with temporary injuries or paralysis, people who walk with difficulty, people with faulty coordination, or those who cannot see signage systems or hear alarms. It is possible to create equal access for these people but the way in which we build ramps, place elevators, create special structures can segregate the disabled from other people and this also applies to students.

Taylor's (2004) findings on widening participation in higher education for students with disabilities at Hereward College in United Kingdom (UK) noted that the physical environment of campus universities and access to buildings were frequently cited in student's accounts of their difficulties. Riddell's (1998) report states that none of the Higher Education institutions were entirely accessible to disabled

students and that most were generally inaccessible. Holmes (2008) in her survey reported that a person with developmental disabilities is faced with a number of challenges, both physical and intellectual and she suggested overcoming the challenge by saying that every library should have adjustable computer tables that can accommodate any size of wheelchair and the library should be equipped with appropriate ramps and/or elevators.

The study carried out by Ryan (2001) on the possibilities of inter-library and inter-organization lending of alternative formats in a chapter on library services for visually impaired people structured as a manual of best practice (National Library for the Blind 2001) observed that alternative format materials had been excluded from inter-library lending systems which resulted in people with visual impairments not being offered sufficient services with a wide range of reading materials that meet their needs. Ryan further claimed that under the terms of the Disability Discrimination Act it would be unlawful for libraries not to request alternative format materials. In addition she suggested inter-lending systems to fulfill the requirement.

In a study conducted by Dermody and Majekodunmi (2011) in Canada, students indicated frustration with the search process and their comments ranged from: “I don’t really know what I’m doing. I spent a lot of time and sometimes end up with nothing” to “I find it difficult and time consuming it seems to take longer for me than for others.” Another student indicates that “for every extra... button that can be clicked, the likelihood of people becoming confused increases. The more busy a database interface may be, the risk increases of (screen readers) not being able to keep pace.”

Burgstahler’s (2002:422) study conducted in United States of America revealed that assistive technology products make it possible for individuals with a wide range of disabilities to gain access to computers. However, some internet resources are still not accessible to individuals with disabilities using this technology. For example, people with visual impairments often use computers equipped with screen reader

software and speech synthesized voice. These systems read whatever text appears on the computers screen. To access the World Wide Web, a person with a visual impairment may use a web browser that only reads text presented on the screen or they may use a multi-media browser with the graphics-loading feature turned off. The combination of hardware and software cannot interpret graphics. For example, when an image map appears on the screen, a speech synthesizer may simply say “image”. Text alternatives to graphic images need to be provided on a website in order for blind students and instructors to make sense of the content.

Onatola (2007:96) claimed that the present situation in all universities in Nigeria is such that students and staff who use wheelchairs must literally be physically carried when they want to access public facilities such as lecture rooms and libraries. The alternative arrangement made was to restrict users of wheelchairs to the ground floor, regardless of where the needed materials were housed. There were no formal calling services, and the students had to rely on friends to source and retrieve the needed materials from upper floors. Poria, Reichel and Brandt (2011) noted in their findings the existence of stairs as a barrier to entering rooms or dining in a restaurant. They further stressed that even a single stair in front of the restrooms can present a barrier. In this context, participants suggested that the staff frequently assumed that wheelchair users could easily climb a single stair.

These challenges were also observed by Adetoro (2011) who complained that in Nigeria, the situation was worse than elsewhere as people with visual impairments relied on the goodness of charities and philanthropists to provide them with information resources. Few schools in Nigeria make available information resources for students with visual impairments. Adetoro further claimed that the demand for the alternative formats used by people with visual impairments in Nigeria appears to be high, but it is believed that the extent of utilization of information resources is limited by availability.

A study carried out in South Africa by Caga (2011) which cited Wordsworth (2003) indicated that the most common challenges identified by the participants were social



barriers which included the imposition of stereotypes and stigmatization of people with disabilities. Others were physical barriers which included the inaccessibility of buildings and infrastructure to people with disabilities. The study of Caga revealed that an inaccessible building was the common challenge facing people with visual impairments. Participants mentioned that often there were no suitable lifts in buildings, the colour coding used to help people with visual impairments to access building was inappropriate and the signage was sometimes too small for partially sighted individuals. One of the participants mentioned that:

the other main challenge is the accessibility of the buildings. You will take a lift and you have to ask people where am I people will just ignore and you will go up and down without knowing where you are going. Where there are lifts with sounds, I don't need anybody, I can walk independently (Caga 2011:58).

Another participant added that “when I was partially sighted people used to tell me ‘to go to 205’, if you are partially sighted how are you supposed to read the numbers?” (Caga 2011:58).

Chitereka's (2010) study carried out a study on people with disabilities and the role of social workers in Lesotho and noted that most public buildings were not accessible for people with disabilities as the buildings do not have ramps. The available modes of transport were also not designed to respond to the needs of people with disabilities. Taxis and buses represented the only possible public transport option for people with disabilities to be able to carry out their daily activities such as work, education, shopping, banking, medical appointments, and other social activities yet the modes of transport were not designed to accommodate people with disabilities. Another challenge facing people with disabilities was the lack of affordable wheelchairs which greatly hindered their mobility. Access to information was also a challenge for people with disabilities in the country as information was presented in a way that could be read or understood by the non-disabled only. For example, information not presented in Braille is inaccessible to people with visual impairments.

Ochoggia's study carried out in 2003 in Kenya on the Persons with Disability Bill and its implications for the provision of library and information services to visually handicapped persons in Kenyan learning institutions, observed that for people with visual impairments, especially students, the range of reading material available to them has always been limited. He further found these limitations were highly noticeable in Kenyan universities. In the library, there were approximately 50 talking books to serve the 38 students who were visually impaired and undertaking various academic programmes. On the shelves of the university library, there was nothing in Braille except a copy of an outdated encyclopedia (Ochoggia 2003b).

A 2005 study by Ndinda looked at integrating the physically disabled children into regular schools in Kenya, and revealed that people with disabilities were marginalized and they faced challenges in their everyday lives that hindered their integration into the mainstream life in the society. Also they faced challenges in accessing education, basic health care services, information, employment and transport and were not readily accepted due to negative traditional beliefs.

Bagandanshwa (1998), in his study carried out on library services for visually impaired and blind people in Tanzania, observed that the possibility of people with visual impairments accessing libraries in Tanzania was hampered by some challenges. There was a poor emphasis or lack of it focusing on people with visual impairments regarding services provided by libraries. In addition, material available in libraries was not generally accessible for users with visual impairments as all journals, periodicals and books were in normal print. Large print materials for the partially sighted were not available. As a result of this, people with visual impairments were denied access to these materials and services. He further explained that library buildings in most cases were unsuitable for the mobility needs of people with visual impairments. They had no rail-marks for easy identification, as well as having a lot of stairs and unprotected embankments. People with disabilities either spent too much time accessing one item of material, or decided not to go to these libraries to avoid the risks involved. In addition, there were no people to guide and

help people with visual impairments and as a result, it was impossible for these people to make use of what was provided.

The same author's study (Bagandanshwa 2006b) carried out on technologies deployed by people with visual impairments and blind people in Tanzania to access information, revealed that most people with visual impairments are poor as some of them had lost their economic base as a result of their disability. Another challenge is the non-availability of technologies in Tanzania. Neither assistive nor adaptive technologies are manufactured in the country, nor do they have local dealers, which makes it quite difficult to purchase them. When they are available, they are sold at exorbitant prices.

Another study carried out by Kaijage (1991) in Tanzania, "An assessment of library and information services for the visually impaired: with particular reference to information needs of visually impaired university students and information plans for Tanzania," highlights that it is clear some people with visual impairments fail to gain maximum access to and use of the available services merely because of their age, the location where they are living or poor layout of a building. Other factors were educational background and lack of properly trained staff who might be in position not only to consider and understand people with visual impairments and their information needs but who may also be able to provide them with quality services. Kaijage also highlighted the challenges which limit access to information resources at the University of Dar es Salaam as follows:

- Not all materials can easily be obtained by people with visual impairments in appropriate formats;
- The design of the library building does not provide easy access for university students with visual impairments;
- The conventional card catalogue makes no provision for the needs of the people with visual impairments;
- No programmes exist, either specialized or mainstreamed ones, which intend to help visually impaired university students to gain bibliographic skills they

require in benefiting from the available services and to promote awareness of their needs among the University and the University of Dar es Salaam Library services staff.

Tungaraza's (2010) study carried out at the University of Dar es Salaam on "Accomplishments and challenges facing students with disabilities at the University of Dar es Salaam: thirty years of navigating the hill" revealed the sad truth that some students graduated from the University of Dar es Salaam without ever using the main library because it did not have books in Braille. Students with visual impairments at the University of Dar es Salaam depended on readers who read for them since the library did not have books in Braille. She further explained that historically there are numerous examples of people with disabilities worldwide who have been ridiculed, killed, left to die or been condemned to permanent exclusion in asylums. In addition the study revealed that despite the knowledge people have about persons with disabilities, negative attitudes are still evident. For example one student narrated how he was taken for a beggar and sent away before he had even opened his mouth to say what he wanted when he went to see his professor about an academic problem. The student claimed that:

One morning, I went to my professor's office because I had an academic problem. I knocked at the door and he told me come in, when he saw me crawling, his face changed and said, "Sorry I have nothing to give you today. Can you get out because I am busy please?" I took some time to let him know that I was one of his students and that I needed some academic help and I was not there to beg. Only after that, did the professor listen to me (Tungaraza 2010:145).

Another student complained sadly how he was turned away from Mlimani City Supermarket when he went there for shopping. He said:

I will never forget the 12<sup>th</sup> of November 2007 when I was refused permission to enter Mlimani City Supermarket by a security guard. He told me that the management directed them not to let persons with disabilities in, because they go there to beg instead of buying things. When I insisted that I was not a

beggar and had to go in. I was pushed out. People who saw me being pushed came and helped me arguing vociferously that I was being discriminated against due to my disability, which was actually true! (Tungaraza 2010:146).

In relation to this the United Republic of Tanzania (2004) claimed that negative attitudes of the community towards people with disabilities is one of the major challenges to the integration and equal participation of people with disabilities in the life of the community, especially as the disabled are often perceived of as a problem and a person with a disability as being dependent.

Accessibility is another challenge as revealed by a study by Tungaraza (2010). She points out that accessibility issues are crucial for successful inclusion programmes. Some people with disabilities cannot be included effectively, if they have difficulties in moving around their environment. For example, people in wheelchairs cannot access the physical environment where there are stairs. One student at the University of Dar es Salaam who has a physical disability claimed that:

sometimes I cannot go to places due to stairs. Besides, some buildings and staff offices are not accessible due to stairs and / or narrow doors, and find it difficult to go to meet my lecturers if I have an academic problem. I have also missed some classes owing to the unfriendly environment. Even the library, the most important place for students, is not accessible for some of us. There is a need for change! (Tungaraza 2010:147).

The study also revealed that the toilet facilities at the University of Dar es Salaam are inaccessible to some students. It is difficult for students in wheelchairs to access the toilets easily due to stairs or steps leading to the toilets and/or narrow doors. Also another challenge facing students at the University of Dar es Salaam, as observed by Tungaraza (2010), is that there is no public transport in Tanzania that caters for people with disabilities. Furthermore the study also revealed a lack of adequate equipment as some students, such as those with visual impairments, need extra equipment such as Braille machines, typewriters and tape recorders, to enable them to take notes, write examinations, and learn effectively.

Another study by Bangula (2005) carried out in Tanzania on the factors influencing the academic performance of students with visual impairments in primary school in Tanzania, observed that there is a shortage of text in Braille. Kalumna (1992 cited in Bangula (2005) maintained that the shortage of texts in Braille for students with visual impairments in primary schools denied them the opportunity to study to the maximum. Kisanji (1981) and Possi (1986) cited in Bangula (2005) argue that apart from the shortage of material for students with visual impairments, the few materials available were worn out so the students could not effectively use them.

The Institute of Education (1984) cited in Bangula (2005) showed that the Tanzania Braille Printing Press was performing below standard and not coping with the demand from schools, colleges and universities due to low production. Gabriel's (2006) study carried out in Tanzania on visually and hearing disabled people as a forgotten group in the struggle to combat the spread of HIV/AIDS in Kinondoni Municipality, observed that the way in which information was delivered excluded people with disabilities. Right from the design stage of information resources, people with visual and hearing impairment needs were not considered. No printed information in daily papers, books, brochures, articles, journals and short stories is produced in Braille enabling people with visual impairments to access them.

The study carried out by Ndumbaro (2009) on library and information services provision for people with visual impairments in selected university and public libraries in Tanzania revealed that there is limited information and only a few study materials for these people. In addition there is no special budget and few staff have been trained to provide for their needs. Some students with disabilities experienced transport difficulties in reaching the library and once they are there found a lack of information, a lack of space, buildings that were not user friendly, no toilet facilities that met their needs, no special materials, and no clear policy on the availability of library and information services. As revealed by different authors, because of the challenges facing people with disabilities, library services for people with visual impairments and in wheelchairs should be inclusive, as explained in the section below.

#### **4.2.4 Library services' provision for people with visual impairments and in wheelchairs in academic libraries**

It is the library's role to support lifelong learning and underpin the move towards increased social inclusion and economic participation. Libraries should be resources that are easily accessible and universally available and which offer a nonjudgmental environment for people from all backgrounds (Feinberge and Feldma 1996 cited in Davis 2009:133). In line with this assertion academic libraries actualize the mission of their parent universities. Libraries complement teaching, training and learning activities in the institutions. They strive to ensure that the instruction and research needs of the academic staff and students are met adequately. Hence, their collections (textbooks, serials, non-print items and so on) support the implementation of the curricula, while extensive reference materials are also provided for in-depth research (Onatola 2007:87).

Enakrire and Baro (2008:19) concur with Onatola by saying that university libraries are therefore central to the development of the intellectual capacity on which knowledge production and utilization depends, and to the promotion of lifelong learning practices necessary to update individuals' knowledge and skills. In relation to this statement, Alvite and Barrionuevo (2011:48) claim that the library is a resource centre for learning, teaching, research and other activities related to the operation and management of the university as a whole. The mission of the academic library is to provide access to and the dissemination of information resources and to participate in the process of creating knowledge in order to contribute to achieving institutional goals. It is the library's duty to choose and manage the different information resources regardless of their budgetary line item, where they were acquired or their material support. Academic libraries should do their utmost to remove the barriers which hinder access to the libraries' collections for people with visual impairment and in wheelchairs and this will in turn enhance career development to them.

Destounis, Garofalakis, Mavritsakis, Rigou, Sirmakessis and Tzimas (2004:286) argue that providing accessible services means removing challenges that prevent

people with disabilities from participating in core life activities, including the use of services, products and information. In a similar way Robertson (2001:2) claimed that if no challenges exist, then people with visual impairments are not prevented from using services. These challenges may be physical, or attitudinal or behavioural. Sometimes inappropriate or inadequate responses create challenges for people with disabilities. For example students may feel embarrassed about asking for a large-print library guide in front of other people. According to Rubin (2002) libraries play a catalytic role in the lives of people with disabilities by facilitating their full participation in society. Libraries should use strategies based upon the principles of universal design to ensure that library policy, resources and services meet the needs of all people. In line with this statement Kharamin and Siamian (2011:368) claimed that an ideal library service is one where each individual, regardless of the degree of their visual impairment or other disabilities has access to information resources at the time they are required, in a format that can be used, in the quantities that are needed, and where the needs of the user are understood by the staff.

The real challenge in our information age is not producing or storing information, but getting people to use information appropriately (Kharamin and Siamian 2011:367). Kharamin and Siamian (2011:368) further claimed that libraries have to play a key role in building an inclusive society, serving all kinds of users including people with visual impairments. Moore (1995) cited in Myhill's (2002) study in the UK asserts that people with disabilities have the same basic range of information needs as the rest of the society, and should be aware of all their rights and ensure they can take responsibility for their own well-being. Similarly Pinder (2005:465) acknowledged that students with disabilities need higher services from colleges and universities. Pinder further argued that inadequate physical access is not a reason for institutions or their libraries not to provide services to students with special needs. The study of Yoon and Kim (2011) in Korea emphasized securing the right to access information for every person with a disability and provision of alternative format materials as prerequisites to ensure this right. Todaro's (2005) study in Argentina advocates for all citizens to have access to information that will enable them to be active and equal contributors and participants in society. In a similar way The



Gaborone Declaration (1994:143) cited in Kiondo (1998:83) declared that access to information services is a basic human right. Governments should ensure that this right applies to all citizens and especially to rural communities, the disadvantaged, disabled and the illiterate. The Gaborone Declaration (1994:11 cited in Kiondo 1998:83) further claimed that it is not enough to recognize the right to access information. To give it substance, we have to conceive and put in place information services which correspond to the actual needs.

Seyama's (2009) study in Pietermaritzburg, South Africa investigated the information seeking behaviour of students with visual impairments. The author stated that students must be able to access that information through whatever valid information seeking behaviour they chose to employ, and the information they discovered must satisfy their general or specific needs. The study carried out in Tanzania by Kaijage (1991) on the assessment of library and information services for visually impaired, with particular reference to the information needs of visually impaired university students and information plans for Tanzania, indicated that people with visual impairments require information on all spheres of life ranging from daily living skills, leisure, jobs, education, married life, sources of help and how to obtain them, information on their rights to moral issues. All of which should be provided in an appropriate language and format to maximize its access and use.

The right to education implies a right to access information. Libraries and other related information services are crucial in educational development because the information they hold is an essential tool with which to foster the learning process (Magara and Nyumba 2004:313). The same view is expressed by Rasmussen (2001) who notes that information is an essential ingredient in capacity building processes because access to the information enables people to be better informed and as a result better able to make decisions. In the same vein Iwe (2001:39) claims that access to information has been described as the key to the socio-economic development of any nation, and on the individual level can be seen as a basic human right. However, information is not always accessible or appropriately "packaged" for people with visual impairments (Beverley, Bath and Barber 2007; 2011). Gibson

(2006: 63) picks up this point, insisting that libraries are all about information and for some people with visual impairments, information needs to be available in alternative formats, for example electronic formats for students who have difficulty accessing print but use adaptive technology. Libraries circulate information and knowledge and provide users with up-to-date information, thereby facilitating their efforts to improve their understanding of life and the world at large. It is therefore important that they are accessible to all individuals, be it in a school, a college, a university or even a multi-structured entity such as a town, a city and so forth (Bagandanshwa 1998).

Anjiode (2010) states that a major role for libraries serving people with disabilities is the development of standards for fully accessible, highly functional information systems which are effective in meeting their information and educational needs. Accessibility of services is essential if the goal of fostering functional independence is to be achieved in people with disabilities (Amusat 2009). In the study carried out in South Africa by Caga (2011), participants recommended increasing the accessibility of libraries or information centers. Some participants stated that:

It will be nice that in different communities there can be information centers for different disabilities and those centers should have the computer programmes such as JAWS for people with visual impairments so that we can see advertised jobs (Caga 2011).

To support the above Lilly (2001:400) insisted that the principle of universal design, when utilized in the development of any product or service, ensures that they may be used by people of varying abilities, are simple, flexible and intuitive in use, provide effective communication of errors, require minimal physical effort and are appropriate in size and required space for use regardless of the user's physical state. Bagandanshwa's (2006b) study carried out in Tanzania on the technologies deployed by people with visual impairments and blind people in Tanzania to access information, insisted that the first step for people with visual impairments in accessing information is the removal of barriers followed by their recognition, and the development of positive policies to ensure recognition of them as potential users

of information. For people with visual impairments to access and use services specially designed for them, there must be access to information about these services and appropriate technology to assist them.

Therefore librarians must examine their facilities, services and materials with a critical eye to make certain that clients with disabilities are taken into account and that they are equally aware of and committed to meeting the needs of their constituency (Riley 2002). Riley further insisted that each of us in the information chain needs to work collaboratively with the other links, so that we provide barrier-free access to library materials and services. In a similar way Cole (2006 cited in Samson 2011:4) addresses the issue of advocacy asking library personnel to consider the challenges that patrons face on a daily basis and to begin removing them as a way to welcome all patrons. The ALA recognizes the critical need for access to library and information resources, services and technologies by all people, especially those who may experience language or literacy related challenges, economic distress, cultural or social isolation, physical or attitudinal challenges, racism, discrimination on the basis of appearance, ethnicity, immigrant status, regions, background, sexual orientation, gender identity, gender experience or challenges to equal education, employment and housing (ALA 2006 cited in Ciszek and Young 2010:155).

Libraries must not discriminate against individuals with disabilities and must ensure that individuals with disabilities have equal access to library resources. To ensure such access libraries may provide these individuals with services such as extended loan periods, waive late return fines, extended reserve periods, library cards for proxies, books by mail, reference services by fax or email, home delivery service, remote access to the OPAC, remote electronic access to library resources, volunteer readers in the library, volunteer technology assistants in the library and radio reading services (American Library Association 2001). In pursuit of the goal of libraries being inclusive in their services to people with disabilities, those with visual impairments and in wheelchairs need free access to the information resources housed in the library, as highlighted in the following section.

#### **4.2.4.1 Layout of library buildings**

“Availability of information is not accessibility”, Chailla (2001:70) explains this statement by saying that information can be available, but not accessible to the users. In line with this Nhlapho (1986:21 cited in Nawe 2001:138) claimed that information may be available, but if it is not brought together and organized for the benefit of those who require it, it is a wasted development resource. In relation to this assertion, Iwe (2001:38) argues that information has little value if it is not made available to the people who need it.

Using the social model of disability as its base, the academic library should make sure that the information resources it houses are accessible to all library users, including people with visual impairments and in wheelchairs, by creating an enabling user-friendly environment. To support this assertion a student with a visual impairment, who does not have access to information because of the visual impairment, is excluded, regardless of the physical setting. In addition Mackay (2007:3) argues that people in wheelchairs have just the same need for freedom of movement as anyone else, but if public buildings are not accessible to them, that right is very limited. In relation to this statement Deines-Jones (2007:145) insisted that libraries should be designed to be universally accessible, and should have equipment in place to enable all users to get maximum benefit from the library’s materials and services offered.

It should be noted that in providing appropriate buildings there should be no architectural barriers creating challenges, for example too many steps, stairways that are narrow, steps at the entrance of the building and no ramps (Todaro 2005); in line with this, Irvall and Nielsen (2005:6) stress that all parts of the library should be accessible. The space should be arranged logically with clear signage and a floor plan posted close to the entrance. Service desks should also be located close to the entrance. Wheelchairs should be able to move around inside the library easily. If the library has more than one level, there should be a lift for wheelchairs or ramps. There should be no raised doorsteps and all doors should have automatic openers. Ideally, shelves should be reachable from a wheelchair.

Kaijage (1991) and Pulman (2004) cited in Anjiode (2010) highlight aspects to consider for the library to be user friendly for people with disabilities, both inside and out. These include:

- Parking and accessible pathways – the library should have parking close to the library entrance to enable people with visual impairments and people in wheelchairs to reach the library without having to walk too far.
- Entrance - the entrance to the library must be easy to identify for people with visual impairments. There must be a step free route leading to the library for the benefit of people with visual impairments and in wheelchairs.
- Internal circulation - all circulation routes need to be wide enough and step free to allow easy motion by people with visual impairments and in wheelchairs. Also the layout of the library should be simple around the circulation path so that it is easy to find all sections.
- Accessible furniture - all tables used by staff and for reading by patrons with visual impairments and in wheelchairs should be designed for ease of use. Also important is the height and placement of the book stacks. It may be useful to have chairs of varying designs and seating heights, some with armrests and some without, to facilitate persons who may have problems standing from the sitting position.
- Toilets - every library must have at least one toilet adapted for disabled people. This toilet needs to be larger in areas with a wider door entrance to accommodate people using wheelchairs. The researcher would add that the toilet should have a supporting handrail and flushing mechanism that is easy to use.
- Circulation and information desks - all staff desks should be of an adjustable height or be at split levels to enable staff to address people using wheelchairs.
- Signage - appropriately designed signage and directional systems should be visible from the main gate to all sections of the library. Good signage goes a long way in making people independent in their interactions and use of various facilities within the premises.

- Emergency evacuation – the library should have alarm systems that are both audible and visual, refuge areas identified with wheelchair waiting spaces, step free exit routes and so on.
- Low level catalogue(s) with clear and large type for catalogue cards;
- Shelving should ideally fall within 750 - 2000mm from floor level
- Pedestrian walkways must be kept clear of obstructions and made easier using colour tactile. Colour tactile is an easy system which uses standardized textures that enable people with visual impairments to identify colour and interpret information.

According to the social model of disability academic libraries should consider all the above requirements for people with disabilities to enable them to access the information resources housed in the library without facing any additional challenges based on the nature of their disability. In addition “all staff, regardless of where in the library they work, should be sensitive to and have a basic knowledge of different forms of impairments and the ways in which different conditions affect the ability to make use of services and the built/physical environment as designed for the general population” (Pulman 2004 cited in Anjiole 2010). Therefore training library staff to deal with people with visual impairments and in wheelchairs and other related facilities of a library is very important. Apart from the layout of library buildings and staff training, information resources should also be in an alternative format, as explained in the following section.

#### **4.2.4.2 Information resources for people with visual impairments**

Access to information is a fundamental concept in information services. International organizations, government, non-governmental organizations, libraries and information centres, all strive to ensure that information is made accessible to those who need it (Kiondo 1998:79). Provision of information resources to people with visual impairments has received attention the world over. Information resources for people with visual impairments are converted into alternative formats such as Braille, talking books/audio recordings, large print books and e-resources to meet

their reading needs (Adetoro 2011:6). In addition Adetoro (2011) and the American Foundation for the Blind (2013) point out that information materials become useful to people with visual impairments when they are transcribed into alternative formats.

According to Adetoro the social model of disability requires academic libraries to collect, organize and disseminate information resources which fulfil the needs of people with visual impairments. To support this assertion Gunde (1991:808) argues that, for libraries that receive state or local public funds, this means that any resident, student, or otherwise eligible patron with a disability must be able to receive and benefit from all services available from their library. So, if a library provides the service of book circulation, it must provide an appropriate selection of books in formats that are usable by people with visual impairments: large print, audiobooks, talking books, and Braille materials, among other special formats and/ or equipment.

In addition Atkinson and Dhiensa (2007:4) highlight the main alternative to standard print used by people with visual impairments as follows:

- **Braille** is a form of tactile communication used mainly by people who are blind or have very low vision. Braille was developed by Louis Braille a young Frenchman in 1829 at the age of 20. He modified an earlier invention of Charles Barbier to produce Braille. Braille had been accidentally blinded at the age of three and attended a school for blind children in Paris. At the age of 11 he was introduced to a tactile code developed to allow soldiers to communicate in dark or smoky conditions. The code was based on a twelve-dot cell, 2 dots wide by 6 dots high. A combination of dots stood for a letter or sound. Braille adapted the code and, by reducing cell size from 12 to six, enabled the fingertip to completely encompass the cell. This allowed the reader to gain an impression of one cell and then quickly move to the next. Braille continued to refine his system until his death. Today, Braille has two different meanings. It can either refer to a Braille alphabet, a set of characters or cells designed for reading by touch, or to one of the many Braille codes.

- **Large print materials** - These are documents printed in large fonts for use by partially sighted users (Atkinson and Dhiensa 2007).

Despite having information resources in alternative formats, Irvall and Nielsen (2005:8) insisted that people with visual impairments need special attention when they visit the library. The library staff should be knowledgeable about various types of disabilities and how to serve patrons with these disabilities. The information resources specifically produced for people with visual impairments should be easy to find. In addition apart from a library having information resources in an alternative format for people with visual impairments, ICT plays a large role in assisting people with visual impairments and in wheelchairs to get access to the information resources available in the library. To support this statement Atkinson and Dhiensa (2007:4) state that people who cannot use traditional print can use many of the electronic resources now available, and ICT has been developed to facilitate access to print materials as elaborated in the following section.

#### **4.2.4.3 The role of ICT in information provision for people with visual impairments and in wheelchairs**

Information and Communication Technology (ICT) is vital in this era, as it facilitates effective information transfer and access through various gadgets. In line with this (Cahill and Cornish 2003:193) insist that information is a key currency in today's society, with ICT its primary means of delivery. They argue that an essential part of bridging the gap between the information rich and information poor is ensuring that no one is denied access to these services because of a disability, or because the equipment that exists in order to breach such challenges is not available at their point of access to ICT services. Yu and Li- Hua (2010:1) claimed that the "entire world is now well into the information age, the storing, retrieving, manipulating, transmitting or receiving of information electronically in a digital form has become critical for the development of society and the economy. ICT is having an increasing impact not only on the people's daily lives, but also on the way business is conducted".



In a similar view, Yu (2002:406) insists that “access to information through technology has increasingly become a necessary tool to success and the source of opportunity in education and employment”. In relation to this assertion, Jaeger (2008:24) stresses that accessibility is equal access to ICT for individuals with disabilities, and it is of utmost importance to persons with disabilities in the networked society. Accessibility allows individuals with disabilities, regardless of the type of disability they have, to use ICTs such as Web sites, in a manner that is equal to the use enjoyed by others. In the same vein, Kinnell, Yu and Creaser (2000:11) noted that use of ICT for people with visual impairments easily helps to convert print into electronic text and read it from the screen as either transitory Braille or through synthetic speech. In addition ICT made possible converters such as scanners, reading machines, embossers and tape recorders to convert text into desired formats.

In addition Coombs (1998:16) claims that modern information technology accessed through a computer adapted for people with a disability opens a window on the world of information as nothing has before. Civil rights legislation in the United States of America requires colleges and universities to provide all their catalogs, pamphlets and course materials in alternative formats, this technology provides an inexpensive solution to a potentially expensive and difficult solution: “People who previously had very little autonomy now use computers to speak, write, read, study, manage finance, organize their own lives, express themselves creatively, develop skills and hobbies and gain employment” (Tilley, Bruce and Hallam 2007:76).

Bell and Peters (2005) add that in the 21<sup>st</sup> century, talking book libraries and mainstream libraries are teaming up to use technological innovations to deliver cutting-edge services and programs and a wide variety of electronic books to ensure that people with visual impairments have the same access to library materials and services as their sighted counterparts. For Dermody and Majekodunmi (2011) “there is no doubt that technology has opened the door for students with disabilities. Using screen readers and augmentative communication programs, students with disabilities can attend classes, participate in discussions, read and write assignments

independently.” In line with this, Destounis et al. (2004:288) comment that “access to information and IT has become so important that it should be considered as a civil right. However, for many people - especially those with disabilities access remains a right denied”. Destounis et al. further claimed that the removal of physical barriers such as having wider doors and ramps which accommodate people in wheelchairs in buildings and public facilities are replaced by the introduction of IT. The researcher would argue that this is not the case entirely but that ICT does allow remote access for such patrons.

In addition

Electronic information can be translated into any language needed. This technological advance may be one of the greatest intellectual aids for people with visual impairments. Software programs are available to translate electronic text into Braille, speech, or sign language on command by the user. People with visual impairments are no longer bound by limitations imposed by the print world. The internet also offers people in wheelchairs a chance to stay connected with community. An interface exists for virtually everyone (Library Technology Report 2004).

Academic libraries should deploy ICT in all their operations, including service delivery to people with visual impairments and in wheelchairs, for the purpose of curbing challenges facing them in accessing information resources. In line with this Dutch and Muddiman (2001) cited in Sturges (2005:300) recommends that “if libraries are to reach out to the excluded of the information society, they will need to move beyond passive conception of access and utilize ICT as a means towards a much more active engagement with local communities and the disadvantaged”. Powell (2003 cited in Stilwell 2011:51-52) emphasized that “ICT are essential in efforts to achieve ‘inclusion’. The information gap is widening faster than other gaps in access to resources if we seek to enable development, ordinary people must have the information necessary to make choices and their views also need to be heeded. The traditional systems, while they still play a vital role, cannot provide all the information that is needed for such choice- making”.

Jaeger (2008:24) claimed that for ICTs, to be accessible, they should provide equal or equivalent access to all users and work compatibly with assistive technologies, such as narrators, scanners, enlargement, voice activated technologies and many other devices that persons with disabilities may use. In relation to this statement, The Association of Specialized and Cooperative Library Agencies (2001) highlights that well-planned technological solutions and access points, based on the concepts of universal design, are essential for the effective use of information and other library services by all people. Libraries should work with people with disabilities, agencies, organizations, and venders to integrate assistive technology into their facilities and services to meet the needs of people with a broad range of disabilities. Library staff should be aware of how available technologies address disabilities and know how to assist all users with library technology.

Mann (2010) claimed that individuals with visual impairments face numerous challenges, but agrees that one of the largest is access to information. Traditional information packages such as books or computer screens do not fit their needs and must be adapted in order to be effectively accessed. He also sees adaptive technologies as created to bridge this gap. In line with this Byerley and Chambers (2002:169) emphasize that “computer and adaptive technologies have greatly enhanced the opportunities of students with disabilities to conduct independent research, write papers and communicate more effectively with peers and instructors”. Goette (2000:68) observed that most individuals with disabilities praise assistive technology and say that they could not imagine life without it.

Tilley, Bruce and Hallam (2007:64) state that “by using appropriate assistive technology; libraries can improve information access and quality of life for large numbers of their patrons.” In line with this Babalola and Haliso (2011:143) recommend that libraries take advantage of advances in ICT to increase information access for people with visual impairments. In addition a broad range of assistive technologies are now available to provide access to information in electronic databases and on the internet, giving users with visual impairments opportunities equal with the sighted.

#### **4.2.4.4 Assistive technologies used by people with visual impairment**

Assistive technology refers “to the hardware and software which has been developed to aid those suffering from disability which might otherwise prevent them from making full use of ICT equipment” (Cahill and Cornish 2003:190). According to Tilley, Bruce and Hallam 2007) assistive technology is “any product, device, equipment, services, strategies and practices that are applied to maintain, increase or improve the functioning of capabilities of individuals with disabilities”.

People with disabilities have experienced significant changes in the last decade with new regulations, legislation and standards being adopted in order to increase their social integration and participation in every aspect of community activities (Dragoicea, Sacala, Cojocaru, Shivarov and Balan 2009). Dragoicea et al. (2009) further claim that the social model of disability is the driving force of these changes and that the tools of assistive technologies could enable the required social inclusiveness. Assistive technologies are prerequisites for people with visual impairments to access information resources housed in academic libraries. Dragoicea et al. (2009) insist that, the aim of assistive technologies in the social model is to overcome the gap between what people with disabilities intend to do and what the existing social infrastructure allows them to do. In a similar way Rout (n.d) claimed that assistive technologies are highly essential for helping students with various disabilities to succeed in their studies.

**The following are assistive technologies which assist people with visual impairments to access information:**

- Screen magnification is one software device used by people with visual impairments to access information on computer screens. The software enlarges information on the screen by incremental factors (Action for the blind people 2013). Most screen magnification software has the flexibility to magnify the full screen, parts of the screen or provide a magnifying glass view of the area around the cursor or pointer. These programs also often allow for inverted colours, enhanced pointer viewing and tracking options (Mann 2010).

- A screen reader is another specialized type of software that converts electronic text to speech and outputs it to headphones, speakers or refreshable Braille devices, in line with user preference. It utilizes an accessible application programme interface (API) (a software “hook”) to access either a web browser and the web content it renders or a computer’s operating system, which in turn communicates with certain computer software (Action for the blind people 2013). A screen reader is used to replace the visual display traditionally viewed on a monitor for those with visual impairments. Hardware and software produce synthesized voice output for text displayed on the computer screen, as well as for keystrokes entered on the keyboard (Mann 2010).
- JAWS is a screen reading software used widely by people with visual impairments to read the text appearing on the screen. It is easily operated by keyboard commands. This software has both the options of Braille display and a synthetic voice (Rout n.d).
- Optical character recognition (OCR): This technology helps people with visual impairments to scan the books or other print materials and read them by using synthetic or digital speech (Rout n.d).
- Refreshable Braille Display is an electronic device that is used to read text that a computer sends to the monitor. The device is connected to the computer by a serial cable and produces Braille output on the Braille display. Refreshable Braille displays only read one line of text at a time. These displays generally include directional keys which allow the user to navigate through a document. Larger displays (80 cells) also include a cursor routing function. Each cell contains eight small pins, allowing eight dot computer Braille rather than the six dot Braille we are used to seeing (Mann 2010).
- Optical Braille Recognition (OBR) is a Windows software program that allows to ‘read’ single and double sided Braille documents on a standard A4

scanner. It scans the Braille document, analyses the dot pattern, and translates it into normal text that it presents on the computer screen (Rout n.d).

- A Braille embosser is a specialized printer that produce Braille embossed documents. It uses Braille translation software to convert electronic documents into Braille before printing (Action for blind people 2013). Most Braille translation software programs can translate material into several grades or versions of Braille (Mann 2010).
- Scanners convert images from printed material to a computer file. The type of scanner used in the context of assistive technology is a flatbed scanner, which scans at a high resolution and can be accessed by a wide range of other assistive technology devices (Action for blind people 2013).
- Closed Circuit Television (CCTV) is a video magnification system consisting of a video screen interfaced with a video camera. Video magnification is achieved in two ways – the electronic conversion from the small camera imager to the larger display screen and the optical effect of the cameras zoom lens. The stand mounted CCTVs can be configured with television receivers, video monitors, or computer monitors. The CCTV system provides high contrast, inverse video display, gray scale, false colours, natural colours, and/or control of contrast level and brightness (Mann 2010).

Combinations of the above assistive technologies need to be available in academic libraries for the purpose of assisting people with visual impairments to access information resources housed in the library easily, independently and remotely.

#### **4.2.4.5 Challenges experienced by the library in seeking to provide services to people with visual impairments and in wheelchairs**

The provision of all kinds of services to people with visual impairments requires heavy financial inputs and staff who are qualified to offer those services. Material investment in terms of assisting devices, appliances and equipment is also required. Acquisition of devices, appliances and equipment such as magnifying glasses,

Braille reading material, large print reading material, appropriate computers, white canes and so on is expensive and beyond the budgetary resources of many academic libraries (Ochoggia 2003a:29). Yokoyama (2012:33) noted that Tanzania, unlike Uganda and Kenya, does not have a sufficient budget for disability issues either at the central or the local government level.

Mwinyimbegu (1989:20) cited in Chailla (2001:60) claims that the inadequate allocation of library budgets indicate that the importance of information was far removed from the priorities of policy makers, planners and the government in general. Policy makers have to realize that, in order to make information resources and services more responsive to the economic, social and political needs, information must be planned and managed. Therefore according to Mwinyimbegu, it is difficult for the library to have strong collections which support people with disabilities. As Ochoggia (2003a) points out materials and equipment for people with disabilities is expensive.

According to Smale (1992) cited in Ochoggia (2003a), in Australian universities, the paucity of information materials for people with visual impairments was attributed to the fact that much of what is available with regard to library and information services is in standard print format or is simply in a format that is not suitable. Given the high cost of providing library and information services to people with visual impairments, very few developing countries are able to offer these services. Marayo (1983) cited in Ochoggia (2003) observed that the situation in Africa was even worse where institutions offering educational services to visually impaired students have to be content with old and outdated donated reading materials.

Tilley, Bruce and Hallam (2007) highlight that the cost of setting up hardware and software, assistive technology, internet service providers and telecommunication broadband are the challenges facing libraries seeking to provide services to people with disabilities. In addition they mention that a lack of training for both library staff and users with disabilities in using technology, poor connectivity and rapidly changing assistive technology are other challenges.

Deines-Jones (2007) mentions challenges such as negative attitudes on the part of people with disabilities that stop them from wanting to use the library. Examples of these are:

- People with disabilities assume that there is nothing for them in the library as they still believe that the library offers only traditional print materials and they feel there is no reason for them to visit or use the library's services.
- People with disabilities have difficulty in getting support and services they need from the government as some may have been victims of arcane institutional systems and bureaucracies. Therefore they assume that using the library will be a similarly negative experience.
- Uncertainty with librarians who may not be able to understand people with disabilities communicating through sign language, Braille, or other non-verbal/ non-print means.
- Having negative past experiences of discrimination, sometimes at the hands of librarians or having been unfairly treated as a child may result in not revisiting the library again (Deines-Jones 2007).

Deines-Jones's (2007) points out that because of past experiences, many people with disabilities still believe that in the library there will be nothing that they can access to satisfy their information needs. The services provided by libraries to people with disabilities are still not inclusive. To change these negative attitudes, academic libraries will need to build or modify infrastructure allowing those with disabilities access to information and the use of assistive equipment housed in the library. Such measures will assist people with visual impairments and in wheelchairs to use information resources independently. Libraries also need to have well trained and competent staff providing services to people with visual impairments and in wheelchairs.

#### **4.2.5 Summary**

This chapter presented policy formulation and implementation, National Policy on Disability, The persons with Disability Act, 2010, National Library Policy, Non-



governmental organizations for people with visual impairments such as Tanzania Society for the Blind and Tanzania League of the Blind, challenges facing people with visual impairments and in wheelchairs in accessing and using library services, library services' provision for people with visual impairments and in wheelchairs in academic libraries, layout of library buildings, information resources for people with visual impairments, the role of ICT in information provision for people with visual impairments and in wheelchairs as well as challenges experienced by the library in seeking to provide services to people with visual impairments and in wheelchairs.

The researcher having gone through previous studies on library services' provision for people with visual impairments and in wheelchairs was able to identify gaps in the literature. Previous studies in Tanzania focused on education for people with disabilities and revealed the challenges facing them. Very few studies have been carried out in Tanzania on library services' provision for people with disabilities. This study addressed this gap by looking specifically at challenges facing people with visual impairments and in wheelchairs in accessing library services, focussing on the availability of information resources and layout of library buildings.

In addition, reviewing the literature from North America, Europe and Australasia helped the researcher to see what has been done in developed countries and determine the applicability of these initiatives in the context of Tanzania concerning access to library services and information resources. For example the Americans with Disabilities Act of 1990 forced academic libraries to review their facilities, collections and services for people with disabilities and make necessary modifications (Burke 2009). According to Burke many library buildings required alterations to reduce or eliminate barriers at entrances, add elevators and restroom facilities, and widen aisles and stacks. Specialized software and hardware were obtained to increase access for people with visual impairments, physically challenged, hearing impairments, and those with learning disabilities. Services were reviewed with modifications frequently made for circulation and photocopying and methods of communication.

In another example in 2001, the American Library Association Council approved a policy on services to people with disabilities that translated the ADA legal requirements and recommendations into applications in a library setting. The policy states that libraries must provide equitable access for people with disabilities through modified services such as extended loan periods, waived late fines, extended reserved periods, library card proxies, books by mail, reference services by fax or e-mail, home delivery services, remote access to resources, and volunteers to help patrons. In addition, libraries should include persons with disabilities as participants in the planning, implementing and evaluating of library services programs and facilities. Libraries must remove physical and communication barriers that are readily achievable, such as modifying parking lots and curbs, entrances, doors, tables, desks and public conveniences (American Library Association 2001).

Furthermore the social model of disability of Oliver (1990) which builds on the ideas of the United Kingdom's (UK) Union of the Physically Impaired Against Segregation (UPIAS) founded in the mid-1970s, requires the society to remove all barriers which hinder access to people with disabilities in accessing education, health services, employment, transport, information and other public services. All these examples from the literature helped to set a benchmark for Tanzanian academic libraries in the provision of equal services to people with visual impairments and in wheelchairs. However, this literature from developed countries has limitations as it focuses on the environment of developed countries where the infrastructure for people with visual impairments and in wheelchairs is well developed: integrating it into a context where the infrastructure is not well established is the difficult task to which this study aspires.

## **CHAPTER FIVE**

### **RESEARCH METHODOLOGY**

#### **5.1 Introduction**

This chapter describes the research methodology used in the study. The chapter includes the research design, area of the study, population of the study, sampling procedure, data collection and instruments used. It also discusses validity and reliability, pre-testing of research instruments, ethical issues as well as data analysis.

#### **5.2 Research methodologies**

Research methodology is a way to systematically solve the research problem (Kothari 2004). Methodology is a set of more or less standardized practices for producing knowledge. A methodology includes an epistemological foundation and associated rules of evidence for making a claim as well as a set of practices for generating that evidence (Anderson 2012:13). For Babbie and Mouton (2001:647) research methodology includes the methods, techniques, and procedures that are employed in the process of implementing the research design or research plan, as well as the underlying principles and assumptions that underlie their use.

#### **5.3 Research design**

The research design is the plan and the procedures for research, spanning the decisions from broad assumptions to detailed methods of data collection and analysis (Creswell 2009:3). Babbie and Mouton (2001:74) define research design as a plan or blueprint of how a researcher intends to conduct the research. According to Polit and Beck (2004:49) research design is the overall plan for obtaining answers to the questions being studied and for handling some of the difficulties encountered during the research process. Research design is the set of logical steps taken by the researcher to answer the research question. It forms the blueprint for the study and sets out the methodology used by the researcher to obtain sources of information, such as participants, elements and units of analysis, to collect and analyze the data, and to interpret the results (Brink, van der Walt and Van Rensburg 2012:96). The current study used a combination of quantitative and qualitative research methods.

### **5.3.1 Distinction between quantitative and qualitative research approaches**

In quantitative research methods, researchers try to understand the facts of a research investigation from an outsider's perspective while in qualitative research method, researchers try to achieve an insider's view by talking to subjects or observing their behaviour in a subjective way (Welman, Kruger and Mitchell 2005:9). Researchers in quantitative research do not begin analyzing data until they have completed the process of collecting all the data they plan to collect and condensed the data into numbers. In qualitative research, analysis begins early while still collecting data (Neuman 1994:405).

In quantitative research, researchers seek explanations and predications that will generalize to other persons and places. The intention is to establish, confirm, or validate relationships and to develop generalizations that contribute to existing theories. With qualitative research researchers seek a deeper understanding of complex situations. Their work is sometimes (although not always) exploratory in nature, they may use their observation to build theory from the ground up (Leedy and Ormrod 2013:96).

Quantitative research is a means of testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically using instruments, so that the data represented as numbers can be analyzed using statistical procedures. The final written report has a set structure consisting of introduction, literature and theory, methods, results and discussion, while qualitative research is a means for exploring and understanding the meanings individuals or groups ascribe to a social or human problem. The process of research involves dealing with emerging questions and procedures, data typically collected in the participants' setting, and data analysis which inductively builds from particulars to general themes. The researcher makes interpretations of the meaning of the data. The final written report has a flexible structure (Creswell 2009:4).

According to Ngulube (2005:130) quantitative studies rely on statistical and mathematical techniques while qualitative study is concerned with the qualities that

things have (Williams 2003:5 cited in Ngulube 2005:130). In a quantitative study, researchers use deductive reasoning to develop from the general theory specific predictions that can be tested empirically. In qualitative research the researcher uses information from the participants inductively as the basis for developing a theory firmly rooted in the participants' experiences. The participants' input is the starting point from which the researcher begins to conceptualize, seeking to explain patterns, commonalities and relationships emerging from the researcher- participant interactions (Polit and Beck 2004:29).

### **5.3.2 Justification for using combined methods**

The present study used a combination of methods that is quantitative and qualitative, because the nature of the study demanded a combination of approaches to soliciting and analyzing data. Ngulube (2005:131) states that both qualitative and quantitative methods have something to offer. Respondents with visual impairments were more easily interviewed while those in wheelchairs, the disabilities unit and library staff were thought to prefer answering a self-administered questionnaire in their own time. The combination of methods helped to get sufficient and comprehensive information and generate confidence in the researcher's findings and conclusions.

Leedy and Ormrod (2001) state that a combination of both qualitative and quantitative research methods is known as the multi-method approach or triangulation. Triangulation refers to research strategies and research designs involving more than one research method or more than one technique or style of inquiry, recognizing that the use of two or more ways of gathering information tells more than using one (Pons 1992:588 cited in Kamosho and Kigongo-Bukenya 2006:101). The combination of methods facilitates the collection of different kinds of data and generates confidence in reaching a conclusion.

This research study was conducted within the paradigm of pragmatism. Barker (2003:312) defines a paradigm as a model or pattern containing a set of legitimated assumptions and a design for collecting and interpreting data. The paradigm legitimizes the manner in which the research on a particular topic is conducted and

guides the research concerning what knowledge exists and how it can be known and comprehended (Munyua and Stilwell 2012:11). Stilwell (2006:3) cited in Munyua and Stilwell (2012:12) claims that paradigms are important for understanding and contributing to the logic and harmony of qualitative, quantitative and mixed methods studies. The identification of the paradigm applied helps to filter researchers' ways of viewing the world and guides how knowledge is conceived and analyzed in order to uncover the essential features of the research (Terre- Blanche and Durrheim 2006:2 cited in Munyua and Stilwell 2012:12). Creswell (2009:10) defines pragmatism as a world view arising out of actions, situations and consequences rather than antecedent conditions. It concerns the application of what works and in finding solutions to problems. Punch (2009:291) explains that pragmatism has two implications: the research question(s) is more important than the method used or the paradigm underlying the method and the decision regarding the use of either qualitative, quantitative methods or mixed methods depends on the research questions being asked.

The researcher used the paradigm of pragmatism because the intention was to address the problems which people with visual impairments and in wheelchairs face by applying different approaches to data gathering. In this study the main research question together with subsidiary research questions were put forward to address the research problem. Johnson and Onwuegbuzie (2004:17) cited in Munyua and Stilwell 2012:26) claim that mixed methods research fits the pragmatic paradigm and is ontologically based on the discovering of patterns, testing of theories and discovering and revealing the best set of explanations for understanding the results. Both quantitative and qualitative research methods were used to gather information and address the challenges facing people with visual impairments and in wheelchairs in accessing information resources in academic libraries in Tanzania.

#### **5.4 Area of the study**

The study was conducted in three administrative regions: Dar es Salaam, Dodoma and Tanga. In these regions five universities were studied. The universities are University of Dar es Salaam (UDSM), Open University of Tanzania (Dar es Salaam

centre), Dar es Salaam University College of Education (DUCE), St. John's University of Tanzania (SJUT) and Sebastian Kolowa Memorial University (SEKOMU). In addition the Special Needs Education Unit for Disabilities at the Ministry of Education and Vocational Training was included in the study. The Southern African Regional Universities Association (2012) report was used as a sampling frame to identify the Tanzanian institutions. The universities were then approached by the researcher and asked for information about hosting students with disabilities and about numbers of staff and students with the disabilities focused on in the study. The five universities were selected because are the only universities attended by students with visual impairments and in wheelchairs, were willing to be surveyed, and were accessible to the researcher.

### **5.5 Population of the study**

Krishnaswami (2003) states that the population is the target group to be studied. It is the total collection of elements about which the researcher wishes to make inferences. A member of a population is an element. S/he is a subject on which a measurement is taken. According to Brink, Van der Walt and Van Rensburg (2012: 131) the population is the entire group of persons or objects that is of interest to the researcher, in other words, that meet the criteria that the researcher is interested in studying.

The population for this study included those groups of people in these five universities who in various ways were directly involved in library services' provision or in the use or non-use of library services for whatever reason, namely:

- People with visual impairments which included people with partial sight or who were totally blind;
- All library staff with library qualifications;
- Library directors;
- Staff from the disability units and the head of the Special Needs Education Unit for Disability at the Ministry of Education and Vocational Training.

Table 1 shows the population of library staff and Table 2 the people with disabilities who were surveyed at the five universities. As both populations were relatively small all of the appropriate qualified staff and as many of the students with visual impairments and in wheelchairs were included in the study. Leedy and Ormrod (2005:207) state that for a small population (with fewer than 100 people or other units), there is little point in sampling and that one should survey the entire population. Their advice was followed with regard to the library staff. In addition 14 staff from the disability units and the one head of the Special Needs Education Unit were surveyed.

**Table 1:** Population of library staff (N= 139)

<i>SN</i>	<i>University</i>	<i>Library Staff</i>		<i>% response</i>
		<i>Expected respondents</i>	<i>Actual Respondents</i>	
1	UDSM	77	66	47%
2	DUCE	24	17	12%
3	OUT	18	13	9%
4	SJUT	13	11	8%
5	SEKOMU	7	6	5%
Total		139	113	81%

**Source:** Field data (2012)

**Table 2:** Population of people with visual impairments and in wheelchairs (N=76)

<i>SN</i>	<i>University</i>	<i>People with visual impairments and in wheelchairs</i>		<i>% response</i>
		<i>Expected respondents</i>	<i>Actual respondents</i>	
1	UDSM	27	26	34%
2	DUCE	10	9	12%
3	OUT	20	10	13%
4	SJUT	2	2	3%
5	SEKOMU	17	16	21%
Total		76	63	83%

**Source:** Field data (2012)



## **5.6 Sample size and sampling techniques**

Sampling refers to the researcher's process of selecting the sample from a population in order to obtain information regarding a phenomenon in a way that represents the population of interest (Brink, Van der Walt and Van Rensburg 2012:132). For Krishnaswami and Ranganatham (2010:118) sampling is the process of drawing a sample from a larger population.

The size of the sample should neither be excessively large nor too small (Kothari 2004:174). It should be determined by the researcher keeping in view the following points: nature of universe which may be either homogenous or heterogeneous in nature, the number of classes proposed and nature of the study. In addition the type of sampling, standard of accuracy and acceptable confidence level have to be taken into account. Furthermore availability of finance and other considerations such as nature of units, size of population, size of questionnaire and so on (Kothari 2004: 174-175) must be considered. Patton (1990:184) cited in Anderson (1998:123) says that in qualitative inquiry, sample size depends on what you want to know, the purpose of the inquiry, what's at stake, what will be useful, what will have credibility, and what can be done with available time and resources.

In research there are two generic methods of sampling, these are probability or random sampling and non-probability or non-random sampling. Probability or random sampling is one in which each person in the population has the same known probability to be representatively selected which permits the researcher to compute an estimate of the accuracy of the sample even before the study is done. Probability or random sampling consists of simple random sampling, systematic sampling, stratified random sampling, cluster sampling and panel sampling (De Vos, Strydom, Fouche and Delport 2011:228). To obtain a probability sample, the researcher must know every element in the population. There must be an available listing of all members of the population, and the sample must be randomly selected from the list. The list is the single most important criterion in determining whether probability sampling is possible for a given study (Brink, Van der Walt and Van Rensburg 2012:134).

Non-probability or non-random sampling is one in which the chances of selecting a particular individual are not known because the researcher does not know the population size or the members of the population (De Vos, Strydom, Fouche and Delport 2011:231). Kothari (2004:59) defines non-probability sampling as that sampling procedure which does not afford any basis for estimating the probability of each item in the population being included in the sample. Non-probability sampling consists of accidental or convenience, purposive or judgemental, quota, dimensional, target, spatial and snowball sampling (De Vos, Strydom, Fouche and Delport 2011:231). Non-probability requires the researcher to judge and select those participants who know the most about the phenomenon, and who are able to articulate and explain nuances to the researcher (Brink, Van der Walt and Van Rensburg 2012:139).

The current study used a non-probability sampling procedure to sample people with visual impairments and in wheelchairs because the researcher had no knowledge of the disability population. Sampling in the form of snowball sampling was used to identify the people with visual impairments and in wheelchairs. According to Brink, Van der Walt and Van Rensburg (2012:142) snowball sampling involves the assistance of the study participants in obtaining other potential participants, especially in situations where it is difficult for the researcher to gain access to the population. Snowball sampling is normally used when there is no knowledge of the sampling frame and limited access to appropriate participants for the intended study (Alston and Bowles 2003:90). Babbie and Mouton (2001:167) support this assertion by stating that snowball sampling is appropriate when the members of a special population are difficult to locate. Therefore to ensure that the estimated numbers of library users who had visual impairments and users in wheelchairs were reached the snowball technique was appropriate. This technique started with the few respondents who were available who were asked where other respondents could be found. The process continued until the researcher was satisfied that the sample was sufficiently large (Brink, Van der Walt and Van Rensburg 2012:142). The researcher interviewed and distributed copies of the questionnaires to all those people with visual impairments and in wheelchairs at the five universities who could be

identified through snowball sampling to allow for those who, for whatever reason, could not be interviewed or who declined to do so.

In addition, the population of library staff was relatively small and all of them were involved in the study. Kothari (2004:55) states that census is when all items are covered, no element of chance is left and highest accuracy is obtained.

## **5.7 Data collection and instruments used**

The researcher used a combination of data collection methods known as methodological triangulation, that is the use of two or more independent sources of data or data collection methods within one study in order to help ensure that the data are telling you what you think they are telling you (Saunders, Lewis and Thomhill 2003). Ngulube, Mokwatlo and Ndwandwe (2009) state that researchers do not apply mixed method research simply for the sake of mixing it but they use mixed methods to bridge the gap between qualitative and quantitative paradigms in order to answer research questions holistically. The researcher employed the survey method to collect data in the study areas using questionnaires, interview schedules and an observation checklist.

### **5.7.1 Questionnaires**

According to Babbie and Mouton (2001) a questionnaire is a document containing questions and other types of items designed to solicit information appropriate to analysis. A questionnaire contains a number of questions printed or typed in a definite order on a form or set of forms (Kothari 2004:100). In a questionnaire respondents read the questions, interpret what is expected and then write down the answers (Kumar 2005:126). The quantitative aspect of the study was facilitated by self-administered questionnaires with closed and open ended questions. In open ended questions the researcher asks a question to which respondents provide any answer that they wish to give. With open ended questions the possible responses are not given and the respondent writes down the answers in his /her own words (Kumar 2005:132). De Vos, Strydom, Fouche and Delport (2011:352) advise that open ended questions should be asked to allow the participants to express themselves freely.

Open-ended questions have the advantages of permitting an unlimited number of possible answers; respondents can answer in detail and can qualify and clarify responses. In addition unanticipated findings can be discovered. It also permits adequate answers to complex issues and furthermore allows for creativity, self-expression and richness of detail as well as revealing a respondent's logic, thinking processes, and frame of reference (Neuman 1994:233). The disadvantages of open ended questions are that respondents give different answers with different degrees of detail. In addition comparisons and statistical analysis become very difficult, coding is also difficult. Furthermore questions may be too general for respondents who lose direction (Neuman 1994:233).

With closed questions the researcher asks questions and gives the respondent mostly fixed responses to choose from. This type of question has the advantage of being easier and quicker for respondents to answer if their response matches those provided. The responses of the different respondents are easier to code, analyze and compare. In addition there are fewer irrelevant or confused answers to questions. Furthermore the respondents are more likely to answer more sensitive topics (Neuman 1994:233). Disadvantages of using a closed questionnaire are that respondents cannot suggest ideas that the researcher may not have included, and respondents with no opinion or knowledge can answer anyway they like. In addition this type of question can force respondents to give simplistic responses to complex issues. Furthermore clerical mistakes or marking the wrong response is possible (Neuman 1994:233). In many instances another category option is provided to cater for responses not included in the list.

Copies of the three different questionnaires were distributed to library staff, people in wheelchairs and to the staff from the Special Needs Education Unit for Disabilities. The questionnaire was self-administered by the respondents. Each group had a separate questionnaire (**see appendices 16, 17 and 18**) however, some questions were common to both groups. According to Krishnaswami (2003), self-administered questionnaires are less time consuming and reduce interview bias. Kothari (2004:100-101) points out that there is less cost even when the universe is

large and is widely spread geographically. Furthermore respondents have adequate time to respond to questions and give adequate thought to them and those respondents who are not easily approachable can be reached conveniently using this method. The disadvantages of a questionnaire are that people may not return the questionnaire, and may not understand the questions and provide incorrect information to the researcher (Krishnaswami 2003) or the questionnaire may get lost once it is sent. There is also the issue of inflexibility because of the difficulty of amending questions once the questionnaire has been distributed. Furthermore this method is likely to be the slowest of all (Kothari 2004:101).

### **5.7.2 Semi-structured interview schedule**

An interview is a two way systematic conversation between an investigator and an informant, initiated for obtaining information relevant to a specific study. It involves not only conversation but also learning from the respondent's gestures, facial expressions and pauses and his/her environment. Interviewing requires face to face contact or contact over the telephone and calls for interviewing skills. It is done by using a structured schedule, semi structured or an unstructured guide (Krishnaswami and Ranganatham 2010). According to Holstein and Gubrium (2003:176) an interview is an in-depth conversation between the participants and the researcher. The method gives the researcher and participant more flexibility (De Vos, Strydom, Fouche and Delport 2011:351). With semi-structured interviews the researcher will have a set of predetermined questions in an interview schedule, but the interview will be guided rather than dictated by the schedule (De Vos, Strydom, Fouche and Delport 2011:352). The researcher used semi structured interviews in order to gain a detailed picture of a participants' beliefs about, or perceptions or accounts of a particular topic.

Interviews have a number of advantages as pointed out by Krishnaswami (2003): they allow the researcher to establish rapport, explain the purpose of the study and clarify issues and allow for possible triangulation or the application of other validity enhancing instruments. Disadvantages of the interview are that they are time consuming and are relatively expensive if the informants are scattered

geographically. The current study used face to face and in some cases, telephone interviews with the informants. The qualitative aspects of the study were facilitated by semi-structured interviews of people with visual impairments and the directors of the libraries (see appendices 19 and 20).

### **5.7.3 Observation**

Observation can be used as a scientific tool and the method of data collection for the researcher. With this method, information is sought by way of the investigator's own direct observation without asking the respondents questions (Kothari 2004:96). Kumar (2005:119) states that observation is a purposeful, systematic and selective way of watching and listening to an interaction of phenomenon as it takes place. According to Krishnaswami and Ranganatham (2010:169) observation is a systematic viewing of a specific phenomenon in its proper setting for specific purpose of gathering data for a particular study. There are two types of observation; participant observation and non-participant observation.

Participant observation according to Kumar (2005:120) is when a researcher participates in the activities of the group being observed in the same manner as its members, with or without their knowing that they are being observed. Krishnaswami and Ranganatham (2010:170) state that with participant observation the observer is a part of the phenomenon or a group which is observed and s/he acts as both an observer and a participant. With non-participant observation the observer stands apart and does not participate in the phenomenon observed (Krishnaswami and Ranganatham 2010:171). Kumar (2005:120) states that with non-participant observation a researcher remains a passive observer watching and listening to its activities and drawing conclusions.

According to Kothari (2004:96) observation has the advantages of eliminating subjective bias, and information observed by the researcher relates to what is currently happening. In addition it is less demanding of active cooperation on the part of respondents as in interview and questionnaire methods as this method is dependent on the researcher's observation (Kothari 2004:96). The observation

method is expensive because the researcher should be at the site all the time and the information provided by this method is very limited. In addition sometimes unforeseen factors may interfere with the observational task (Kothari 2004:96). In addition participants might resent being observed so it is wise and ethically correct to seek their permission.

The qualitative aspect of the research was facilitated by observation. The researcher was able to observe people with visual impairments and in wheelchairs, engaging with library services, the layout of library buildings and the information resources available in these libraries. An observation checklist (**see appendix 21**) was used to supplement the findings obtained through questionnaires and interviews. The researcher observed the information resources available (for example, in Braille), as well as the availability of toilets, study carrels, ICT equipment (computers, CCTV and scanner), appropriate and suitably arranged furniture (shelf arrangement, chairs and tables), floor space, elevators (lifts) and doors. The type of stairs and the safety of stairs were also assessed.

## **5.8 Validity and reliability**

Validity and reliability are central issues in all scientific measurements. Both are concerned with how measures or indicators are developed for construct (Neuman 1994:127). Babbie and Mouton (2001:119) cited in Ngulube (2005:135) state that reliability and validity are the major technical considerations that researchers take into account when constructing and evaluating instruments of data collection. Validity is used to mean true or correct. If the researcher states that an indicator is valid, it is valid for a particular purpose and definition. The same indicator can be valid for one purpose but less valid or invalid for others. Validity is a term describing a measure that accurately reflects the concept it is intended to measure (Babbie and Mouton 2001). According to Welman, Kruger and Mitchell (2005:142) validity is the extent to which the research findings accurately represent what is really happening in the situation. An effect or test is valid if it demonstrates or measures what the researcher thinks or claims it does.

Reliability means that the information provided by indicators (for example a questionnaire) does not vary as a result of characteristics of the indicator, instrument, or measurement device itself (Neuman 1994:127). According to Welman, Kruger and Mitchell (2005:145) reliability is concerned with the findings of the research and relates to the credibility of the findings. Reliability is the consistency with which a measuring instrument yields a certain result when the entity being measured has not changed (Leedy and Ormrod 2001:31). The present study used various methods to ensure that the validity and reliability of the findings were achieved. These were by pre-testing data collection instruments and the combination of data gathering methods such as questionnaire, interview schedule and observation checklist.

### **5.8.1 Pre-testing of research instruments**

No matter how carefully a researcher designs a data collection instrument, such as a questionnaire, there is always the possibility, indeed the certainty of error. The surest protection against such errors is to pre-test the questionnaire or interview schedule in full or in part (Babbie and Mouton 2001:244). The researcher pre-tested the research instruments for the purpose of ensuring their reliability and validity as well as to determine if the questions in the instruments met the research questions of the study. In addition the purpose of pre-testing was to identify parts of the instrument package that were difficult for pretest subjects to read or understand or that may have been misinterpreted by them. Furthermore pre-testing determined whether the sequencing of instruments was sensible (Polit and Beck 2004:328).

Krishnaswami and Ranganatham (2010:258) state that the purpose of pre-testing is to test whether the instruments would obtain the responses required to achieve the research objectives, to test whether the content of the instruments is relevant and adequate, to test whether the wording of questions is clear and suited to the understanding of the respondents, to test the other qualitative aspects of the instrument like question structure and to develop appropriate procedures for administering the instrument with reference to field conditions. Therefore twelve (12) copies of questionnaires were distributed to librarians and to users in wheelchairs at the University of KwaZulu-Natal, Pietermaritzburg Campus's Cecil



Renaud Library. Respondents were asked to give their views on the data collection instruments. The pre-test checklist questions covered typographical errors, misspelt words, font size (if was sufficient for reading), and also asked whether the vocabulary used was appropriate. In addition respondents were asked if the instructions given about completing the questionnaire were clear as well as whether the layout of questions was logical to them. Finally they were asked to provide suggestions in order to improve the quality of instruments.

The researcher had hoped to pre-test the instruments on fifteen (15) library staff and fifteen (15) people with visual impairments and in wheelchairs as planned in the research proposal but this was not possible due to the following reasons: at the Pietermaritzburg Campus, Cecil Renaud Library there are only nine (9) librarians and one (1) of them was on leave, therefore the researcher managed to pre-test to eight (8) librarians. In addition, during pre-testing students were preparing for examination therefore it was difficult to pre- test users with visual impairments and in wheelchairs, although the researcher managed to pre-test the instrument on three users in wheelchairs. Despite these limitations the researcher managed to gather useful information which helped to provide a critical view of the instruments. The respondents made their suggestions which were discussed with the thesis supervisor and decisions were made on how to implement the changes.

## **5.9 Data collection procedures**

This section presents the areas of the study and times at which the researcher travelled to collect data as well as the activities undertaken in the areas studied.

The researcher travelled in November, 2012 from Dar es Salaam to Tanga to collect data at Sebastian Kolowa Memorial University. Copies of two separate questionnaires were distributed to library staff and staff of the disability unit. None of the questionnaires were distributed at Sebastian Kolowa Memorial University to the wheelchair users because they had only one wheelchair user and he was admitted to hospital at the time the researcher was collecting data. In the same period the researcher interviewed users with visual impairments and the director of the library

services. In addition the researcher observed people with visual impairments and in wheelchairs using library services, examined the layout of the library buildings noting whether it allowed these two groups of users to gain access to the information resources needed, and established which information resources and other library facilities were available. This process of gathering data in Tanga at Sebastian Kolowa Memorial University took two weeks.

The researcher then travelled to Dodoma region in December 2012 to collect data at St. John's University of Tanzania. The copies of the two questionnaires were distributed to library staff and users in wheelchairs. This university had only one user in a wheelchair and there were no disability unit staff, as there was no disability unit. The researcher also interviewed the director of the library services and users with visual impairments. Again there was only one user with visual impairments. In addition the researcher observed how people with visual impairments and in wheelchairs were able to use the library services, examined the layout of the library buildings, and established which information resources and other library facilities were available. This process of gathering data in Dodoma at St. John's University of Tanzania took two weeks.

In December 2012 the researcher then travelled to Dar es Salaam where the data were collected at the University of Dar es Salaam, Open University of Tanzania and Dar es Salaam University College of Education. Copies of the questionnaires were distributed to library staff, disability unit staff, users in wheelchairs and at the same time users with visual impairments and the directors of the library services were interviewed. In addition observations also took place using the same checklist as for the other institutions above. The process of data gathering in these three universities took two months from mid-December 2012 to mid- February 2013.

#### **5.10 Data analysis and presentation of data**

Analysis means the detailed examination or study of something in order to understand more about its substance and to find out what it consists of (Ogunbameru and Ogunbameru 2010:280). Kerlinger (1973) defines analysis as the categorizing,

ordering, manipulating and summarizing of data to obtain answers to research questions. Presentation refers to the act of showing something or of giving something to somebody. Researchers generally use tables and graphs to present their data while interpretation refers to the particular way in which something is understood or explained. It is usually done by addressing the data in the tables presented (Ogunbameru and Ogunbameru 2010:280). Data analysis according to Kothari (2004:122) involves a number of closely related operations which are performed with the purpose of summarizing the collected data and organizing these in such a manner that they provide information in response to the research questions. Data analysis includes operations such as editing, coding, classification and tabulation.

Editing data is a process of examining the raw data to detect errors and omissions and to correct where possible. Editing is done to ensure that data collected are accurate, consistent with other facts gathered, uniformly entered, as complete as possible and arranged to facilitate coding and tabulation (Kothari 2004:122). Coding is the process of assigning numerals or other symbols to answers so that responses can be placed in a limited number of mutually exclusive categories or classes. Coding is necessary for efficient analysis and through it several replies may be reduced to a small number of classes which contain the critical information required for analysis. Classification is the grouping of data with common characteristics into one class. In this way the entire data get divided into a number of groups or classes (Kothari 2004:123-124). Tabulation is the process of summarizing raw data and displaying the same in compact form (that is in the form of statistical tables) for further analysis (Kothari 2004:127).

Quantitative data collected using open and closed ended questions from library staff, disability unit staff and people in wheelchairs were cleaned, edited and coded before being analyzed. These processes are essential to ensure that the collected data is systematically organised in a manner that facilitates analysis (Kothari 2004:122). Data collected were entered into the computer and descriptive statistics such as mean, frequencies and cross tabulation were generated using SPSS version 16. SPSS

offers powerful and user-friendly ways to extract meaningful information from the data. For Pickard (2007:278), SPSS has the advantages of reducing the time required to analyse data; reducing the errors involved in coding data; thoroughly analysing data with in-depth statistics as well as presenting results clearly with flexible reports and charts. SPSS helps to generate tables which were used to depict data statistically and in graphic form. Tables with frequencies and percentages, pie charts and histograms were used to present the findings. The results are presented in chapter six.

Qualitative data collected from directors and from people with visual impairments (partially sighted and totally blind) from all five universities was analyzed using thematic analysis (Braun and Clarke 2006). Thematic analysis is a method for identifying, analyzing and reporting patterns (themes) within data. It minimally organizes and describes data sets in rich detail (Boyatzis 1998 cited in Braun and Clarke 2006:79). The benefit of thematic analysis is its flexibility (Braun and Clarke 2006:79). The completed thesis was checked for similarity of text in Turnitin and reflected a value of 18%, which was motivated for as acceptable on account of the content from policy documents that was identified as similar.

### **5.11 Ethical issues**

According to the American Sociological Association (1999) ethics is a range of general principles (ranging from professional competence, integrity, responsibility and respect for people's rights, dignity and diversity), followed by a list of ethical standards linked to these principles. The Social Research Association (2003) defines ethics as the core principles and obligations, emphasizing that the aim of the document is to attempt to get social researchers, from the bottom-up to make informed decisions and judgments about how to deal with the dilemmas that can come from doing social research. On the other hand ethical issues arise out of our interaction with other people, and the environment, especially where there is potential for, or where there exists a conflict of interest (Babbie and Mouton 2001: 520). The *Webster new world dictionary* cited in Babbie and Mouton (2001:520) defines ethical issues as conforming to the standards of conduct of a given profession

or group. Ethical research depends on the integrity of the individual researcher and his or her deeply held values (Neuman 1994:428).

To address these ethical issues, the researcher sought permission from various authorities in the study areas to carry out the research. The letter from the University of KwaZulu-Natal in South Africa and clearance letters from University of Dar es Salaam, Open University of Tanzania, Sebastian Kolowa Memorial University, Dar es Salaam University College of Education, St. John's University of Tanzania and the Ministry of Education and Vocational Training authorized the collection of data in the study areas. The University of KwaZulu-Natal's ethics policy requirement was followed and respondents were notified about the purpose and procedures of the study prior to the data collection. A consent form was signed by all respondents in the study areas before commencement of the study. According to Greener (2011:146) informed consent should provide detailed information about the research so that prospective participants can make an informed decision on their possible involvement. Greener further emphasized that this consent should be sought in written form and signed off by the research subject; based on the objective of conducting research without deception, with research without consent only being sanctioned as a last resort where no other approach is possible. All respondents were assured of confidentiality and of their right to withdraw at any point of the study, for any reason.

Greener (2011:146) stated that researchers should be organized in the way that the data collected are safely stored and to ensure that when being reported, the data preserves the anonymity of its research subjects. In addition if researchers guarantee anonymity, they must make sure that reported quotes and incidents are not directly traceable to particular individuals, either by those outside the research context or by those within it, the latter often providing a particular challenge. In a similar way, Babbie and Mouton (2001:523) support this assertion by saying that the clearest concern in the protection of the subjects' interests and well-being, is the protection of their identity.

### **5.12 Evaluation of the research methodology**

Ngulube (2005:139) claimed that the research method should be evaluated in order to explain what information was needed, how it was obtained accurately and cheaply and how it was analysed. It is mandatory for researchers to evaluate their investigation procedures, and all methods are imperfect in his view (Ngulube 2005:139). This research study combined quantitative and qualitative methods, and the data were collected simultaneously. Questionnaires were used to collect data from library staff, staff of disability units and users of the library in wheelchairs, while interview schedules were used to collect data from library directors and users with visual impairments. In addition the researcher observed people with visual impairments and in wheelchairs engaging with library services, and the layout of library buildings and information resources available in these libraries were investigated. The combination of the methods used by the researcher helped to measure the validity and reliability of the results gathered. In relation to this assertion Ngulube (2005:140) states that combining research methods in collecting data offers the promise of getting a more complete picture in a way that a single method cannot achieve.

During the data collection process the researcher noted that an interview was more appropriate for people with visual impairments as they were able to verbalise their feelings, thoughts and experiences fully. The researcher also observed that in the questionnaire some respondents were likely to provide answers which were incorrect for questions that required further explanation. For example “if the answer is Yes or No, please explain.” In this type of question respondents preferred not to answer in order to avoid providing more explanation and therefore the answer was likely to be incorrect. Therefore using a combination of methods helped to ensure the validity and reliability of the results given by the respondents. In addition the responses in the questionnaires were likely to be imperfect because there was no clarification of the open ended questions as the respondents responded at their own pace, unlike the interview schedule where the researcher first clarified questions before the respondents answered. Furthermore the questionnaires took longer to complete

compared to the interview schedules because respondents responded at their own pace.

The respondents also complained that the questions in the questionnaire were difficult to respond to because of the level of education of some respondents and also the questions were not familiar to them due to the fact that their libraries did not always provide services to people with disabilities. Therefore they requested more clarification from the researcher before they filled in the questionnaires in order to respond correctly. The researcher complied with this request.

All these challenges occurred during data gathering but the researcher was able to overcome them and the process of data gathering went ahead smoothly. The combination of questionnaire, interview and observation enabled the researcher to validate the data using the different data gathering instruments, and also enabled the researcher to achieve what she wanted to achieve in the study.

### **5.13 Summary**

This chapter explained the research methodology and research design of the study. It provided the distinction between quantitative and qualitative research approaches as well as justification for combined methods. The study population, sample size and sampling techniques, data collection instruments, validity and reliability were discussed. In addition pre-testing of research instruments, sampling procedures, data analysis and presentation of data, ethical issues as well as evaluation of the research methodology were presented.

## **CHAPTER SIX**

### **PRESENTATION OF FINDINGS**

#### **6.1 Introduction**

This chapter presents the study findings derived from the three questionnaires, the two interview schedules and observation checklist. Questionnaires were distributed to library staff, disability unit staff and people in wheelchairs while interviews were conducted with people with visual impairments and library directors of the five universities. Data collected through questionnaires were cleaned, edited and coded before being analyzed using descriptive statistics and the software package SPSS version 16. Tables with frequencies and percentages, pie charts and histograms are used to present the findings. In addition data collected using interviews were analyzed using thematic analysis.

The study investigated library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania, specifically looking into access to information resources and the layout of library buildings in five universities. These universities were University of Dar es Salaam (UDSM), Open University of Tanzania (OUT), Dar es Salaam University College of Education (DUCE), Sebastian Kolowa Memorial University (SEKOMU) and St. John's University of Tanzania (SJUT).

The results of this study are organized and presented according to the main research and subsidiary research questions outlined in chapter one section 1.4.3. The main research question was what services do the academic libraries provide for people with disabilities? specifically people with visual impairments and in wheelchairs, and whether the library environment in these institutions is hospitable in terms of physical access and resources. The subsidiary research questions were as follows:

- What is the physical layout of academic libraries in Tanzania?
- What information resources are provided by academic libraries for people with visual impairments?



- What challenges face people with visual impairments and in wheelchairs in accessing and using library services?
- What is the role of information and communication technology (ICT) in facilitating provision of information resources to people with visual impairments and in wheelchairs?
- What challenges are experienced by the library in seeking to provide services to people with visual impairments and in wheelchairs?

In addition the researcher assessed the suitability of the model chosen for the study. The researcher was able to collect useful information concerning this study from the respondents involved. One hundred thirty nine (139) copies of the questionnaire for library staff, nineteen (19) copies of the questionnaire for disability unit staff and seven (7) copies of the questionnaire for people in wheelchairs were prepared and sent to the respondents in five universities and in the Ministry of Education and Vocational Training. The response rates for library staff, disability unit staff and people in wheelchairs are shown in the tables 3 and 4.

## 6.2 Study respondents

This section presents table 3 and 4 which indicate response rate of library staff, disability unit staff, people with visual impairments and in wheelchairs.

**Table 3:** Response Rate of library staff, disability unit staff and people in wheelchairs

<i>University</i>	<i>Library Staff</i>		<i>Disability unit staff</i>		<i>People in wheelchairs</i>	
	<i>Expected respondents (N= 139)</i>	<i>Actual Respondents</i>	<i>Expected respondents (N = 19)</i>	<i>Actual Respondents</i>	<i>Expected respondents (N= 7)</i>	<i>Actual Respondents</i>
UDSM	77	66(47.4%)	3	3(15.8%)	3	3(42.8%)
OUT	18	13(9.3%)	3	1(5.2%)	1	1(14.3%)
DUCE	24	17(12.2%)	3	3(15.8%)	1	1(14.3%)
SEKOMU	7	6(4.3%)	5	5(26.3%)	1	-
SJUT	13	11(7.9%)	-	-	1	1(14.3%)
MOEVT	-	-	5	3(15.8%)	-	-
Total	139	113(81%)	19	15(78.9%)	7	6(85.7%)

**Source:** Field data (2012)

**Table 4:** Response rate of people with visual impairments (N=67)

<i>University</i>	<i>People with visual impairments</i>		<i>% responses</i>
	<i>Expected respondents</i>	<i>Actual Respondents</i>	
UDSM	23	23	34.3%
OUT	19	9	13.4%
DUCE	8	8	11.9%
SEKOMU	16	16	23.8%
SJUT	1	1	1.4%
Total	67	57	85%

**Source:** Field data (2012)

The above tables 3 and 4 show a clear picture that 113 (81%) copies of the questionnaire were returned by library staff out of 139 copies of the questionnaire sent earlier, 15(78.9%) copies of the questionnaire were returned by disability unit staff out of 19 copies of the questionnaire sent and 6(85.7%) copies of the questionnaire were returned by people in wheelchairs out of 7 copies of the questionnaire sent from five universities. In addition 57(85%) out of 67 respondents with visual impairments and 5(100%) directors from five universities were interviewed. Babbie and Mouton (2001:261) state that the overall rate of response is a guide to the representativeness of the sample respondents. If a high response rate is achieved, there is less chance of significant response bias than in a low rate. In addition Babbie and Mouton (2001:261) further claimed that the consensus is that a response rate of 50 per cent is adequate for analysis and reporting. A response of 60 per cent is good, and a response rate of 70 per cent is very good. Therefore following Babbie and Mouton's (2001:261) advice the researcher was satisfied with the response rate for the number of completed copies of the three questionnaires received from three categories of respondents (library staff, disability unit staff and people in wheelchairs) and the interview schedules completed by two categories of respondents (people with visual impairments and library directors).

### **6.2.1 Characteristics of respondents**

The characteristics of respondents were not part of the study objectives but are presented for the benefit of the reader to give some background information about

the respondents involved in the study. Therefore the study presents the characteristics of respondents who were involved in the study in terms of gender, age, education level and work experience.

#### **6.2.1.1 Gender composition of the respondents**

This section presents a description of the gender composition of respondents of the five universities and the ministry investigated.

**Table 5:** Gender of the library staff (N=113)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Male	61	54%
Female	52	46%
Total	113	100%

**Source:** Field data (2012)

Table 5 above shows gender of library staff of the five universities involved in the study. The responses were as follows: 61(54%) were male and 52(46%) female.

**Table 6:** Gender of people in wheelchairs (N=6)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Male	6	100%
Total	6	100%

**Source:** Field data (2012)

Table 6 above shows the gender of people in wheelchairs. The 6 (100%) respondents were male. There were no female respondents in wheelchairs in these universities when the researcher was collecting data.

**Table 7:** Gender of staff for special needs of education unit (N=15)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Male	13	87%
Female	2	13%
Total	15	100%

**Source:** Field data (2012)

Table 7 above demonstrates the gender of the staff of special needs of education units. Respondents were: 13(87%) males and 2(13%) females. Table 5, 6 and 7 show that male and female respondents from five universities and the Ministry were involved in the study with males being in the majority.

#### **6.2.1.2 Age groups of the respondents**

This section provides the age groups of respondents of five universities involved in the study. Table 8 below indicates age range of library staff from five universities involved in the study.

**Table 8:** Age range of library staff (N= 113)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
20-25 years	10	9%
26-30 years	20	18%
31-35 years	23	20%
36-40 years	17	15%
41 and above years	43	38%
Total	113	100%

**Source:** Field data (2012)

The responses revealed the following: the highest score at 43(38%) was for those in the category 41 and above years, 23(20%) in 31-35 years, 20(18%) in 26-30 years, 17(15%) indicated 36-40 years and 10(9%) stated 20-25 years. Hence the majority of the respondents were 36 or older.

**Table 9:** Age of people in wheelchairs (N= 6)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
20-25 years	2	33.3%
26-30 years	2	33.3%
41 and above years	2	33.3%
Total	6	100%

**Source:** Field data (2012)

Table 9 above indicates the age groups of people in wheelchairs. Responses were: 2(33.3%) in the category 20-25 years, 2(33.3%) in the group 26-30 years and

2(33.3%) cited 41 and above years. Table 8 and 9 indicates that different age groups from five universities were included in the study.

### 6.2.1.3 Education levels of the respondents

This section describes the education level of the respondents from the five universities involved in the study.

**Table 10:** Education level of library staff (N= 113)

Responses	Frequency	Percentage
Certificate	7	6%
Diploma	30	26%
Degree	29	26%
Masters	35	31%
PhD	12	11%
Total	113	100%

**Source:** Field data (2012)

Responses were as follows: the highest score at 35(31) was for those who held a master's degree, 30(26%) had a diploma, 29(26%) indicated they held a bachelor's degree and 12(11%) had a PhD. Seven (6%) stated that they had a certificate. Of these 113 respondents (42%) held a masters and /or a PhD.

**Table 11:** Education level of people in wheelchairs (N= 6)

Responses	Frequency	Percentage
Diploma	1	16.6%
Degree	4	66.6%
Masters	1	16.6%
Total	6	100%

**Source:** Field data (2012)

Table 11 above shows education level of people in wheelchairs. Responses were: 4(66.6%) held a degree, 1(16.6%) had a diploma and 1(16.6%) indicated a master's.

**Table 12:** Education level of staff of special needs of education unit (N= 15)

Responses	Frequency	Percentage
Diploma	4	26.6%
Degree	4	26.6%
Masters	6	40%
PhD	1	6.6%
Total	15	100%

**Source:** Field data (2012)

Table 12 above gives the education level for staff of special needs of education units. The following were responses: 6(40%) responded that they had a master's degree; 4(26.6%) indicated diploma; 4(26.6%) mentioned a degree; and 1(6.6%) cited PhD. Of these 15 respondents 7(46.6%) had a masters and/or PhD. Table 10, 11 and 12 indicate that there are various levels of education of staff and users of the libraries from five universities and the Ministry investigated.

People with visual impairments were interviewed regarding their level of education. The responses were that they held a bachelor's degree (48), or master's (6) and/or PhD (3). Again they were interviewed about the discipline which they were studying. Most of their responses were BA, MA and PhD education special needs (48), and a few responded LLB (Bachelor in Law) and LLM (Masters in Law) (4), BA Mass Communication (2), BA Political Science (1), Bachelor in Commerce (1) and Bachelor in Cultural Heritage (1). In addition they were asked about the reason for choosing the discipline which they were studying. Those who responded BA and MA education special needs, said they liked the discipline because it is easy to implement and easy to get employment. Those who responded LLB and LLM, BA Mass Communication, BA Political Science, Bachelor of Commerce and Bachelor in Cultural Heritage said that they liked the discipline. The study indicated that most of the people with visual impairments preferred studying education special needs because it is easy to implement and easy to get employment.

#### 6.2.1.4 Work experience

This section presents the work experience of the respondents of the five universities involved in the study.

**Table 13:** Work experience of library staff (N= 113)

Responses	Frequency	Percentage
1-10 years	73	65%
11-20 years	17	15%
21-30 years	12	11%
31-40 years	7	6%
41 and above years	4	3%
Total	113	100%

**Source:** Field data (2012)

Table 13 above demonstrates work experience of the respondents from five universities. The following were responses: 73(65%) responded 1-10 years; 17(15%) said 11-20 years; 12(11%) mentioned 21-30 years; 7(6%) indicated 31-40 years; and 4(3%) showed 41 and above years. The majority had worked for ten years or less.

**Table 14:** Work experience of staff of special needs of education unit (N= 15)

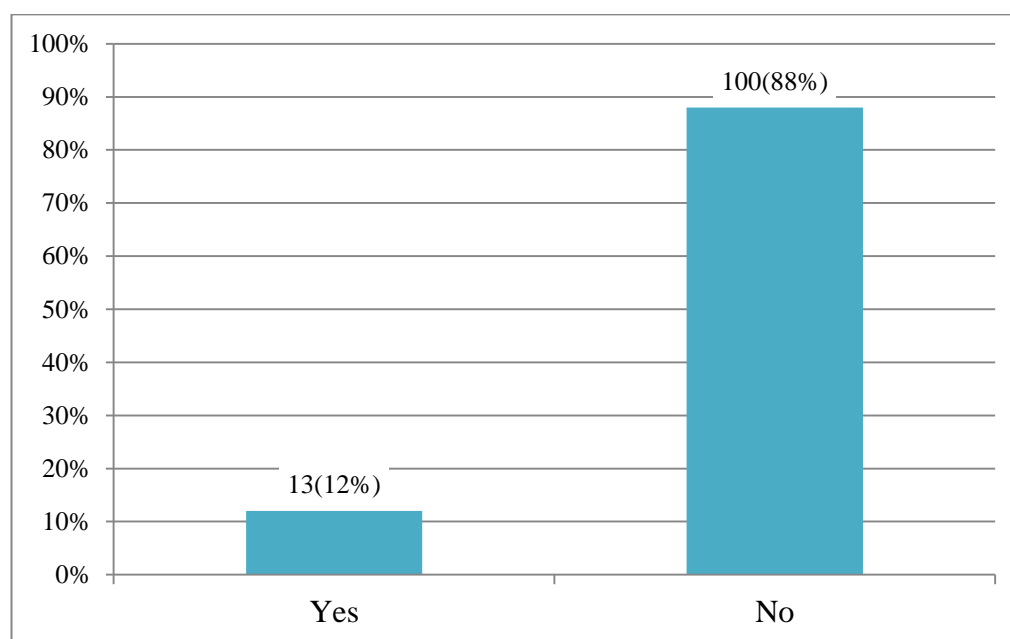
Responses	Frequency	Percentage
1-10 years	7	46.6%
11-20 years	3	20%
21-30 years	1	6.6%
31-40 years	4	26.6%
Total	15	100%

**Source:** Field data (2012)

Table 14 above depicts years of work experience for staff of special needs of education units. The responses were: 7(46.6%) responded 1-10 years; 4(26.6%) cited 31-40 years; 3(20%) indicates 11-20 years; and 1(6.6%) said 21-30 years. Table 13 and 14 indicate that there is a range of work experience in the area investigated. Of 15 staff/ respondents, 46.6% had worked for 10 years or less.

### 6.2.1.5 Education and training in special needs

The researcher in this section sought to find out if library staff have been educated and trained in special needs. According to the social model of disability, staff who provide services to people with disabilities need to be educated and trained in special needs so they are able to help people with different categories of disabilities.



**Figure 3:** Education and training in special needs (N=113)

**Source:** Field data (2012)

Figure 3 above shows responses of library staff on education and training in special needs. Responses were as follows: the vast majority 100(88%) responded negatively while 13(12%) responded positively. Respondents who responded negatively indicated that they did not have education and training in special needs and those who responded positively stated that they do have education and training in special needs.

Staff of special needs education units for disabilities were asked if they have been educated and trained in disabilities. The researcher wanted to find out if staff of special needs education unit for disabilities had knowledge and skills regarding disabilities. Table 15 below indicates their responses.



**Table 15:** Education and training in disability (N=15)

Responses	Frequency	Percentage
Yes	14	93%
No	1	7%
Total	15	100%

**Source:** Field data (2012)

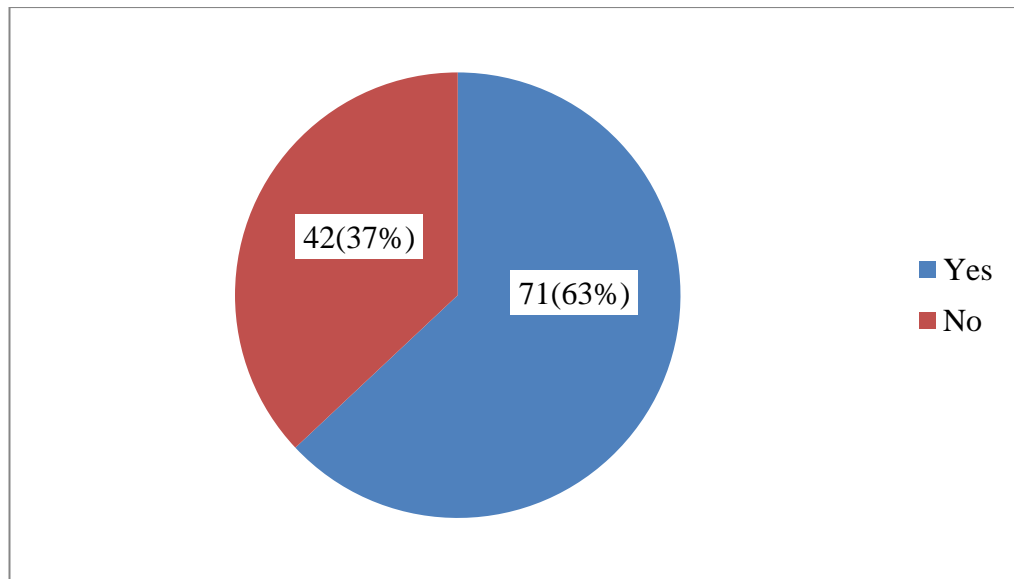
Responses were as follows 14(93%) responded positively and 1(7%) responded negatively. Those who responded positively indicated that they have had training in disabilities whereas the respondent who responded negatively has had no training in disabilities.

### **6.3 Library services provided to people with visual impairments and in wheelchairs in academic libraries in Tanzania**

This main research question sought to identify services provided by the library to people with visual impairments and in wheelchairs. Data to address this objective were collected through questionnaires, semi structured interview schedules and an observation checklist.

#### **6.3.1 Library services provided to people with visual impairments and in wheelchairs**

In this question the researcher wanted to know if the library provided services to people with visual impairments and in wheelchairs. In relation to the social model of disability the academic library in Tanzania requires libraries to provide universal services. Figure 2 shows the responses of library staff from five universities involved in the study. These universities are University of Dar es Salaam (UDSM), Open University of Tanzania (OUT), Dar es Salaam University College of Education (DUCE), Sebastian Kolowa Memorial University (SEKOMU) and St. John's University of Tanzania (SJUT).



**Figure 4:** Provision of library services to people with visual impairments and in wheelchairs (N = 113)

**Source:** Field data (2012)

Figure 4 above shows the responses on whether the library provides services to people with visual impairments and in wheelchairs. The responses were as follows: 71(63%) responded positively while 42(37%) responded negatively. Respondents who responded positively further explained that they provided lending, photocopy and internet services and study rooms. Those who responded negatively stated that their libraries are not designed to provide services to people with visual impairments and in wheelchairs, and also they said there is a lack of policy addressing issues relating to people with visual impairments and in wheelchairs. In addition the respondents said that currently the services for these groups are provided by the unit which is under the School of Education. Respondents further explained that no initiatives have been undertaken by their universities regarding people with visual impairments and in wheelchairs.

People in wheelchairs were asked whether they used the library services. Table 16 below shows their responses.

**Table 16:** Library services used by people in wheelchairs  
(N= 6)

Responses	Frequency	Percentage
Yes	4	67%
No	2	33%
Total	6	100%

**Source:** Field data (2012)

The responses were as follows: 4(67%) responded positively while 2(33%) responded negatively. Those who responded positively explained further that they used the library for borrowing books and other information resources as well as searching the internet. Respondents who responded negatively said they did not use library because the infrastructure did not allow them access to the information housed in the library.

Directors of the libraries were also asked in an interview if they provided services to people with visual impairments and in wheelchairs. The responses were positive although they explained further that in most cases the services are provided by the disability units, which administratively fall under the school of education. Materials and equipment suitable for people with visual impairments are housed in the disability units.

In addition people with visual impairments were also asked in their interview if they used the library services. 47(82%) out of 57 responded that they used the library when they wanted to borrow books and other information resources. 10(18%) out 57 said that they were not using the library services because in the library there were no information resources in their format and even the layout of the library buildings did not allow them to get access to information resources. Through observation the researcher confirmed that the libraries provided services to people with visual impairments and in wheelchairs. The services which the libraries provided were lending, internet and photocopying services. In addition the researcher noted that the disability units, which were under the school of education, were involved in service provision to people with disabilities.

The researcher asked the staff of special needs education units for disability about the services provided by their units for people with disabilities. In this question the researcher wanted to find out which services were provided by the units to people with disabilities. The responses were multiple. Table 17 below indicates their responses.

**Table 17:** Services provided by disability unit (N= 15)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Transcribing information resources into Braille	13	87%
Provision of teaching and learning materials	12	80%
Provision of note takers and readers	5	33%
Provision of wheelchairs and white canes	5	33%
Counselling	5	33%
Coordinating education for people with disabilities in the country	3	20%
Training teachers in special needs education	3	20%
Provision of sign language instruction to the deaf	2	13%

**Source:** Field data (2012)

Responses were as follows: 13(87%) responded transcribing information resources into Braille; 12(80%) mentioned provision of teaching and learning materials; 10(67%) indicated provision of note takers and readers; 5(33%) wheelchairs and white canes; 5(33%) provided counselling; 3(20%) said coordinating education for people with disabilities in the country; 3(20%) cited training teachers in special needs education and 2(13%) provided sign language instruction to the deaf. The most commonly provided services were transcription of resources into Braille and the provision of teaching and learning materials.

### **6.3.2 Awareness of the services provided to people with visual impairments and in wheelchairs**

The researcher wanted to examine whether people with visual impairments and in wheelchairs were aware of the services provided by disability units. This question was posed to the staff of special needs education units for disability.

**Table 18:** Awareness of the services provided by disability unit  
(N=15)

Responses	Frequency	Percentage
Yes	15	100%
Total	15	100%

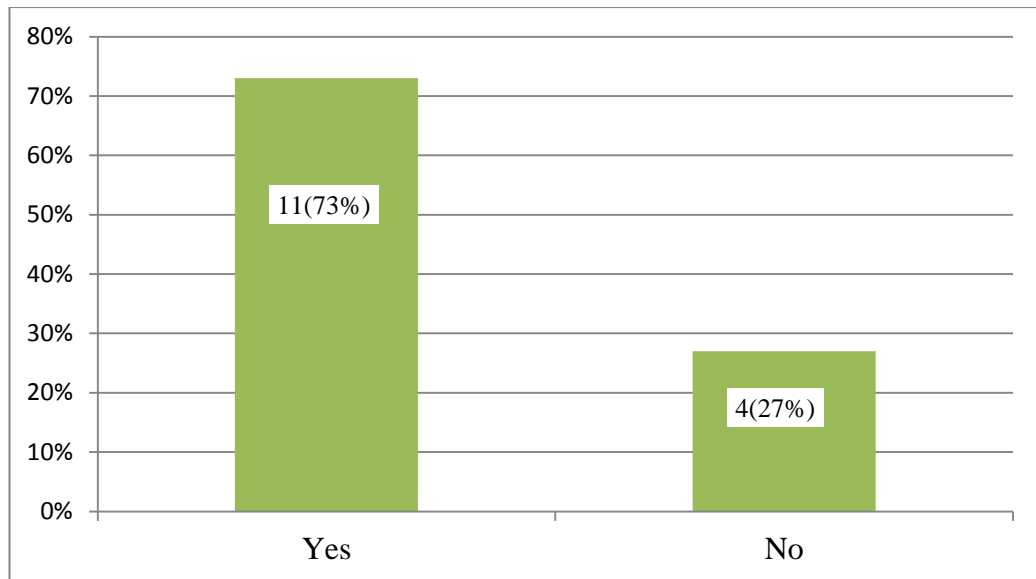
**Source:** Field data (2012)

Table 18 above shows the responses regarding the awareness by people with disabilities of the services provided by the disability unit. All the respondents responded positively which indicates that the staff of the unit thought that people with disabilities were aware of the services provided by the unit (see comment below). In addition they elaborated on the methods used to make people with disabilities know about their services. They said the units announce services on the websites, sensitize people through various media for example television, radio, and newspapers as well as mention being made at the orientation week every year of the disability unit's programme. However, one student with a visual impairment complained that:

It takes time to know the unit and sometime you can finish a semester without knowing there is a unit within the university and we have readers who read for us as materials in the library are not in Braille and large print.

Directors of academic libraries were also interviewed about the awareness of the library staff regarding provision of library services to people with visual impairments and in wheelchairs. The responses were positive indicating that they were aware of the services regarding people with visual impairments and in wheelchairs.

Staff of special needs education units for disability were asked if they offered any training to the community in general (not only people with disabilities) regarding awareness raising about the activities of the unit. The responses are in figure 5 below.



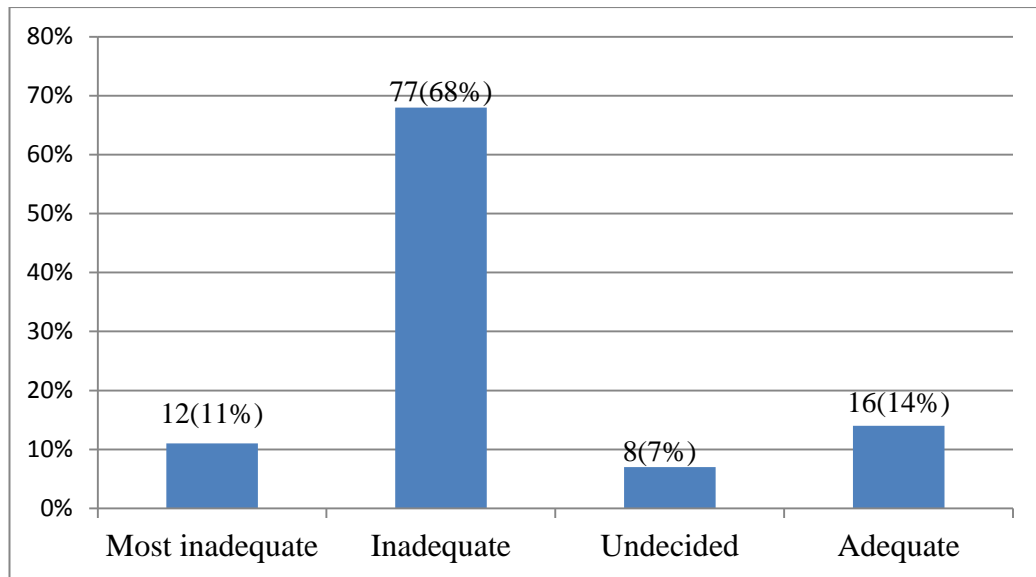
**Figure 5:** Training in the community regarding awareness raising about the activities of the unit relating to people with disabilities (N=15)

**Source:** Field data (2012)

Responses were as follows: 11(73%) responded positively whereby 4(27%) responded negatively. Respondents who responded positively indicated that the community was made aware of the activities of the unit's role relating to people with disabilities, whereas those respondents who answered negatively indicated that there were no awareness-raising activities undertaken by the unit. This group offered no response when asked how the community were made aware of the unit's services.

### **6.3.3 Adequacy of the available services provided by the library to people with visual impairments and in wheelchairs**

The question sought to ascertain the adequacy of the services provided by academic libraries to people with visual impairments and in wheelchairs. According to the social model of disability the services provided by academic libraries to people with visual impairments and in wheelchairs should be supportive of their academic purposes. The academic library is for the purpose of supporting teaching, learning, research and consultancy of the academic community of the university. Figure 6 shows responses of the library staff from five universities involved in the study.



**Figure 6:** Adequacy of the available services provided by the library to people with visual impairments and in wheelchairs (N =113)

**Source:** Field data (2012)

Figure 6 above presents responses on whether services provided by academic libraries are adequate for people with visual impairments and in wheelchairs. The responses were as follows: 77(68%) responded inadequate, 16(14%) cited adequate, 12(11%) mentioned most inadequate and 8(7%) indicated undecided. There were no responses for more than adequate. The majority responded that they found the services inadequate and indicated that the services provided by the library to people with visual impairments and in wheelchairs was, in their view, inadequate.

The respondents in wheelchairs were asked if they were satisfied with the services provided by their academic library. Table 19 below indicates their responses.

**Table 19:** Whether respondents were satisfied with the services provided by the academic libraries (N= 6)

Responses	Frequency	Percentage
Satisfied	2	33%
Neutral	2	33%
Dissatisfied	1	17%
Very dissatisfied	1	17%
Total	6	100%

**Source:** Field data (2012)

In table 19 above, the responses made by people in wheelchairs displayed their satisfaction with the library services provided for them. The responses were as follows: 2(33%) were satisfied; 2(33%) remained neutral; 1(17%) indicated dissatisfaction; and 1(17%) was very dissatisfied.

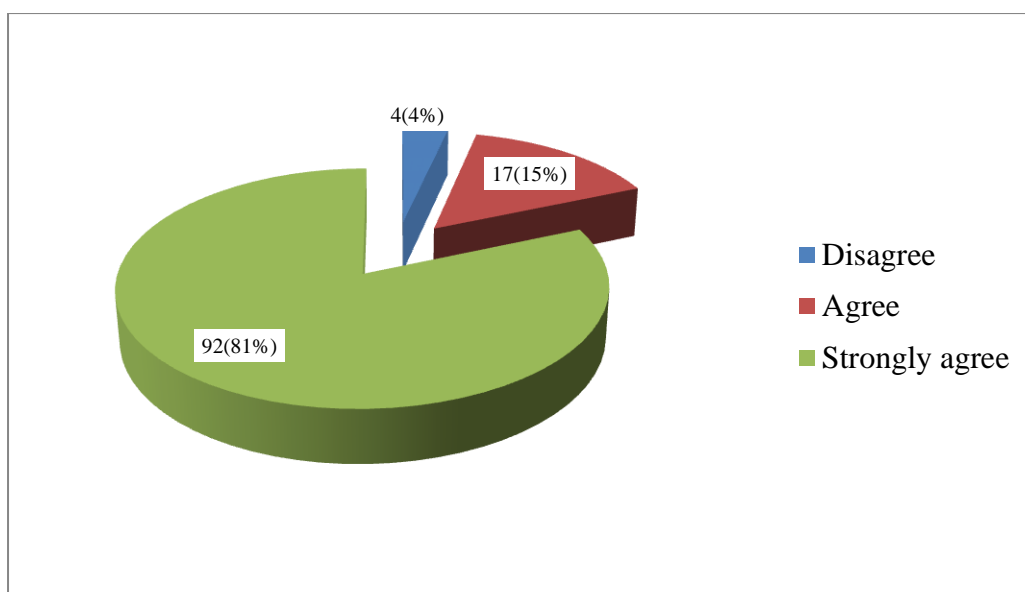
People with visual impairments were also interviewed to establish whether they were satisfied with the services provided by the libraries. All 57(100%) responded that they were not satisfied with the services provided to them because the library is not user friendly in terms of information resources, assistive equipment and even the infrastructure. In addition they said even the books which are in normal print are not provided in sufficient numbers to fulfill their needs.

The researcher also observed that the services provided to people with visual impairments and in wheelchairs were not satisfactory as there were no information resources or assistive equipment suitable for people with visual impairments, nor did the infrastructure allow them to gain access to the services needed.

#### **6.3.4 Academic libraries to be redesigned to meet the needs of people with visual impairments and in wheelchairs**

The researcher wanted to find out from library staff in all the universities surveyed, whether academic libraries should be redesigned to meet the needs of people with visual impairments and in wheelchairs. In relation to the social model of disability, the academic library should be redesigned and all barriers removed which might hinder access to the facilities provided by the library. Figure 7 shows responses by the library staff from all the universities involved in the study.





**Figure 7:** Academic libraries to be redesigned to meet the needs of people with visual impairments and in wheelchairs (N = 113)

**Source:** Field data (2012)

Figure 7 above shows responses from library staff on whether academic libraries should be redesigned to meet the needs of people with visual impairments and in wheelchairs. The responses were as follows: 92(81%) responses strongly agreed that libraries should be redesigned, 17(15%) agreed that libraries should be redesigned, and 4(4%) disagreed.

The researcher also observed that academic libraries need to be redesigned to meet the needs of people with visual impairments and in wheelchairs as they need to read for examinations, write assignments, write research papers and all work related to academic purposes just as abled people do. The mission of the academic library is to support teaching, learning, research and consultancy to the community of users, including people with visual impairments and in wheelchairs.

### **6.3.5 Specialised services or adaptive equipment provided by the library to people with visual impairments and in wheelchairs**

In this question the researcher investigated whether academic libraries have specialised services or adaptive equipment provided by the library to people with visual impairments and in wheelchairs. According to the social model of disability

the academic library is required to provide services for people with visual impairments and in wheelchairs. In addition the model suggests that adaptive equipment should be available in the library to assist people with visual impairments and in wheelchairs to use the information resources housed in the library without any additional challenges. Table 20 below shows responses of the library staff from all five universities surveyed.

**Table 20:** Specialized service or adaptive equipment provided by the library to people with visual impairments and in wheelchairs (N =113)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	11	10%
No	102	90%
Total	113	100%

**Source:** Field data (2012)

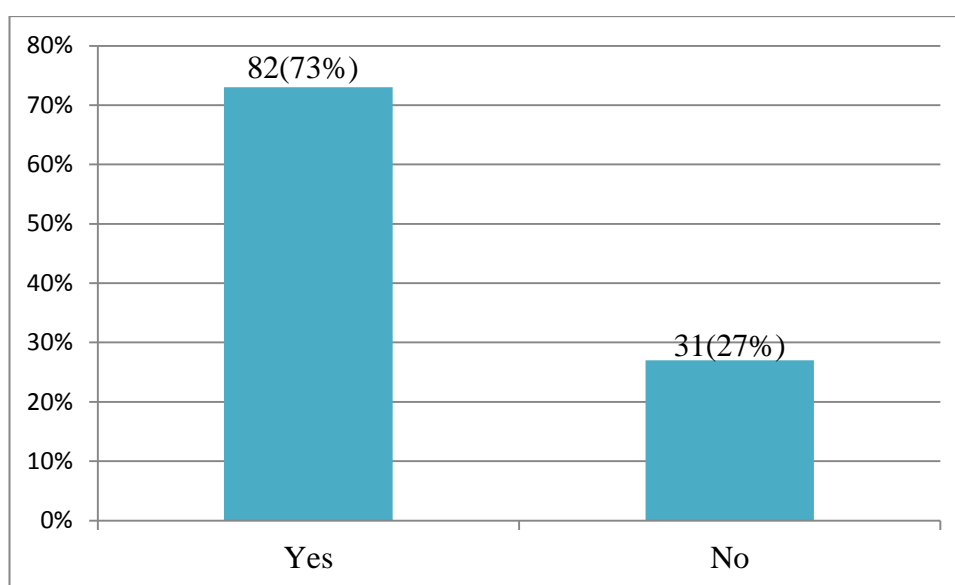
Table 20 above presents responses of library staff regarding the provision of specialized services or adaptive equipment by academic libraries to people with visual impairments and in wheelchairs. The following were the responses: 102(90%) responded negatively while 11(10%) responded positively. Respondents who responded negatively further explained that academic libraries lack funds to purchase adaptive equipment.

In addition they said there is a lack of trained staff to provide services to people with visual impairments and in wheelchairs. They responded further that the library is not designed to provide services to people with visual impairments and in wheelchairs and nor is there any policy addressing services related to such people. In addition they reported that there existed a lack of awareness of people with visual impairments and in wheelchairs. Respondents also mentioned that no specific needs had been established and finally they responded that priority is not given to people with visual impairments and in wheelchairs. For those who responded positively they explained further that the academic library should provide electronic books and

tape recorders. However, there were some limited services provided on the ground floor.

### **6.3.6 Whether library staff assisted people in the library with visual impairments and in wheelchairs**

The question sought to identify whether the qualified library staff but not the directors assisted people with visual impairments and in wheelchairs in accessing library services. In relation to the social model of disability, library staff are required to provide services to people with visual impairments and in wheelchairs to the same extent that they provide for able people. That means that library staff are required to provide services to people with visual impairment and in wheelchairs without any discrimination. Figure 8 shows the responses of library staff from five universities surveyed.



**Figure 8:** Library staff assistance to people in the library with visual impairments and in wheelchairs (N =113)

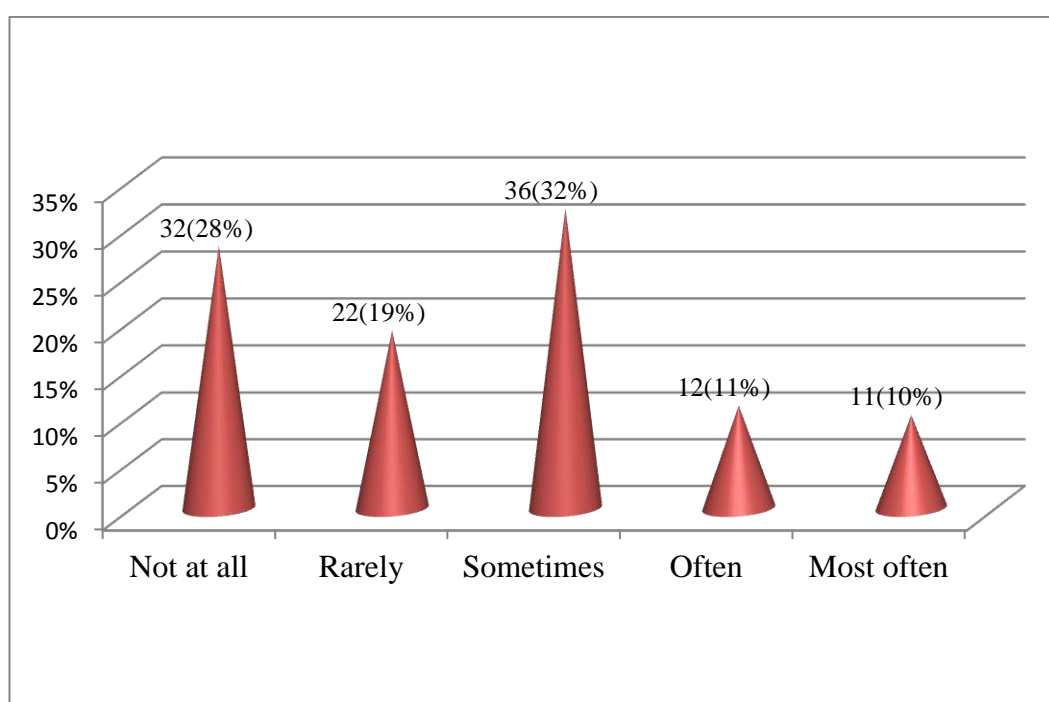
**Source:** Field data (2012)

Figure 8 above demonstrates responses of library staff assisting people with visual impairments and in wheelchairs. Responses were as follows: 82(73%) responded positively while 31(27%) responded negatively. Respondents who responded

positively indicated that library staff assisted users with visual impairments and in wheelchairs whereby respondents who responded negatively show that library staff did not assist people with visual impairments and in wheelchairs.

### 6.3.7 Frequency of incidents of library staff assisting people with visual impairments and in wheelchairs

The researcher wanted to know how often the library staff assisted people with visual impairments and in wheelchairs. According to the social model of disability library staff who provide services to people with visual impairments and in wheelchairs need to be available in the library all the time to provide assistance when needed. Figure 9 shows responses of the library staff from five universities involved in the study.



**Figure 9:** Frequency of incidents of library staff assisting people with visual impairments and in wheelchairs (N=113)

**Source:** Field data (2012)

Figure 9 above shows the frequency of library staff assisting people with visual impairments and in wheelchairs. Responses were as follows: 36(32%) responded

sometimes; 32(28%) responded not at all; 22(19%) responded rarely; 12(11%) responded often and 11(10%) responded most often. The responses of library staff indicate that they assist people with visual impairments and in wheelchairs in the use of library services irregularly, with assistance occurring often and most often comprising only 21%.

People in wheelchairs were asked how often they used the library's services. In this question the researcher wanted to know the frequency with which people in wheelchairs used library services. Table 21 below demonstrates the frequency of their use of the library's services.

**Table 21:** Frequency of using library services (N=6)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Sometimes	3	50%
Rarely	1	17%
Not at all	2	33%
Total	6	100%

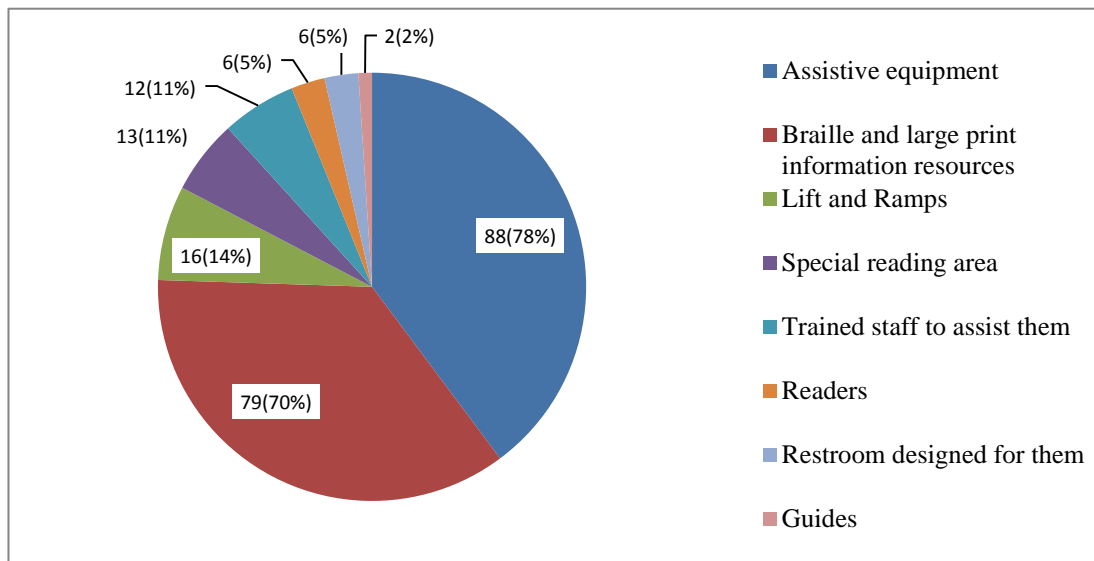
**Source:** Field data (2012)

Table 21 above shows responses regarding the frequency with which people in wheelchairs use the library services. The following were responses: 3(50%) responded sometimes; 1(17%) mentioned rarely; and 2(33%) indicated not at all. But none of them responded that they used the library often or most often. The responses show that people in wheelchairs use the library at different levels. People with visual impairments were also interviewed about the frequency of their use of the library services. Of the 57, 47(82%) said they used the library services when they want to read or borrow information resources and 10(18%) responded they did not use the library services.

### **6.3.8 Library services needed for people with visual impairments**

In this question the researcher wanted to identify the services provided by academic libraries to people with visual impairments. In relation to the social model of disability the academic library is required to provide services suitable to people with

visual impairments. Figure 10 shows multiple responses of the library staff from five universities involved in the study.



**Figure 10:** Library services needed for people with visual impairments (N=113)  
**Source:** Field data (2012)

Figure 10 above indicates the responses regarding the services the library staff said were needed for people with visual impairments. Responses were as follows: 88(78%) responded that they needed assistive equipment; 79(70%) responded that Braille and large print information resources were needed; 16(14%) responded that lifts and ramps were required; 13 (11%) responded that special reading areas were needed; 12(11%) responded that trained staff were required to assist them; 6(5%) responded that readers were needed; 6(5%) responded that they needed a restroom designed for them; and 2(2%) responded that they needed guides.

Respondents who responded that assistive equipment was required indicated that the academic libraries need to provide assistive equipment to people with visual impairments so that they were able to access information housed in the library. Those who responded that Braille and large print information resources were required indicated that academic libraries needed to acquire Braille and large print information resources so that people with visual impairments can read. In addition

respondents noted that lifts and ramps were needed so that people with visual impairments could access information resources housed in the library.

Respondents noted that a special reading area was required for people with visual impairments to use their readers without disturbing other users. Furthermore those who responded that they needed trained staff demonstrated that academic libraries do need specially trained staff who would be able to assist people with visual impairments. Respondents who replied that they required readers indicated that academic libraries needed to employ readers who would read for people with visual impairments as the libraries had no information resources in Braille or large print.

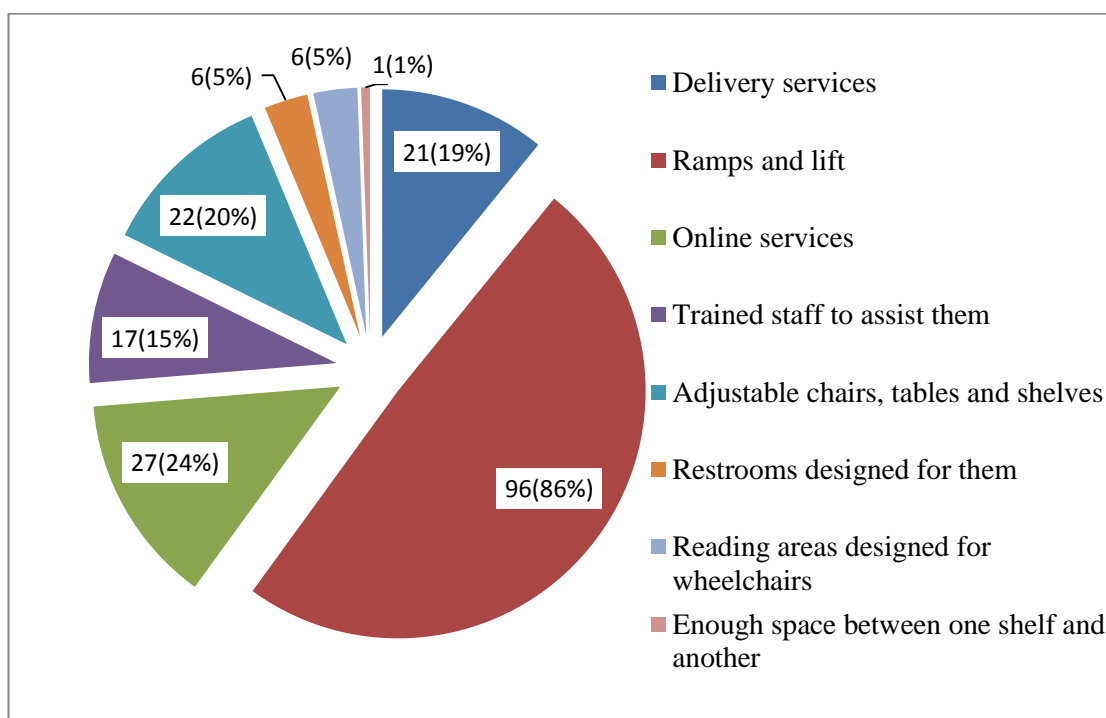
Restrooms needed to be designed for these groups. Some library staff indicated a need for academic libraries to build or modify restrooms to suit people with visual impairments so that they can use restrooms independently. Finally others responded that guides were needed. Academic libraries need to prepare guides so that people with visual impairments will be able to identify where to get services or locate information resources easily.

The researcher also confirmed by observation that academic libraries need to provide information resources like Braille, large print and assistive equipment so that people with visual impairments can read and use the equipment for their academic purposes. In addition the researcher noted that people with visual impairments need trained staff to assist them to use the information resources required. They also need a working lift and ramps to gain access easily to the information resources housed in the library.

Furthermore the researcher observed that people with visual impairments need guides and tools suitable for them so that they can locate information resources needed easily and independently. Also the researcher noted that signs are needed for people with visual impairments so that they can identify the services needed easily. In addition training on how to use assistive equipment was needed.

### 6.3.9 Library services needed for people in wheelchairs

The researcher sought to find out which services should be provided by academic libraries in Tanzania to people in wheelchairs. In relation to the social model of disability the academic library is required to provide services appropriate to people in wheelchairs. Figure 11 shows the responses of the library staff from five universities surveyed.



**Figure 11:** Library staff views on services needed for people in wheelchairs  
(N = 113)

**Source:** Field data (2012)

Figure 11 above shows the responses of the library staff regarding the services needed for people in wheelchairs. Responses were as follows: 96(86%) said that they needed ramps and lifts; 27(24%) responded to online services; 22(20%) noted adjustable chairs, tables and shelves; 21(19%) identified delivery services; 6(5%) required a restroom designed for them; 6(5%) required reading areas designed for wheelchairs and 1(1%) mentioned enough space between one shelf and the next. Respondents who noted the need for ramps and a lift indicated that academic libraries need to have ramps and a working lift so that people in wheelchairs can get



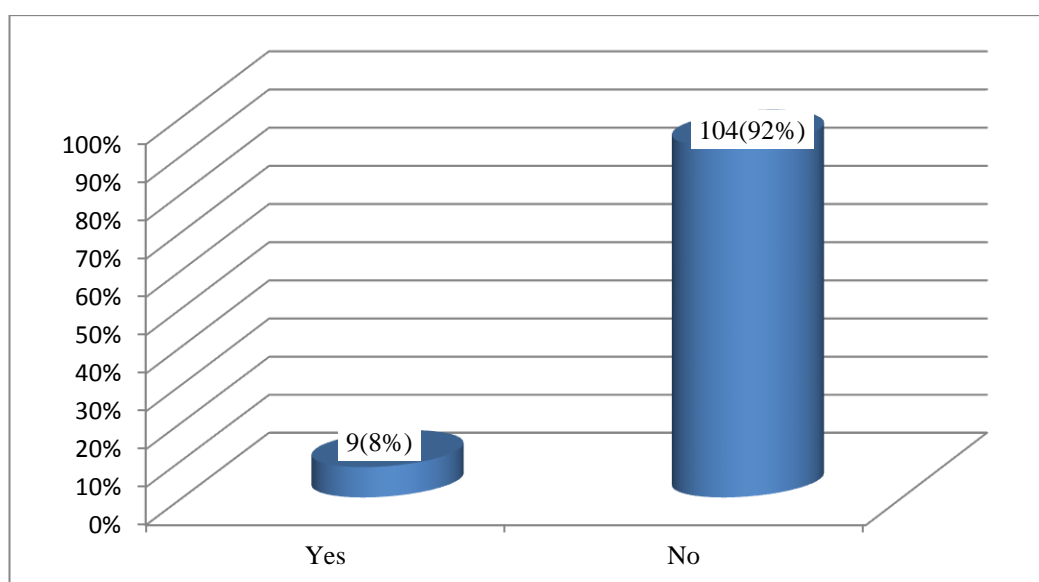
into the library and access the information resources housed there. In addition, those who responded to online resources would like academic libraries to offer remote access to people in wheelchairs. Furthermore for those who responded that they needed adjustable chairs, tables and shelves indicated that they need academic libraries to have chairs, tables and shelves which will allow people in wheelchairs to sit, read and write as well as locate documents easily without any assistance. Other respondents who said they needed delivery services want academic libraries to deliver services to the place where people in wheelchairs stay. Respondents who need the restroom to be designed for them need academic libraries to build or modify restrooms which suit people with visual impairments so that they can use restrooms independently. In addition respondents who indicated they needed enough space between one shelf and another requested that academic libraries make sure that there is enough space between one shelf and another so that people in wheelchairs can move freely.

The researcher observed that people in wheelchairs need ramps and a working lift so that they can easily get to the information resources housed in library. In addition the researcher noted that people in wheelchairs need online services so that they can be able to access information resources remotely rather than physically going to the library. Also the researcher observed that academic libraries can deliver services to the place where people in wheelchairs stay rather than having users come to where services are located. Furthermore people in wheelchairs need adjustable chairs, tables and shelves so that they sit, read and locate documents easily in the library. Academic libraries need well-arranged tables, chairs and shelves with sufficient space to enable people in wheelchairs to move around freely.

#### **6.3.10 Whether libraries have staff who are trained and experienced to provide for or assist users with visual impairments and in wheelchairs in the use of library services**

In this section the researcher wanted to know if the library has staff that are trained and experienced to provide services to people with visual impairments and in wheelchairs. According to the social model of disability, academic libraries need to

have trained and experienced staff to be able to assist people with visual impairments and in wheelchairs in the use of library services and its resources. Figure 12 shows responses of the library staff excluding directors from five universities involved in the study.



**Figure 12:** Availability of trained and experienced staff who provide for or assist users with visual impairments and in wheelchairs in the use of library services (N=113)

**Source:** Field data (2012)

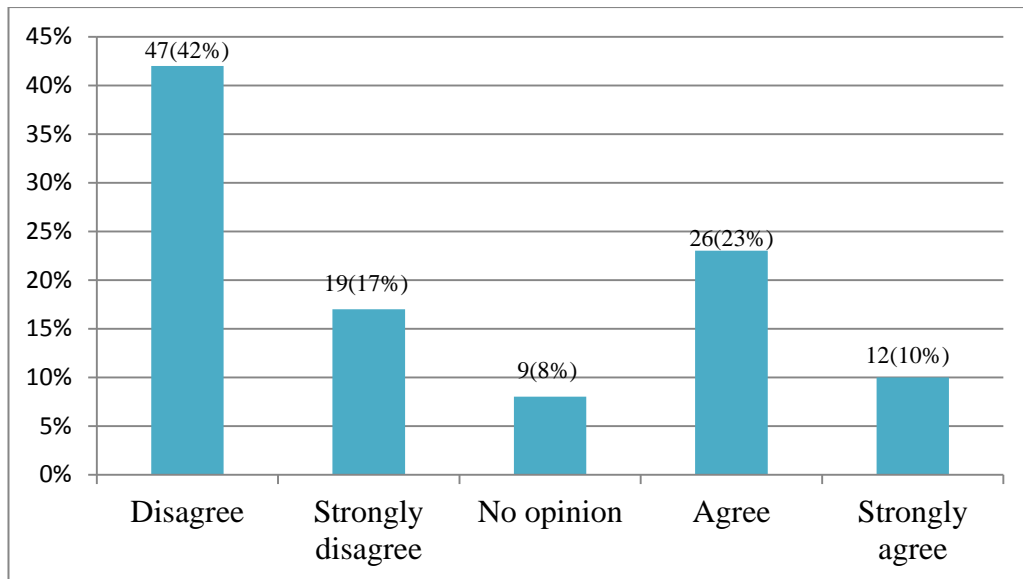
The following were responses: 104(92%) responded negatively, while 9(8%) responded positively. Those who responded negatively demonstrated that in their academic libraries no trained and experienced staff assist users with visual impairments and in wheelchairs. Respondents further explained that the library programmes and curricula of universities at all levels do not include a component on special needs for people with disabilities. In addition they said serving people with disabilities has not been given priority by the libraries. Further, they demonstrated that there is no policy addressing services to people with disabilities and also they indicated that services to people with disabilities are provided by the unit which is under the school of education. They explained that there is a lack of awareness and no initiatives have been taken by academic libraries regarding the provision of services to people with disabilities. Respondents finally indicated that there is no

encouragement from the government regarding people with disabilities. Those who responded positively show that academic libraries do have trained and experienced staff who provide for or assist users with visual impairments and in wheelchairs.

The directors of the libraries interviewed were asked if they had staff who were trained to assist people with visual impairments and in wheelchairs. The responses were negative indicating that no specially trained and experienced library staff assisted people with visual impairments and in wheelchairs. The researcher also noted that staff who were providing services to people with visual impairments and in wheelchairs are not trained in the special needs required by people with visual impairments and in wheelchairs.

#### **6.3.11 Whether the attitude of most library staff is favourable when providing library services to people with visual impairments and in wheelchairs**

The researcher wanted to examine the attitude of library staff to people with visual impairments and in wheelchairs regarding the provision of library services. In relation to the social model of disability staff need to have positive attitudes to people with visual impairments and in wheelchairs so that they can assist them in accessing library services without discriminating against them. Staff providing library services were asked about their attitudes to people with visual impairments and in wheelchairs. They were asked to respond to the statement “to what extent do you agree with the following statement: generally the attitude of most library staff towards providing library services to people with visual impairments and in wheelchairs is not good.” Figure 13 indicates responses of the library staff excluding directors from all universities involved in the study.



**Figure 13:** “To what extent do you agree with the following statement: generally the attitude of most library staff towards providing library services to people with visual impairments and in wheelchairs is not good” (N= 113)

**Source:** Field data (2012)

Responses were as follows: 47(42%) disagree; 19(17%) strongly disagree; 9(8%) demonstrated no opinion; 26(23%) agreed; and 12(10%) strongly agreed. Respondents who said disagree and strongly disagree mean that the attitudes of library staff to people with visual impairments and in wheelchairs towards the provision of library services are good. And for those who indicated agree and strongly agree denote that the attitudes of library staff to people with visual impairments and in wheelchairs towards the provision of library services are not good. In addition, for those who said ‘no opinion’ were not sure whether the attitude of library staff was good or not good towards the provision of library services to people with visual impairments and in wheelchairs. Responses indicated that the majority of library staff thought that staff attitude was good, although there were some who disagreed and believed that attitudes were not good to people with visual impairments and in wheelchairs regarding the provision of library services.

This question was also directed at people in wheelchairs and the responses are in table 22 below.

**Table 22:** To what extent do you agree with the following statement: the attitude of library staff towards people with visual impairments and in wheelchairs in provision of library services is principally negative (N=6)

Responses	Frequency	Percentage
Strongly agree	5	83%
No opinion	1	17%
Total	6	100%

**Source:** Field data (2012)

Table 22 above shows responses of people in wheelchairs on the attitudes of library staff towards the provision of library services. Responses were as follows: 5(83%) strongly agree and 1(17%) cited no opinion. Respondents who responded with ‘strongly agree’ indicated that the attitudes of library staff to people with visual impairments and in wheelchairs towards the provision of library services are negative. Those who responded with ‘no opinion’ show that they are not sure about the attitudes of library staff towards people with visual impairments and in wheelchairs towards the provision of library services.

People with visual impairments were also interviewed and all 57 (100%) responded that there are some library staff who are positive and others are negative to the provision of library services to people with visual impairments. Respondents explained further that to those staff who are positive to them, they are also positive in return and to those who are negative they are also negative. One student complained that:

There are some library staff who are very negative to us when you ask for help it’s like you are disturbing them, but some are positive and helpful when you ask for help you get assistance.

The current study noted that not only library staff had negative attitudes, but the whole society, as one student with visual impairments complained that:

My family said I have already died because I’m visually impaired and I can’t do anything, but after my strugle and performing well in my studies is when they started realising that I can do something and to be helpful to the family.

Another student complained that even lecturers have negative attitudes to us and she said:

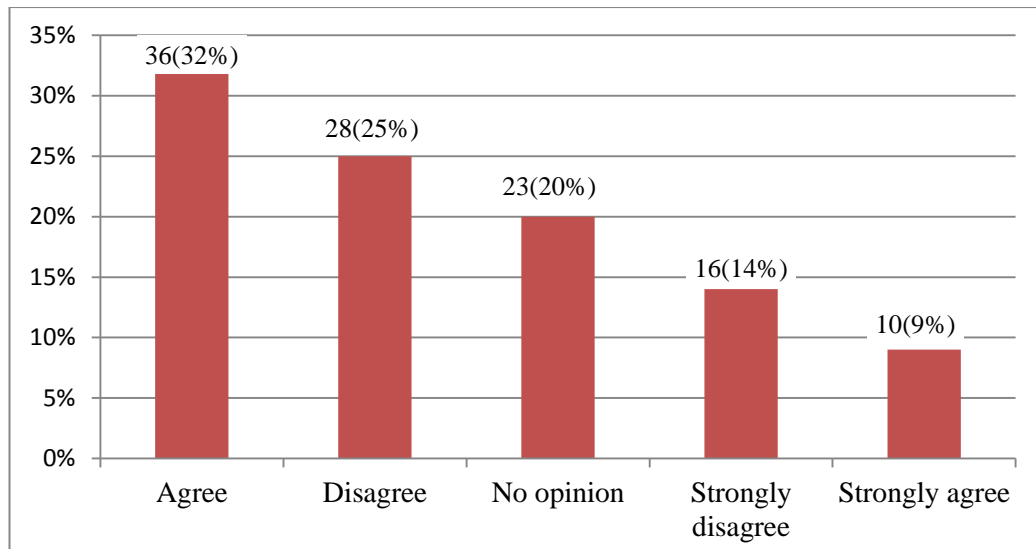
Sometimes when the lecturers teaching they can say this and this or write a spelling of the word and tell us this is the spelling of this term we are visually impaired how can we know what is written? It is affecting us academically.

In addition another student contended that:

We are not happy with the names given to us when we go for the services in some areas you hear people calling us ambulance is passing, let ambulance go first, that means we don't need to wait for the services.

#### **6.3.12 Whether the attitudes of people with visual impairments and in wheelchairs are negative to the library staff in the provision of library services**

The researcher sought to identify library staff views on the attitudes of people with visual impairments and in wheelchairs regarding the provision of library services. According to the social model of disability people with visual impairments and in wheelchairs need to be positive about the library staff so that they can access library services without any inferior treatment from library staff. Figure 14 indicates responses of the library staff excluding directors from the five universities involved in the study.



**Figure 14:** To what extent do you agree with the following statement: “the attitude of people with visual impairments and in wheelchairs towards library staff provision of library services to them is principally negative” (N=113)

**Source:** Field data (2012)

Figure 14 above indicates responses of library staff on the attitudes of people with visual impairments and in wheelchairs to the library staff towards provision of library services. Library staff were asked about the attitudes of people with visual impairments and in wheelchairs towards them. The following were responses: 36 (32%) responded agree, 28(25%) disagreed, 23(20%) indicated no opinion, 16(14%) demonstrated strongly disagree and 10(9%) responded strongly agree. Respondents who said agree and strongly agree indicate that the attitudes of people with visual impairments and in wheelchairs to the library staff towards provision of library services is negative. And for those who mentioned disagree and strongly disagree show that the attitudes of people with visual impairments and in wheelchairs to library staff towards library services is positive. In addition for those who mentioned no opinion indicated that they are not sure whether the attitudes of people with visual impairments and in wheelchairs to library staff regarding provision of library services are positive or negative. Responses indicate that the majority of staff think the attitudes of people with visual impairments and in wheelchairs are negative though there are some who think they are positive about library staff.

This question was also posed to people in wheelchairs and the responses were in table 23 below.

**Table 23:** Attitudes of people in wheelchairs to library staff (N=6)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Strongly agree	2	33.3%
Agree	1	16.6%
Strongly disagree	1	16.6%
Disagree	1	16.6%
No opinion	1	16.6%
Total	6	100%

**Source:** Field data (2012)

Table 23 above demonstrates responses of the attitudes of people in wheelchairs to library staff. They were asked to respond to the statement “to what extent do you agree with the following statement: generally the attitude of most people with visual impairments and in wheelchairs towards library staff is not good”. The following were responses: 2(33.3%) responded strongly agree, 1(16.6%) cited agree, 1(16.6%) mentioned strongly disagree, 1(16.6%) indicated disagree, 1(16.6%) said no opinion. For those who responded strongly agree and agree indicates that their attitudes to library staff were negative; whereas to respondents who indicated strongly disagree and disagree shows that they were positive about library staff. In addition respondents who mentioned no opinion indicated that they were not sure about the attitudes of people in wheelchairs to library staff.

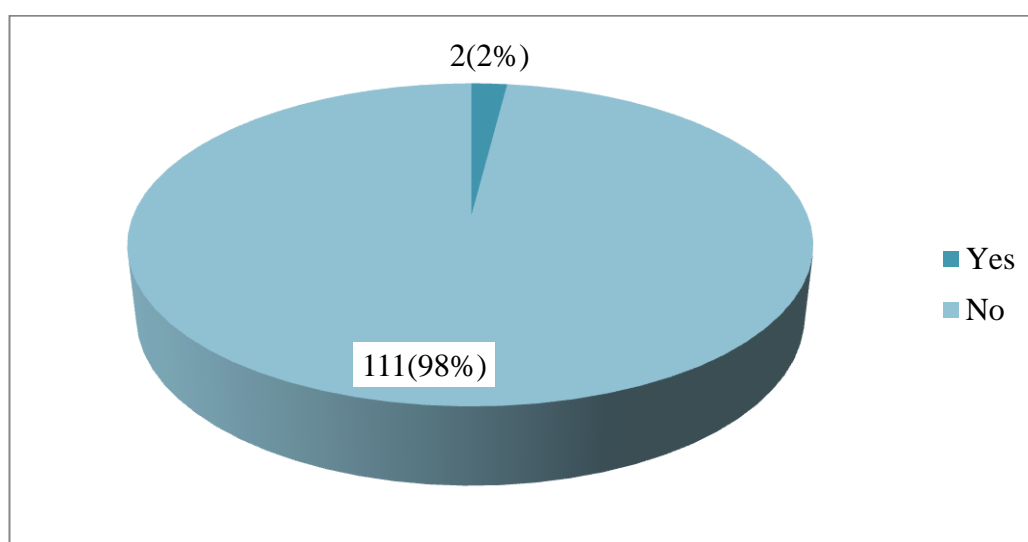
People with visual impairments were interviewed and all 57(100%) mentioned that always they are positive in their attitudes to library staff because they need their help to get the information resources they need in the library but in some cases they feel compelled to be negative to library staff who are negative to them. One library staff member complained that:

People with disabilities are not always satisfied and appreciative to whatever we are doing to them and they keep on complaining and we don't know how to satisfy them.



### 6.3.13 Whether libraries have a written policy that describes services to people with visual impairments and in wheelchairs

In this section the researcher wanted to find out whether academic libraries in Tanzania had policy addressing services regarding people with visual impairments and in wheelchairs. The social model of disability requires policy which addresses services regarding people with visual impairments and in wheelchairs so that the library can be guided by the policy to deal with all matters related to them. For example, acquiring information resources which are in Braille and large print, acquiring assistive equipment, training library staff who could provide for and assist users with visual impairments and in wheelchairs. Figure 15 indicates responses of the library staff excluding directors from the five universities involved in the study.



**Figure 15:** Whether library has a policy describing services regarding people with visual impairments and in wheelchairs (N=113)

**Source:** Field data (2012)

Figure 15 above shows responses on whether libraries have a written policy addressing services regarding people with visual impairments and in wheelchairs. The responses were as follows: 111(98%) responded negatively whereby 2(2%) responded positively. Respondents who indicated 'no' meant that academic libraries had no written policy describing services regarding people with visual impairments and in wheelchairs and for those who responded positively showed that academic

libraries had a written policy regarding library services for people with visual impairments and in wheelchairs.

This question was also asked for staff of special needs education units for disability on whether they had a policy relating to library services' provision for people with disabilities. The responses are shown in table 24 below.

**Table 24:** Whether the Special Needs Unit has a policy relating to library services' provision for people with disabilities (N= 15)

Responses	Frequency	Percentage
Yes	3	20%
No	12	80%
Total	15	100%

**Source:** Field data (2012)

Table 24 above indicates the responses for staff of special needs education units for disability on whether they have a policy relating to library services' provision for people with disabilities. The following were responses: 12(80%) responded negatively whereas 3(20%) responded positively. Those who responded negatively indicated that there is no policy relating to library services for people with disabilities and further explained that currently no plan had been taken to formulate a policy regarding library services' provision for people with disabilities. For respondents who indicated positively it meant that there was a policy relating to library services' provision for people with disabilities.

Directors of the libraries interviewed were asked whether they had a policy relating to library services' provision for people with visual impairments and in wheelchairs. They responded that they did not have a policy, but the director of the Open University of Tanzania said they had started writing a policy describing services to people with disabilities and the policy was in the final stage. All the above responses show that there is no policy in academic libraries in Tanzania regarding library services for people with disabilities, although Open University of Tanzania is in the

final stage of formulating a policy relating to library services for people with disabilities.

#### **6.3.14 Whether libraries have a budget for library services for people with visual impairments and in wheelchairs**

The researcher also asked staff of the special needs education units for disability if they have a dedicated budget for people with disabilities. In this question the researcher wanted to know if the unit was provided with funds to support services to people with visual impairments and in wheelchairs.

**Table 25:** Budget dedicated to people with a disability: disability unit staff responses (N=15)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	6	40%
No	9	60%
Total	15	100%

**Source:** Field data (2012)

Table 25 above shows responses on the budget dedicated to the provision of services to people with a disability. The following were responses: 9(60%) responded negatively whereas 6(40%) responded positively. The respondents who responded negatively indicated that the units do not have funds to support services to people with visual impairments and in wheelchairs. Respondents who responded positively stated that the units had funds to support provision of services to people with visual impairments and in wheelchairs. In addition the researcher asked respondents who responded positively about what percentage of their budget was dedicated specifically for the provision of library services. They said, they were not sure of the percentage provided to the libraries as the budgets were allocated to the university under the school of education.

Directors of academic libraries interviewed were also asked if they have a budget for acquiring alternative materials and assistive equipment for people with visual

impairments. The responses were negative; that is they indicated that they did not have a budget to acquire alternative materials and assistive equipment for people with visual impairments. When asked if they had made any attempt to secure a budget, again they responded negatively. All responses from the directors above indicated that either no budgets had been allocated to academic libraries in Tanzania regarding library services for people with visual impairments and in wheelchairs, or they were unsure of the percentage allocated to library services.

Staff of special needs education units for disability in the Ministry of Education and Vocational Training were asked if they had clear statistics on the number of people with disabilities who were enrolled in various universities. With this question the researcher wanted to investigate if the Ministry is informed about the number of people with disabilities enrolled in various universities in the country. This information was considered important for budgeting. The responses were negative and further, these respondents said that no research had been done to establish the number of people with disabilities enrolled in various universities in the country.

#### **6.3.15 Other initiatives taken by the library regarding library services to people with visual impairments and in wheelchairs**

The researcher sought to find out if there were any other initiatives undertaken by academic libraries regarding library services for people with visual impairments and in wheelchairs. The social model of disability requires libraries to provide universal services to all users including people with visual impairments and in wheelchairs. Therefore initiatives should be undertaken by academic libraries for the provision of inclusive library services to people with visual impairments and in wheelchairs. Table 26 shows responses of the library staff excluding directors from five universities surveyed.

**Table 26:** Existence of other initiatives undertaken by academic libraries  
(N=113)

Responses	Frequency	Percentage
Yes	48	42%
No	56	50%
Not aware	9	8%
Total	113	100%

**Source:** Field data (2012)

Table 26 above shows responses on whether academic libraries had taken initiatives regarding services to people with visual impairments and in wheelchairs. The following were responses: 56(50%) responded negatively; 48 (42%) indicated positively; and 9(8%) said they were not aware. Respondents who indicated negatively meant that there were no initiatives taken by academic libraries regarding services to people with visual impairments and in wheelchairs. Those who responded positively indicated that there were initiatives taken by academic libraries regarding services to people with visual impairments and in wheelchairs. Examples of initiatives were that one institution had sent a proposal to a donor soliciting funding for the purpose of establishing services for people with disabilities. Another said that the library had dedicated rooms at ground floor of the library for the use of people with disabilities and staff of disability unit. In addition another mentioned that there is a new library building under construction that would allow easy access to them. Another respondent added that they had started writing a policy regarding services to people with disabilities and the policy was in its final stage. Another library had a plan to train one library staff member every year in special needs. Furthermore another library stated that there was a laboratory for people with visual impairments where they recorded the information resources and the formats needed for people with visual impairments. The respondents who responded that they were not aware meant that they do not know if there were any initiatives taken or not by the libraries regarding services to people with disabilities.

The researcher also observed some initiatives taken by some libraries regarding services to people with visual impairments and in wheelchairs. These were the provision of rooms on the ground floor of the libraries to help these groups gain access to information. Also computers had been set aside on the ground floor to help people in wheelchairs search information as the main sections for electronic services were on the upper floors and there were no lifts and ramps for them to reach that level.

#### **6.4 Physical layout of academic libraries in Tanzania**

This section presents the findings of the research question one which was to find out what the layout of library buildings was. The social model of disability guided this part of the study as well. Research question one sought to establish whether the layout of the library allowed people with visual impairments and in wheelchairs to get access to the information resources housed in the library.

##### **6.4.1 The way in which people with visual impairments and in wheelchairs locate an item they need in the library**

In this section the researcher wanted to know the way in which people with visual impairments and in wheelchairs locate the items they need in the library. The social model of disability requires libraries to facilitate the easy location of items for people with visual impairments and in wheelchairs. Table 27 shows the responses of the library staff from five universities involved in the study.

**Table 27:** Manner of locating items in the library by people with visual impairments and in wheelchairs (N=113)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Use their friends and library staff	107	95%
Use their readers	80	71%
Use the catalogue	8	7%
Do not use the library	1	1%

**Source:** Field data (2012)

Table 27 above indicates the way people with visual impairments and in wheelchairs located items they need in the library. The following were responses: 107 (95%)

responded friends and library staff; 80(71%) said readers; 8(7%) mentioned the catalogue; and 1(1%) indicated that they did not use the library. Respondents who said friends and library staff meant that people with visual impairments and in wheelchairs were assisted by friends and library staff when they want items in the library. Those who indicated readers meant that people with visual impairments were assisted by their readers who were employed by universities to locate items in the library. Those who mentioned the catalogue meant that they used catalogues to locate documents in the library.

People in wheelchairs were also asked the above question on how they located the items they needed in the library. Responses were multiple and are shown in table 28 below

**Table 28:** Manner of locating items in the library by people in wheelchairs (N=6)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Use friends	4	67%
Use catalogue	2	33%
Use library staff	3	50%

**Source:** Field data (2012)

Table 28 above shows responses in the way people in wheelchairs locate items they need in the library. The following were responses: 4(67%) responded that they used friends; 2(33%) mentioned that they used the catalogue; and 3(50%) cited using library staff. Respondents who indicated that they used friends meant that people in wheelchairs used friends to source items in the library and for those who mentioned using the catalogue indicated that they used the catalogue to search and find the location of items on the shelves. Respondents who used the library staff meant that they got assistance from library staff when they needed items in the library.

People with visual impairments were asked in the interview the way they locate items in the library. They responded that they used readers employed by the university, library staff and friends. Again they were asked if there were any arrangements made by the library to assist them to get the information resources

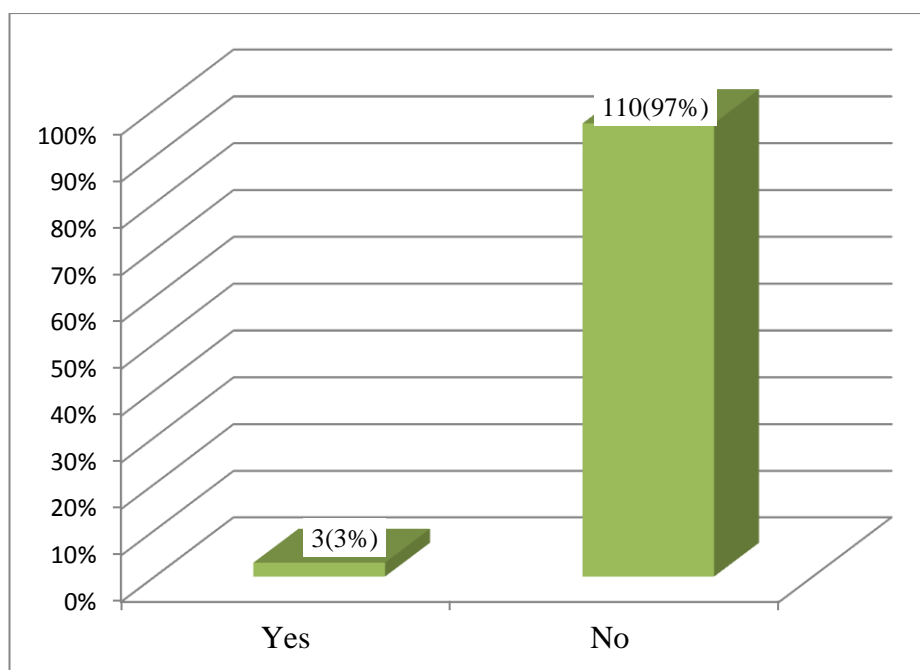
needed. They said no arrangement had been made by the library to assist them to get information resources they need. They were asked if the signs in the library were suitable for their library access needs. They said normally they had their own signs which they used to identify the information resources or the places where they were, and they did not use the library signs. For example if they touch a shelf they would know that they are in a place where they could locate information resources and if they touch tables and chairs they realise that they are in the reading areas and so on.

The researcher also observed that people with visual impairments and in wheelchairs used library staff or readers employed by universities and friends willing to search information resources they needed in the library. The researcher also noted that there were no additional arrangements made by the library to assist users with visual impairments and in wheelchairs to get information resources they needed. She observed that there were no signs in the library suitable for people with visual impairments to help them to identify where the information resources were located.

#### **6.4.2 Whether the library shelves allowed people with visual impairments and in wheelchairs to locate information resources by browsing**

In this section the researcher wanted to find out if the library shelves allowed people with visual impairments and in wheelchairs to locate information resources by browsing. In relation to the social model of disability, the library is required to simplify and facilitate the easy browsing of information resources arranged in the shelves in a manner that is accessible to people with visual impairments and in wheelchairs. Figure 16 shows responses of the library staff from five universities involved in the study.





**Figure 16:** Whether the library shelves allowed people with visual impairments and in wheelchairs to locate information resources by browsing:  
staff responses (N=113)

**Source:** Field data (2012)

Figure 16 above demonstrate responses from the library staff on the way library shelves allowed people with visual impairments and in wheelchairs to locate information resources by browsing. Responses were as follows: 110 (97%) responded negatively and 3 (3%) responded positively. Respondents who responded negatively further explained that people with visual impairments and in wheelchairs used friends, library staff, readers and the catalogue to browse for information resources on the shelves and others said that they did not use the library because the shelves do not allow them to browse for information resources.

People in wheelchairs were also asked if library shelves allowed them to locate information resources by browsing. Table 29 below demonstrate their responses.

**Table 29:** Whether the library shelves allowed people in wheelchairs to locate information resources by browsing: people in wheelchairs' responses (N=6)

<b>Responses</b>	<b>Frequence</b>	<b>Percentage</b>
Yes	1	17%
No	5	83%
Total	6	100%

**Source:** Field data (2012)

Table 29 above shows responses from people in wheelchairs on the location of information resources in the library shelves by browsing. The responses were as follows: 5(83%) responded negatively while 1(17%) responded positively. Respondents who responded negatively indicated that the library shelves did not allow them to locate information resources by browsing and they explained further that shelves were too high and it was difficult for them to reach the information resources they needed. Therefore they used friends and library staff to search for them and sometimes they preferred not to use the library. For the respondent who responded positively, library shelves did allow the location of information resources by browsing.

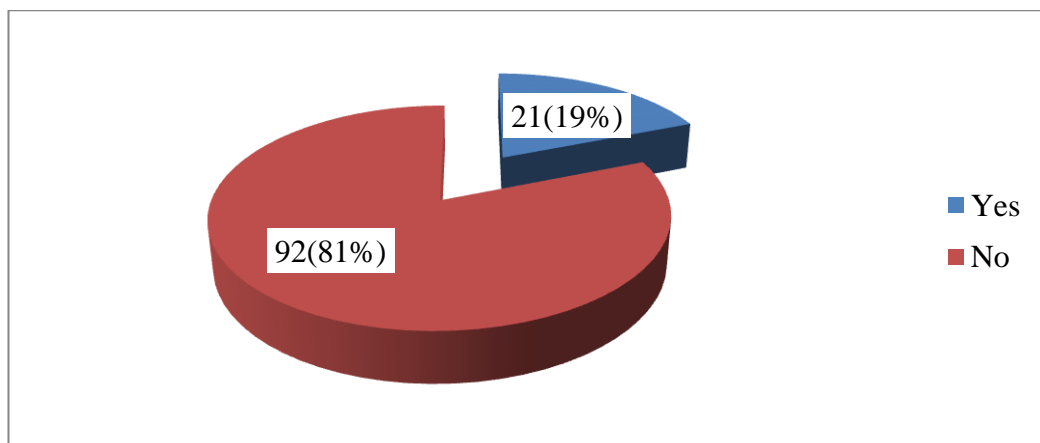
The researcher observed that library shelves were high and it was difficult for people in wheelchairs to locate information resources by browsing. Therefore they used friends and the library staff on duty to locate information resources they needed in the library. Below are examples of library shelves with the books arranged for users to browse and locate the items they required.



**Figure 17:** Photograph of library book shelves

#### **6.4.3 Whether the arrangement of shelves in the library allowed people with visual impairments and in wheelchairs to move freely**

The question sought to identify whether the arrangement of shelves allowed free movement to people with visual impairments and in wheelchairs. According to the social model of disability academic libraries are required to arrange shelves with enough space between one shelf and the next to allow free movement to people with visual impairments and in wheelchairs. Figure 18 shows responses of the five universities involved in the study.



**Figure 18:** Whether the arrangement of shelves in the library allowed people with visual impairments and in wheelchairs to move freely: library staff responses (N=113)

**Source:** Field data (2012)

Figure 18 above indicates responses on whether the arrangement of shelves allowed free movement to people with visual impairments and in wheelchairs. Responses were as follows: 92(81%) responded negatively and 21(19%) responded positively. Respondents who responded negatively indicated that the arrangement of shelves in the library did not allow free movement to people with visual impairments and in wheelchairs and for those who responded positively demonstrated that the arrangement of shelves in the library allowed free movement to people with visual impairments and in wheelchairs. Respondents who responded negatively further explained that they used friends, library staff and readers to search for documents on the shelves for them.

People in wheelchairs were asked if the arrangements of shelves in the library allowed them to move freely. Table 30 below shows their responses.

**Table 30:** Whether the arrangement of shelves in the library allowed them to move freely: people in wheelchairs (N=6)

Responses	Frequency	Percentage
Yes	1	17%
No	5	83%
Total	6	100%

**Source:** Field data (2012)

Table 30 above presents responses on whether the arrangement of library shelves allowed people in wheelchairs to move freely. The responses were as follows: 5(83%) responded negatively whereas 1(17%) responded positively. Respondents who responded negatively indicated that the arrangement of library shelves did not allow them to move freely while the respondent who responded positively stated that the arrangement of library shelves allowed them to move freely.

People with visual impairments were interviewed to find out if the arrangement of library shelves allowed them to move freely. All 57 (100%) said that this was not

possible unless they go to the library with their readers or their friends to enable them to move without any difficulties.

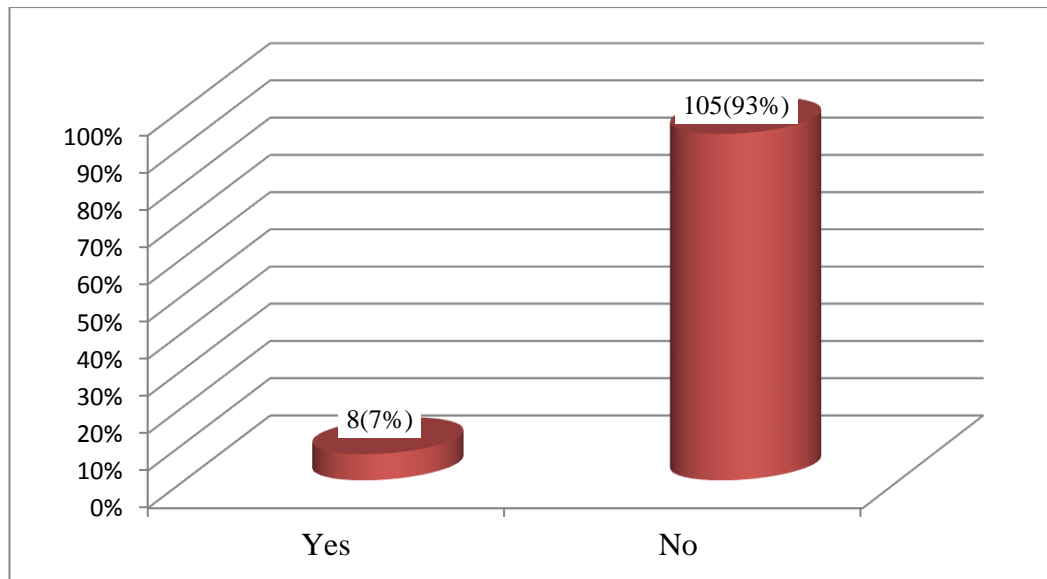
The researcher noted that the arrangement of library shelves did not allow people in wheelchairs to move freely between them and people with visual impairments could move freely only with assistance. Below in figure 19 is the arrangement of the library shelves.



**Figure 19:** Photographs of library shelves

#### **6.4.4 Suitability of the study carrels, computer workstations, tables and chairs for people with visual impairments and in wheelchairs**

In this section the researcher wanted to know if the study carrels, computer workstations, tables and chairs were suitable for people with visual impairments and in wheelchairs. In relation to the social model of disability the library needs to provide reading rooms which are conducive for reading, and computers with assistive technologies like JAWS to help people with visual impairments access information resources easily. As well, adjustable tables and chairs are needed for people in wheelchairs to sit and read comfortably. Figure 20 shows the responses of the library staff from five universities involved in the study.



**Figure 20:** The suitability of study carrels, computer workstations, tables and chairs for people with visual impairments and in wheelchairs: library staff (N=113)

**Source:** Field data (2012)

Figure 20 above shows responses on whether the study carrels, computer workstations, tables and chairs were suitable for people with visual impairments and in wheelchairs. The following were responses: 105(93%) responded negatively and 8(7%) responded positively. Respondents who responded negatively meant that the study carrels, computer workstations, table and chairs were not suitable for people with visual impairments and in wheelchairs. Those who responded positively indicated that, study carrels, computer workstations, tables and chairs were suitable for people with visual impairments and in wheelchairs.

The above question was posed separately to people in wheelchairs, that is, whether the study carrels, computer workstations, tables and chairs were suitable for them. The responses are indicated in table 31 below.

**Table 31:** Suitability of study carrels, computer workstations, tables and chairs: people in wheelchairs (N=6)

Responses	Frequency	Percentage
No	6	100%
Total	6	100%

**Source:** Field data (2012)

Table 31 above shows the responses regarding the suitability of the study carrels, computer workstation, tables and chairs for people in wheelchairs. All the respondents responded negatively to denote that study carrels, computer workstation, tables and chairs were not suitable for them.

The researcher also observed that no study carrels, computer workstations, tables or chairs were suitable for people in wheelchairs. Figure 21 below is a photograph of chairs and tables in the reading area of one of the institutions studied.



**Figure 21:** Photograph of chairs and tables

#### **6.4.5 Whether people with visual impairments and in wheelchairs were able to use the restroom facilities in the library independently**

The researcher wanted to establish whether people with visual impairments and in wheelchairs were able to use restroom facilities in the library without any assistance. According to the social model of disability the library needs to design restroom

facilities for people with visual impairments and in wheelchairs to use the restroom independently. Table 32 shows responses of the library staff of the five universities involved in the study.

**Table 32:** Responses of library staff on independent use of library restroom by people with visual impairments and in wheelchairs (N=113)

<b>Responses</b>	<b>frequency</b>	<b>Percentage</b>
Yes	23	20%
No	90	80%
Total	113	100%

**Source:** Field data (2012)

Table 32 above presents the responses regarding whether people with visual impairments and in wheelchairs were able to use library restrooms independently. Responses were as follows; 90(80%) responded negatively while 23(20%) responded positively. Those who responded negatively indicated that people with visual impairments and in wheelchairs were not able to use library restrooms independently and further they said library restrooms were not designed for people with visual impairments and in wheelchairs therefore they were helped by their friends and readers. They said they did not use the library restrooms. Respondents who responded positively indicated that people with visual impairments and in wheelchairs used the library restrooms independently.

People in wheelchairs were asked if they are able to use library restroom independently. Table 33 below presents their responses.

**Table 33:** Responses of people in wheelchairs on the independent use of library restrooms (N=6)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	3	50%
No	3	50%
Total	6	100%

**Source:** Field data (2012)



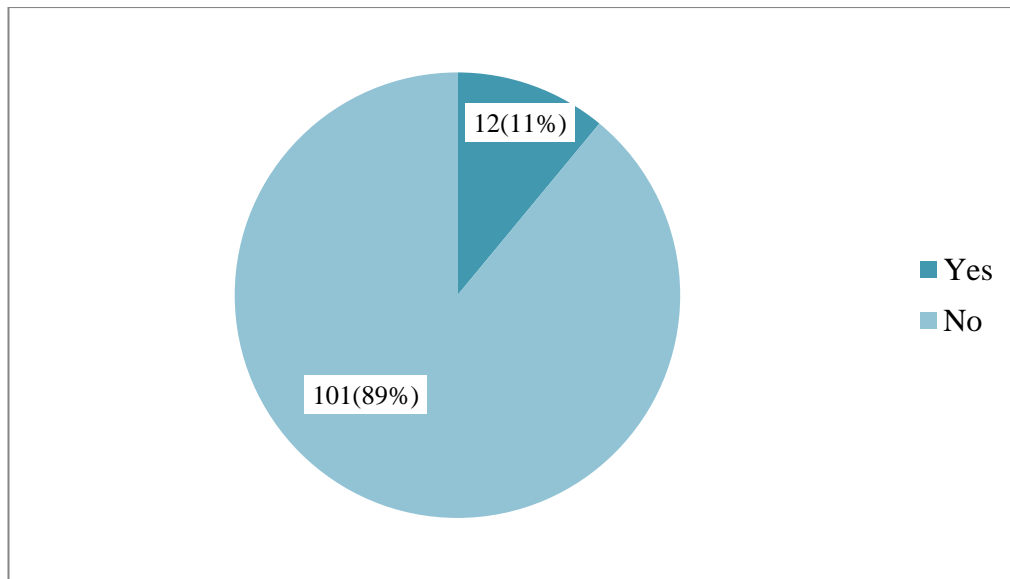
Table 33 shows responses of people in wheelchairs on the independent use of library restrooms. The responses were as follows: 5(50%) responded negatively and 5(50%) responded positively. Those who responded negatively indicated that they were not able to use library restrooms independently and further they were assisted by their friends who were willing to help them. Respondents who responded positively meant that they were able to use library restrooms independently.

People with visual impairments were interviewed to establish if they were able to use library restrooms independently. All 57(100%) said no they needed assistance because the library restrooms were not designed for people with visual impairments and also the restrooms were very dirty so most of the time they preferred to use the facilities which were in their rooms.

The researcher also noted that the library restroom facilities of academic libraries were not designed for people with visual impairments and in wheelchairs. At two institutions, however, the restrooms are modified to help people with visual impairments and in wheelchairs to use independently. They were not used only by people with visual impairments and in wheelchairs but were used by others as well.

#### **6.4.6 Whether the layout of library buildings allowed people with visual impairments and in wheelchairs to get access to the information resources**

In this section the researcher wanted to find out whether the layout of the library buildings allow people with visual impairments and in wheelchairs to get access to the information resources housed in the library. In relation to the social model of disability, academic library buildings should allow easy access to the information resources housed in the library to people with visual impairments and in wheelchairs. For example libraries should have ramps and working lifts to allow people with visual impairments and in wheelchairs to get easy access to the information resources available. Figure 22 shows responses of the library staff from five universities surveyed.



**Figure 22:** Access for persons with disabilities facilitated by the layout of library buildings: library staff (N=113)

**Source:** Field data (2012)

Figure 22 above indicates responses regarding the layout of library buildings, as to whether it allows people with visual impairments and in wheelchairs to access the information resources housed in the library. Responses were as follows: 101(89%) responded negatively and 12(11%) responded positively. Respondents who responded negatively indicated that the layout of the library buildings did not allow people with visual impairments and in wheelchairs to get access to the information resources housed in the library. They further said that people in wheelchairs left their wheelchairs and crawled their way upstairs. People with visual impairments were assisted by their readers who searched for documents for them and in some cases people with visual impairments and in wheelchairs were assisted by library staff and their friends to source the information resources needed. Furthermore those who responded positively suggested that the layout of the library buildings allowed people with visual impairments and in wheelchairs to get access to the information resources, although they explained further that there were rooms set aside for people with visual impairments and in wheelchairs on the ground floor where they requested the documents they needed from the library staff and could read in those rooms.

The same question was asked of people in wheelchairs to find out whether the layout of the library buildings allowed them to access information housed in the library. The table below demonstrates responses concerning the layout of the library buildings.

**Table 34:** Whether layout of the library buildings allowed access: people in wheelchairs (N= 6)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Yes	2	33%
No	4	67%
Total	6	100%

**Source:** Field data (2012)

Table 34 above indicates responses concerning the layout of the library buildings by people in wheelchairs: that is whether it allowed them to access information resources housed in the library. Responses were as follows: 4(67%) responded negatively whereby 2(33%) responded positively. Respondents who responded negatively showed that the layout of the library buildings of academic libraries did not allow them access to the information resources housed in the library. Respondents further explained that they were helped by library staff and their friends who located sources for them if they needed documents from the library. Others said that they did not use the libraries because they were not user friendly. They had to be carried by their friends to the upper floors of the library. Respondents who answered positively indicated that the layout of the library buildings allowed them to access the information resources housed in the library.

Directors of the libraries were interviewed and asked if the layout of the library buildings allowed people with visual impairments and in wheelchairs to get access to the information resources housed in the library. The responses were negative indicating that the layout of the library buildings did not allow people with visual impairments and in wheelchairs to access the information resources housed in the library.

In addition people with visual impairments were also interviewed and all 57(100%) responded that the layout of the library buildings did not allow people with visual impairments to easily access information resources housed in the library.

Furthermore the researcher observed that the layout of library buildings in academic libraries did not allow people with visual impairments and in wheelchairs to access the information resources housed in the library. Also the researcher noted that there were no functioning lifts and ramps in any university investigated. These would have helped people with visual impairments and in wheelchairs to reach the upper floors where information resources or services were located. One student in a wheelchair sadly complained that:

I don't like to go to the library and even to any other offices because there are stairs and there is no lift unless I ask someone to carry me upstairs, which I don't like to be carried like a luggage.

The photographs below show stairs that went to the upper floors of a library where services and information resources are located. There was no lift or ramp.



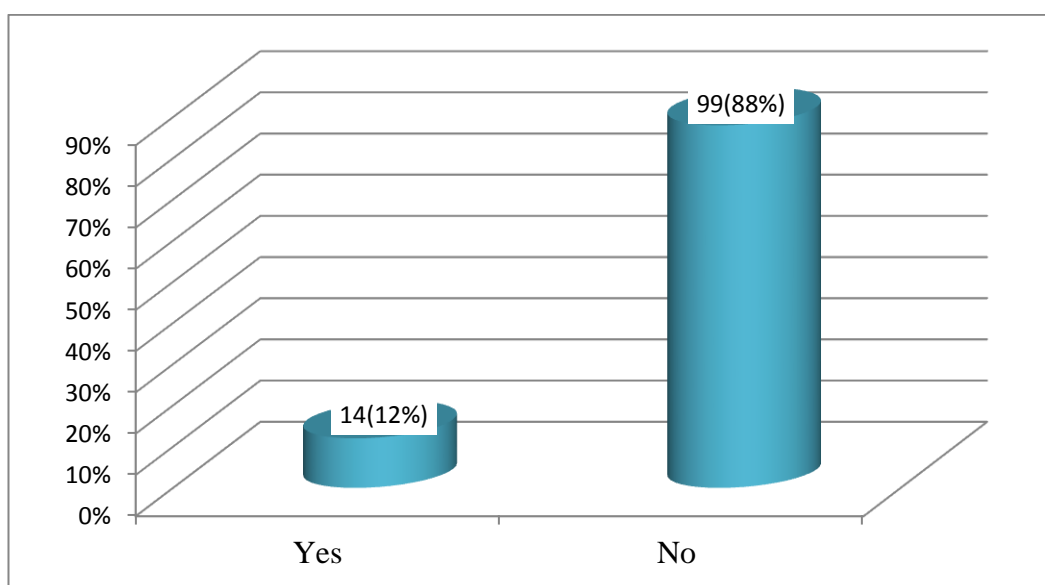
**Figure 23:** Photographs of stairs going up to the services and library collections from three of the institutions studied, with no lifts or ramps available

### **6.5 Information resources provided for people with visual impairments**

The second research question sought to identify the information resources provided by the library to people with visual impairments in line with the social model of disability. Questionnaires, interview schedules and an observation checklist were used to gather information from respondents in the five universities involved in the study.

### 6.5.1 Alternative materials for people with visual impairments

The researcher wanted to find out whether the information resources available in the library were suitable for people with visual impairments. According to the social model of disability the information resources housed in the library should be in Braille and large print for the people with visual impairments to read without any additional challenges. Figure 24 shows responses of the library staff from the five universities surveyed.



**Figure 24:** Alternative materials for people with visual impairments: library staff (N=113)

**Source:** Field data (2012)

Figure 24 above demonstrates responses regarding whether academic libraries had alternative materials for people with visual impairments. The following were the responses: 99(88%) responded negatively whereby 14(12%) responded positively. Respondents who responded negatively indicated that there were no alternative materials in academic libraries for people with visual impairments. Respondents further said academic libraries provided normal information resources to people with visual impairments and that readers employed by the School of Education read these materials for them. For respondents who responded positively academic libraries did provide alternative material for people with visual impairments. They further

explained that they provided electronic books and tapes for people with visual impairments.

Library directors were also interviewed about whether academic libraries had alternative material for people with visual impairments. Despite the few positive responses from library staff the responses were negative, indicating that there were no alternative materials for people with visual impairments.

Furthermore people with visual impairments were also interviewed to establish whether academic libraries had alternative materials. Again, despite the positive responses above all 57(100%) people with visual impairments again responded negatively indicating that there was no alternative material in academic libraries.

The researcher also observed that there were no alternative materials in academic libraries in Tanzania, although at one university there are a few manuals which are in Braille prepared by lecturers. In the current study one student with visual impairments complained that:

We are taking so many years to finish our degrees instead of taking three or four years to finish our degree we are taking ten or more and sometimes we decide not to continue because the information resources available in the libraries are not in Braille or large print to make us read ourselves like abled people.

Another student said;

One day we had a test I told my lecturer that I couldn't see well because the words were too small he said if you don't see go and start the weekend. I failed that test and I had to go for supplementary. The reason for failure was due to the fact that the words in that test were not in large print and suitable for partially sighted students.

## **6.6 Challenges facing people with visual impairments and in wheelchairs in accessing and using library services**

This section presents the findings of research question three together with guidelines from the social model of disability. Questionnaires, interview schedules and an observation checklist were used to gather information from respondents in five universities involved in the study.

### **6.6.1 Challenges which hinder access to and use of library services for people with visual impairments and in wheelchairs**

The researcher wanted to identify the challenges facing people with visual impairments and in wheelchairs in accessing and using library services in academic libraries in Tanzania. In relation to the social model of disability all challenges which hinder access and use of library services which can be removed, should be removed so that these users can access the information resources housed in the library without any additional challenges. Table 35 below shows multiple responses from the library staff from five universities involved in the study.

**Table 35:** Challenges that hinder access to and use of library services for people with visual impairments and in wheelchairs: library staff responses (N=113)

<b>: Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Poor infrastructure	92	81%
Lack of trained staff	58	51%
Lack of Braille and large print information resources	52	46%
Lack of assistive equipment	38	34%
Lack of guides and signs	7	6%
Lack of adjustable chairs, tables and shelves	7	6%
Lack of readers	3	3%
Negative attitudes of library staff and people with disabilities	3	3%

**Source:** Field data (2012)

Table 35 above depicts responses concerning challenges facing people with visual impairments and in wheelchairs in accessing and using library services. Responses were as follows: 92(81%) responded that the infrastructure was poor; 58(51%) said



there was a lack of trained staff; 52(46%) indicated a scarcity or lack of Braille and large print information resources; 38(34%) responded a lack of assistive equipment; 7(6%) indicated a lack of guides and signs; 7(6%) demonstrated a lack of adjustable chairs, tables and shelves; and 3(3%) responded on the paucity of readers as well as 3(3%) indicating negative attitudes of library staff and people with disabilities.

People in wheelchairs were also asked about the challenges that hinder access and use of library services. Their responses were multiple and are shown in table 36 below.

**Table 36:** Challenges that hinder access to and use of the library: people in wheelchairs (N= 6)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Poor infrastructure	5	83%
Shelves are too high	5	83%
Restrooms not designed for them	3	50%
Lack of trained staff	3	50%
Negative attitudes of library staff	2	33%
Moving inside the library is difficult because spacing of tables, chairs and shelves is inadequate	2	33%

**Source:** Field data (2012)

Table 36 above demonstrates the challenges which hindered people in wheelchairs in accessing and using library services. The responses were as follows: 5(83) responded poor infrastructure; 5(83%) mentioned that shelves were too high; 3(50%) indicated that restrooms were not designed for them; 3(50%) cited lack of trained staff; 2(33%) presented negative attitudes of library staff; and 2(33%) said moving inside the library was difficult because of the spacing of tables, chairs and shelves.

People with visual impairments were also interviewed on the challenges which hindered them in accessing and using library services. They responded that the lack of Braille and large print information resources, lack of trained staff to assist them, poor infrastructure which did not allow them access to the information resources, lack of assistive equipment, lack of signs and tools, lack of training on how to use

assistive equipment, restrooms not being designed for them, inadequate number of readers/ lack of readers, lack of reading areas, inadequate time span for borrowing information resources, negative attitudes of library staff and lack of information literacy training.

The researcher also observed that the infrastructure of the library did not allow people with visual impairments and in wheelchairs to get access to the information resources housed in the library and there were no working lifts and ramps. Information resources were not provided in Braille and large print, and there were no assistive equipment suitable for people with visual impairments. The assistive equipment which was available was housed in the disability units which are under the school of education. The researcher also noted that restrooms were not designed for people with visual impairments and in wheelchairs. Shelves were too high and spacing was not wide enough to allow people in wheelchairs to access items and remove freely. In addition there was no trained and experienced staff able to provide for or assist users with visual impairments and in wheelchairs. Furthermore there were no guides and tools suitable for people with visual impairments and in wheelchairs.

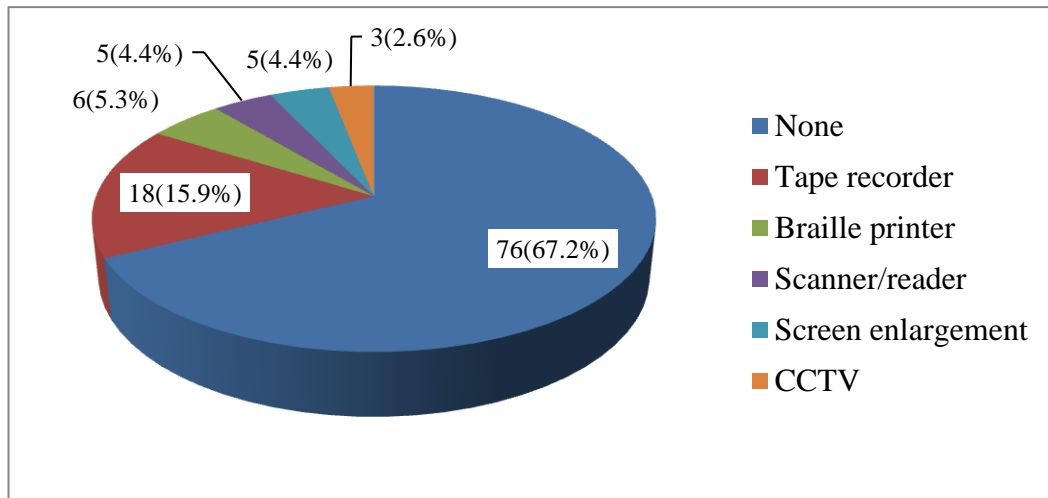
## **6.7 The role of ICT in facilitating provision of information resources to people with visual impairments and in wheelchairs**

This section provides findings regarding research question four together with the requirements of the social model of disability. Questionnaires, interview schedules and observation checklists were used to gather information from respondents in five universities involved in the study.

### **6.7.1 Adaptive equipment or technology available**

In this section the researcher wanted to investigate adaptive or assistive technology available in academic libraries in Tanzania. According to the social model of disability the academic library needs to acquire assistive equipment for people with visual impairments and in wheelchairs to access and use information resources easily

and independently. Figure 25 shows responses of the library staff of the five universities involved in the study.



**Figure 25:** Adaptive equipment or technology available in the library: library staff responses (N=113)

**Source:** Field data (2012)

Figure 25 above demonstrates the library staff responses regarding the adaptive or assistive technology available in academic libraries in Tanzania. The following were responses: 76(67.2%) responded none; 18(15.9%) indicated a tape recorder; 6(5.3%) mentioned a Braille printer; 5(4.4%) said a scanner/ reader and 5(4.4%) a screen enlargement as well as 3(2.6%) indicating CCTV. Respondents who stated none, meant that none of the equipment mentioned by the researcher was available in academic libraries while others indicated that the academic libraries had tape recorders. In addition some respondents responded that the academic libraries had Braille printers and others said that the academic libraries had scanner/ readers. Furthermore still other respondents mentioned that academic libraries had screen enlargement technology and others said the academic libraries had CCTV for people with visual impairments.

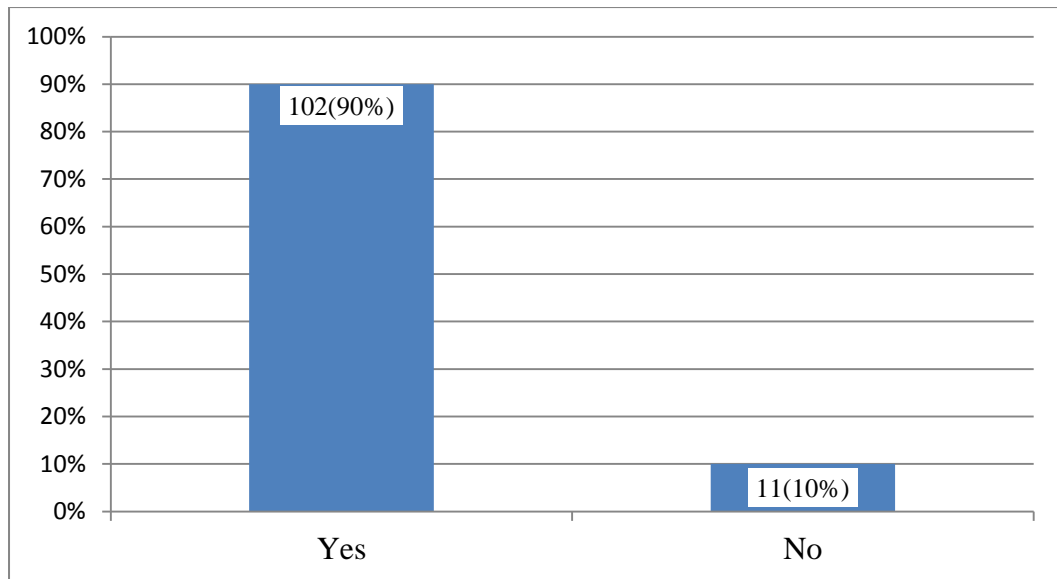
People with visual impairments were interviewed to establish whether the library provided any assistive equipment to them. Despite the positive responses above, all 57(100%) people with visual impairments responded negatively, indicating that

libraries did not provide any assistive equipment. In addition the researcher posed another question on whether the libraries had any adaptive or assistive equipment. The responses again were negative as there was not any adaptive or assistive equipment in the library for people with visual impairments. Furthermore the researcher asked if they had enough assistive equipment and again the response was negative, because according to them the libraries did not have any assistive equipment.

The researcher observed that no assistive or adaptive equipment was available in the library for people with visual impairments and in wheelchairs. Despite receiving positive responses from some library staff on the availability of assistive or adaptive equipment, the researcher noted that the assistive or adaptive equipment available in all universities surveyed was in the disability units which were managed by the school of education and not in the library. In addition the researcher established that the assistive equipment in the disability units was not sufficient to fulfill the needs of users with visual impairments and in wheelchairs.

#### **6.7.2 Whether ICT equipment would assist in library services' provision of information resources to people with visual impairments and in wheelchairs**

The researcher wanted to know whether ICT equipment would assist in the provision of library services to people with visual impairments and in wheelchairs. In relation to the social model of disability, ICT equipment needs to be available in the library to facilitate easy access and use of information resources to people with visual impairments and in wheelchairs. Figure 26 indicates responses of the library staff from five universities surveyed.



**Figure 26:** ICT equipment assists in the provision of information to people with visual impairments and in wheelchairs: library staff responses (N=113)  
**Source:** Field data (2012)

Figure 26 above shows the responses regarding whether ICT equipment would assist in the provision of information in academic libraries in Tanzania for people with visual impairments and in wheelchairs. Responses were as follows: 102(90%) responded positively while 11(10%) responded negatively. Positive responses showed that it was thought that ICT equipment would assist in the provision of information in academic libraries in Tanzania for people with visual impairments and in wheelchairs and further, that ICT equipment would facilitate easy access and use, convert information resources to the format suitable for people with visual impairments and allow access to and use of information resources independently and remotely for people with both visual impairments and in wheelchairs. In the view of respondents who responded negatively, ICT equipment would not assist in the provision of information resources in academic libraries for people with visual impairments and in wheelchairs. They further explained that ICT equipment was very expensive and people needed training to use it. Therefore they thought that ICT equipment was not needed for information provision in academic libraries in Tanzania for people with visual impairments and in wheelchairs.

The above question was also posed to people in wheelchairs on whether ICT equipment assisted access to the information needed. Table 37 indicates their responses.

**Table 37:** Responses of people in wheelchairs on whether ICT equipment will assist them (N=6)

Responses	Frequency	Percentage
Yes	6	100%
Total	6	100%

**Source:** Field data (2012)

Table 37 above shows responses of people in wheelchairs on whether ICT equipment assists access to information resources needed. All 6(100%) people in wheelchairs responded positively, indicating that ICT equipment assisted them in accessing information resources. In addition they explained that ICT equipment facilitates easy retrieval of information and also information can be accessed remotely.

People with visual impairments were also interviewed about whether ICT equipment could facilitate information access for them. All 57(100%) responded positively that ICT facilitates access to the information they need. They explained further that ICT helps them to access information easily and independently as well as converting information to a suitable format.

## **6.8 Challenges experienced by libraries when they sought to provide services to people with visual impairments and in wheelchairs**

This section provides the responses for research question five in which the researcher sought to investigate challenges experienced by academic libraries in the provision of library services to people with visual impairments and in wheelchairs, together with the social model of disability. Questionnaires, interview schedules and observation checklists were used to gather information from respondents in five universities involved in the study.

### 6.8.1 Challenges experienced by libraries when providing services to people with visual impairments and in wheelchairs

The researcher sought to investigate the challenges experienced by academic libraries in seeking to provide services to people with visual impairments and in wheelchairs. In relation to the social model of disability, challenges encountered by academic libraries in the provision of services to people with visual impairments and in wheelchairs should be removed so that information can be provided and accessed easily. Table 38 shows multiple responses of the library staff from five universities involved in the study.

**Table 38:** Challenges experienced by libraries when providing services to people with visual impairments and in wheelchairs: library staff responses (N=113)

Responses	Frequency	Percentage
Inadequate funds	68	61%
Lack of trained staff	64	57%
Poor infrastructure	50	45%
Lack of assistive equipment	43	38%
Lack of policy	42	37%
Negative attitudes of both library staff and people with disabilities	8	7%
Lack of awareness	1	1%

**Source:** Field data (2012)

Table 38 above indicates the responses to challenges experienced by academic libraries in seeking to provide services to people with visual impairments and in wheelchairs. Responses were as follows: 68(61%) responded inadequate funds; 64(57%) said lack of trained staff; 50(45%) mentioned poor infrastructure; 43(38%) indicated lack of assistive equipment; 42(37%) demonstrated lack of policy; 8(7%) showed negative attitudes of both library staff and people with disabilities and 1(1%) cited lack of awareness.

Directors of academic libraries were interviewed on the challenges experienced by the libraries in seeking to provide services to people with visual impairments and in wheelchairs. The responses showed that the challenges were inadequate funds, lack

of trained staff, poor infrastructure of the library, lack of assistive equipment, lack of a policy describing library services to people with disabilities as well as lack of support from the government on how to run services to people with disabilities.

The above question was also posed to staff of the special needs education units for disability on the challenges which face the unit in providing services to people with disabilities. Responses were multiple and are shown in table 39 below.

**Table 39:** Challenges facing staff of special needs education units for disability in providing services for people with disabilities (N= 15)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Inadequate funds	15	100%
Poor infrastructure	7	47%
Lack of Braille materials and inadequate assistive equipment	5	33%
Insufficient trained staff on special needs	4	27%
Inadequate number of staff	3	20%
Lack of awareness of the community regarding people with disabilities	3	20%
Negative attitudes of both staff and people with disabilities	2	13%

**Source:** Field data (2012)

Table 39 above indicates challenges facing disability units in providing services to people with disabilities. Responses were as follows: 15(100%) responded inadequate funds; 7(47%) said poor infrastructure; 5(33%) cited lack of Braille materials and inadequate assistive equipment; 4(27%) demonstrated inadequate of trained staff on special needs; 3(20%) presented few number of staff; 3(20%) mentioned lack of awareness of the community regarding people with disabilities and 2(13%) noted the negative attitudes of both staff and people with disabilities.

## **6.9 Suggestions on the improvement of library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania**

In this section the researcher wanted to know from the respondents how academic libraries in Tanzania could improve library services to people with visual



impairments and in wheelchairs. Questionnaires and interview schedules were used to gather information. Table 40 gives responses from the library staff from five universities involved in the study. Respondents could give more than one response.

**Table 40:** Improvement measures for library services to people with visual impairments and in wheelchairs: library staff responses (N= 113)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Train library staff	68	61%
Improve library infrastructure	63	56%
Purchase Braille, large print information resouces and assistive equipment	52	46%
Formulate policy	44	39%
Allocate sufficient funds	33	29%
Provide adjustable chairs,tables and shelves	5	4%
Foster positive attitudes in provision and use of library services	4	4%
Needs assessment to determine user needs	3	3%
Establish information literacy	1	1%

**Source:** Field data (2012)

Table 40 above shows library staff responses on how to improve library services to people with visual impairments and in wheelchairs in academic libraries in Tanzania. The following were responses: 68(61%) responded train library staff; 63(56%) stated improve libray infrastrucure; 52(46%) mentioned purchasing Braille, large print information resources and assistive equipment; 44(39%) indicated formulate policy; 33(29%) said allocate enough funds; 5(4%) responded for the provision of adjustable chairs, tables and shelves; 4(4%) mentioned the need for positive attitudes from both library staff and people with disabilities; 3(3%) indicated the need for assessments to determine their needs and 1(1%) said establish information literacy.

People in wheelchairs were also asked on how universities could improve academic library services in Tanzania. Table 41 below shows that responses were multiple.

**Table 41:** Responses of people in wheelchairs on improvements in library services (N=6)

Responses	Frequency	Percentage
Layout of the library building should be improved	6	100%
Library staff should be trained	3	50%
Attitudes of library staff should be positive	3	50%
Chairs, tables and shelves should be adjustable	2	33%
Sufficient funds should be allocated	2	33%

**Source:** Field data (2012)

Table 41 above shows responses of people in wheelchairs on how to improve library services. The responses were as follows: 6(100%) responded layout of the library building should be improved; 3(50%) said library staff should be trained; 3(50%) thought attitudes of library staff should be positive; 2(33%) mentioned that chairs, table and shelves should be adjustable and 2(33%) indicated sufficient funds should be allocated.

People with visual impairments were interviewed on how to improve library services. All 57(100%) people with visual impairments responded as follows: the library should purchase Braille, large print information resources and assistive equipment; library staff should be trained on special needs to assist people with disabilities; attitudes of the library staff should be positive to people with disabilities; infrastructure of the library should be improved; tools and signs should be suitable for people with visual impairments; enough funds should be allocated to the library to improve services to people with visual impairments and in wheelchairs; the library should conduct information literacy training for people with visual impairments so that it could help them to use library and its information resources. People with visual impairments should be trained on how to use assistive equipment as well as sufficient time should be provided to people with visual impairments for borrowing books. In addition JAWS and any other software helping people with visual impairments should be installed on all computers so that they are able to read without any assistance. Furthermore libraries should have study carrels for people with visual impairments so that they can read with their readers without causing disruption to other library users.

Directors of the academic libraries were asked if they have any plans to improve library services for people with visual impairments and in wheelchairs. The responses were positive indicating that they have a plan to improve library services to people with visual impairments. Further, they said they have a plan to train one library staff member every year on special needs. In addition they explained that they intend planning new library buildings which will accommodate people with visual impairments and in wheelchairs.

#### **6.10 Additional comments regarding library services' provision to people with visual impairments and in wheelchairs**

The researcher wanted to identify any other recommendations regarding library services' provision in academic libraries in Tanzania for people with visual impairments and in wheelchairs. Questionnaires and interview schedules were used to gather information. Table 42 shows responses from the library staff of five universities involved in the study. Respondents could give more than one response.

**Table 42:** Additional comments regarding library services' provision to people with visual impairments and in wheelchairs: library staff responses (N= 113)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Library should be designed to provide services to people with disabilities	50	48%
Policy formulated by the government should be implemented	28	27%
Provision of sufficient funding by government	17	16%
Training of library staff should be given priority	17	16%
Formulate library policy regarding people with disabilities	10	10%
Government should educate society to be aware of disability issues	8	8%
Library should acquire materials suitable for people with impairments	7	7%
University to formulate by-laws	4	4%
Library to seek funds from donors	2	2%
University to employ full time readers	1	1%

**Source:** Field data (2012)

Table 42 above shows the responses of the additional comments regarding library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. Responses were as follows: 50(48%) responded that the library should be designed to provide services to people with disabilities; 28(27%) said that the policy formulated by the government should be implemented; 17(16%) mentioned provision of sufficient funding by government; 17(16%) stated that training of library staff should be given priority; 10(10%) to formulate library policy regarding people with disabilities; 8(8%) indicated that government should educate society to be aware of disability issues; 7(7%) said the library should acquire materials suitable for people with impairments; 4(4%) mentioned that the university should formulate by-laws; 2(2%) responded that the library should seek funds from donors and 1(1%) indicated that the university should employ full time readers.

The above question was also asked to people in wheelchairs, to indicate their recommendations on library provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. Table 43 indicates their responses. Respondents could give more than one response.

**Table 43:** Responses for people in wheelchairs on additional comments (N=6)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
Libraries should be designed to provide services to people with disabilities	3	50%
Government should make sure that the policy formulated is implemented	3	50%
Universities should make sure all campuses are accessible	2	33%
Tanzania Loan Board should provide enough loans for students with disabilities	2	33%
Government should educate the community on all issues related to people with disabilities	1	17%

**Source:** Field data (2012)

Table 43 above shows responses on the other comments from people in wheelchairs regarding library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. The following were responses:

3(50%) responded that the library should be designed to provide services to people with disabilities; 3(50%) said government should make sure that the policy formulated is implemented; 2(33%) mentioned that universities should make sure all campuses were accessible; and 2(33%) indicated that the Tanzania Loan Board should provide sufficient loans for students with disabilities to purchase assistive equipment and information resources. Of the respondents 1(17%) stated that the government should educate the community on all issues related to people with disabilities.

Staff of special needs education units for disability were asked if they had any other comments regarding library services for people with visual impairments and in wheelchairs. Table 44 below show their responses.

**Table 44:** Responses for staff of special needs education units for disability on additional comments (N=15)

<b>Responses</b>	<b>Frequency</b>	<b>Percentage</b>
People with disabilities should be given priority for them to perform better in their studies	6	40%
Library should be designed to provide services for people with disabilities.	5	33%
More research should be conducted regarding services to people with disabilities	4	27%
Total	15	100

**Source:** Field data (2012)

Table 44 above demonstrates the responses on additional comments regarding library services for people with visual impairments and in wheelchairs. Responses were as follows: 6(40%) responded that people with disabilities should be given priority to enable them to perform better in their studies; 5(33%) said the library should be designed to provide services for people with disabilities and 4(27%) mentioned that more research should be conducted regarding services to people with disabilities.

People with visual impairments were interviewed on other comments regarding library services for people with visual impairments and in wheelchairs. All 57(100%)

people with visual impairments responded that the library should be designed to meet the needs of people with disabilities. In addition they recommended that government should make sure that the policy regarding people with disabilities are implemented in all sectors including libraries. Furthermore they recommended that the Tanzania Loan Board should provide enough funds to people with visual impairments as the assistive equipment and information resources are very expensive. They recommended that the government should educate the community on the importance of education to people with disabilities just as for abled-bodied people. They recommended further that the curriculum should include components relating to people with disabilities from primary to university level. They also recommended that government give assurances of employment to people with disabilities so that they could study any courses. Most people with visual impairments were studying education because it is manageable and easy to get employment. They recommended again that government fund and equip all schools so that people with visual impairments can attend any school rather than going to special schools. They feel as if they are discriminated against. The Tanzania Commission for Universities (TCU) website should be suitable for people with visual impairments and the form which applicants complete to apply to universities should have a place indicating disabled so that staff who are responsible for selection would know who is disabled and who is not. People with disabilities could then be selected for the right university with appropriate facilities. Librarians and other government officials should be visiting developed countries to see how libraries and other facilities provide for people with disabilities. Government should increase awareness programmes so that the general public is informed on all matters related to people with disabilities such as education, employment, transport, health and so on. In addition education awareness programmes should be conducted by people with disabilities and not exclusively by others.

Directors of academic libraries were also interviewed and asked if they had any other comments. They responded that the Tanzania Commission for Universities was the main organ which admitted students at national level therefore this organ should make sure that policies regarding people with disabilities were implemented. In

addition they said government should provide enough funds through their universities to support library services for people with disabilities.

### **6.11 Summary**

This chapter presented the findings from the study which focused on the library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. Key findings revealed that academic libraries provide services to people with visual impairments and in wheelchairs which is not inclusive / universal. In addition, the study presented findings of the challenges facing people with visual impairments and in wheelchairs in accessing and using library services. The role of ICT in facilitating the provision of information resources to people with visual impairments and in wheelchairs as well as challenges facing academic libraries in seeking to provide services to people with visual impairments and in wheelchairs was examined. The respondents made suggestions about how services to these groups could be improved.

## **CHAPTER SEVEN**

### **DISCUSSION OF THE FINDINGS**

#### **7.1 Introduction**

This chapter presents an interpretation of the research findings provided in chapter six. According to Kothari (2004:244) interpretation is the task of drawing inferences from the collected facts after an analytical or experimental study. It is a search for the broader meaning of the research findings. Pickard (2007:150) states that interpretation is a combination of the preparatory work in the literature review, the wider context which was presented based on secondary sources concerning specific topics or areas, and primary analysis. Therefore interpretation is the device through which the factors that seem to explain what has been established by the researcher in the course of the study can be better understood and it also provides a theoretical conception which can serve as a guide for further research (Kothari 2004:244). Interpreting data means relating the findings to the original research problem and to the specific research objectives and questions; relating the findings to the literature, concepts, theories and research studies; determining whether the findings have partial significance as well as statistical significance and also identifying the limitations of the study (Leedy and Ormrod 2005:276).

The purpose of the study was to examine library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania, looking into access to the information resources which were available and the layout of library buildings in five universities. The universities studied were University of Dar es Salaam (UDSM), Open University of Tanzania (OUT), Dar es Salaam University College of Education (DUCE), Sebastian Kolowa Memorial University (SEKOMU) and St. John's University of Tanzania (SJUT). This study was guided by Oliver's (1990) social model of disability.

The main research question was what services the academic library provides for people with disabilities, specifically people with visual impairments and people in wheelchairs, and whether the library environment in these institutions is hospitable



in terms of physical access and information resources. The following subsidiary research questions which guided this inquiry were:

- What is the physical layout of academic libraries in Tanzania?
- What information resources are provided by academic libraries for people with visual impairments?
- What challenges face people with visual impairments and in wheelchairs in accessing and using library services? (**Responses presented in the main research question and in the specific research questions 1 and 2).**
- What is the role of information and communication technology (ICT) in facilitating provision of information resources to people with visual impairments and in wheelchairs?
- What challenges are experienced by the library in seeking to provide services to people with visual impairments and in wheelchairs? (**Responses presented in the main research question and in the specific research questions 1 and 2).**

In addition the researcher assessed the suitability of the model chosen for the study. In discussing the findings research questions three and five will not be presented in isolation but will be included in the main research question and in the specific research questions one and two. The reason for this is to avoid repetition as there was a great deal of overlap in the content of the responses regarding these research questions. Despite the questions which were put to the respondents being different, the responses contained material that was pertinent to the main research question and the specific research questions one and two.

## **7.2 Library services' provision for people with visual impairments and in wheelchairs**

The study as in line with the social model of disability requires academic libraries to provide inclusive services to people with visual impairments and in wheelchairs. Similarly Kharamin and Siamian (2011:368) claimed that libraries have to play a key role in building an inclusive society, serving all kinds of users including people with

visual impairments. In the same vein Lilly (2001:400) insisted that the principle of universal design, when utilized in the development of any product or service, ensures that they may be used by people of varying abilities, are simple, flexible and intuitive in use, provide effective communication of errors, require minimal physical effort and are appropriate in size and required space for use regardless of the user's physical state.

The current study revealed that academic libraries in Tanzania provided services to people with visual impairments and in wheelchairs. The services which the libraries provided were lending services, internet services and photocopy services. This was supported by library staff (71, 63%) and people in wheelchairs (4, 67%) as depicted in figure 4 and table 16. In addition the five directors of libraries supported this response and said they provided library services to people with visual impairments and in wheelchairs although they explained further that in most cases the services were provided by the disability units which fall under the school of education. Materials and equipment suitable for people with visual impairments were housed in the units. 47(82%) people with visual impairments, when interviewed, also said they borrowed books and other information resources. In addition the current study noted that some people with visual impairments and in wheelchairs were not using the library services because in the library there were no information resources in the required formats and even the layout of the library buildings did not allow them to get access to information resources housed there. This finding was supported by library staff (41, 37%) and people in wheelchairs (2, 33%) as shown in figure 4 and table 16 as well as 10(18%) people with visual impairments.

Furthermore the findings confirmed that the disability units which fall under the school of education were involved in service provision to people with disabilities. The disability units transcribed information resources into Braille; provided learning and teaching materials; provided note takers and readers as well as wheelchairs and white canes. They counselled people with disabilities and trained teachers in special needs. In addition the disability unit in the Ministry of Education and Vocational Training coordinated education for people with disabilities in the country.

It was evident from the current findings that although academic libraries in Tanzania provided services to people with visual impairments and in wheelchairs the services were not inclusive or universal. The services which they provided were for able-bodied people. This finding concurs with the study by Ndumbaro (2009) who observed that in Tanzania generally, library and information services were planned without considering the needs of people with visual impairment. In the same vein Bagandashwa's (1998) study noted that library services for people with visual impairments were significantly lacking in Tanzania. In a similar way Grobbelaar-du Plessis and van Reenen (2011:xvi) observed that, for a large majority of people with disabilities, public facilities, transport, training, working opportunities, communication and access to information were unavailable or inaccessible. In addition Alemna (1993:258) claimed that in most African countries library and information services to people with visual impairments were almost non-existent.

#### **7.2.1 Awareness of the services provided to people with visual impairments and in wheelchairs**

Librarians must examine their facilities, services and materials with a critical eye to make certain that clients with disabilities are taken into account and that they are equally aware of and committed to meeting the needs of the community (Riley 2002). Findings of the current study revealed that library staff were aware of the provision of library services for people with visual impairments and in wheelchairs, and were supported by the directors of the libraries. Ndumbaro (2009) also claimed that to some extent the staff in university and public libraries were aware of people with visual impairments. The study of Bodaghi and Zainab (2012) noted that there was a lack of awareness among librarians of users with disabilities. In addition, from the current study's findings it was observed that people with visual impairments and in wheelchairs were aware of the services provided by the unit. This was supported by 15(100%) staff of special needs education units for disability, and also by people with visual impairments, although one student with a visual impairment complained that it takes time to know the disability unit. Despite the awareness of library staff regarding provision of library services to people with visual impairments and in

wheelchairs, no assessments have been done by the libraries to determine information needs of people with visual impairments and in wheelchairs.

### **7.2.2 Academic libraries' need to be redesigned to meet the needs of people with visual impairments and in wheelchairs**

Academic libraries in line with the social model of disability should be redesigned to meet the needs of people with visual impairments and in wheelchairs. This entails removing all the barriers which might hinder them in accessing the facilities provided by the library. Destounis (2004:286) claimed that providing accessible services meant removing challenges that prevent people with disabilities from participating in substantial life activities, including the use of services, products and information. In a similar way Robertson (2001:2) maintained that if no access challenges existed, then people with visual impairments were not prevented from using services.

The findings of the current study revealed that academic libraries need to be redesigned to meet the needs of people with visual impairments and in wheelchairs as supported by 92(81%) of the library staff, as shown in figure 7, who responded that they strongly agreed that the library should be redesigned to meet the needs of people with visual impairments and in wheelchairs. Similarly Deines-Jones (2007:145) insisted that libraries should be designed to be universally accessible, and should have equipment in place to enable all users to get maximum benefit from the library's materials and services offered. People with visual impairments and in wheelchairs need to read for examinations, write assignments, write research papers and undertake all work related to academic purposes in the same way as abled people, and the mission of academic libraries is to support teaching, learning, research and consultancy to all of the community of users, including people with visual impairments and in wheelchairs. Libraries should use strategies based upon the principles of universal design to ensure that library policy, resources and services meet the needs of all people (Rubin 2002).

### **7.2.3 Whether library staff assisted people in the library with visual impairments and in wheelchairs**

The findings of the current study revealed that people with visual impairments and in wheelchairs were assisted by library staff when they needed information resources or any other issues related to academic purposes. The library staff responded positively to the question with 82(73%), as in figure 8, stating this. In relation to the social model of disability library staff are required to provide services to people with visual impairments and in wheelchairs to the same extent that they provide for abled people. That means library staff are required to provide services to people with visual impairments and in wheelchairs without any discrimination.

### **7.2.4 Frequency of library staff assisting people with visual impairments and in wheelchairs**

The current study noted that there were some library staff who assisted people with visual impairments and in wheelchairs and others who did not assist them as indicated by 36(32%) library staff who responded 'sometimes' and 32(28%) said 'not at all' in response to this question as depicted in figure 9. In addition the findings of the current study revealed that people in wheelchairs used the library at different frequencies as supported by people in wheelchairs who mentioned that they sometimes used it, 3(50%), and not at all by 2(33%) in table 21. People with visual impairments used the library services when they wanted to read or borrow information resources, 47(82%); whereby 10(18%) people with visual impairments did not use the library services. According to the social model of disability, library staff who provide services to people with visual impairments and in wheelchairs need to be available in the library all the time for the purpose of assisting them when they need services in the library.

### **7.2.5 Library services needed for people with visual impairments**

The study, as in line with the social model of disability, found that the academic library is required to provide services related and suitable to people with visual impairments. To support this statement the American Library Association (2001) highlighted the services required by people with disabilities such as extended loan

periods, the waiving of late return fines, extended reserve periods, volunteer readers in the library, volunteer technology assistants in the library and radio reading services.

The current study confirmed that academic libraries needed to provide information resources like Braille, large print and assistive equipment so that people with visual impairments could read and use the equipment for their academic purposes. This finding concurs with the study of Poss (1999) who claimed that students with visual impairments required Braille text, talking books, Perkins Braillers as well as talking computers for processing their work. Similarly Gunde (1991:808) insisted that the library must provide an appropriate selection of books in formats that are usable by people with visual impairments: large print, audio books, talking books, and Braille materials, among other special formats and/or equipment. In addition the findings of the current study noted that people with visual impairments needed trained staff to assist them to use the information resources required. They also needed working lifts and ramps to gain access easily to the information resources housed in the library. Furthermore the findings observed that people with visual impairments needed guides and tools suitable for them so that they could locate information resources needed easily and independently. Also the current study indicated that signs were needed for people with visual impairments so that they could easily identify the services needed. They also needed training on how to use assistive equipment.

#### **7.2.6 Library services needed for people in wheelchairs**

In relation to the social model of disability, the academic library is required to provide services appropriate to people in wheelchairs. The American Library Association (2001) pointed out that the services required were similar to those mentioned above by people with disabilities, such as extended loan periods, waiving return fines, extended reserve periods, library cards for proxies, books by mail, reference services by fax or email, home delivery services, remote access to the OPAC and remote electronic access to the library resources.

The findings of the current study indicated that people in wheelchairs need ramps and a working lift so that they can easily get to the information resources housed in

the library. In addition the current study noted that people in wheelchairs needed online services so that they could access information resources remotely rather than physically going to the library. Also the findings of the current study observed that academic libraries could deliver services to the places where people in wheelchairs lived rather than having users come to where services were located.

Furthermore people in wheelchairs need adjustable chairs, tables and shelves so that they sit, read and locate documents easily in the library. Academic libraries need well-arranged tables, chairs and shelves with enough spacing between them so that people in wheelchairs can move freely in the library. These findings are in line with those of Irvall and Nielsen (2005:6) who stressed that all parts of the library should be accessible. The space should be arranged logically with clear signage and a floor plan posted close to the entrance. Service desks should be located close to the entrance. Wheelchairs should be able to move around inside the whole library easily. There should be a lift or ramps for wheelchairs, if the library has more than one level. There should be no raised doorsteps and all doors should have automatic openers. Ideally, shelves should be reachable from a wheelchair. Similarly Moseid (2006:2) claimed that people in wheelchairs were not disabled in an environment with lift and ramps. Moseid (2006:3) further insisted that automatic door openers were often necessary for wheelchair users to enter the library building.

#### **7.2.7 Whether libraries had staff who were trained and experienced to provide for or assist users with visual impairments and in wheelchairs in the use of library services**

The study in line with the social model of disability found that academic libraries need to have trained and experienced staff who could assist people with visual impairments and in wheelchairs in the use of library services and its resources. Pulman (2004) cited in Anjode (2010:3) pointed out that all staff regardless of where in the library they worked should be sensitive to, and have a basic knowledge of different forms of impairments. They also needed to understand the ways in which different conditions affected the ability of users to make use of services and the built/physical environment as designed for the general population. In a similar way, Heery

(1996:5) declared that librarians should help users with disabilities even when their libraries were not designed with the needs of disabled users in mind.

The findings of the current study revealed that in academic libraries in Tanzania no trained and experienced staff assisted users with visual impairments and in wheelchairs as indicated by 102(92%) library staff in figure 12. The study findings were also in line with those of Bagandanshwa (1998) who noted that there was no-one to guide and help people with visual impairments and as a result, it was impossible for these people to make use of the library's services. In the same vein Arjomand (1993) and Hashemi (1994) cited in Bodaghi and Zainab (2012:243-244) observed that there were untrained staff who were unable to handle or assist people with disabilities. Similarly Kaijage (1991) pointed out that there was a lack of properly trained staff who might be in position to not only be considerate and understanding of people with visual impairments, but who might also provide them with their information needs. Ndumbaro's (2009) study indicated that there were a few staff who had been trained to serve people with visual impairments but the current study observed that there were no trained or experienced staff to assist people with visual impairments and in wheelchairs, as supported by the Bagandanshwa and Kaijage studies.

The findings of the current study indicated that there were no trained or experienced staff to assist users with visual impairments and in wheelchairs because library programmes and the curricula of universities did not include a component on the special needs of people with disabilities. In line with this, Alemna (1993:259) indicated that there was a lack of properly trained library personnel. In most school libraries in Africa, the curricula are geared towards conventional librarianship courses. For this reason, library staff are often unable to address the needs of people with visual impairments. In addition, the current study revealed that assisting people with disabilities was not prioritised by the libraries. Furthermore the current study observed that there was no policy addressing what the training needs for those assisting people with disabilities were. The findings also indicated that services to people with disabilities were provided by the unit which was under the school of



education. The staff who were in the unit were trained to assist people with disabilities. The findings of the current study also noted that there was a lack of awareness and very few instances of initiatives that had been taken by academic libraries regarding provision of services to people with disabilities. In addition the current study indicated that there was no encouragement from the government regarding people with disabilities despite the existence of policy to this effect.

#### **7.2.8 Attitudes of library staff towards people with visual impairments and in wheelchairs in the provision and use of library services**

In line with the social model of disability, academic libraries need both positive attitudes in library staff and in people with visual impairments and in wheelchairs, for the library staff to be able to assist these users to access library services without discriminating against them. Otherwise people with visual impairments and in wheelchairs are the recipients of inferior service.

The current study's findings noted that the attitude of the majority of library staff towards people with visual impairments and in wheelchairs was positive although there were some who were negative about people with visual impairments and in wheelchairs regarding the provision of library services. This finding was supported by 47(41%) library staff and 5(83%) people in wheelchairs as shown in figure 13 and table 22, as well as by people with visual impairments who agreed that some library staff were positive and others were negative towards the provision of library services to people with visual impairments.

In addition the findings indicated that the majority of people with visual impairments and in wheelchairs were negative, although there were some who were positive about library staff. This finding was supported by 36 (32%) library staff and 2 (33%) people in wheelchairs in figure 14 and table 23, as well as by people with visual impairments. The latter mentioned that they were always positive in their attitudes to library staff because they needed help to get information resources, but that in some cases they felt compelled to be negative about library staff who were negative about them.

Generally from the current study findings, it was noted that a positive attitude of both library staff towards people with visual impairments and in wheelchairs is required to facilitate maximum usage and provision of library services. In line with this Alemna (1993:260) contended that attitude is an essential ingredient in making the library available to people with visual impairments. In the same vein Dequin, Schilling and Huang (1988) claimed that the positive attitudes of academic librarians towards disabled students were essential for the provision of adequate library services to meet their needs. Seyama (2009) pointed out that in order to provide effective library services to students with visual impairments, it is essential that all staff have appropriate attitudes towards them.

The study of Ndumbaro (2009) indicates that attitudes based on ignorance or misconceptions created barriers and were most frequently the cause of inadequate or non-existent services. Similarly, the United Republic of Tanzania (2004) claimed that negative attitudes of the community to people with disabilities was one of the major challenges against the integration and equal participation of people with disabilities in the life of the community. Often disability is perceived as a problem and a person with a disability as unable and dependent. The study of Tungaraza (2010) revealed that despite the knowledge people have about persons with disabilities, negative attitudes are still evident. Similarly Poss (1999) claimed that some parents may not be interested in sending their children with special needs to school due to negative attitudes about people with disabilities. In a similar way Mandesi (2007) contended that people's negative attitudes towards persons with disabilities often causes social exclusion and were the hardest to overcome. In the same vein Leong and Higgins (2010) pointed out that being disabled was still viewed as a social stigma. Shunmugam's study at the university of Natal (2002) noted stereotype attitudes and perceptions of the university population that students with visual impairments are incomplete people who are in need of help.

### **7.2.9 Whether libraries had a written policy that described services to people with visual impairments and in wheelchairs**

The study in line with the social model of disability found that academic libraries require policies which address services regarding people with visual impairments and in wheelchairs, so that the library could be guided by a policy in dealing with all matters related to them. For example, acquiring information resources which are in Braille and large print, acquiring assistive equipment, training library staff who could provide for and assist users with visual impairments and in wheelchairs. Kinnell, Yu and Creaser (2000:44) argue that if policy was not in place services would not develop. In the same vein Bagandanshwa's (2006a) study insisted on the development of positive policies to ensure recognition of people with visual impairments as potential users of information. Similarly Bodaghi and Zainab (2013: 40) claimed that to provide accessible library services for students with visual impairments, libraries must formulate social inclusion policies.

It was evident from the current findings that the National Policy on Disability of 2004 did not address library services to people with disabilities and there were no library policies in academic libraries in Tanzania regarding library services for people with disabilities, although the Open University of Tanzania was in the final stage of formulating policy relating to library services for people with disabilities. This was supported by 111(98%) library staff and 12(80%) staff of special needs education units for disability and also directors of academic libraries. The findings of the current study concur with those of Ndumbaro (2009) who said that policy was not clear on the availability of library and information services. In the same vein Bath (2005) cited in Bodaghi and Zainab (2012) claimed that there was a lack of policies, procedures or guidelines that catered for the needs of people with disabilities.

### **7.2.10 Whether libraries had a budget for people with visual impairments and in wheelchairs regarding library services**

The current study's findings indicated that no budgets had been allocated to academic libraries in Tanzania for services to people with visual impairments and in

wheelchairs. This finding was supported by 9(60%) staff of special needs education units for disability who indicated that the units do not provide funds to support library services to people with visual impairments and in wheelchairs and the directors of academic libraries who said that they did not have a budget to acquire alternative materials and assistive equipment for people with visual impairments and also there were no attempts made to secure a budget. These findings relate to the study of Ndumbaro (2009) who observed that there was no special budget to cater for the needs of people with visual impairments. In the same vein Shunmugam (2002) noted that there had been limited funds dedicated to learners with disabilities or special needs education in higher educational institutions. Yokoyama (2012:33) pointed out that Tanzania, unlike Uganda and Kenya, did not have a sufficient budget for disability issues at the central or the local government level. Similarly Majinge's (2009) study revealed that the government of Tanzania provided inadequate funds to the institutions, and hence the libraries got less than they needed. The amount allocated did not enable libraries to acquire or to subscribe to other library materials. In the same vein Bodaghi and Zainab (2012) pointed out that there was a challenge in providing access due to the lack of budget. Oдини (1998) claimed that libraries and information services in general had a low priority. Money was scarce and priorities were realigned. The library and information systems always found their schemes left out, or at best delayed. In the same vein Nawe (2007) noted that the funding crisis for libraries was a worldwide phenomenon as universities became increasingly under funded. The interpretation made by the current study is that it is difficult for the library to have strong collections which support people with disabilities. As Ochoggia (2003a) pointed out materials and equipment for people with disabilities are expensive.

In addition the Tanzania Human Rights Report (2010) claimed that the Government of Tanzania provided only limited funding for special facilities and programmes. Similarly Mpandikizi and Maro (2010) pointed out that in 2009, the year the Government ratified the Convention of Human Rights, did not bring about any difference in terms of increased budgetary allocations to ensure the availability of facilities for children with disabilities. In addition the current study's findings

observed that the Ministry of Education and Vocational Training was not informed about the number of people with disabilities enrolled in various universities in the country as no research had been done. Not having this information would make funding and budgeting impossible.

#### **7.2.11 Other initiatives taken by the library regarding library services to people with visual impairments and in wheelchairs**

This study, as in line with the social model of disability, required academic libraries to provide universal services to all users including people with visual impairments and in wheelchairs. Therefore initiatives should be undertaken by academic libraries for the provision of inclusive library services to people with visual impairments and in wheelchairs.

The current study's findings, as supported by 56(50%) library staff, revealed that there were no initiatives taken by academic libraries regarding services for people with visual impairments and in wheelchairs. There were some initiatives undertaken by some academic libraries regarding services for people with visual impairments and in wheelchairs as supported by 48 (42%) library staff and directors of academic libraries. Examples of initiatives were in the one institution which had sent a proposal to a donor soliciting funding for the purpose of establishing services for people with disabilities. The same institution said that the library had dedicated rooms on the ground floor of the library for the use of people with disabilities and staff of the disability unit. In addition another institution mentioned that there was a new library building, which was under construction, that would allow easy access to people with disabilities. The institution also had a plan to train one library staff every year on special needs. Furthermore another institution added that they had started writing a policy regarding services to people with disabilities and the policy was in the final stage. The same institution stated that there was a laboratory for people with visual impairments where they recorded information resources in the format needed for people with visual impairments.

### **7.3 Physical layout of academic libraries in Tanzania**

The current study, using the social model of disability as its base, found that the academic library should make sure that the information resources were accessible to all library users including people with visual impairments and in wheelchairs, by creating an enabling user-friendly environment. For example the library should have ramps and a working lift to allow people with visual impairments and in wheelchairs to easily access the available information resources. In relation to this assertion Francis and Adams (2010:137) claimed that people with mobility challenges require ramps or lifts to replace stairs. The social model of disability is about the challenges that people with disabilities face. For example, if a wheelchair user cannot climb stairs, then a ramp or lift should be installed (Carson 2009). Similarly Shava (2008) asserted that the design of the buildings should have ramps alongside stairs and should include automatic doors. In the same vein McCaskill and Goulding (2001:198) claimed that unsuitable library entrances, lacking alternative access via a ramp or lift and/or with heavy doors, were clearly unsuitable for the needs of certain categories of people with disabilities. In a similar way Amusat (2009:32) insisted that the accessibility of services was essential if the goal of fostering functional independence was to be achieved in people with disabilities. Based on the social model, Bodaghi and Zainab (2012:242) claimed that it was not the disability that prevented the disabled from using the library but rather the lack of suitable paths and ramps that limited access.

The researcher in the current study observed and reported in the findings that the layout of library buildings in academic libraries did not allow people with visual impairments and in wheelchairs to get easy access to the information resources housed in the library. In addition the study findings noted that in all the universities investigated, there were no functioning lifts and ramps which helped people with visual impairments and in wheelchairs reach the upper floors where the information resources or services were located. This finding was supported by 101(89%) library staff and 4(67%) people in wheelchairs as well as people with visual impairments and directors of the libraries. Respondents indicated that the layout of the library

buildings did not allow people with visual impairments and in wheelchairs to get access to the information resources housed in the library (see **Figure 23**).

The findings of the current study concur with those of Bagandanshwa (1998) who observed that library buildings in most cases were unsuitable for the mobility needs of people with visual impairments. They had no rail-marks for easy identification, a lot of stairs and unprotected embankments. In the same vein Kaijage (1991), Ndumbaro (2009) and Leong and Higgins (2010) noted that the design of the library building did not provide easy access for university students with visual impairments. Similarly Onatola (2007:96) claimed that the present situation in all universities in Nigeria was such that students and staff who used wheelchairs had to be physically carried when they wanted to access public facilities such as lecture rooms and libraries. The alternative arrangement was to restrict users of wheelchairs to the ground floor, regardless of where the materials which they needed were housed. In addition the studies of Taylor (2004), Tungaraza (2010), Chitereka (2010) and Caga (2011) observed the inaccessibility of buildings for people with disabilities. Furthermore Forrest (2006:16) asserted that access to the library was challenging as the library was situated on the first floor of a building with no lift or chair elevator on the stairs. Alemna (1993:260) observed that most of the older libraries in Africa, especially university libraries, were built long before the libraries ever considered providing material for people with visual impairments, and therefore they had the challenges of steps, narrow doorways and lack of elevators.

### **7.3.1 The way in which people with visual impairments and in wheelchairs located an item they needed in the library**

The social model of disability requires libraries to facilitate the easy location of items by people with visual impairments and in wheelchairs. The current study observed that people with visual impairments and in wheelchairs used library staff, readers employed by universities and friends willing to search for the information resources they needed in the library. This was supported by 107 (95%) library staff who stated that friends assisted and other library staff, 80(71%), who said readers helped these users. It appeared that they drew on their experience and observation for

their response. In addition 8(7%) mentioned the use of the catalogue, as in table 27, and 4(67%) people in wheelchairs responded that they used friends, 2(33%) mentioned using the catalogue and 3(50%) cited using library staff, as in table 28. People with visual impairments added that they used readers employed by the university, library staff and friends. Also the current findings noted that there were no additional arrangements made by the library to assist users with visual impairments and in wheelchairs to get the information resources they need. This findings concurs with Onatola (2007:96) who claimed that there were no formal calling services, and the students had to rely on friends to source and retrieve the needed materials from upper floors. In a similar way Tungaraza's (2010) study indicated that students with visual impairments at the University of Dar es Salaam depended on readers who read for them since the library did not have books in Braille. In addition the current study's findings indicated that there were no signs or tools in the library suitable for people with visual impairments to help them to identify where the information resources or services are located. Similarly the study of Kaijage (1991) indicated that the conventional card catalogue made no provision for the needs of the people with visual impairments.

### **7.3.2 Whether the library shelves allowed people with visual impairments and in wheelchairs to locate information resources by browsing**

In relation to the social model of disability, academic libraries are required to simplify and facilitate the easy browsing of information resources arranged on shelves in a manner that is accessible to people with visual impairments and in wheelchairs.

The current study's findings revealed that library shelves were high and it was difficult for people in wheelchairs to locate information resources by browsing. Therefore they used friends and the library staff to locate the information they needed in the library as supported by 110(97%) library staff and 5(83%) people in wheelchairs (see **Figure 17**). This finding concurs with Alemna's (1993:260) who claimed that most of the older libraries in Africa especially university libraries were



built long before libraries ever considered providing material for the people with visual impairments who have the challenge of high book shelves.

### **7.3.3 Whether the arrangement of shelves in the library allowed people with visual impairments and in wheelchairs to move freely**

From the findings of the current study in relation to the social model of disability, academic libraries are required to arrange shelves with enough space between one shelf and the next to allow for the free movement of people with visual impairments and in wheelchairs.

The current study's findings noted that the arrangement of library shelves (see **Figure 19**) did not allow people in wheelchairs to move freely, and people with visual impairments could move freely only with assistance. This was supported by 92(81%) library staff and 5(83%) people in wheelchairs as well as people with visual impairments who said that this was not possible unless they went to the library with their readers or their friends to enable them to move without any difficulty.

### **7.3.4 The suitability of study carrels, computer workstations, tables and chairs for people with visual impairments and in wheelchairs**

The study found, in line with the social model of disability, that the library needs to provide reading rooms which are conducive for reading, and computers with assistive technologies, like JAWS, are required to help people with visual impairments to access information resources easily. Adjustable tables and chairs are needed for people in wheelchairs to sit and read comfortably.

The current study's findings established that no study carrels, computer workstations, tables and chairs were suitable for people in wheelchairs. This finding was supported by 105(93%) library staff and 6(100%) people in wheelchairs. Study carrels are small rooms in the library available for private study which accommodate one to three readers at time. Therefore if these facilities existed people with visual impairments and their readers could use this space, as the rules of the library do not allow one to make a noise, including reading aloud. In addition, there were no

computer workstations which had software, such as JAWS, to allow people with visual impairments to read the information resources they wanted. Furthermore tables and chairs available in academic libraries were not adjustable to enable people in wheelchairs to sit and read without any difficulties (see **Figure 21**).

### **7.3.5 Whether the library restroom facilities were able to be used independently by people with visual impairments and in wheelchairs**

The restroom facilities of academic libraries need to be designed for people with visual impairments and in wheelchairs so they can use the restrooms independently as per the social model of disability's requirements. The current study noted that the restroom facilities of academic libraries were not designed for people with visual impairments and in wheelchairs. However, at two institutions the restrooms had been modified to help people with visual impairments and in wheelchairs use them independently. They are not used only by people with visual impairments and in wheelchairs, however, and were used by others as well. The finding about the lack of suitable restrooms was supported by 90(80%) library staff and 5(50%) people in wheelchairs, as well as people with visual impairments who said they needed assistance because the library restrooms were not designed for people with visual impairments. They also complained that the restrooms were very dirty and so most of the time they preferred to use the facilities in their rooms. The findings of the current study largely concurred with the study of Tungaraza (2010) and Ndumbaro (2009) who claimed that there were no toilet facilities that met the needs of people with visual impairments and in wheelchairs. It was difficult to access toilets easily due to stairs or steps leading to the toilets and/or narrow doors.

## **7.4 Information resources provided for people with visual impairments**

The current study as in line with the social model of disability requires academic libraries to have Braille and large print information resources for people with visual impairments to read without any challenges. The social model of disability is about the challenge that people with disabilities face. For example, if a blind person cannot read written information then the solution is to provide the information in an alternative format such as audio or Braille (Carson 2009). In relation to this

statement, Kharamin and Siamian (2011:368) further claimed that an ideal library service was one where each individual, regardless of the degree of their visual impairment or other disabilities had access to the information resources at the time they were required, in a format that can be used, in the quantities that were needed, and where the needs of the user were understood by the staff. In a similar way Bodaghi and Zainab (2012:241) asserted that access to information sources are one of the rights that society cannot deny and libraries are one of the most important sources of information.

The right to education implies a right to access information. Libraries and other related information services are crucial in educational development because the information they hold is an essential tool with which to foster the learning process (Magara and Nyumba 2004:313). The same view was expressed by Rasmussen (2001) who noted that information is an essential ingredient in capacity building processes because access to information enables people to be better informed and as a result better able to make decisions. Moore (2000) contends that the lack of access to information contributes directly to social exclusion. Without adequate access to information, people are unable to play their part as citizens; they cannot make informed choices as consumers and they are unable to benefit fully from all that society has to offer. In a similar way Seyama's (2009) study insisted that students must be able to access information through whatever valid information seeking behaviour they chose to employ, and the information they discovered must satisfy their general or specific needs.

The current study found that there were no alternative materials for these users in academic libraries in Tanzania. At one university there were a few manuals in Braille, prepared by some lecturers. This finding was supported by 99(88%) library staff as well as people with visual impairments and directors of the libraries. In addition the current study observed that people with visual impairments were using normal print information resources which university employed readers read for them. This finding relates to the study of Tungaraza (2010) who noted that students with visual impairments at the University of Dar es Salaam depended on readers who read

for them since the library did not have books in Braille. In the same vein Kaijage (1991), Ndumbaro (2009), Bagandanshwa (1998), Shunmugam (2002) and Ochoggia (2003a) claimed that there were no information resources in alternative formats for people with visual impairments in the academic libraries in which they studied. In addition Beverley, Bath and Barber (2007:10, 2011:257) argued that information was not always accessible or appropriately “packaged” for people with visual impairments. In a similar way Alemna (1993:258) indicated that there was a dearth of appropriate materials such as books in Braille and talking books to aid people with visual impairments. In the same vein Koulikourdi (2007:145) observed that there were inadequate alternative materials provided through libraries and publishing houses.

Furthermore the current study found that there were not sufficient books which were in normal print to fulfill their needs as indicated by 77(68%) library staff in figure 6. In addition people with visual impairments said that they were not satisfied with the services provided to them because the library was not user friendly in terms of information resources. These findings concurred with the earlier study of Majinge (2009) who claimed that the information resources that were available in academic libraries were not sufficient to meet users’ information needs. In the same vein Todaro (2005) observed that libraries did not have the resources to satisfy the minimum demands of their users. Similarly Ryan (2001) claimed that alternative format materials had been excluded from the inter-library lending system which resulted in people with visual impairments not being offered sufficient services with a wide range of reading information that met their needs. Ndumbaro (2009) noted that people with visual impairments were not satisfied with the service because there was no supportive environment which enabled them to be independent.

The current study’s findings further showed that there were a few or a lack of readers to read for people with visual impairments as the information resources available in the library were in normal print not in Braille. This finding relates to the study by Ndumbaro (2009) who noted that there was a lack of, or too few readers to read for people with visual impairments.

### **7.5 The role of ICT in facilitating provision of information resources to people with visual impairments and in wheelchairs**

In relation to the social model of disability the academic library needs to acquire assistive equipment for people with visual impairments and in wheelchairs to access and use information resources housed in libraries easily and independently. To support this statement Dragoicea, Sacala, Cojocaru, Shivarov and Balan (2009) claimed that assistive technologies are prerequisites for people with visual impairments to access information resources housed in academic libraries. Dragoicea et al. (2009) insisted further that the aim of assistive technologies in the social model is to overcome the gap between what people with disabilities intend to do and what the existing social infrastructure allows them to do. Bagandanshwa (2006b) in his study insisted that technology was appropriate for people with visual impairments for accessing and using the services. In a similar way Myhill (2002) argued that providing access to information for all users, irrespective of their physical disabilities, is a requirement for all libraries and ICT could be used to assist this.

The current study found that ICT equipment facilitates library services' provision of information resources to people with visual impairments and in wheelchairs easily and independently as well as converting information resources to the formats suitable for people with visual impairments as supported by 102 (90%) library staff and 6 (100%) people in wheelchairs as well as 57 (100%) people with visual impairments. The latter said ICT facilitates access to the information they need easily and independently as well as converting information to the format suitable for them. The findings relate to Walterova and Tveit's (2012) study which claimed that information and communication technology (ICT) is offering new opportunities for everyone, but it is more significant for people with disabilities as, in general, they use technological assistance for daily activities to a greater extent than able-bodied people. With technological equipment adapted to the abilities of everyone, people with disabilities would be able to participate in all aspects of social life on more equal terms than ever before. It is vital for persons with disabilities to equally benefit from the rapid developments in ICT in order to enter an inclusive and barrier-free information society. Similarly D'Aubin (2007:197) affirmed that universal design is

an empowering concept that enables more people to use products and environments, including ICT. In the same vein Seyama (2009) confirmed that assistive or adaptive technologies can play a major role in giving people with visual impairments access to information.

In addition the current study's findings noted that among the five academic libraries investigated, there was no adaptive or assistive equipment for people with visual impairments, except for one library that had tape recorders. The university, through the disability unit in coordination with the library, employed someone who was competent and able to read the information resources and record the reading. The tape recorders were kept in the library for people with visual impairments to use. The findings of the current study concurred with the study of Bagandanshwa (2006b) who noted that technologies were not available in Tanzania; assistive and adaptive technologies were neither manufactured in the country nor did they have local dealers which made it difficult to purchase them. When they were available, they were sold at exorbitant prices. Similarly Arjomand (1993) cited in Bodaghi and Zainab (2012) established that there was a lack of equipment to convert print to Braille and suitable audio recorders to create audio corrections were not available. Seyama (2009) in her study noted that the UKZN library computer did not have a JAWS programme therefore the students had to use the LAN rooms each time they needed information from the database.

Furthermore the findings of the current study revealed that there were no specialized services or adaptive equipment provided by the academic libraries to people with visual impairments and in wheelchairs for a variety of reasons. There were no funds to purchase adaptive or assistive equipment; there was a lack of staff trained to provide services to people with visual impairments and in wheelchairs; libraries were not designed to provide services to people with visual impairments and in wheelchairs. In addition the lack of policy addressing services relating to people with visual impairments and in wheelchairs was a factor. Policy would act as a guideline for the library to train staff, acquire information resources and assistive or adaptive equipment. Furthermore the services to people with visual impairments and in

wheelchairs were currently provided by the disability units which were managed by the school of education. In addition there was a lack of awareness of and priority given to people with visual impairments and in wheelchairs by the top decision makers of the universities. No specific needs had been established in internal research projects regarding people with visual impairments and in wheelchairs in any of the institutions investigated.

#### **7.6 Suggestions on the improvement of library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania**

This section discusses the improvement of library services for people with visual impairments and in wheelchairs in academic libraries in Tanzania. Based on the findings of the current study the suggestions were: the layout of the library buildings should be improved to allow people with visual impairments and in wheelchairs to get access to information resources housed. In addition library staff should be trained in special needs so that they would be able to assist people with visual impairments and in wheelchairs. Furthermore the current study showed that academic libraries should purchase Braille and large print information resources so that people with visual impairments could read without using readers to read for them. Assistive equipment should be purchased to assist people with visual impairments to read information resources available in the libraries. The current study also indicated that policy addressing library services' provision for people with visual impairments and in wheelchairs should be formulated. The findings further revealed that enough funds should be allocated to support the provision of library services to people with visual impairments and in wheelchairs.

Furthermore the findings of the current study noted that chairs, tables and shelves should be adjustable so that people in wheelchairs could sit, read and locate information resources easily. The findings of the study also revealed that both library staff and people with visual impairments and in wheelchairs should be positive about the provision and use of library services. In addition the findings of the current study indicated that academic libraries need to assess and determine information needs of

people with visual impairments and in wheelchairs. Also information literacy should be conducted to help people with visual impairments and in wheelchairs to use libraries and their resources. In addition JAWS and any other software helping people with visual impairments should be installed on all computers so that these users could be able to read without readers' assistance.

The findings of the current study also established that people with visual impairments should be trained on how to use assistive equipment as well as enough time being provided to people with visual impairments for borrowing books as they currently needed readers to read for them. Also libraries should have study carrels for people with visual impairments so that they could read with their readers without causing a disturbance to other library users. Furthermore the current study noted that tools and signs should be suitable for people with visual impairments so that they could locate and access information resources needed.

#### **7.7 Additional comments regarding library services' provision to people with visual impairments and in wheelchairs**

In this section the current study provides findings on additional comments regarding library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. The findings of the current study indicate that libraries should be designed to provide services for people with disabilities. The findings also revealed that government should make sure that policy formulated regarding people with disabilities should be implemented in all sectors including libraries. From the findings the study also noted that government should provide enough funds to support library services for people with disabilities. Furthermore the training of library staff in special needs should be given priority. Academic libraries should formulate policy regarding library services for people with disabilities. The findings also indicated that governments should educate society to be aware of all matters relating to people with disabilities. In addition the Tanzania Loan Board should provide enough funds to students with disabilities as their materials and assistive equipment is very expensive and most come from poor families.



The findings of the current study were that universities need to employ full time readers as the academic libraries have no information resources in Braille and large print so that people with visual impairments need readers to read for them. Also the findings of the study revealed that academic libraries need to solicit funds from donors to improve library services for people with visual impairments and in wheelchairs. In addition the findings observed that universities need to formulate by-laws to assist people with disabilities in the universities. Furthermore the current study's findings noted that people with visual impairments and in wheelchairs need all campuses in universities to be accessible.

The current study further noted that the curriculum should include a component from primary to university level, regarding people with disabilities. The government needs to give assurance of employment to people with disabilities so that they can study courses of their choice rather than education because it is easy to implement and to get employment. Again the current study's findings revealed that government should fund and equip all schools so that people with visual impairments can attend any school rather than going to special schools which make them feel discriminated against. The Tanzania Commission for Universities (TCU) website should be suitable for people with visual impairments and the form which applicants fill in to enrol at universities should have a place indicating whether the applicant is disabled to assist with selection procedures. Librarians and other government officials should visit developed countries to see how libraries and other facilities are organized for people with disabilities. Government should increase awareness programmes so that the general public will be informed on all matters relating to people with disabilities, such as education, employment, transport, health and so on. In addition education awareness programmes should be conducted by people with disabilities themselves and not by others.

## **7.8 Summary**

Chapter seven interpreted the findings that were presented in chapter six. Interpretation of the findings was done according to the research problem, literature review and social model of disability of Oliver (1990). In interpreting research

findings, an attempt was made to indicate how the current study's findings support or differ from previous studies related to the present study. Interpretation of research findings covered the main research question together with the subsidiary questions outlined in chapter one section 1.4.3.

It was evident from the current findings that although academic libraries in Tanzania provide some services to people with visual impairments and in wheelchairs, the services were not inclusive or universal. The services which they provided were for able-bodied people. In addition the findings revealed that academic libraries in Tanzania had no trained or experienced staff assisting users with visual impairments and in wheelchairs. Furthermore the study's findings confirmed that positive attitudes of both library staff and people with visual impairments and in wheelchairs were required to facilitate maximum usage and provision of library services to people with visual impairments and in wheelchairs. The current findings indicated that the National Policy on Disability of 2004 did not address library services to people with disabilities and there were no library policies in academic libraries in Tanzania regarding library services for people with disabilities, although the Open University of Tanzania was in the final stage of formulating a policy relating to library services for people with disabilities. It was evident from the study's findings that no budgets had been allocated to academic libraries in Tanzania regarding library services for people with visual impairments and in wheelchairs. There were no clear data on people with disabilities enrolled in Tanzanian universities.

The findings further confirmed that the layout of library buildings in academic libraries did not allow people with visual impairments and in wheelchairs to easily obtain access to the information resources housed in the library. In addition the study noted that there were very few alternative information resources for people with visual impairments in academic libraries in Tanzania. The study found that ICT equipment could facilitate library services' provision to people with visual impairments and in wheelchairs. The study noted that there was no adaptive or assistive equipment in the libraries for these groups of people.

The findings revealed suggestions about improvements in library services' provision for people with visual impairments and in wheelchairs as follows: the library should purchase Braille, large print information resources and assistive equipment; library staff should be trained in special needs, and attitudes of both library staff and people with disabilities should be positive; infrastructure of the library should be improved, and tools and signs should be suitable for people with visual impairments; sufficient funds should be allocated to the libraries. In addition, the library should conduct information literacy training for people with disabilities. People with visual impairments should be trained on how to use assistive equipment and enough time should be provided to people with visual impairments for borrowing books. JAWS and any other software helping people with visual impairments should be installed on all computers so that they can read without any assistance. Furthermore libraries should have study carrels for people with visual impairments so they can read with their readers without causing a disturbance and adjustable chairs, tables and shelves should be provided. Assessments must be done to determine the needs of users.

The library should be designed to meet the needs of people with disabilities. The Tanzania Loan Board should provide enough funds to people with visual impairments to enable them to study. The government should be responsible for the following: raising awareness in the community on the importance of education for people with disabilities; giving assurance of employment to people with disabilities; funding and equipping all schools, and including in the curriculum a component regarding people with disabilities; ensuring that the policy regarding people with disabilities is implemented in all sectors, including libraries. The Tanzania Commission for Universities (TCU) website should be suitable for people with visual impairments and the form which applicants fill in for enrolling at universities should have a place indicating whether or not the applicant is disabled. Finally, librarians and other government officials should visit developed countries to see how libraries and other facilities provide for people with disabilities.

Table 45 below presents summary of the findings of this chapter which brings together the attributes of the model which guided the study, the relevant literature

used in relation to the model, the principles and prerequisites for service derived from the model and the literature in relation to the study's research questions and results.

**Table 45:** Matrix of the social model, literature reviewed, principles and prerequisites, research questions, and findings

<b>Social Model of Disability &amp; ICF Characteristics</b>	<b>Literature reviewed</b>	<b>Principles and prerequisites from the model and the literature</b>	<b>Research questions</b>	<b>Findings</b>
<b>Activities limitation</b>	Carson (2009), Ndumbaro (2009) Bagandashwa (1998), Lilly (2001), Kharamin and Siamian (2011)	Inclusive/ universal access	1) What services the academic libraries provide for people with visual impairments and in wheelchairs?	Not inclusive
<b>Body function &amp; structure &amp; Participation restriction</b>	Bagandanshwa (1998), Kaijage (1991), Ndumbaro (2009), Taylor (2004), Onatola (2007), Chitereka (2010), Tungaraza (2010) Caga (2011)	Provision of lifts and ramps	2) What is the physical layout of academic libraries in Tanzania?	No working lift and ramps
<b>Health condition &amp; Body function &amp; structure.</b>	Tungaraza (2010), Kaijage (1991), Ndumbaro (2009), Bagandanshwa (1998), Bangula (2005), Gabriel (2006), Chitereka (2010), Ochoggia (2003a) Adetoro (2011)	Braille and large print provided.	3) What information resources are provided for people with visual impairments?	Normal print information resources

<b>Environmental factors &amp; Personal factors</b>	Tungaraza (2010), Kaijage (1991), Ndumbaro (2009), Bagandanshwa (1998), Bangula (2005), Gabriel (2006), Chitereka (2010), Ochoggia (2003a), Adetoro (2011)	1)Infrastructure to be improved, 2)Trained staff, 3)Availability of Braille and large print information resources, 4)Availability of assistive equipment, 5)Guides and signs suitable for people with disability, 6)Chairs, tables and shelves should be adjustable, 7)Readers should be available, 8) Staff with positive attitudes to users, 9) Enough spacing of tables, chairs and shelves for easy movement, 10) Restrooms suitable for people with disabilities, 11) Study areas available, 12) Enough time allocated for borrowing books. 13) Information literacy training conducted.	3) What challenges face people with visual impairments and in wheelchairs in accessing and using library services?	1)Poor infrastructure, 2) Lack of trained staff, 3)Lack of Braille and large print information resources, 4) Lack of assistive equipment, 5)Lack of guides and signs, 6) Lack of adjustable chairs, tables and shelves, 7) Lack of readers/ inadequate readers, 8)Negative attitudes of library staff and people with disabilities, 9)Moving inside the library is difficulty because spacing of tables, chairs and shelves is inadequate, 10)Restrooms not designed for them, 11)Lack of reading areas, 12) Inadequate time span for borrowing information resources, 13) Lack of information literacy training.
<b>Health condition &amp; Body function &amp; structure</b>	Dragoicea, Sacala,Cojocaru, Shivarov and Balan (2009). Bagandanshwa (2006b).	Provision of assistive equipment	4) What is the role of ICT in facilitating provision of information resources to people with visual impairments and in wheelchairs?	Lack of assistive equipment

<b>Environmental factors, Personal factors &amp; Participation restriction</b>	Tungaraza (2010), Kaijage (1991), Ndumbaro (2009), Bagandanshwa (1998), Bangula (2005), Gabriel (2006), Chitereka (2010), Ochoggia (2003a), Adetoro (2011)	1)Allocation of sufficient funds, 2) Improved infrastucture, 3)Availability of Braille, large print information resources and assistive equipment, 4) Staff trained in special needs, 5)Formulated library policy, 6) Postive attitudes by both library staff and people with disabilities 7) Awareness created, 8) Government support.	5) What challenges experienced by the library in seeking to provide services to people with visual impairments and in wheelchairs?	1)Inadequate funds, 2)Poor infrastructure, 3)Lack of Braille materials and assistive equipment, 4) Lack of staff trained in special needs, 5) Lack of policy, 6) Negative attitudes of both library staff and people with disabilities, 7) Lack of awareness, 8) Lack support from the government.
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**Source:** Field data (2012)

The current study was guided by the social model of disability of Oliver (1990) and used the ICF framework to address the research problem in the context of the library. The researcher used the social model of disability because it focuses on a more general view of society than the medical model, for instance, and on the need to remove barriers which hinder access to facilities by people with disabilities. This focus of the model applies to all aspects of communities, for example, to access to health, education, employment, transport, information and other social services but the researcher used this model in the library context to address the research problem because of its focus on removing barriers to access.

In column one the attributes from the ICF framework listed are activity limitations, body function and structure, participation restrictions, health conditions, environmental factors and personal factors. These are found in various combinations.

**Activity limitations** are the difficulties an individual may have in executing activities. In the context of academic libraries these are the challenges which people

with disabilities (people with visual impairments and in wheelchairs) face in accessing and using information resources housed in the library. These challenges limit their access to and use of information resources and are caused by the impairments the individuals have and the environment created for them by the society. Based on the social model of disability the academic library should create an environment which allows people with visual impairments and in wheelchairs to easily get to the information resources housed in the library without any challenges.

**Body function and structure, health condition and participation restrictions.**

Body functions are physiological functions of body systems (including psychological functions), while health conditions are diseases, disorders and injuries. Body structure describes the anatomic parts of the body such as organs, limbs and their components. Participation restrictions are problems an individual may experience in involvement in life situations. These attributes were used in this study because people with visual impairments and in wheelchairs experience disability in some part of their body, and this is what restricts them in accessing services as easily as able-bodied people. There is nothing which can change their impairments but conditions for access can be improved by creating an environment which will allow them to access information services easily as per the social model of disability.

**Environmental factors and personal factors.** Environmental factors are those in the general environment, which include the physical, social, financial and political elements. Personal factors are individual characteristics, such as education, income, family and friends, motivation and so on. These attributes were used in this study because the environmental and personal factors entail attributes which might allow or restrict the accessibility of information to people with disabilities (people with visual impairments and in wheelchairs). In relation to the social model of disability, environmental and social factors should allow people with disabilities (people with visual impairments and in wheelchairs) to be able to access the information resources housed in the library.

In column two the relevant studies conducted by various researchers which were examined in the literature review are listed and are organised by their relevance to the characteristics in column one.

Column three depicts the principles and prerequisites for delivery distilled from the model and from the literature listed in column 2. These principles and prerequisites are required for an academic library to provide inclusive or universal services to people with visual impairments and in wheelchairs.

In column four are the research questions which guided the study and in column five the findings as revealed by the current study.

The next chapter is a summary of the findings, conclusions, recommendations, and a new model proposed. Areas for further research study are identified.



## **CHAPTER EIGHT**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **8.1 Introduction**

Chapter eight provides a summary of the findings, conclusions and recommendations of the study, based on the data presented and interpreted in the two previous chapters. In this chapter the summary of the findings, conclusions and recommendations regarding research questions three and five are not be presented separately but are included in the main research question and in the specific research questions one and two as presented in chapter seven, the discussion chapter. This is to minimize repetition as there was a great deal of overlap in the content of the responses to these research questions. Despite the questions which were put to the respondents being different the responses contained material that was pertinent to the main research question and the specific research questions one and two.

#### **8.2 Research purpose and research questions**

The purpose of the study was to examine library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania, looking into access to the information resources available and the layout of library buildings in the five universities. These universities are University of Dar es Salaam (UDSM), Open University of Tanzania (OUT), Dar es Salaam University College of Education (DUCE), Sebastian Kolowa Memorial University (SEKOMU) and St. John's University of Tanzania (SJUT). This study was guided by the social model of disability of Oliver (1990).

The main research question was what services the academic libraries provide for people with disabilities, specifically people with visual impairments and people in wheelchairs, and whether the library environment in these institutions is hospitable in terms of physical access and the information resources provided. The following subsidiary research questions guided this inquiry:

- What is the physical layout of academic libraries in Tanzania?

- What information resources are provided by academic libraries for people with visual impairments?
- What challenges face people with visual impairments and in wheelchairs in accessing and using library services? (**Responses presented in the main research question and in the specific research questions 1 and 2**).
- What is the role of information and communication technology (ICT) in facilitating provision of information resources to people with visual impairments and in wheelchairs?
- What challenges are experienced by the library in seeking to provide services to people with visual impairments and in wheelchairs? (**Responses presented in the main research question and in the specific research questions 1 and 2**)

In addition the researcher assessed the suitability of the model chosen for the study.

### **8.3 Summary of the findings**

This section provides a summary of research findings based on research questions of the study presented in chapter one section 1.4.3. Both male and female respondents from five universities were involved in the study. They were from different age groups and had various levels of education. The staff also had differing amounts of work experience.

#### **8.3.1 Library services provision for people with visual impairments and in wheelchairs**

The study findings revealed that academic libraries in Tanzania provide services to people with visual impairments and in wheelchairs but these are neither inclusive nor universal. The services which they provide are for able-bodied people and in a very limited circumstance for people with disabilities. The findings noted further that the disability units which were under the schools of education in the universities were involved in service provision to people with disabilities. In addition the findings showed that there were no concerted initiatives being taken by academic libraries regarding services for people with visual impairments and in wheelchairs. The

findings indicated, however, that there were some more isolated initiatives that had been undertaken by some academic libraries regarding services for people with visual impairments and in wheelchairs.

Furthermore the study established that academic libraries need to provide services online and deliver services to people in wheelchairs so that they can read where they are rather than physically going to the library. Findings showed that library staff were aware of the provision of services regarding people with visual impairments and in wheelchairs. There is, however, a lack of awareness and support from the university on the provision of library services for people with visual impairments and in wheelchairs, although the findings showed that these people were aware of the services provided by disability units.

#### **8.3.1.1 Library staff who are trained and experienced to assist users with visual impairments and in wheelchairs in the use of library services**

The findings revealed that in academic libraries in Tanzania no trained and experienced staff assist users with visual impairments and in wheelchairs. One reason for this is that the library programmes and curricula of the universities do not include a component on special needs for people with disabilities, at any level.

In addition the findings revealed that serving people with disabilities had not been given priority by the libraries. Furthermore the findings observed that there was no policy specifically addressing the training needs for services to people with disabilities. The findings indicated that services to people with disabilities are provided by the disability units which are under the schools of education, but these units are not close to where the libraries are located. This meant that library services to users with disabilities were not provided all in one location. The study also noted that there was a lack of awareness and no initiatives had been taken by academic libraries regarding the training of staff in special needs to provide services to people with disabilities. In addition, the findings established that despite the existence of a National Policy on Disability of 2004, there was no encouragement from the government for people with disabilities.

Furthermore, the study findings established that library staff were required to provide services to people with visual impairments and in wheelchairs without discriminating, and in the same way that services were provided for able-bodied people. The study noted that library staff who provided services to people with visual impairments and in wheelchairs needed to be available in the library during opening hours to assist these users when it was required.

#### **8.3.1.2 Attitudes of library staff towards people with visual impairments and in wheelchairs to the provision and use of library services**

The study noted that the majority of library staff had positive attitudes, although there were some who were negative about people with visual impairments and in wheelchairs regarding the provision of library services. In addition, the findings indicated that the majority of people with visual impairments and in wheelchairs held negative attitudes about library staff although there were some who were positive in this regard. Generally the study found that both the attitudes of library staff and people with visual impairments and in wheelchairs were required to be positive to facilitate maximum usage of the library and the provision of library services to people with visual impairments and in wheelchairs without too many unnecessary challenges for these users.

#### **8.3.1.3 Library policy that underpins services to people with visual impairments and in wheelchairs**

It was evident from the current findings that the National Policy on Disability of 2004 does not specifically address library services to people with disabilities per se, and there are no policies formulated specifically for academic libraries in Tanzania to address library services for people with disabilities. The Open University of Tanzania, however, is in the final stages of formulating policy relating to library services for people with disabilities.

#### **8.3.1.4 Library budgets for services to people with visual impairments and in wheelchairs**

The findings indicated that in the absence of appropriate policy there were no budgets allocated to academic libraries in Tanzania for library services to people with visual impairments and in wheelchairs. Such funds could be used to acquire assistive equipment, information resources such as Braille and large print books, as well as to train staff in special needs services. In addition the findings observed that the Ministry of Education and Vocational Training was not informed and no research had been undertaken to ascertain the number of people with disabilities enrolled in various universities in the country. This lack of data for people with disabilities enrolled in the various universities means that it is not possible to accurately budget for them.

#### **8.3.2 Physical layout of academic libraries in Tanzania**

The findings indicated that the layout of library buildings did not allow people with visual impairments and in wheelchairs to easily obtain access to the information resources housed in the library. In addition the study noted that there were no functioning lifts and ramps to help people with visual impairments and in wheelchairs reach the upper floors where the information resources or services were located in all the universities investigated. Therefore people with visual impairments and in wheelchairs made use of library staff, readers employed by universities, and friends who were willing to search for the information needed. There were limited additional arrangements made by the library to assist users with visual impairments and in wheelchairs to get the information resources needed. In addition the findings indicated that there were no signs or tools in the library suitable for people with visual impairments to help them to identify where the information resources or services were located.

The library shelves were too high for people in wheelchairs and it was difficult for these people to locate information resources by browsing. The arrangement of library shelves did not allow people in wheelchairs to move freely between the rows and people with visual impairments could move freely only with assistance. In addition

the study observed that no study carrels, computer workstations, tables and chairs were suitable for people in wheelchairs. Furthermore the library restroom facilities were not designed for people with visual impairments and in wheelchairs to use independently.

### **8.3.3 Information resources provided for people with visual impairments**

The study noted that there were no alternative information resources for people with visual impairments in academic libraries in Tanzania. At one university, there were a few manuals which were in Braille prepared by some lecturers. In addition the study findings indicated that people with visual impairments used normal print information resources for which the universities employed readers who read for them. However there were few readers employed and some academic libraries did not employ any.

### **8.3.4 The role of ICT in facilitating provision of information resources to people with visual impairments and in wheelchairs**

The study found that ICT equipment can facilitate library services provision to people with visual impairments and in wheelchairs. ICT equipment is able to convert information resources to the format suitable for people with visual impairments. It allows a measure of independence for these users. In addition the study noted that there was no adaptive or assistive equipment in the libraries for people with visual impairments except for the one library among the five investigated, which had tape recorders. This university through the disability unit and in coordination with the library employed someone who was competent and able to read certain information material and record them onto tapes which were kept with the tape recorders in the library for the use of people with visual impairments. Furthermore the study established that the assistive equipment which was available in these universities was housed in the disability unit. People with visual impairments either borrowed or used the equipment there. The equipment available in the unit, however, was not sufficient to fulfill their needs.

## **8.4 Conclusion**

The conclusions were drawn from the main research question and subsidiary research questions presented in chapter one section 1.4.3. The study included respondents representing both males and females from the five universities which were involved in the study. The respondents represented different age groups and various levels of education. Staff came from different backgrounds regarding work experience, and students from various academic levels of study.

### **8.4.1 Library services provision: users with visual impairments and in wheelchairs**

Guided by the social model of disability the study found that academic libraries in Tanzania provided services to people with visual impairments and in wheelchairs which were neither inclusive nor universal. The services which they provided were for able-bodied people and in a few, very limited circumstances for some people with disabilities. The study noted further that disability units which were under the schools of education were involved in the service provision to people with disabilities. The researcher from the findings concluded that the disability units which were under the schools of education were involved in the service provision to people with visual impairments and in wheelchairs and not academic libraries.

In addition the researcher concluded from the findings that although library staff were aware of the need for people with visual impairments and in wheelchairs to acquire and use information provided by the library, no assessments had been done to determine the type of services required. The services provided by these libraries were not suitable for people with visual impairments and in wheelchairs in terms of information resources and assistive equipment.

#### **8.4.1.1 Trained and experienced library staff to assist users with visual impairments and in wheelchairs in the use of library services**

The findings revealed that no trained staff experienced in providing services to users with special needs or assisting users with visual impairments and in wheelchairs were employed in academic libraries in Tanzania. Based on the social model of

disability the researcher concluded from the findings that in the absence of the integration of a component on the special needs of people with disabilities in the library programmes and the curricula at all levels of the universities, libraries will not have well trained and experienced staff who will be able to assist people with disabilities.

#### **8.4.1.2 Attitudes of library staff towards users with visual impairments and in wheelchairs in the provision and use of library services**

From the findings in relation to the social model of disability the researcher observed that there are some library staff who are positive and others who are negative towards people with visual impairments and in wheelchairs regarding the provision and use of library services in academic libraries in Tanzania. The researcher concluded from the findings that the negative attitudes of both library staff and people with disability affect access and use of information resources housed in libraries.

#### **8.4.1.3 Library policy: services to people with visual impairments and in wheelchairs**

The study established that the National Policy on Disability of 2004 does not address library services to people with disabilities specifically, and there were no library policies in academic libraries in Tanzania regarding library services for people with disabilities. According to the social model of disability the researcher from the findings concluded that the lack of policies in academic libraries leads to services that are not suitable for people with visual impairments and in wheelchairs.

#### **8.4.1.4 Library budgets for services to people with visual impairments and in wheelchairs**

It was evident from the findings that no budgets had been allocated to academic libraries in Tanzania for services for people with visual impairments and in wheelchairs. In addition the findings indicated that there were no clear data for people with disabilities enrolled in various universities. The researcher concluded that insufficient funds and the non availability of data on the numbers of people with



disabilities enrolled in these institutions affects budgeting and the libraries will not be able to acquire alternative information resources, assistive equipment and train library staff.

#### **8.4.2 Physical layout of academic libraries**

In line with the social model of disability the findings revealed that the layout of the library buildings in academic libraries does not allow people with visual impairments and in wheelchairs easy access to the information resources housed in the library. In addition the findings revealed that there are no functioning lifts and ramps which enable people with visual impairments and in wheelchairs to reach upper floors where information resources or services located. The researcher concluded from the findings that inaccessibility and non availability of functioning lifts and ramps in academic libraries affect access and use of information resources for people with visual impairments and in wheelchairs.

#### **8.4.3 Information resources provided: users with visual impairments**

Using the social model of disability and from the findings the researcher concluded that non availability of suitable information resources for people with visual impairments is likely to discourage them from using the libraries and is likely to have an effect on their academic performance. This is supported by the study of Taylor, Baskett and Wren (2010:166) who claimed that students with a disability in the United Kingdom's (UK) higher education sector tend to encounter more challenges to learning at university, and to achieve poorer outcomes in terms of final degree classification, despite having comparable qualifications to other students when entering the same university.

#### **8.4.4 The role of ICT in the provision of information resources to people with visual impairments and in wheelchairs**

The study, in line with the social model of disability, concluded by the researcher that ICT facilitates the provision of information to people with visual impairments and in wheelchairs, and enables them to use information resources easily, independently, and remotely. In addition the researcher concluded from the findings

that non availability of specialized services or adaptive equipment and installation of software like JAWS and other related software as well as training on how to use assistive equipment affects access and use of information resources for people with visual impairments in academic libraries.

## **8.5 Recommendations**

The study identified various challenges which face people with visual impairments and in wheelchairs in accessing and using information resources as well as challenges experienced by academic libraries in seeking to provide services to people with visual impairments and in wheelchairs. The study therefore provides recommendations on how to improve library services' provision to people with visual impairments and in wheelchairs. It also recommends a new non-recursive and interactive model of disability.

### **8.5.1 Library services' provision for users with visual impairments and in wheelchairs**

The study recommends that academic libraries should provide inclusive or universal services to all users including people with disabilities (visual impairments and in wheelchairs). This concurs with the study of Taylor, Baskett and Wren (2010:168) who recommended that higher education institutions should aim to be as inclusive as possible and as far as possible should treat students with disabilities in exactly the same manner as any other student except where special provision is required. In the same vein Shunmugam (2002) recommended that the library needs to develop its services to include the needs of students with visual impairments. People with visual impairments and in wheelchairs need to read for examinations, write research papers and undertake all work related to academic purposes just as able people do. The mission of an academic library is to support teaching, learning, research and consultancy to the entire community of users, including people with visual impairments and in wheelchairs. In relation to this statement Alvite and Barrionuevo (2011:48) claim that the library is a resource centre for learning, teaching, research and other activities related to the operation and management of the university as a whole. Initiatives should be undertaken by academic libraries for the provision of

inclusive or universal library services to people with visual impairments and in wheelchairs. In addition the researcher from the findings recommend that academic libraries need to provide services online and deliver services to people in wheelchairs so that they can read wherever they are, rather than going physically to the library. The library should make the community aware of the services provided by academic libraries to people with visual impairments and in wheelchairs. Awareness of the services will maximize utilization of information resources and help them to perform well in their studies. Furthermore the study recommends that government should increase awareness programmes so that the general public will be informed on all matters related to people with disabilities and that education awareness programmes for the community should be conducted by people with disabilities themselves and not by others.

#### **8.5.1.1 Library staff who are trained and experienced to provide or assist users with visual impairments and in wheelchairs**

Library programmes and the curricula of universities at all levels should include components on special needs for people with disabilities. Integration of special needs training at all levels of the university will help to get well trained and competent staff who should be able to assist people with visual impairments and in wheelchairs in the use of library services and its resources. It was recommended in Seyama's study (2009) that staff training and awareness-raising programs be developed. For instance, staff should be aware of current terminology relating to disabilities and understand that the person came before their impairments. She further recommended that staff needed to be educated about the abilities and realistic limitations of people with special needs.

In addition library staff should be willing to assist people with visual impairments and in wheelchairs, when they need help or information resources in the libraries, to the same extent that they provide for more able people. Furthermore library staff in academic libraries should be available at all times during opening hours to assist users with visual impairments and in wheelchairs when they need assistance. People with visual impairments and in wheelchairs should use the library and its resources

as the library is there to support learning, teaching, research and consultancy to all users of the university community.

#### **8.5.1.2 Attitudes of library staff towards people with visual impairments and in wheelchairs**

The findings revealed that positive attitudes in library staff and people with visual impairments and in wheelchairs are needed for library staff to assist people with visual impairments and in wheelchairs to access library services without discriminating against them. People with visual impairments and in wheelchairs need to be able to access library services without these services being in any way inferior. Similarly Seyama (2009) recommended that in order to provide effective library services to students with visual impairments, it was essential that all staff had appropriate attitudes towards them.

#### **8.5.1.3 Library policy**

The study confirmed that the National Policy on Disability of 2004 does not address library services to people with disabilities and there are no written library policies in academic libraries in Tanzania regarding library services for people with disabilities. From the findings the researcher recommends that government should make sure that the policy regarding people with disabilities is implemented in all sectors including libraries. In addition academic libraries should formulate policy regarding library services to people with disabilities for the purpose of guiding the acquisition of information resources and assistive equipment as well as training library staff. Formulation of policies regarding library services to people with disabilities would help academic libraries to provide inclusive services as required by the social model of disability. The study of Ndumbaro (2009) recommended that libraries should have clear policies to help people with visual impairments. In the same vein Bagandanshwa (2006a) insisted on the development of positive policies to ensure the recognition of people with visual impairments as potential users of information. Needham (1977) recommended as far back as the 1970s that one area that could be given immediate attention was planned library services for people with disabilities. Basic to such service is a statement of policy on the library's philosophy of services

to people with disabilities. Similarly Kinnell, Yu and Creaser (2000) claimed that where authorities had a written policy they were more likely to focus on meeting a wider range of special needs of people with visual impairments.

#### **8.5.1.4 Library budget**

The researcher recommends the allocation of sufficient funds by government through higher learning institutions to support library services to all communities of users including people with disabilities. Ndumbaro (2009) recommended that university and public libraries allocate enough funds to support library services for people with visual impairments. Similarly Majinge (2009) recommended that parent institutions should allocate enough funds for the library budget, but where this is not possible, libraries should solicit funds from other sources to supplement what is given by the parent organization. Adequate allocation of funds would help academic libraries to acquire alternative information resources, assistive equipment and train staff of academic libraries to provide inclusive/ universal services to the community of users. In addition clear data on people with disabilities enrolled in various universities should be available as this information is considered important for budgeting. Similarly Seyama (2009) recommended that the needs of people with disabilities must be included in the plan when they budget and allocate funds.

#### **8.5.2 Physical layout of Tanzanian academic libraries**

The researcher recommends on the basis of the findings that the layout of academic library buildings should include working lifts and ramps to facilitate people with visual impairments and in wheelchairs to easily access the information resources housed in the library. Todaro (2005) recommended that an adequate building should have no architectural barriers, such as too many steps in stairways; doorways that are too narrow; steps at the entrance of the building and no ramps. In addition arrangements should be made to help people with visual impairments and in wheelchairs if they face any challenges in accessing information resources in the libraries. Furthermore signage and tools should be suitable for people with visual impairments and in wheelchairs to identify where the information resources or services are located. Shelves should be adjustable or not too high and arranged for

free movement and the easy location of information resources. Study carrels, computer workstations, tables and chairs should be suitable for people in wheelchairs and also the library restroom facilities should be designed for people with visual impairments and in wheelchairs. Irvall and Nielsen (2005:6) recommended that all service areas of the library should be accessible. The space should be arranged logically with clear signage and a floor plan posted close to the entrance. Service desks should be located close to the entrance. Wheelchairs should be able to move around inside the whole library easily. There should be a lift for wheelchairs, if the library has more than one level or else ramps installed. There should be no raised doorsteps and all doors should have automatic openers. Ideally, shelves should be reachable from a wheelchair.

### **8.5.3 Information resources provided for users with visual impairments**

From the findings the researcher recommends that academic libraries need to acquire information resources which are in Braille and large print so that people with visual impairments could read without any additional challenges. In a similar way Seyama (2009) recommended that textbooks should be in both audio and printed format and both formats should be purchased by the library. Yoon and Kim (2011) claimed that inadequate or insufficient alternative formats reduces the chance of guaranteeing people with disabilities access to information and narrowing the relative gap, which in turn makes it more difficult to achieve social integration.

### **8.5.4 The potential role of ICT in facilitating provision of information resources to people with visual impairments and in wheelchairs**

The researcher recommends that academic libraries acquire and install ICT equipment to facilitate library service provision of information resources to people with visual impairments and in wheelchairs easily, independently, and remotely. They should also convert information resources into formats suitable for people with visual impairments. In addition installation of software like JAWS and other related software, as well as training on how to use assistive equipment is recommended. In a study by Caga (2011) participants with visual impairments recommended that different communities have information centers for different disabilities. Those

centres for the people with visual impairments should have computer programmes like JAWS so that the users can read about advertised jobs. JAWS is a computer programme that enables people with visual impairments to use the computer.

### **8.6 Originality of the study**

Phillip and Pugh (2005: 62) claimed that at this level, a requirement is that the study should make a significant and original contribution to the knowledge of facts and / or theories in the field of the study. The originality of this study lies in its exploration of the anomalous situation between policy and practice in the provision of library services for people with visual impairments and in wheelchairs in academic libraries in Tanzania. The researcher reviewed various studies related to the current study and carried out by various researchers (Kaijage 1991; Bagandanshwa 1998; Ndumbaro 2009; Ochoggia 2003a; Seyama 2009; Babalola and Haliso 2011; Adetoro 2011; Bodaghi and Zainab 2012). These studies assisted in the setting of a benchmark regarding the provision of services to people with visual impairments and in wheelchairs that are equal to those provided for without disabilities.

In addition the current study used a combination of quantitative and qualitative methods as well as various data collection instruments such as questionnaires, interviews and observation schedules to address the research problem. These processes of reviewing the various studies related to the current study and the combination of quantitative and qualitative methodologies, together with various data collection instruments, allowed the researcher to arrive at findings that constitute an original contribution. The study drew attention to the complexity of the information needs and use of the groups and how pitifully underserved they are. It also enabled a critical analysis of the prevailing models of disability. The study has also provided a revised model in Figure 27 which, in addition to the findings of the study could help to shape other studies on library services' provision for people with visual impairments and in wheelchairs in academic libraries in the future.

### **8.7 Contribution of the study**

In this section the contribution of the study to theory, policy and practice are set out.

### **8.7.1 Contribution to theory**

This section examined the theoretical implications of the study on library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. The adoption of the social model of disability of Oliver (1990) served to provide insight into the provision of library services to people with visual impairments and in wheelchairs in academic libraries in Tanzania. The empirical findings based on the cultural settings and challenges in the Tanzanian situation were used to examine and build on the existing theories of disability which were reviewed in the study.

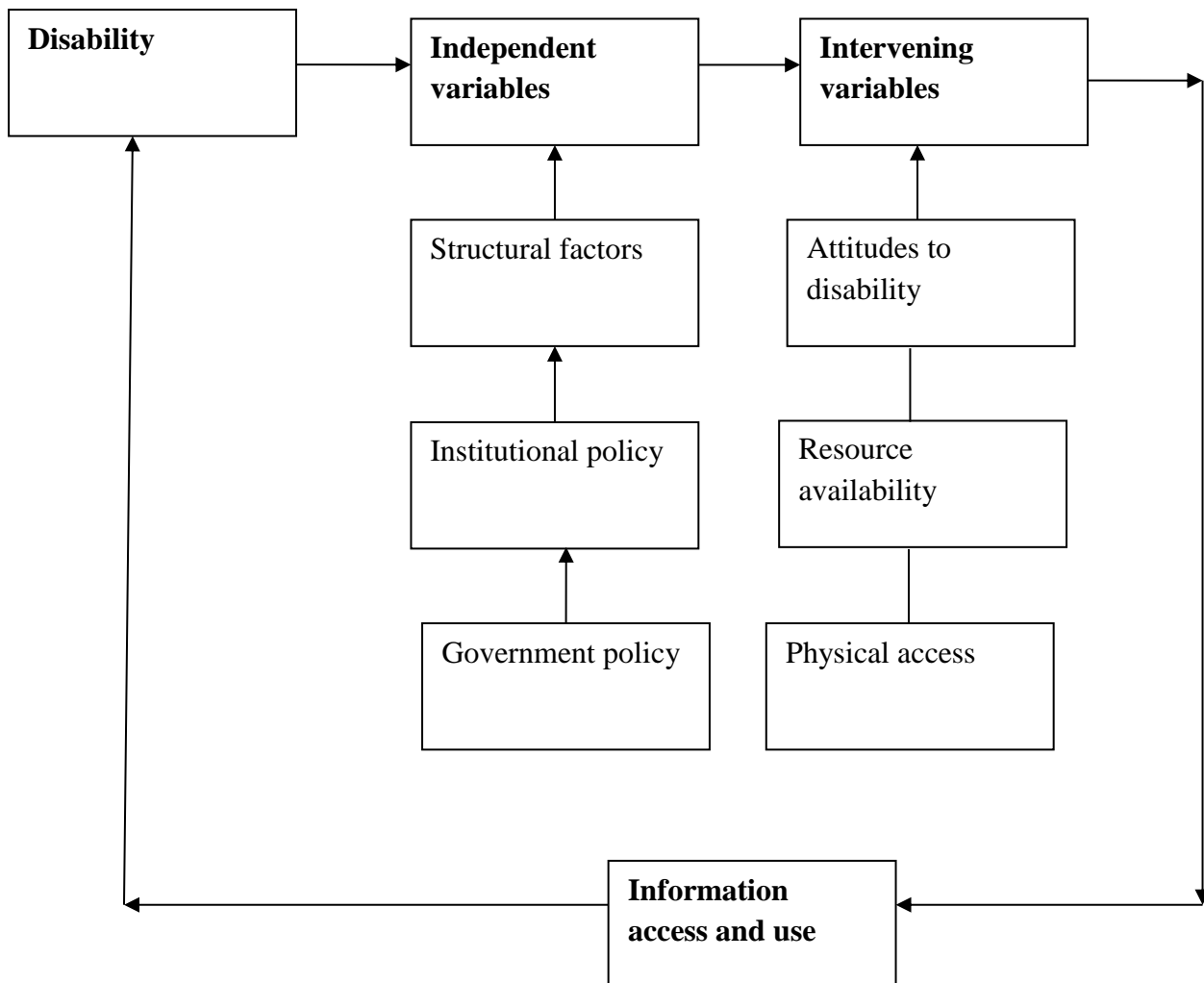
The findings of the study revealed the important role of understanding the complexity of information needs and use in the critical analysis of the social model of disability. The study identified a gap in information and knowledge regarding the provision of services to people with disabilities (people with visual impairments and in wheelchairs). The study's contribution to theory lies in its critique of the existing models based on insights gained into the information gap experienced by people with visual impairments and in wheelchairs, particularly in the Tanzanian context. These insights were enabled by the triangulated methodology and the array of tools used. The information asymmetry that was identified was the result of the poor layout of the library buildings and the inadequacy of the information resources available which were not in formats suitable for people with visual impairments.

Based on the social model of disability of Oliver (1990) and the International Classification of Functioning (ICF) framework, the study addressed the research problem in the context of the academic library in Tanzania. The ICF framework integrates the medical and social models to address issues of disability. The medical model has been critiqued as being centred on the individual and thus neglecting the more socio-structural and environmental factors. On the other hand the social model recognizes that some of these factors are external to the individual and thus society in general is seen as having an impact on individual behaviour patterns. Based on the the findings of the study the researcher proposed a new model which captures the



interactive nature of this framework in figure 27. This proposed new non-recursive interactive model of disability is put forward for testing and discussion in further research. It also constitutes a contribution to theory.

Access and use of information by disabled individuals is significantly affected by the socio-structural and individual factors, and access and use of information in turn significantly affects these independent and intervening variables. This interaction has an impact on attitudes and socio-structural factors. The new model (Figure 27) highlights the complexity of human behaviour patterns that cannot be explained simply by the use of a limited number of factors in isolation from one another.



**Figure 27:** Proposed new non-recursive interactive model of disability.

The proposed model is a non-recursive interactive model explaining information access and use in the context of disability. Interactive means allowing or capable of mutual action and allowing continuous two-way communication (Schwarz 1993: 871). This model also integrates the factors at the individual level as well as drawing on factors derived from socio-structural conditions to explain information access and use by people with a disability. The model shows how individual, institutional and structural attributes affect each other and in a reciprocal manner. The elements in the model are explained below and their interactive nature is elucidated.

In a non-recursive model the causal relationship may flow in more than one direction. The non-recursive models need not be fully non-recursive, which means that not all variables have to be non-recursive. The main argument is that recursive models which are unidirectional in nature are not realistic because they do not accommodate the potential for feedback between variables or factors in social sciences. Therefore in non-recursive models, variables in the models are reciprocally related either directly or indirectly (Paxton, Hipp and Marquart-Pyatt 2011).

The proposed model for information access and use by users with disabilities is assumed to be a function of several factors or variables. These include structural factors, institutional and government policy, disability, attitude to disability, resources availability and physical access. The main strength of the proposed non-recursive model is that once users with disabilities have access and use information this very condition will generate a feedback effect or loop on the independent and intervening variables. For example informed and information-using users with disabilities will demand more resources, will influence changes in government and institutional policies toward disability and services for users with disability, and so on.

The following are attributes of the new proposed non-recursive interactive model of disability.

**Disability** (visual impairments, people in wheelchairs, aging and so on) is an independent variable which influences access to information. The nature or type of disability has an impact on access to information. To ensure that the resources housed in the library are accessed and used by people with disabilities, the layout of the library building, information resources available and the assistive equipment provided must be suitable to allow them to easily and independently access the required information resources.

**Structural factors** (funding, training, cultural norms and so on) constitute another independent variable which influences access to information. Funds, trained staff, and cultural norms are the factors which impact information access. To ensure inclusive or universal services' provision to people with disabilities, sufficient funds should be allocated to support library services to people with disabilities. Staff should be trained to assist people with disabilities in the access and use of the information resources housed in the library. People with disabilities themselves should be able and willing to access and use information resources available in the library.

**Institutional policy and library policy** (policy on equal access, physical structures, ICT policy and so on ) is also an independent variable which influences access of information. To ensure services are inclusive or universal to people with disabilities, policies should address the format of information resources, the layout of library buildings and the ICT equipment required for people with disabilities.

**Government policy** (for example policy toward equal access, physical structures, ICT policy and so on) is an independent variable which influences information access. Government policy should address equal provision of services to people with disabilities in all sectors including libraries together with buildings which allow easy access of information. In addition government policy should address information resources suitable for people with visual impairments. Furthermore policy should address the ICT facilities required for people with disabilities.

**Attitudes** (positive or negative attitude toward disability) constitute an intervening variable which facilitates or interferes with access to information. For the information resources to be used and accessed in the library, positive attitudes are needed both by people with disabilities and by library staff.

**Resource availability** (information resources for example Braille, large print, assistive technology, white canes and so on) is an intervening variable which facilitates or affects access to information in libraries. Availability of alternative information resources such as Braille and large print as well as assistive equipment suitable for people with disabilities will help them access and use information resources housed in the library.

**Physical access** (for example lifts, ramps and so on) is an intervening variable which affects or facilitates access of information in the library. The layout of the library buildings is the determining factor which facilitates or affects access and use of information resources housed in the library. Therefore, to allow people with disabilities to access and use information resources easily and independently, the layout of the library building should include a working lift and ramps.

**Information access and use** (patterns of information access and use) constitutes a dependent variable which is influenced by disability, structural factors, institutional and library, as well as government policies regarding access to information. In addition access to and use of information can be facilitated or affected by physical access, resource availability and attitudes towards disability. For people with disabilities to access and use the information resources housed in the library to the maximum, all these factors should be joined together or connected to focus on people with disabilities and their access to and use of information resources.

The contribution of the non-recursive interactive model of disability is to help other researchers who will conduct similar studies. They could use and test the model for the improvement of library services to people with disabilities.

From a theoretical perspective, for the library to provide inclusive services to people with different types of disabilities, policy addressing the layout of library buildings, format of information resources, ICT equipment, training of library staff, allocation of funds as well as positive attitudes are needed.

### **8.7.2 Contribution to policy**

Various international bodies have adopted policy on library services for people with disabilities. These were reviewed in Walling (2004), American Library Association (2001), and Australian Library and Information Association (2005). For example, the Library Association of Australia adopted a policy statement stating that the Library Association believes that everyone has the right of access to library services and materials to meet their needs for information, inspiration, education and recreation. In addition the Americans with Disabilities Act (ADA) passed in 1990 in United States of America (USA), and now fully implemented, holds information specialists in all types of settings responsible for assuring equal access to all the information they provide. Furthermore and closer to home, in South Africa the Promotion of Equality and Prevention of Unfair Discrimination Act (PEPUDA) No. 4 of 2000 according to The Office of the President (2000) compels institutions of higher learning to make sure that visually impaired students are able to consult whichever information source or service they require without barriers or discrimination, and that such services should be provided equitably (Seyama 2009:16). In addition the Library and Information Association of South Africa (LIASA) strongly supports a World Intellectual Property Organization (WIPO) International Treaty for the visually impaired to enable member states to establish an exception to their national copyright laws that will authorise the making of accessible copies for people with print disability (blind, visually impaired and other reading disabilities). This initiative should also enable cross-border exchange of accessible copies (for example Braille, large print, accessible digital formats such as e- books) between member countries. LIASA also called on countries, rights-owners and powerful corporations that oppose the Treaty to rethink their strategy on this important human rights issue. The library associations of other African countries should add their voice to that of LIASA so that instead of restricting access to thousands of persons with visual

impairments, these stakeholders support this Treaty and ensure equality of access to all.

In Tanzania the National Policy on Disability of 2004 (Tanzania) provides guidelines and sets parameters for service delivery, with a strong focus on development, and the rights and dignity of people with disabilities. This policy was aimed at providing an environment conducive for people with disabilities to engage in productive work for their own development and in the utilization of the available resources for improved service delivery. In addition the policy also aimed at improving the life situation of people with disabilities by undertaking the following actions: encourage the development of people with disabilities; empower families with disabilities; review/amend legislation that is not disability friendly; improve service delivery; allow the participation of people with disabilities in decision making and implementation of important activities in the society, and enable families of people with disabilities and the society at large to participate in decisions and implementation of important disability friendly activities (United Republic of Tanzania 2004). Although the focus of National Policy on Disability was to provide guidelines and set parameters for services delivery, with a strong focus on the development, rights and dignity of people with disabilities, this policy did not specifically address the provision of library services to people with disabilities.

The Persons with Disabilities Act, 2010 (Tanzania), however, under **Section 48 (1)** states that all persons with disabilities shall be entitled to a barrier-free and disability friendly environment to enable them to have access to public premises and facilities for public use, roads, communications and other amenities to assist and promote their mobility. **Section 48(2)** further states that architects, construction engineers and other persons who are involved in design and construction of the physical environment shall observe and comply with accessibility requirements to ensure that all new buildings, roads, play grounds, transport facilities and renovation of the old ones, conform to designs aimed at creating access for persons with disabilities. In addition **Section 49(2)** states that information services and documentation shall be made accessible to different groups of persons with disabilities in such form as

Braille, tactile services and large print; spoken information and appropriate technologies and sign language; and computerized information (United Republic of Tanzania 2010). Tanzania League of the Blind (2012) claimed that the main goal of the government was to ensure that those legal instruments were known by the general public and by the community of people with disabilities so as to guarantee that they are implemented in the country.

Despite the wealth of policy supporting services to those with disabilities and the implications of the various sections of the 2010 Act there appears to be a lack of recognition of the applicability of the act to academic library services. In all the academic libraries investigated in Tanzania the study confirmed that the layout of the library buildings and the information resources available were not suitable for people with disabilities. That means there is a gap between policy and the actual practice of library services' provision for people with disabilities in academic libraries in Tanzania.

Therefore from the above discussion it is intended that the findings of the study should influence those in authority to close the gap between policy and practice. Decision makers can be made aware of the study's findings through workshops, and publications, conference papers and advocacy so that they recognise and act on the need to demonstrate their on-going and concerted commitment to services for people with visual impairments and in wheelchairs.

Universities in particular need to recommend policy which builds on the national act and fleshes it out, placing responsibility for provision more appropriately with the libraries rather than only with the disability units. Universities also need to provide an adequate budget for the implementation of such policy. Such actions would go a long way to address library services' provision for people with disabilities and ensure that the policy formulated is implemented to bridge the yawning gap between policy and practice.

### **8.7.3 Contribution to practice**

The study investigated library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. The findings of this study were significant as they bridge the gap between theory and actual practice in Tanzanian university libraries.

By having this research in place the many possible choices for accessing information by people with visual impairments and in wheelchairs can be established and if they are acted upon the quality of academic life for these users and potential users could be improved.

In addition the study sheds light on the factors which hinder access to information and the challenges which face those with visual impairments and in wheelchairs in accessing information resources. Among these are the poor attitudes of some library staff and in turn in users with disabilities to the likelihood of being served. Such issues do not require immense sums of money to address. Improvements could now be made to any existing services.

The findings and recommendations of the study could be used to draft a Charter on Academic Libraries' Services to People with Disabilities which could be workshopped with various stakeholders in the region for action and implementation. University of KwaZulu-Natal (UKZN) has various initiatives in this regard for example the UKZN (2004) mission statement indicated commitment to increase access to learning of students with special needs and redressing the disadvantages, iniquities and imbalances of the past. This was evident with the formation of the Disability Unit (DU) in 1995 (Seyama 2009:3). Another example is that on 3 October 2013 the University had an awareness campaign regarding students with disabilities. The aim of the campaign was to create awareness among students and the staff on the different natures of disabilities and fight against discrimination of people with disabilities.



## **8.8 Summary of the study**

The study examined library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. The study focused on access to information resources and the layout of library buildings in particular. The study used the social model of Oliver (1990) in the context of the academic library. The pragmatism paradigm was employed in the study because of its fitness for purpose approach. Both quantitative and qualitative methods were used. Regarding the respondents 113 of 139 were surveyed by questionnaires and 57 of 67 respondents were interviewed. The population of the study involved library staff, disability unit staff, people with visual impairments and in wheelchairs as well as library directors. Snowball sampling was used to identify people with visual impairments and in wheelchairs. Questionnaires, interview schedules and an observation checklist were used to gather data. Data gathered through questionnaires were analysed using descriptive statistics facilitated by the application of SPSS and interview data were analysed using thematic analysis.

The study confirmed that academic libraries in Tanzania provide services to people with visual impairments and in wheelchairs which are not inclusive or universal. The study concluded that academic libraries should provide inclusive and universal services to people with visual impairments and in wheelchairs as access to information is the fundamental human right of every human being and academic libraries exist to support learning, teaching, research and consultancy to all in the community of users of the universities including people with visual impairments and in wheelchairs. For academic libraries to provide services which are inclusive and universal the layout of library buildings need to have working lifts and ramps for people with visual impairments and in wheelchairs so that they can easily obtain access to the information resources housed in the library. In addition information resources which are in Braille and large print are required for people with visual impairments to read easily as well as assistive equipment to help them read the information resources available.

Furthermore staff trained and experienced in special needs are required and this will be possible if the library programmes and curricula of universities include components on special needs for people with disabilities at all levels of qualification. Positive attitudes to both library staff and people with visual impairments and in wheelchairs are needed to allow access and use of information resources. In addition policy addressing library services for people with disabilities is important for the library to provide universal services as well as adequate allocation of funds to support library services to people with visual impairments and in wheelchairs.

### **8.9 Suggestions for further research**

The current study examined library services' provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. The study was limited to five academic libraries and to people with visual impairments and in wheelchairs. It recommends that further study should be conducted in all academic libraries to determine the magnitude of the challenges which people with visual impairments and in wheelchairs face in accessing and using library services.

In addition research on other types of disabilities should be conducted to identify the challenges which they face in accessing and using library services. Further studies should also be conducted to determine whether the non-availability of alternative information resources and layout of library buildings have an impact on academic performance for people with visual impairments and in wheelchairs.

Finally the new non-recursive interactive model should be tested for suitability, particularly in the African context where service to those with disabilities is the exception rather than the rule.

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## APPENDICES

### Appendix 1: Informed consent form



University of KwaZulu-  
Natal  
School of Social Sciences  
Private Bag X01  
Scottsville  
3209  
South Africa  
Telephone: +27(0)332605320/5007  
Fax: +27(0)332605092  
Email: [social\\_sciences@ukzn.ac.za](mailto:social_sciences@ukzn.ac.za)

17th October, 2012

Dear Respondent

#### Informed Consent Letter

**Researcher:** Rebecca Mgunda Majinge  
Institution; University of KwaZulu-Natal  
Telephone number: 0790680352  
Email address: [majinge@yahoo.com](mailto:majinge@yahoo.com)

**Supervisor:** Prof. Christine Stilwell  
Institution: University of KwaZulu-Natal  
Telephone number: 033-260 5095  
Email address: [Stilwell@ukzn.ac.za](mailto:Stilwell@ukzn.ac.za)

I, Rebecca Mgunda Majinge, of the University of KwaZulu-Natal, kindly invite you to participate in the research project entitled Library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania.

This research project is undertaken as part of the requirements of the PhD, which is undertaken through the University of KwaZulu-Natal, Information Studies Department.

The aim of this study is to investigate library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania.

Participation in this research project is voluntary. You may refuse to participate or withdraw from the research project at any stage and for any reason without any form of disadvantage. There will be no monetary gain from participating in this research project. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Department of Information Studies, at the University of KwaZulu-Natal.

If you have any questions or concerns about participating in this study, please feel free to contact myself or my supervisor at the numbers indicated above. It should take you about 15 minutes to complete the questionnaire.

Thank you for participating in this research project.

-----	17 <sup>th</sup> October, 2012
Signature	Date

I ..... hereby consent to participate in the above study.

Name: ..... Date: ..... Signature: .....

## Appendix 2: Application letter for data collection at the University of Dar es Salaam



Information Studies  
School of Social Sciences  
University of KwaZulu-Natal  
Private Bag X01  
Scottsville 3209, South Africa  
Tel: +27 (0) 33 2605007  
Fax: +27 (0) 33 2605092

[stilwell@ukzn.ac.za](mailto:stilwell@ukzn.ac.za)

14 June 2012

Vice Chancellor  
University of Dar es Salaam  
P.O. Box 35091  
Dar es Salaam.

Att: Library director

Dear Sir/Madam,

### **RE: APPLICATION FOR RESEARCH DATA COLLECTION**

Reference is made to the above subject.

Mrs Rebecca Majinge is a PhD student in the Information Studies Programme at the University of KwaZulu-Natal, in South Africa. As part of the requirement for the degree, she is required to collect data at five Tanzanian university libraries and we would like to include your university library in the project. She is researching "Library services provision for people with disabilities in academic libraries in Tanzania".

Therefore, I am writing to kindly request written permission to collect data from users of the library as well as library staff, and from you as the Library Director. Possible dates, if permission is granted by you are from 30th September to 31<sup>st</sup> December, 2012 but these are negotiable. The questionnaire, semi-structured interview and observation schedule are attached.

I hope you will be able to comply with my request. Please feel free to request any further information you might require.

Yours sincerely,

Professor Christine Stilwell PhD  
Supervisor

Candidate  
Mrs Rebecca M. Majinge  
Cell: +27 790680352 (SA), +255 754 695460 (TZ)



### Appendix 3: Research permit from university of Dar es Salaam

## UNIVERSITY OF DAR ES SALAAM

### DIRECTORATE OF RESEARCH

P.O. Box 35091 ■ DAR ES SALAAM ■ TANZANIA

Tel: 2410500-8 Ext. 2087, 2077,  
2410743, 2410727

Mobile: 0754 270789



fax: 255 022 2410743  
55 022 2410 023  
e-Mail: research@udsm.ac.tz

Ref. No. AB3/12(B)

26<sup>th</sup> June, 2012

The Director,  
University Library,  
**University of Dar es Salaam.**

#### **Re: RESEARCH PERMIT: MRS. REBECCA M. MAJINGE**

The purpose of this letter is to introduce to you Mrs. Rebecca M. Majinge who is a bonafide student of the University of KwaZulu-Natal, in South Africa, and who has been permitted to conduct research at the University of Dar es Salaam

The title of the research in question is **"Library Services Provision for People with Disabilities in Academic Libraries in Tanzania"**.

The period for which this permission has been granted is September, 2012 to December, 2012. It will be appreciated if you will render her any assistance that will facilitate achievement of her research objectives.

A handwritten signature in black ink, appearing to read 'J. V. Tesha'.

Prof. J.V. Tesha  
**DIRECTOR OF RESEACH**

#### **Appendix 4: Application letter for data collection at the Open University of Tanzania.**



Information Studies  
School of Social Sciences  
University of KwaZulu-Natal  
Private Bag X01  
Scottsville 3209, South Africa  
Tel: +27 (0) 33 2605007  
Fax: +27 (0) 33 2605092  
[stilwell@ukzn.ac.za](mailto:stilwell@ukzn.ac.za)

14 June 2012

Vice Chancellor  
The Open University of Tanzania  
P.O. Box 23409  
Dar es Salaam

Att: Library director

Dear Sir/Madam,

#### **RE: APPLICATION FOR RESEARCH DATA COLLECTION**

Reference is made to the above subject.

Mrs Rebecca Majinge is a PhD student in the Information Studies Programme at the University of KwaZulu-Natal, in South Africa. As part of the requirement for the degree, she is required to collect data at five Tanzanian university libraries and we would like to include your university library in the project. She is researching "Library services provision for people with disabilities in academic libraries in Tanzania".

Therefore, I am writing to kindly request written permission to collect data from users of the library as well as library staff, and from you as the Library Director. Possible dates, if permission is granted by you are from 30th September to 31<sup>st</sup> December, 2012 but these are negotiable. The questionnaire, semi-structured interview and observation schedule are attached.

I hope you will be able to comply with my request. Please feel free to request any further information you might require.

Yours sincerely,

Professor Christine Stilwell PhD  
Supervisor

Candidate  
Mrs Rebecca M. Majinge  
Cell: +27 790680352 (SA), +255 754 695460 (TZ)

## Appendix 5: Research permit from Open University of Tanzania

**THE OPEN UNIVERSITY OF TANZANIA**  
*DIRECTORATE OF RESEARCH, PUBLICATIONS, AND POSTGRADUATE STUDIES*

P.O. Box 23409 Fax: 255-22-2668759 Dar es Salaam, Tanzania,  
<http://www.out.ac.tz>



Tel: 255-22-2666752/2668445 ext.2101  
Fax: 255-22-2668759,  
E-mail: [drpc@out.ac.tz](mailto:drpc@out.ac.tz)

06/06/2012

**To Whom It May Concern,**

**RE: RESEARCH CLEARANCE**

This is to certify that **Mrs Rebecca Majinge** has been granted permission to conduct research on **“Library Services Provision for People with Disabilities in Academic Libraries in Tanzania”**

This permission allows her to see and talk to the leaders and members of staff of The Open University of Tanzania in connection with her research.

This is in accordance with the Government circular letter Ref. No. MPEC/R/10/1 dated 4<sup>th</sup> July 1980; the Vice Chancellor was empowered to issue research clearance to the staff and students of the University on behalf of the Government and the Tanzania Commission for Science and Technology, a successor organisation to UTAFITI.

This permission is granted for the period between 30/09/2012 to 31/12/2012 covering areas/offices of the Open University of Tanzania.

We thank you in advance for your cooperation and facilitation of this research activity.

Yours sincerely,

A handwritten signature in purple ink, appearing to read 'S. Mbogo', is written over a circular stamp.

**Prof. S. Mbogo**

**For: VICE CHANCELLOR**

**THE OPEN UNIVERSITY OF TANZANIA**

**Appendix 6: Application letter for data collection at Dar es Salaam University  
College of Education.**



Information Studies  
School of Social Sciences  
University of KwaZulu-Natal  
Private Bag X01  
Scottsville 3209, South Africa  
Tel: +27 (0) 33 2605007  
Fax: +27 (0) 33 2605092  
[stilwell@ukzn.ac.za](mailto:stilwell@ukzn.ac.za)

31 July 2012

Deputy Principal Academic  
Dar es Salaam University College of Education  
P.O. Box 2329  
Dar es Salaam

Att: Library director

Dear Sir/Madam,

**RE: APPLICATION FOR RESEARCH DATA COLLECTION**

Reference is made to the above subject.

Mrs Rebecca Majinge is a PhD student in the Information Studies Programme at the University of KwaZulu-Natal, in South Africa. As part of the requirement for the degree, she is required to collect data at five Tanzanian university libraries and we would like to include your university library in the project. She is researching "Library services provision for people with disabilities in academic libraries in Tanzania".

Therefore, I am writing to kindly request written permission to collect data from users of the library as well as library staff, and from you as the Library Director. Possible dates, if permission is granted by you are from 30th September to 31<sup>st</sup> December, 2012 but these are negotiable. The questionnaire, semi-structured interview and observation schedule are attached.

I hope you will be able to comply with my request. Please feel free to request any further information you might require.

Yours sincerely,

Professor Christine Stilwell PhD  
Supervisor

Candidate  
Mrs Rebecca M. Majinge  
Cell: +27 790680352 (SA), +255 754 695460 (TZ)

## Appendix 7 : Research permit from Dar es Salaam University College of Education



### DAR ES SALAAM UNIVERSITY COLLEGE OF EDUCATION

A Constituent College of the University of Dar Es Salaam

Tel 022-2850978  
Fax 022-2850952  
E-mail: [dpacademic@duce.ac.tz](mailto:dpacademic@duce.ac.tz)

#### OFFICE OF THE DEPUTY PRINCIPAL ACADEMIC



PO Box 2329,  
Dar es Salaam,  
Tanzania.

DUCE/OF/R2/5/F.33

14<sup>th</sup> August, 2012

School of Social Sciences  
University of KwaZulu- Natal  
Private Baga X 01  
Scottville 3209, South Africa

#### RE: PERMISSION FOR MRS. REBECCA MAJINGE TO COLLECT RESEARCH DATA AT DUCE

Reference is made to your letter dated 2<sup>nd</sup> August 2012, on the subject matter.

You are hereby informed that the permission has been granted to Mrs. Rebecca Majinge to collect research data at DUCE on "*Library Services Provision for People with Disabilities in Academic Libraries in Tanzania*" as per request.

While at DUCE, you may consult the office of Deputy Principal Academic, and Head of Library at their convenience for assistance.

Yours truly,

Shaaban Mtengeti  
For: Deputy Principal Academic

## **Appendix 8: Application letter for data collection at Sebastian Kolowa Memorial University**



Information Studies  
School of Social Sciences  
University of KwaZulu-Natal  
Private Bag X01  
Scottsville 3209, South Africa  
Tel: +27 (0) 33 2605007  
Fax: +27 (0) 33 2605092  
[stilwell@ukzn.ac.za](mailto:stilwell@ukzn.ac.za)

14 June 2012

Provost  
Sebastian Kolowa University College  
P.O. Box 370  
Lushoto  
Tanzania

Att: Library director

Dear Sir/Madam,

### **RE: APPLICATION FOR RESEARCH DATA COLLECTION**

Reference is made to the above subject.

Mrs Rebecca Majinge is a PhD student in the Information Studies Programme at the University of KwaZulu-Natal, in South Africa. As part of the requirement for the degree, she is required to collect data at five Tanzanian university libraries and we would like to include your university library in the project. She is researching "Library services provision for people with disabilities in academic libraries in Tanzania".

Therefore, I am writing to kindly request written permission to collect data from users of the library as well as library staff, and from you as the Library Director. Possible dates, if permission is granted by you are from 30th September to 31<sup>st</sup> December, 2012 but these are negotiable. The questionnaire, semi-structured interview and observation schedule are attached.

I hope you will be able to comply with my request. Please feel free to request any further information you might require.

Yours sincerely,

Professor Christine Stilwell PhD  
Supervisor

Candidate  
Mrs Rebecca M. Majinge  
Cell: +27 790680352 (SA), +255 754 695460 (TZ)

## Appendix 9: Research permit from Sebastian Kolowa Memorial University

SEBASTIAN KOLOWA UNIVERSITY COLLEGE  
OF  
TUMAINI UNIVERSITY MAKUMIRA

P.O. BOX 370, LUSHOTO, TANZANIA

*"Acquire Knowledge, Serve with Compassion"*

Tel: +255-27- 2977003  
Fax: +255-27-2977004

Our Ref: SEK/PF/11-143



E-Mail: [admin@sekuco.org](mailto:admin@sekuco.org)  
Website: [www.sekuco.org](http://www.sekuco.org)

Date: 10<sup>th</sup> July, 2012

Prof. Christine Stilwell,  
Information Studies,  
School of Social Science,  
University of Kwazulu Natal,  
Private Bag X01  
SCOTTSVILLE 3209  
SOUTH AFRICA

Dear Madam,

RE: APPLICATION FOR RESEARCH DATA COLLECTION

Kindly refer to the above mentioned heading.

The request for Mrs Rebecca M. Majige to collect data from our University Library has been accepted.

She is most welcome.

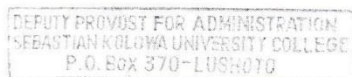
Yours sincerely,

SEBASTIAN KOLOWA UNIVERSITY COLLEGE

A handwritten signature in dark ink, appearing to read "Josephat M. Semkiwa".

Josephat M. Semkiwa

Ag. DEPUTY PROVOST FOR ADMINISTRATION



*All correspondence should be addressed to the Provost*

## Appendix 10: Application letter for data collection at St. John's University of Tanzania



Information Studies

School of Social Sciences

University of KwaZulu-Natal

Private Bag X01

Scottsville 3209, South Africa

Tel: +27 (0) 33 2605007

Fax: +27 (0) 33 2605092

[stilwell@ukzn.ac.za](mailto:stilwell@ukzn.ac.za)

31 July 2012

The Deputy Vice Chancellor  
St. John's University of Tanzania  
P.O. Box 47  
Dodoma

Att: Library director

Dear Sir/Madam,

### **RE: APPLICATION FOR RESEARCH DATA COLLECTION**

Reference is made to the above subject.

Mrs Rebecca Majinge is a PhD student in the Information Studies Programme at the University of KwaZulu-Natal, in South Africa. As part of the requirement for the degree, she is required to collect data at five Tanzanian university libraries and we would like to include your university library in the project. She is researching "Library services provision for people with disabilities in academic libraries in Tanzania".

Therefore, I am writing to kindly request written permission to collect data from users of the library as well as library staff, and from you as the Library Director. Possible dates, if permission is granted by you are from 30th September to 31<sup>st</sup> December, 2012 but these are negotiable. The questionnaire, semi-structured interview and observation schedule are attached.

I hope you will be able to comply with my request. Please feel free to request any further information you might require.

Yours sincerely,

Professor Christine Stilwell PhD  
Supervisor

Candidate

Mrs Rebecca M. Majinge

Cell: +27 790680352 (SA), +255 754 695460 (TZ)



## Appendix 11: Research permit from St. John's University of Tanzania



ST JOHN'S UNIVERSITY OF TANZANIA

Director of Information and Library  
Management

Tel: 026-2390044  
P.O. Box 47  
Fax: 026-2390025

email: [library@sjut.ac.tz](mailto:library@sjut.ac.tz)

website: [www.sjut.ac.tz](http://www.sjut.ac.tz)

Dodoma, Tanzania

14<sup>th</sup> November, 2012

Professor Stilwell,  
University of KwaZulu –Natal,  
School of Social Sciences,  
Private Bag X01, Scottsville  
3209,  
South Africa

Dear Prof Stilwell,

This is to inform you that permission for Mrs Rebecca Majinge, a PhD student at Kwa Zulu Natal University to undertake data collection on Library Services for people with disabilities in academic libraries, has been granted.

She will be given all the necessary assistance while working on the project. However, she will be required to meet all her expenses for her stay in Dodoma.

We wish her good luck in her endeavor to achieve her goal.

Regards,

  
Geoffrey M Chelelo  
Director of Library Services

## **Appendix 12: Application letter for data collection at Ministry of Education and Vocational Training**



Information Studies

School of Social Sciences

University of KwaZulu-Natal  
Private Bag X01

Scottsville 3209, South Africa

Tel: +27 (0) 33 2605007

Fax: +27 (0) 33 2605092

[stilwell@ukzn.ac.za](mailto:stilwell@ukzn.ac.za)

14 June 2012

Permanent Secretary  
Ministry of Education and Vocational Training  
P.O. Box 9121  
Dar es Salaam  
Tanzania

Att: Special Needs Education Unit of Disability.

Dear Sir/Madam,

### **RE: APPLICATION FOR RESEARCH DATA COLLECTION**

Reference is made to the above subject.

Mrs Rebecca Majinge is a PhD student in the Information Studies Programme at the University of KwaZulu-Natal, in South Africa. As part of the requirement for the degree, she is required to collect data at five Tanzanian university libraries and to the Unit of Disability. We would like to include your staff from Special Needs Education Unit of Disability in the project. She is researching "Library services provision for people with disabilities in academic libraries in Tanzania".

Therefore, I am writing to kindly request written permission to collect data to your staff from Special Needs Education Unit of Disability. Possible dates, if permission is granted by you are from 30th September to 31<sup>st</sup> December, 2012 but these are negotiable. The questionnaire, semi-structured interview and observation schedule are attached.

I hope you will be able to comply with my request. Please feel free to request any further information you might require.

Yours sincerely,

Professor Christine Stilwell PhD  
Supervisor

Candidate  
Mrs Rebecca M. Majinge  
Cell: +27 790680352 (SA), +255 754 695460 (TZ)

## Appendix 13: Research permit from Ministry of Education and Vocational Training

THE UNITED REPUBLIC OF TANZANIA

### MINISTRY OF EDUCATION AND VOCATIONAL TRAINING

Cable: "ELIMU" DAR ES SALAAM  
Telex: 41742 Elimu Tz.  
Telephone: 2121287, 2110146  
Fax: 2127763



Post Office Box 9121  
DAR ES SALAAM

In reply please quote:

Ref. ED/EP/ERC/VOLV/ 98

Date: Friday, 13<sup>th</sup> July, 2012.

The Commissioner for Education- MoEVT

**ATT: Special Needs Education Unit**

**RE: RESEARCH CLEARANCE FOR MRS REBECCA MAJINGE:**

The above-mentioned is a bonafide student of The University of KwaZulu-Natal who is conducting a research on the topic titled "**Library Services Provision for People with Disabilities in Academic Libraries in Tanzania**" as part of her Doctoral dissertation in PhD programme (Information Studies). Specifically, the researcher seeks to understand the status of the real situation of library services to the people with disabilities in learning institutions.


The researcher needs to collect data and necessary information related to the research topic from your office(s).

In line with the above information you are being requested to provide the needed assistance that will enable her to complete this study successfully.

The period by which this permission has been granted is from **September to December, 2012.**

By copy of this letter, **Mrs. Rebecca Majinge** is required to submit a copy of the report (or part of it) to *the Permanent Secretary, Ministry of Education and Vocational Training* for documentation and reference.

Yours truly,



Ms. Paulina J. Mkoma  
**For Permanent Secretary**

**CC: Mrs. Rebecca Majinge** - The University of KwaZulu-Natal

## **Appendix 14: Request for permission to pre- test Instruments at University of KwaZulu- Natal Library**

University of KwaZulu-Natal  
School of Social Sciences  
Private Bag X01  
Scottsville  
3209  
South Africa  
30<sup>Th</sup> May, 2012

Dr Nora Buchanan  
UKZN Libraries  
University of KwaZulu - Natal  
Howard College Campus

**Dear Dr Buchanan**

### **RE: Request for Permission to Pre-Test My Research Instruments**

I am a PhD student in Information Studies programme, at the University of KwaZulu-Natal Pietermaritzburg campus. My research topic is '*Library Services Provision for People with disabilities in Academic Libraries in Tanzania*'. To ensure consistency, clarity and validity of research instruments I wish to pretest my instruments at this campus's libraries the UKZN once my ethical clearance has been granted. My supervisor Prof. Christine Stilwell (see contact details below) has advised me to seek your permission to pretest the instruments (survey questionnaire/interview schedules) to about 15 qualified librarians at Pietermaritzburg Campus in your Department. I wish to request for your permission and Dr Sukram's through you in this regard.

Yours sincerely,

Rebecca M. Majinge (Mrs)  
Candidate  
Email: majinge@yahoo.com  
Cell: +27 790680352 (SA), +255 754 695460 (TZ)

Professor Christine Stilwell PhD  
Supervisor  
Telephone number: 033-260 5095  
Email address: [Stilwell@ukzn.ac.za](mailto:Stilwell@ukzn.ac.za)

Cc Dr Praversh Sukram  
Campus Librarian  
Cecil Renaud Library  
Pietermaritzburg Campus  
UKZN

**Appendix 15: Request for permission to pre- test Instruments at University of KwaZulu- Natal Disability Unit**

University of KwaZulu-Natal  
School of Social Sciences  
Private Bag X01  
Scottsville  
3209  
South Africa

30<sup>TH</sup> May, 2012

Director of Disability Unit  
University of KwaZulu-Natal  
Pietermaritzburg Campus  
South Africa

**Dear Sir/ Madam**

**RE: Request for Permission to Pre-Test My Research Instruments**

I am a PhD student in Information Studies programme, at the University of KwaZulu-Natal Pietermaritzburg campus. My research topic is '*Library Services Provision for People with Disabilities in Academic Libraries in Tanzania*'. To ensure consistency, clarity and validity of research instruments I wish to pretest my instruments at Pietermaritzburg Campus of the UKZN. My supervisor Prof. Christine Stilwell (see her contact details below) has advised me to seek your permission to pretest the instruments (survey questionnaire/interview schedules). These will be administered, once my ethical clearance is granted to people with physical (ie not mental impairments in wheelchairs and people visual impairments who are served by your Unit.

This letter serves as a request for your permission in this regard.

Yours sincerely

Rebecca M. Majinge (Mrs)

Candidate

Email: majinge@yahoo.com

Cell: +27 790680352 (SA), +255 754 695460 (TZ)

Professor Christine Stilwell PhD

Supervisor

Telephone number: 033-260 5095

Email address: [Stilwell@ukzn.ac.za](mailto:Stilwell@ukzn.ac.za)

## Appendix 16: Questionnaire for library staff

Dear respondent,

I am a PhD student in Information Studies programme at the University of KwaZulu-Natal, Pietermaritzburg campus. I am investigating library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania, with regard to layout of library buildings and access to information resources. Could you please help me by filling this questionnaire in order to assist in the process of collecting data for my research topic. Any information provided here will remain confidential and you will remain anonymous. Your cooperation will be greatly appreciated. Please kindly fill in the blank space or tick in the appropriate box for each question.

1. Name of the university.....[optional]
2. Your gender  
☐ male  
☐ female
3. Your age  
☐ 20 – 25 years old  
☐ 26 – 30 years old  
☐ 31 – 35 years old  
☐ 36 – 40 years old  
☐ 41- and above years old
4. Your highest level of education  
☐ Certificate  
☐ Diploma  
☐ Degree  
☐ Masters  
☐ PhD
5. Do you have any education and training in special needs?  
☐ Yes  
☐ No

6. If your answer to question 5 is **YES** please specify

-----  
-----  
-----  
-----

7. How long have you been working in the library?

- ☐ 1 -10 years  
☐ 11-20 years  
☐ 21-30 years  
☐ 31-40 years  
☐ 41 and above years

8. Does the library provide services for people with visual impairments and in wheelchairs?

- ☐ Yes  
☐ No

If your answer to question 8 is **YES** what type of services do you provide?

-----  
-----  
-----  
-----

If your answer to question 8 is **NO** what are the reasons?

-----  
-----  
-----  
-----

9. How adequate are the available services provided by your library to people with visual impairments and in wheelchairs?

- ☐ More than adequate  
☐ Adequate  
☐ Undecided  
☐ Inadequate  
☐ Most inadequate

10. Library should be redesigned to meet the needs of people with visual impairments and in wheelchairs?

- ☐ Strongly agree  
☐ Agree  
☐ Undecided

- ☐ Disagree
- ☐ Strongly disagree

11. Are any specialised services or adaptive equipment provided by the library to people with visual impairments and in wheelchairs?

- ☐ Yes
- ☐ No

If your answer to question 11 is **YES** what kind of services?

---

---

---

---

---

If your answer to question 11 is **NO** what are reasons?

---

---

---

---

---

12. Have you ever assisted people in the library with visual impairments and in wheelchairs?

- ☐ Yes
- ☐ No

13. If your answer to question 12 is YES how often do you assist?

- ☐ Most often
- ☐ Often
- ☐ Sometimes
- ☐ Rarely
- ☐ Not at all

14. What library services provision do you think are needed by people with visual impairments?

---

---

---

---

---



15. What library services provision broadly do you think are needed by people in wheelchairs?  
 -----  
 -----  
 -----  
 -----
16. Does the library have staff that are trained and experienced to provide or assist users with visual impairments and in wheelchairs in the use of library services?  
☐ Yes  
☐ No
17. If the answer to question 16 is **NO** please give reasons.  
 -----  
 -----  
 -----  
 -----
18. To what extent do you agree with the following statement: generally the attitude of most library staff towards providing library services to people with visual impairments and in wheelchairs is not good.  
☐ Strongly agree  
☐ Agree  
☐ No opinion  
☐ Disagree  
☐ Strongly disagree
19. To what extent do you agree with the following statement: the attitude of people with visual impairments and in wheelchairs towards library staff provision of library services to them is principally negative.  
☐ Strongly agree  
☐ Agree  
☐ No opinion  
☐ Disagree  
☐ Strongly disagree
20. How do people with visual impairments and in wheelchairs locate an item in the library they need?  
☐ Use the catalogue  
☐ Library staff dedicated for such service  
☐ Use their friends  
☐ Use a special tool designed for people with disabilities  
☐ I don't know  
 Other please specify-----

21. Do the library shelves allow people with visual impairments and in wheelchairs to locate information resources by browsing?

☐ Yes

☐ No

If the answer to question 21 is NO how does the library assist them to locate the items on the shelves?

-----  
-----  
-----  
-----  
-----

22. Does the arrangement of shelves in the library allow people with visual impairments and in wheelchairs to move freely?

☐ Yes

☐ No

If the answer to question 22 is NO what do they do to cope?

-----  
-----  
-----  
-----  
-----

23. Are the study carrels, computer workstations, tables and chairs suitable for people with visual impairments and in wheelchairs?

☐ Yes

☐ No

24. Are people with visual impairments and in wheelchairs able to use the restroom facilities in the library independently?

☐ Yes

☐ No

If the answer to question 24 is **NO** please explain how you assist them.

-----  
-----  
-----  
-----

25. Does the library building layout allow people with visual impairments and in wheelchairs to get access to the information resources?

☐ Yes

☐ No

If the answer to question 25 is **YES** please explain how?

-----  
-----  
-----

If the answer to question 25 is **NO** please explain how do they get into the library?

-----  
-----  
-----

26. Does the library have alternative materials for people with visual impairments?

☐ Yes

☐ No

If the answer to question 26 is **YES** what type of information resources does the library have?-----

-----  
-----  
-----

If the answer to question 26 is **NO** what information resources does the library provide to people with visual impairments? -----

-----  
-----  
-----

27. What adaptive equipment or technologies are available in the library?

☐ Scanner/ reader

☐ Braille printer

☐ Tape recorder

☐ Screen enlargement

☐ CCTV

☐ JAWS software

Other please specify-----

28. Do you think ICT equipment will assist in library services provision of information resources to people with visual impairments and in wheelchairs?

☐ Yes

☐ No

If the answer to question 28 is **YES** please explain how?

-----  
-----  
-----

If the answer to question 28 is **NO** please explain why not?

-----  
-----  
-----

29. Does the library have a written policy that describes services to people with visual impairments and in wheelchairs?

[ ] Yes  
[ ] No

If the answer to question 29 is **YES** please explain what kind of services addressed in the policy? -----

-----  
-----  
-----

30. Are there any other initiatives taken by the library regarding library services to people with visual impairments and in wheelchairs? -----

-----  
-----  
-----  
-----

31. What challenges hinder access and use of library services provision for people with visual impairments and in wheelchairs? -----

-----  
-----  
-----  
-----

32. What challenges does the library experience when they seek to provide services to people with visual impairments and in wheelchairs?-----

-----  
-----  
-----  
-----

33. What can be done to improve library services provision to people with visual impairments and in wheelchairs? -----

-----  
-----  
-----

34. What additional comments do you have regarding library services provision to people with visual impairments and in wheelchairs? -----

-----  
-----  
-----

**THANK YOU FOR YOUR TIME AND COOPERATION**

## Appendix 17: Questionnaire for users in wheelchairs

Dear respondent,

I am a PhD student in Information Studies programme at the University of KwaZulu-Natal, Pietermaritzburg campus. I am investigating library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania, with regard to layout of library buildings and access to information resources. Could you please help me by filling this questionnaire in order to assist in the process of collecting data for my research topic. Any information provided here will remain confidential and you will remain anonymous. Your cooperation will be greatly appreciated. Please kindly fill in the blank space or tick in the appropriate box for each question.

1. Name of the university.....[optional]
2. Your gender  
☐ Male  
☐ Female
3. Your age  
☐ 20 – 25 years old  
☐ 26 – 30 years old  
☐ 31 – 35 years old  
☐ 36 – 40 years old  
☐ 41- and above years old
4. Your highest level of education  
☐ Certificate  
☐ Diploma  
☐ Degree  
☐ Masters  
☐ PhD
5. Which discipline are you in? -----
6. What do you consider to be the reasons for the choice of the discipline you are in?  
-----  
-----  
-----  
-----

7. Do you use any library services?

- ☐ Yes  
☐ No

If your answer to question 7 is **YES** what type of services do you use?

-----  
-----  
-----

If your answer to question 7 is **NO** what are the reasons?

-----  
-----  
-----

8. How often do you use these services?

- ☐ Most often  
☐ Often  
☐ Sometimes  
☐ Rarely  
☐ Not at all

9. To what extent are you satisfied with the services provided by the library?

- ☐ Very satisfied  
☐ Satisfied  
☐ Neutral  
☐ Dissatisfied  
☐ Very dissatisfied

10. Does the layout of library buildings allow you to get access to the information resources you need?

- ☐ Yes  
☐ No

11. If the answer to question 10 is **NO** how do you get into the library and to the various floor levels?

-----  
-----  
-----

12. Are you able to use the restroom facilities in the library independently?

- ☐ Yes  
☐ No

If the answer to question 12 is **NO** please explain how do you get assistance?

-----  
-----  
-----  
-----

13. How do you locate an item you need in the library?

- ☐ Use the catalogue  
☐ Use library staff dedicated for such service  
☐ Use friends  
☐ Use a special tool designed for people with visual impairments and in wheelchairs  
☐ I don't know  
Other please specify-----

14. Do the library shelves allow you to locate information resources by browsing?

- ☐ Yes  
☐ No

If the answer to question 14 is **NO** how does the library assist you to locate the items on the shelves? -----

-----  
-----  
-----  
-----

15. Does the arrangement of shelves in the library allow you to move freely?

- ☐ Yes  
☐ No

If the answer to question 15 is **NO** what do you do to cope?

-----  
-----  
-----  
-----  
-----

16. Are the study carrels, computer workstations, tables and chairs suitable for people in wheelchairs?

- ☐ Yes  
☐ No

17. Do you think ICT equipment will assist you to get access to the information resources you need?

- ☐ Yes  
☐ No



If your answer to question 17 is **YES** please explain how?

-----  
-----  
-----  
-----

If your answer to question 17 is **NO** please explain why?

-----  
-----  
-----  
-----

18. To what extent do you agree with the following statement: generally the attitude of most people with visual impairments and in wheelchairs towards library staff is not good.

[ ] Strongly agree  
[ ] Agree  
[ ] No opinion  
[ ] Disagree  
[ ] Strongly disagree

19. To what extent do you agree with the following statement: the attitude of library staff towards people with visual impairments and in wheelchairs in provision of library services is principally negative.

[ ] Strongly agree  
[ ] Agree  
[ ] No opinion  
[ ] Disagree  
[ ] Strongly disagree

20. What challenges are you facing in accessing and using library services?

-----  
-----  
-----  
-----  
-----

21. What do you think can be done to improve library services provision to people with visual impairments and in wheelchairs?

-----  
-----  
-----  
-----

22. Is there anything you would like to add?

-----  
-----  
-----  
-----

**THANK YOU FOR YOUR TIME AND COOPERATION.**

## **Appendix 18: Questionnaire for staff of Special Needs Education Unit for Disability**

Dear respondent,

I am a PhD student in Information Studies programme at the University of KwaZulu-Natal, Pietermaritzburg campus. I am investigating library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania, with regard to layout of library buildings and access to information resources. Could you please help me by filling this questionnaire in order to assist in the process of collecting data for my research topic. Any information provided here will remain confidential and you will remain anonymous. Your cooperation will be greatly appreciated. Please kindly fill in the blank space or tick in the appropriate box for each question.

1. Name of Unit.....
2. Gender  
☐ Male  
☐ Female
3. Your highest level of education  
☐ Certificate  
☐ Diploma  
☐ Degree  
☐ Masters  
☐ PhD
4. Do you have education and training in disability?  
☐ Yes  
☐ No
5. How long have you been working in this unit of disabilities? -----  
☐ 1 -10years  
☐ 11-20years  
☐ 21-30years  
☐ 31-40years  
☐ 41 and above years
6. What services does the unit provide for people with disabilities?  
-----  
-----  
-----  
-----

7. Are people with disabilities aware of the unit and the services provided?  
[ ] Yes  
[ ] No
8. If your answer to question 7 is **YES** please explain how do you make them aware of the unit?  
-----  
-----  
-----  
-----  
-----
9. If your answer to question 7 is **NO** what are your strategies making people with disabilities know of the unit and the services provided?  
-----  
-----  
-----  
-----  
-----
10. Do you have any policy relating to library services provision for people with disabilities?  
[ ] Yes  
[ ] No
11. If your answer to question 10 is **YES** please explain if the policy is being implemented in these libraries?  
-----  
-----  
-----  
-----  
-----
12. If your answer to question 10 is **NO** please explain what is your plan to formulate policy relating to library service provision to people with disabilities?  
-----  
-----  
-----  
-----  
-----
13. Does the unit have a dedicated budget for people with disabilities?  
[ ] Yes  
[ ] No

14. If the answer to question 13 is YES what percentage is allocated to library services for people with disabilities?
- ☐ 1% - 5%
- ☐ 6% - 10%
- ☐ 11% - 15%
- ☐ 16% - 20%
- ☐ 21% and above
15. If your answer to question 13 is **NO** please give the reasons.
- 
- 
- 
- 
16. Does the unit have a clear data on the number of people with disabilities who are enrolled in various universities?
- ☐ Yes
- ☐ No
17. If your answer to question 16 is YES how many people with visual impairments and in wheelchairs are in various universities?
- 
- 
- 
- 
- 
18. If your answer to question 16 is NO please explain why?
- 
- 
- 
- 
19. What challenges face the unit in providing services to people with disabilities?
- 
- 
- 
- 
20. Do you offer any training to the community regarding awareness creation on activities of the unit related to people with disabilities?
- ☐ Yes
- ☐ No

21. If the answer to question 20 is NO please explain how does the community know the services you offer?

-----  
-----  
-----  
-----

22. Anything else you would like to add

-----  
-----  
-----  
-----  
-----

**THANK YOU FOR YOUR TIME AND COOPERATION**

## **Appendix 19: Semi-structured interview schedule for people with visual impairments**

Dear respondent,

I am a PhD student in Information Studies programme at the University of KwaZulu-Natal, Pietermaritzburg campus. I am investigating library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania, with regard to layout of library buildings and access to information resources. Could you please help me to answer the following questions in order to assist in the process of collecting data for my research topic. Any information provided here will remain confidential and you will remain anonymous. Your cooperation will be greatly appreciated.

1. What is the name of your University? -----  
[optional]
2. Gender of respondent-----
3. Age of respondents-----
4. What is your highest level of education? -----
5. Which discipline are you in? -----
6. What do you consider to be the reasons for the choice of the discipline you are in?  
-----  
-----  
-----  
-----
7. Do you use any library services? -----
8. What type of services do you use?  
-----  
-----  
-----  
-----
9. How often do you use these services?  
-----  
-----  
-----  
-----

10. To what extent are you satisfied with the services provided by the library?  
[ ] Very satisfied  
[ ] Satisfied  
[ ] Neutral  
[ ] Dissatisfied  
[ ] Very dissatisfied
11. Does the library building layout allow you to get into the library and access the information resources?  
-----  
-----  
-----  
-----
12. Does the arrangements of shelf in the library allow you to move freely?  
-----  
-----  
-----  
-----
13. Are the signs in the library suitable for your library access needs?  
-----  
-----  
-----  
-----
14. Are you able to use the restroom facilities in the library independently?  
-----  
-----  
-----  
-----
15. How do you locate an item you need in the library?  
-----  
-----  
-----  
-----
16. Does the library have alternative information resources for your use?  
-----  
-----  
-----  
-----



17. Is there any arrangement made by the library to assist you to get information resources needed?  
-----  
-----  
-----  
-----
18. Does the library provide any assistive technology to assist you to get information required?  
-----  
-----  
-----  
-----
19. What adaptive equipment or technologies are available in the library?  
-----  
-----  
-----  
-----
20. Does the library have sufficient equipment and adaptive technology related to services to people with visual impairment?  
-----  
-----  
-----  
-----
21. Do you think ICT will facilitate services provided by the library to people with visual impairment?  
-----  
-----  
-----  
-----
22. What in your view is the attitude of library staff towards people with visual impairment in provision of library services?  
[ ] Very positive  
[ ] Positive  
[ ] No opinion  
[ ] Negative  
[ ] Very negative

23. What do you think are the attitude of people with visual impairments to library staff?

---

---

---

---

24. What challenges are you facing in accessing and using library services?

---

---

---

---

25. What do you think can be done to improve library services provision?

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26. Is there anything you would like to add?

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**THANK YOU FOR YOUR TIME AND COOPERATION**

## Appendix 20: Semi-structured interview schedule for the director of library

Dear respondent,

I am a PhD student in Information Studies programme at the University of KwaZulu-Natal, Pietermaritzburg campus. I am investigating library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania, with regard to layout of library buildings and access to information resources. Could you please help me to answer the following questions in order to assist in the process of collecting data for my research topic. Any information provided here will remain confidential and you will remain anonymous. Your cooperation will be greatly appreciated.

1. Name of the University-----  
[optional]
2. Position -----
3. Highest qualification held -----
4. Number of years in current position-----
5. How long have you been working in library? -----
6. Does the library provide services to people with visual impairments and in wheelchairs? -----
7. Does the library have a budget for acquiring alternative materials and assistive equipment for people with visual impairments? -----
8. If not, have any attempts been made to secure such a budget? -----
9. Does the library have any policy relating to library services provision to people with visual impairments and in wheelchairs? -----
10. Does the layout of library buildings allow access to people with visual impairments and in wheelchairs? -----  
If YES how?  
-----  
-----  
-----  
-----

If NO why not?

-----  
-----  
-----  
-----

11. Does the library have alternative materials for people with visual impairments?

-----

If YES what type of information resources does the library have?

-----  
-----  
-----  
-----

If NO what information resources does the library provide to people with visual impairments?

-----  
-----  
-----  
-----

12. How aware are your library staff regarding the provision of library services to people with visual impairments and in wheelchairs?

- ☐ Very aware  
☐ Aware  
☐ No opinion  
☐ Unaware  
☐ Very unaware

13. Do your library staff have special training related to provision of library services to people with visual impairments and in wheelchairs?

-----  
-----  
-----  
-----

14. Does the library have any future plan for improving library services to people with visual impairments and in wheelchairs?

-----  
-----  
-----  
-----

15. If the answer in question 14 is NO what is your future plan for establishing library services to people with visual impairments and in wheelchairs?

-----  
-----  
-----  
-----

16. What challenges does the library experience when they seek to provide services to people with visual impairments and in wheelchairs?

-----  
-----  
-----  
-----

17. What additional comments do you have regarding library services provision to people with visual impairments and in wheelchairs?

-----  
-----  
-----  
-----

**THANK YOU FOR YOUR TIME AND COOPERATION**

## Appendix 21: Observation checklist used at selected universities in Tanzania

### 1. Observation record

- Observer -----
- Observer's name -----
- Observed universities address -----  
-----  
-----
- Date/Month/Year -----

### 2. Users with disabilities

- Users with visual impairments-----
- Users in wheelchairs-----

### 3. Library facilities

- Information resources for people with visual impairments (braille)----  
-----  
-----  
-----
- Toilets -----  
-----  
-----
- Study carrels-----  
-----  
-----  
-----
- ICT equipment (computers, CCTV, Scanner) -----  
-----  
-----  
-----

- Furniture (shelves arrangements, chairs, tables) -----  
-----  
-----

#### **4. Layout of library buildings**

- Floors -----  
-----  
-----
- Stairs-----  
-----  
-----
- Elevators (lifts)-----  
-----  
-----
- Doors-----  
-----  
-----

#### **5. Access to information by people with visual impairments and in wheelchairs**

- Library staff assisting people with visual impairments and in wheelchairs-----  
-----  
-----
- People with visual impairments and in wheelchairs interaction with information resources -----  
-----  
-----

## Appendix 22: Pre- testing checklist

Library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania. 16<sup>Th</sup> October 2012

Pre- test checklist of questionnaire for library staff, people in wheelchairs and interview schedule for people with visual impairments at University of KwaZulu Natal Pietermaritzburg campus Cecil Renaud Library.

1. (a) Does the questionnaire have any typographical errors?

Yes [ ] no [ ]

(b) If yes, please indicate in the questionnaire

.....  
.....

(c) Does the interview schedule have any typographical errors?

Yes [ ] no [ ]

(d) If yes, please indicate in the Interview schedule

.....  
.....

2. (a) Does the questionnaire have misspelt words?

Yes [ ] no [ ]

(b) If yes, please indicate in the questionnaire

.....  
.....

(c) Does the interview schedule have misspelt words?

Yes [ ] no [ ]

(d) If yes, please indicate in the interview schedule

.....  
.....

3. (a) Is the questionnaire font size sufficiently large for reading?

Yes [ ] no [ ]



.....

.....

Yes [ ] no [ ]

.....

Yes [ ] no [ ]

.....

.....

Yes [    ]                      no [    ]

.....

Yes [ ] no [ ]

.....

.....

Yes [ ] no [ ]

.....

.....

6. (a) Are the questions in the questionnaire clear?

Yes [   ]

no [   ]

(b) If no, please provide suggestions for the questions that are not clear

.....  
.....

(c) Are the questions in the interview schedule clear?

Yes [   ]

no [   ]

(d) If no, please provide suggestions for the questions that are not clear

.....  
.....

7 (a) Are the instructions provided for filling in the questionnaire clear?

Yes [   ]

no [   ]

(b) If no, please provide suggestions

.....  
.....

(c) Are the questions in the interview schedule clear?

Yes [   ]

no [   ]

(d) If no, please provide suggestions

.....  
.....

8 (a) Is the questionnaire layout clear?

(b) If no, please provide suggestions

.....  
.....

(c) Is the interview schedule layout clear?

Yes [   ]

no [   ]

(d) If no, please provide suggestions

.....  
.....

9. Kindly provide suggestions which will help to improve the quality of  
questionnaire and interview schedule.....

.....  
.....

Thank you for your time and cooperation

**Student:** Rebecca. M. Majinge

University of KwaZulu-Natal

Telephone number: 0790680352

Email address: [majinge@yahoo.com](mailto:majinge@yahoo.com)

**Supervisor:** Prof. Christine Stilwell

University of KwaZulu-Natal

Telephone number: 033-260 5095

Email address: [Stilwell@ukzn.ac.za](mailto:Stilwell@ukzn.ac.za)