

**INFORMATION SUPPORT FOR STUDENTS WITH DISABILITIES IN SELECTED  
ACADEMIC LIBRARIES IN MALAWI**

**By**

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## DECLARATION

I declare that this study, ‘Information support for students with disabilities in selected academic libraries in Malawi’, is my original research work. This thesis has not been submitted to any other university for the award of any other degree. All data and information used in this research work has been duly acknowledged in the text, references and appendices.

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## **DEDICATION**

To my late parents, Mr. Dennis Timothy and Mrs. Elizabeth Muhambuwa, who believed so much in me, and encouraged me constantly to work hard in school, despite their own low level of education, but never lived to see the fruits of their labour;

To my God-given parents, Mrs. Moriah Macheso and the late Mr. Fixon Duncan Macheso (Ababa), whose profound love has enabled me to reach this stage;

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To our wonderful children Tiyamike, Tidalira, Taona and Tamando.

And to all students with disabilities in public universities in Malawi; students without information.

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## ABSTRACT

This study examined information support for students with disabilities in selected academic libraries in Malawi. It focused on the access to library facilities, resources and services for students with disabilities in the following institutions: University of Malawi (UNIMA) (Chancellor College and Polytechnic Libraries), Malawi University of Science and Technology (MUST) and Mzuzu University (MZUNI). The specific objectives of the study were to examine the availability and accessibility of library and information services for students with disabilities in the selected academic libraries; the accessibility of library buildings to students with disabilities; implementation of policy and legislation; to establish challenges facing students with disabilities in accessing library and information resources in the selected academic libraries; and to propose a strategy for the provision of library services for students with disabilities.

The study adopted a qualitative multi-case study design guided by an interpretivist paradigm. The sample comprised students with disabilities, library staff and disability unit staff (where such units existed) from the selected institutions. The universities were specifically selected because they are all public institutions and they enrol students with disabilities, they have similar governance structures and are under an obligation to implement government policy and legislation.

A purposive sampling technique was employed to select library staff, while a census was employed for students. In total, 23 students with disabilities, 14 library staff, one head of a disability unit and one dean of students were interviewed. In addition, the Malawi Disability Act and the strategic plans of the selected institutions were reviewed. The selected libraries were also audited for accessibility using an inspection audit checklist that was informed by the IFLA checklist. Data was analysed using thematic analysis.

The study was guided by the social model of disability and Wilson's model of information behaviour. The two models were important in identifying barriers to library and information access for students because of disability.

This study revealed that there was inadequate information support for students with disabilities in all the selected academic libraries. The libraries were providing services and resources which were not accessible to students with disabilities. None of the libraries provided information materials in alternative formats such as braille, audio and large print, nor was assistive technology available to

enhance the accessibility of information. No readers were provided to read for visually impaired students. Library buildings and facilities were not accessible to students with disabilities, mainly those with mobility and visual impairments. In some libraries, this was due to turnstiles fitted at the entrances and stairs leading to upper floors of the libraries with no provision for a lift/elevator or ramps.

Furthermore, the libraries did not take into account the needs of students with disabilities in designing library orientation and information literacy training programmes, which led to their exclusion from these programmes.

A lack of policy governing library services for students with disabilities exposed the students to marginalising practices and discriminatory library services. Even the existing national disability policy and legislation did not explicitly address library services for persons with disabilities. The study also revealed that the design of library websites did not favour users of assistive technologies because of the errors displayed by the WebAim library accessibility evaluation tool.

The study recommends the development of policy to address library services for students with disabilities in academic libraries. In addition, academic libraries should embark on less costly efforts towards addressing accessibility, such as assigning staff to assist students with disabilities, conducting awareness training for library staff and introducing telephony services. Furthermore, academic libraries should collaborate with other libraries and agencies that promote and provide reading materials for persons with disabilities, such as braille and audio materials. In the long term, academic libraries should procure assistive technologies for use by students. The study has proposed a strategy towards the provision of library services for students with disabilities.

**Keywords:** Disability, academic libraries, students with disabilities, assistive technologies, Malawi

# TABLE OF CONTENTS

<b>DECLARATION</b> .....	i
<b>DEDICATION</b> .....	ii
<b>ACKNOWLEDGEMENTS</b> .....	iii
<b>ABSTRACT</b> .....	v
<b>LIST OF TABLES</b> .....	xiii
<b>LIST OF FIGURES</b> .....	xiii
<b>LIST OF APPENDICES</b> .....	xv
<b>LIST OF ABBREVIATIONS AND ACRONYMS</b> .....	xvi
<b>CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY</b> .....	1
<b>1.1 Introduction</b> .....	1
<b>1.2 Background to the research problem</b> .....	2
<b>1.3 Contextual setting</b> .....	4
<b>1.4 Theoretical framework</b> .....	5
<b>1.5 Motivation of the study</b> .....	5
<b>1.6 Statement of the problem</b> .....	6
<b>1.7 Aim of study</b> .....	6
<b>1.8 Objectives of the study</b> .....	7
<b>1.8.1 Research questions</b> .....	7
<b>1.9 Contribution of the study</b> .....	7
<b>1.10 Scope and limitations of study</b> .....	8
<b>1.11 Research methodology</b> .....	8
<b>1.12 Knowledge dissemination</b> .....	9
<b>1.13 Ethical and safety issues</b> .....	9
<b>1.13 Definition of key terms</b> .....	10
<b>1.13.1 Academic library</b> .....	10
<b>1.13.2 Assistive technology</b> .....	10
<b>1.13.3 Braille</b> .....	10
<b>1.13.4 Disability</b> .....	10
<b>1.13.5 Impairment</b> .....	12
<b>1.13.6 Information seeking behaviour</b> .....	12
<b>1.14 Terminology</b> .....	12
<b>1.15 Structure of the thesis</b> .....	13

1.16 Chapter Summary .....	14
<b>CHAPTER TWO: CONTEXT OF THE STUDY</b> .....	15
2.1 Introduction .....	15
2.2 Prevalence of disability in Malawi .....	15
2.3 Disability policy and legislation in Malawi .....	16
2.3.1 National disability policy framework .....	17
2.3.2 Disability legal framework .....	19
2.4 The United Nations Convention on the Rights of People with Disabilities .....	21
2.5 Education for people with disabilities in Malawi .....	22
2.6 Public universities in Malawi .....	24
2.6.1 University of Malawi (UNIMA) .....	24
2.6.2 Lilongwe University of Agriculture and Natural Resources (LUANAR).....	26
2.6.3 Mzuzu University (MZUNI) .....	26
2.6.4 Malawi University of Science and Technology (MUST) .....	26
2.7 Prevalence of Disability in Malawi Higher Education .....	27
2.8 Library services for students with disabilities in higher education in Malawi.....	29
2.9 Appraisal of the chapter .....	31
2.10 Chapter summary .....	34
<b>CHAPTER 3: THEORETICAL FRAMEWORK</b> .....	35
3.1 Introduction .....	35
3.2 Theoretical framework .....	35
3.3 Models of disability .....	37
3.3.1 Medical model.....	37
3.3.2 Social model .....	38
3.4 Implications and applications of the social model of disability .....	44
3.4.1 Application of the social model of disability in related studies .....	45
3.4.2 Application of the social model of disability to the current study.....	46
3.5 Information seeking behaviour model.....	47
3.5.1 Ellis’s model .....	48
3.5.2 Kuhlthau’s Information search process model.....	48
3.5.3 Wilson’s (1981) model of information seeking behaviour .....	49
3.6 Implications of Wilson’s model to academic libraries .....	51
3.7 Chapter Summary .....	52
<b>CHAPTER FOUR: LITERATURE REVIEW</b> .....	54

<b>4.1 Introduction</b> .....	54
<b>4.2 Literature on library services for people with disabilities</b> .....	54
<b>4.3 The role of academic libraries in a university</b> .....	55
<b>4.4 Library services for students with disabilities</b> .....	57
<b>4.5 Accessibility of information resources and services to students with disabilities</b> .....	61
<b>4.5.1 Library services and resources for students with print disabilities</b> .....	66
<b>4.5.2 Library services and resources for students with mobility impairment</b> .....	68
<b>4.5.3 Library services and resources for students with hearing impairment</b> .....	69
<b>4.6 Accessibility of academic library websites to students with disabilities</b> .....	72
<b>4.6.1 Web content accessibility guidelines</b> .....	74
<b>4.7 Accessibility of e-resources</b> .....	74
<b>4.8 Assistive technologies for persons with disabilities</b> .....	77
<b>4.8.1 Assistive technologies for people with print disabilities</b> .....	78
<b>4.8.2 Assistive technologies for people with hearing impairment</b> .....	80
<b>4.9 Challenges faced by students with disabilities in accessing library resources, services and facilities</b> .....	80
<b>4.10 Challenges faced by academic libraries in providing services and resources to students with disabilities</b> .....	85
<b>4.11 Impact of policy and legislation on academic library service provision for students with disabilities</b> .....	87
<b>4.12 Appraisal of the chapter</b> .....	90
<b>CHAPTER FIVE: RESEARCH METHODOLOGY</b> .....	93
<b>5.1 Introduction</b> .....	93
<b>5.2 Research paradigm</b> .....	93
<b>5.2.1 Positivism</b> .....	94
<b>5.2.2 Critical theory</b> .....	94
<b>5.2.3 Interpretivism</b> .....	95
<b>5.3 Research methods</b> .....	96
<b>5.3.1 Justification for using the qualitative research method</b> .....	98
<b>5.4 Research design</b> .....	98
<b>5.4.1 Narrative research</b> .....	99
<b>5.4.2 Phenomenology</b> .....	99
<b>5.4.3 Grounded theory</b> .....	100
<b>5.4.4 Ethnography</b> .....	100
<b>5.4.5 Case study</b> .....	101

5.5 Study population .....	104
5.6 Sampling technique .....	105
5.7 Data collection instruments .....	107
5.7.1 Interviews .....	107
5.8 Data analysis .....	109
5.9 Pilot study .....	111
5.10 Validity and reliability .....	112
5.11 Ethical issues .....	115
5.12 Methodological limitations .....	116
5.13 Chapter summary .....	117
<b>CHAPTER SIX: PRESENTATION OF FINDINGS</b> .....	118
6.1 Introduction .....	118
6.2 Prevalence of disability in institutions under study .....	119
6.3 Study participants .....	119
6.3.1 Student participants .....	119
6.3.2 Staff participants .....	123
6.4 Chancellor College Library .....	126
6.4.1 Prevalence of disability at Chancellor College .....	127
6.4.2 Status of information provision for students with disabilities at Chancellor College Library .....	128
6.5 Polytechnic library .....	146
6.5.1 Prevalence of disability at Polytechnic .....	147
6.5.2 Availability of information resources for students with disabilities at the Polytechnic Library .....	147
6.5.3 Accessibility of the library, information resources and services for students with disabilities .....	148
6.5.4 Awareness and use of library e-resources among students with disabilities .....	153
6.5.5 Existence of library policy .....	153
6.5.6 Awareness of national disability policy and legal frameworks and international treaties by library staff .....	154
6.5.7 Awareness of disability policy and legal frameworks and international treaties by students with disabilities .....	154
6.5.8 Challenges faced by libraries in providing services for students with disabilities .....	155
6.5.9 Challenges faced by students with disabilities in accessing library services and facilities .....	155
6.6.1 Prevalence of disability at MUST .....	157

6.6.2 Availability and accessibility of library services and resources at MUST .....	157
6.6.3 Accessibility of the MUST library building .....	157
6.6.4 Existence of policy at MUST .....	158
6.6.5 Challenges faced by the library in providing services for students with disabilities.....	158
6.6.6 Challenges faced by students with disabilities in accessing library services and resources .....	158
6.7.1 Prevalence of disability .....	159
6.7.2 Availability and accessibility of library services and resources at Mzuzu University Library .....	159
6.7.3 Accessibility of the library building.....	161
6.7.4 Accessibility of the library web page .....	161
6.7.5 Existence of policy .....	162
6.7.6 Challenges faced by the library in providing services for students with disabilities.....	163
6.7.7 Challenges faced by students with disabilities in accessing library services and resources .....	165
6.7.8 Awareness of disability policy and legal frameworks by library staff.....	166
6.7.9 Awareness of disability policy and legal frameworks by students with disabilities .....	166
6.8 Physical audit of the libraries.....	166
6.9 Proposals for improvement .....	167
6.10 Chapter summary .....	169
<b>CHAPTER SEVEN: DISCUSSION OF FINDINGS .....</b>	<b>170</b>
7.1 Introduction .....	170
7.2 Existence of disability units in public universities in Malawi.....	170
7.3 Availability and accessibility of library information resources to students with disabilities .	172
7.3.1 Provision of assistive technologies.....	176
7.3.2 Accessibility of library buildings, facilities and services to students with disabilities ....	177
7.3.3 Accessibility of library websites .....	179
7.4 Existence of library and institutional disability policy and compliance with national policy and legal frameworks .....	181
7.4.1 Awareness of disability policy and legislation by students with disabilities .....	184
7.4.2 Awareness of disability policy and legislation by library staff.....	185
7.5 Challenges facing students with disabilities in accessing library services.....	186
7.5.1 Physical challenges .....	186
7.5.2 Systemic challenges .....	187
7.5.3 Social and cultural challenges .....	189
7.5.4 Challenges faced by libraries in providing services to students with disabilities .....	191

<b>7.6 Chapter Summary</b> .....	192
<b>CHAPTER EIGHT: SUMMARY, CONCLUSION AND RECOMMENDATIONS</b> .....	195
<b>8.1 Introduction</b> .....	195
<b>8.2 Summary of findings</b> .....	196
<b>8.2.1 Objective 1: To examine the availability and accessibility of information resources and services for students with disabilities in academic libraries</b> .....	196
<b>8.2.2 Objective 2: To examine the accessibility of library buildings for students with disabilities</b> .....	197
<b>8.2.3 Objective 3: To examine the implementation of policy and legislation in academic libraries</b> .....	198
<b>8.2.4 Objective 4: To establish challenges facing students with disabilities in accessing library and information services in academic libraries</b> .....	198
<b>8.2.5 Objective 5: To propose strategy for the provision of library services for students with disabilities</b> .....	200
<b>8.3 Conclusion</b> .....	202
<b>8.4 Originality of the study</b> .....	203
<b>8.4.1 Contribution to theory</b> .....	204
<b>8.4.2 Contribution to policy</b> .....	205
<b>8.4.3 Contribution to practice</b> .....	205
<b>8.5 Recommendations</b> .....	205
<b>8.5.1 Availability and accessibility of library services and resources to students with disabilities</b> .....	206
<b>8.5.2 Accessibility of library buildings for students with disabilities</b> .....	207
<b>8.5.3 Library policy on students with disabilities</b> .....	207
<b>8.5.4 Collaboration</b> .....	208
<b>8.5.5 Library standards for students with disabilities</b> .....	208
<b>8.6 Recommendations for further research</b> .....	209
<b>References</b> .....	210
<b>APPENDICES</b> .....	242

## LIST OF TABLES

Table 1 Prevalence of disability in Malawi by type .....	15
Table 2 Prevalence of disability in public universities in Malawi .....	28
Table 3 Differences between qualitative and quantitative research methods.....	97
Table 4 Misunderstandings about case study research.....	104
Table 5 Distribution of population of the study .....	105
Table 6 Types of interviews .....	107
Table 7 Enrolment of students with disabilities in institutions under study.....	119
Table 8 Student participants .....	120
Table 9 Number of student participants per institution .....	121
Table 10 Number of student participants per disability type.....	121
Table 11 Staff participants.....	124
Table 12 Prevalence of disability at Chancellor College .....	127
Table 13 Chancellor College Library website accessibility evaluation results .....	134
Table 14 Prevalence of disability at the Polytechnic.....	147
Table 15 Polytechnic Library website accessibility evaluation results .....	152
Table 16 Mzuzu University Library website accessibility evaluation results .....	161
Table 17 Results of physical audit of libraries under study .....	167
Table 18 Proposals for improvement.....	167
Table 19 Strategy for providing library services to students with disabilities .....	200

## LIST OF FIGURES

Figure 1 Wilson's 1996 Information behaviour model.....	<b>Error! Bookmark not defined.</b>
Figure 2 Wilson's 1999 model of Information behaviour.....	49
Figure 3 Entrance to Chancellor College Library .....	131
Figure 4 Stairs leading to the top floors of Chancellor College Library .....	132
Figure 5 Stairs leading to the upper floor of The Polytechnic Library.....	149

## **LIST OF APPENDICES**

Appendix A: University of Zululand Ethical Clearance .....	242
Appendix B: Approval to conduct research, Mzuzu University .....	244
Appendix C: Interview guide for students with disabilities .....	246
Appendix D: Interview guide for library staff.....	248
Appendix E Interview guide for University/College Librarians .....	250
Appendix F: Interview guide for Disability unit staff .....	252

## LIST OF ABBREVIATIONS AND ACRONYMS

ACRL	Association of College and Research Libraries
ADA	Americans with Disabilities Act
ALA	American Library Association
AT	Assistive Technology
CCTV	Closed Circuit Television
CESCR	Covenant on Economic, Social and Cultural Rights
DA	Disability Act
DPSA	Disabled People South Africa
EIFL	Electronic Information for Libraries
FOTIM	Foundation of Tertiary Institutions of the Northern Metropolis
ICT	Information and Communication Technologies
IFLA	International Foundation for Library Associations and Institutions
ICCPR	International Covenant on Civil and Political Rights
INASP	International Network for the Availability of Scientific Publications
JAWS	Job Access with Speech
KCN	Kamuzu College of Nursing
LUANAR	Lilongwe University of Agriculture and Natural Resources
MALA	Malawi Library Association
MALICO	Malawi Library and Information Consortium
MUST	Malawi University of Science Technology
MZUNI	Mzuzu University
NACCODI	National Advisory and Coordinating Committee on Disability Issues
NAREC	Natural Resource and Environment Centre
NESP	National Education Sector Plan
NSO	National Statistical Office
OPAC	Online Public Access Catalogue
PERI	Programme for Enhancement of Research Information
SCECSAL	Standing Conference of Eastern, Central and Southern African Librarians
SDGs	Sustainable Development Goals

SENDA	Special Education Needs and Disability Act
SNE	Special Needs Education
SNU	Special Needs Unit
UK	United Kingdom
UN	United Nations
UNCRP	United Nations Convention on the Rights for Persons with Disabilities
UNDHR	Universal Declaration of Human Rights
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNIMA	University of Malawi
UPIAS	Union of the Physically Impaired Against Segregation
USA	United States of America
WHO	World Health Organisation
WIPO	World Intellectual Property Organisation

# **CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY**

## **1.1 Introduction**

Libraries are all about information, and information plays a crucial role in every person's life. For people with disabilities, the use of information enhances their self-reliance. Fullmer and Majmuder (1991, p. 17) reaffirm that accessible information gives a person alternative options to choose from, apart from the restrictive and often unfavourable choices that may be available.

Information accessibility for persons with disabilities has been a concern for libraries for a long time. This is evidenced by the establishment of national libraries for the blind and other initiatives aimed at providing accessible information to visually impaired persons in western countries (Brophy & Craven, 1999, pp. 16–23). The development of guidelines for library services for persons with various disabilities by the International Federation for Library Associations and Institutions (IFLA) (IFLA, 2000; Irvall & Nielsen, 2005; Kavanagh & Skod, 2005) emphasises this international body's commitment to towards inclusive library services. Furthermore, the United Nations Convention on the Rights for Persons with Disabilities (United Nations, 2006) has an entire article, Article 9, devoted to accessibility of information and related services. The Sustainable Development Goals (United Nations, 2015) explicitly address the need for inclusive services and programmes in Goal number 4 to ensure accessibility for persons with disabilities.

Following the ratification of the UNCRP, many governments have enacted policy and legal frameworks to promote the rights of persons with disabilities, including the right to information, for example, the Disability Act in Malawi (Malawi Government, 2012).

The American Library Association (ALA) (2001), the world's oldest and largest library association, stresses that libraries must create a non-discriminating environment that ensures equal access to library resources by persons with disabilities. The International Federation of Library Associations and Institutions (IFLA) observed various challenges facing people with disabilities in accessing libraries, and responded by developing a checklist for all types of libraries as a mechanism to facilitate access to library facilities and services by people with disabilities, including students with disabilities in higher education institutions (Irvall & Nielsen, 2005). The

checklist provides recommendations for exterior library facilities, interior facilities that will enable entry into the library for all people with disabilities, library shelving and information formats and media that facilitate information access to different categories of disability. In cognisance of the significant role libraries play in students' success, the following publication stresses that library services must be designed in such a way that they are accessible to all students, including those with disabilities, because providing inaccessible library services is equivalent to denying such students the opportunity to obtain higher education: (Association of College and Research Libraries (ACRL), 2016, p. 16; Thorpe, Lukes, Bever, & He, 2016; United Nations Educational Scientific and Cultural Organisation (UNESCO), 1999)(United Nations Educational Scientific and Cultural Organisation (UNESCO), 1999).

Similarly, Carter (2004, p. 13) emphasises that academic libraries must prioritise the accessibility of their resources as the number of students with disabilities in higher education increases.

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

Historically, persons with disability are perceived as incapable and they are given labels with negative connotations (World Health Organisation, 2011, p. 6). Deep-rooted negative attitudes towards disability have led to the neglect of the needs of persons with disabilities in the design of services and programmes, such that they face difficulties in living an environment that is suitable for non-disabled people.

Oliver (1990, p. 27) traces the exclusion of people with disabilities in Britain to the changes in the labour market in the nineteenth century, which relegated persons with disabilities to the bottom of the labour market as they were deemed unfit for the new factory-based system which was organised around individual labourers. This marked the beginning of institutionalised living for persons with disabilities, as they were regarded as a social and educational problem (Oliver, 1990, p. 28). Persons with disabilities were housed in special homes and educated in special schools, excluding them totally from the social world.

The disability and development report (United Nations, 2019) highlights the challenges facing people with disabilities in all sectors of life, including education.

Lack of educational materials in alternative formats, an inaccessible curriculum and inaccessible infrastructure are some of the barriers that dominate the educational sector. The world report on

disability mentions the lack of appropriate resources for persons with disabilities as a significant barrier to their attainment of education (World Health Organisation, 2011, p. 214). The change of approach to education for children with disabilities from special schools to inclusive education (UNESCO, 1994) has not yielded much, as schools remain under-resourced and few adaptations are made to minimise environmental barriers, especially in developing countries (World Health Organisation, 2011, p. 215).

Students with disabilities in higher education are not spared the educational barriers as universities are found to be less inclusive in their approach to education for students with disabilities (Franck & Joshi, 2017; Moriña, 2017a; Moriña, López-gavira, & Molina, 2017; Moriña & Morgado, 2018). Barriers have been identified in the delivery of the curriculum, infrastructure and provision of services (Franck & Joshi, 2017; Moriña, 2017b; Moriña, Cortés-Vega, & Molina, 2015; Moriña & Morgado, 2018). Although libraries are core to teaching and learning in any institution of higher learning (Chiwandire & Vincent, 2017, p. 4), they feature prominently among the sectors that present access barriers to students with disabilities. The disability and development report (United Nations, 2019, p. 73) emphasises that accessibility of learning environments includes provision of accessible educational materials such as library resources and related information materials.

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) conducted a study of the situation of disabled students at universities in Africa (UNESCO, 1997), which revealed that students with disabilities in most universities in Africa were facing enormous challenges due to inaccessible infrastructure and lack of information in appropriate formats. The situation has not improved much as evidenced by recent studies (Mantey, 2017; Mutanga & Walker, 2017)

Another study, by the Foundation of Tertiary Institutions of the Northern Metropolis (FOTIM) (FOTIM, 2011), found that students with disabilities in South African higher education institutions faced challenges in accessing information from libraries, among many other challenges.

Other studies, from Nigeria (Babalola & Haliso, 2011; Ekwelem, 2013), Tanzania (Bagandanshwa, 2006; Kavishe & Isibika, 2018), Zimbabwe (Rugara, Ndinde, & Kadodo, 2016), Botswana (Moswela & Mukhopadhyay, 2011) and Namibia (Mnubi-Mchombu & Tjilale, 2018) confirm that access to information for persons with disabilities still remains a challenge, despite

the enactment of legislation aimed at improving the situation in many countries in Africa and the world.

Studies on inclusive education in primary schools in Malawi show that there is a serious lack of educational resources such as books to cater for students who cannot read standard print text books (Banks & Zuurmond, 2015; Chimwaza, 2015; Salmonsson, 2006). The only study on library service provision for persons with disabilities in Malawi, by Chaputula and Mapulanga (2017), found that higher education institutions in Malawi do not anticipate a demand for library services from persons with disabilities. As a result, they do not plan for them, which leads to the marginalisation of such persons once they enter higher education. However this study was too general as it included all tertiary institutions in Malawi. There was still need for a sector specific study that would give an in-depth analysis of the issues of academic library services provision for students with disabilities in public universities and provide a remedy for correcting the situation.

### **1.3 Contextual setting**

The study was conducted in three public universities in Malawi, namely the University of Malawi, Mzuzu University and Malawi University of Science and Technology. For the University of Malawi, the study was conducted in two of the four constituency colleges, namely Chancellor College and the Polytechnic. The study focused on public institutions because they are all publicly funded by government and they have similar governance structures. The three universities were selected because they were the only ones enrolling students with disabilities at the time of the study and they were also willing to participate in the study. For university of Malawi, College of Medicine and Kamuzu College of Nursing do not enroll students with disabilities as acknowledged by the National Education Sector Plan II (2008, p. 113) that some universities and colleges have not yet opened doors to persons with disabilities. This was corroborated by Chaputula and Mapulanga's recent study (2017, p. 9) which also found that Kamuzu College of Nursing and College of Medicine were not yet enrolling students with disabilities. Similarly, Lilongwe University of Agriculture and Natural Resources (LUANAR) did not have any students with disabilities during the time of study.

## **1.4 Theoretical framework**

A number of models have emerged from literature that are used to conceptualise disability. However, two are commonly discussed in literature; the medical model and social model of disability (Oliver, 1990).

The medical model perceives disability as an individual problem, while the social model views disability through a societal lens. The social model argues that people are impaired and they are disabled by society which does not identify and remove barriers that impede their access. Using the social model of disability in the study enabled the researcher to identify barriers in academic libraries and suggest ways of removing them to ensure accessibility for students with disabilities. The social model has been used as an underpinning theory in many studies, including United Nations treaties such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) (United Nations, 2006) and the world report on disability (World Health Organisation, 2011).

In addition to the social model of disability, the study also used Wilson's (Wilson, 1999) model of information behaviour. This model was used to inform the study on the information behaviour of students with disabilities that subsequently enabled the researcher to develop a strategy for library service provision in academic libraries for students with disabilities. Both these models are discussed in detail in Chapter Three.

## **1.5 Motivation of the study**

The population of Malawi is growing; so is the population of persons with disabilities. In 1983 persons with disabilities constituted 2.9% of the total population (Salmonsson, 2006). The 2018 population and housing census shows that the percentage of persons with disabilities has increased to 10.4% (National Statistical Office, 2019, p. 28). As the Government of Malawi is implementing inclusive education, more pupils with disabilities are being integrated in conventional schools (Itimu & Kopetz, 2008). Consequently, the admission of students with disabilities in higher education is set to increase. As reported by Mkwapatira (2019), between 2018 and 2019, students with disabilities admitted to University of Malawi has increased to 53 in 2019 from 9 in 2018. Considering the unpreparedness of most libraries in Malawi to serve persons with disabilities and the fragmented approach to library service provision to such people by different types of libraries

(Chaputula & Mapulanga, 2017), the researcher is motivated to explore the situation in academic libraries of public universities, and the influence of policy and legislation on information services delivery to students with disabilities. By reviewing literature to learn from international best practices in this area, the researcher has developed a strategy to support library and information services provision for students with disabilities in selected academic libraries.

### **1.6 Statement of the problem**

Several studies on disabilities in education have been conducted in Malawi. Earlier studies examined the implementation of inclusive education in primary and secondary schools. Kamchedzera (2010) examined the education of pupils with disabilities in Malawi's inclusive secondary schools; Chavuta *et al.* (2008) carried out a situational analysis of the mainstream education system for the inclusion of learners with special needs in primary schools in the Shire Highlands Education Division; and Chimwaza (2015) investigated challenges in implementing inclusive education in Malawi with a special focus on Montfort Special Needs College and selected primary schools in Blantyre. Only Chaputula and Mapulanga's (2017) study focused on library service provision in higher education institutions in Malawi. However, this study did not exhaust all the issues pertaining to provision of library information services to students with disabilities. Evidently, the extent of information provision to students with disabilities, with a special focus on university libraries as the hub of teaching and learning, is unknown.

Secondly, all categories of disability existing in the universities under study and their information needs have not yet been investigated. Thirdly, the implementation of disability policy and legal frameworks in relation to information provision in academic libraries has not been investigated. Fourthly, there is a clear lack of strategy for information provision for students with disabilities. The main research question being addressed in this study is therefore: "What is the current status of information service provision for students with disabilities in academic libraries in public universities in Malawi?"

### **1.7 Aim of study**

The main aim of this study is to investigate information service support for students with disabilities and the gaps that exist in the provision of support, the influence of policy and legislation on library services provision to students with disabilities, with a special focus on academic libraries

in public universities in Malawi, and to develop an information support strategy for the delivery of library and information services to such students.

### **1.8 Objectives of the study**

The objectives of the study were as follows:

1. To examine the availability and accessibility of library information resources and services for students with disabilities in the academic libraries under study.
2. To examine the accessibility of library buildings by students with disabilities in institutions under study.
3. To examine the influence of national policy and legislation in library service provision for students with disabilities.
4. To identify the challenges faced by students with disabilities in accessing information resources in the academic libraries under study.
5. To propose a strategy for the provision of library services for people with disabilities in academic libraries in Malawi.

#### **1.8.1 Research questions**

The above objectives were guided by the following research questions:

1. What information resources and services are available in academic libraries for students with disabilities?
2. How do students with disabilities access library and information resources?
3. How do libraries incorporate national policies and legislation in designing library services for students with disabilities?
4. What challenges do students with disabilities face in accessing information resources in academic libraries?

### **1.9 Contribution of the study**

The study investigated the provision of academic library services for students with disabilities which has led to the development of an information support strategy for students with disabilities in Malawian. In practice, the strategy could act as a frame of reference for library directors in designing library and information services for students with disabilities. The library directors could

also use it as a reason for requesting increased funding for the improvement of services for students with disabilities. Furthermore, the findings of this study raise awareness among decision makers which would in turn influence them to create policies aimed at improving the situation.

The study will also empower students with disabilities to insist on their rights to accessible information facilities and services.

### **1.10 Scope and limitations of study**

This study focused on provision of library services for students with disabilities in public university libraries as regards to accessibility of library infrastructure and information resources and services. All disabilities that existed in the study institutions during time of this study were included. By the period of study, the institutions had students with the following disabilities: visual impairment (both partial sightedness and total blindness), physical disability and hearing impairment.

The universities were selected based on their enrollment of students with disabilities and easy access to the researcher. In addition, they responded positively to the researcher's request for participation in the study.

The researcher experienced some challenges during the study. Not all public universities in Malawi follow the government prescribed academic calendar due to long closures following student and staff protests. This is mainly a big problem at the University of Malawi, where the academic calendars of its constituent colleges are irregular and unsynchronised. This affected data collection because, while students were on campus at one institution, they were on vacation at another.

Finally, some students with disabilities may have felt uncomfortable participating in the study due to its sensitive nature. Students with albinism were unwilling to participate, as this study was conducted at the peak of albino killings and abductions in Malawi, hence they could not trust the researcher.

### **1.11 Research methodology**

This study was a qualitative multi-case study involving four public university libraries. Data collection was done through semi-structured interviews, document review and observation. The research participants included students with disabilities, library staff and disability coordinators.

Thematic analysis was employed to analyse the data. Chapter five provides a detailed coverage of the research methodology.

### **1.12 Knowledge dissemination**

The findings of the study will be disseminated to all participating institutions. A copy of the thesis will be deposited in each of the participating libraries.

Furthermore, the findings of this study will be disseminated through publication in academic journals and conference proceedings. So far, the following papers have been presented:

1. The application of the social model of disability and Wilson's model of information behaviour towards effective service delivery for students with disabilities within an academic library context. *Inkanyiso Journal of Humanities and Social Science*, 11(1), 69-79.
2. The contribution of University of Zululand Library to the university's inclusive education agenda: Students with disabilities. Paper presented at UNILISA conference in Pretoria, South Africa, 13-15 March 2019.
3. Contextualising information services for persons with disabilities in Malawi. Paper presented at SCECSAL XX conference in Entebbe, Uganda, 23-27 April 2018.
4. Conceptualisation of disability in African disability research. Paper presented at University of Zululand Department of Information Studies 17<sup>th</sup> annual conference in Richards Bay, South Africa, 4-8 September, 2017.
5. Challenges faced by students with disabilities in accessing library and information services: The case of public university libraries in Malawi. Presented at ProLissa doctoral forum at UNISA, Pretoria, South Africa, 13-14 March 2017.

Although the study focuses on academic libraries, it will raise awareness of challenges faced by students with disabilities in higher education in general and therefore has the potential to influence policy changes.

### **1.13 Ethical and safety issues**

The University of Zululand's ethical guidelines and policies regarding plagiarism and research participants were observed in this study. Ethical clearance was obtained from the university, which was duly recognised by the participating institutions (see Appendix A).

Participants' consent was sought before the commencement of interviews and they were assured of their confidentiality and privacy throughout the study.

### **1.13 Definition of key terms**

This section gives definitions of such terms as academic library, assistive technology, Braille, disability, impairment and information seeking behaviour as they are used in this study.

#### **1.13.1 Academic library**

An academic library is a library that is attached to either a college or a university and whose role is to support the curriculum and to support the research of the university or college faculty and students.

#### **1.13.2 Assistive technology**

The Assistive Technology Industry Association (2018) defines assistive technology as “any item, piece of equipment, software program, or product system that is used to increase, maintain, or improve the functional capabilities of persons with disabilities.” According to Brophy and Craven (1999), assistive technologies are also known as “adaptive,” “access,” and “enabling” technologies. Examples of assistive technologies include text-to-speech software, screen magnifier, white cane just to mention a few.

#### **1.13.3 Braille**

Braille is a form of tactile communication used mainly by people who are blind or have very low vision. It was developed in 1829 by Louis Braille, a young Frenchman, at the age of 20.

#### **1.13.4 Disability**

According to Greyling (2008) and Ghosh (2012), the definition of disability, its prevalence in society and institutional provisions that ensure the accommodation of students with disabilities are determined by how people understand and interpret it. The definition of disability is complex (Oliver & Barnes, 2010), and increasingly subjective, mostly bearing on social conditions that exclude an individual's full participation in society (Ginsburg & Rapp, 2013). What is regarded as an impairment in one cultural setting may not be regarded as such in another. This assertion is also shared by Morris (1993, p. 86), who attributes physical impairment to social construction, whose

prevalence varies across and within societies depending on gender, class, race, occupation and geographical location. Furthermore, Oliver (1990, p. 78) contends that disability definitions are socially constructed rather than rationally determined. For Gartner and Lipsky (1999, p. 102), society dictates how people should be categorised and matches each of these categories to appropriate naturalised attitudes. Thus responses to disability are not natural but rather conceived, depending on culture, discipline and time. Elwan (1999, p. 2) states that these variations in the definitions of disability cause disparities in its classifications which makes the comparability of disability data across countries almost impossible.

Leonardi *et al.* (2006, p. 1219) give three conditions to be satisfied by a definition of disability, which are:

- i. Applicability to all people, without categorising into groups such as “visually impaired”, “wheelchair users” and “chronically ill”. The three authors propose a definition of disability that would succinctly describe the experience of disability in all areas of functioning
- ii. Ability to compare severity across the various types of disability
- iii. Ability to explicitly embrace the real and actual causes of disability.

The Disability Discrimination Act (United Kingdom Parliament, 1995) does not define disability, but instead defines a person with a disability as “one who has a physical or mental impairment which has a substantial and long-term adverse effect on his ability to carry out normal day-to-day activities” (United Kingdom Parliament, 1995, p. 1).

The Americans with Disabilities Act (United States of America Congress, 2015, p. 7) defines disability as a) “a physical or mental impairment that substantially limits one or more major life activities of such individual; b) a record of such an impairment, c) being regarded as having such an impairment”.

The World Health Organisation (WHO) (2001, p. 3), through the International Classification of Functioning, Disability and Health (ICF), defines disability as “an umbrella term for impairments, activity limitations and participation restrictions”. Impairments and limitations refer to the interaction between an individual and that individual’s contextual factors. When the result of this

interaction is negative, there is said to be a disability (Frattura & Griffo, 2011, p. 2). The ICF is discussed in much detail in Section 3.6.

Oliver (1990, p. 2) warns against defining disability as a tragedy, which leads to treating people with disabilities as victims of some tragic occurrence. This usually results in the formulation of policies aimed at compensating victims for such a tragedy, hence promoting marginalisation and discrimination. Oliver, however, recommends the definition of disability as a social oppression imposed on people with disabilities by an unaccommodating society. Policies formulated under this perspective aim at easing oppression rather than compensating individuals.

### **1.13.5 Impairment**

The International Classification of Functioning, Disability and Health (2001) defines impairment as deviation from the generally accepted norm of the body function and structure as a result of a loss or abnormality. The ‘body function’ defines the physiological and psychological functions of the body. The ‘body structure’ includes the limbs and organs.

### **1.13.6 Information seeking behaviour**

Information seeking behaviour refers to the strategies employed by an individual to satisfy his/her information need. Case (2016, p. 55) defines information seeking as the reaction to the recognition of an information need. Information need is the feeling of uncertainty.

## **1.14 Terminology**

In any context, the use of words reflects the values and attitudes in that particular social context, hence language is very significant in disability studies (Disabled People South Africa, 2001, p. 10). According to Disabled People South Africa (DPSA), terminology can effectively label people with disabilities, stereotype them, discriminate against them and eventually create a hostile environment for them.

According to Erkiliç (2011, p. 190), political waves and pressures combined with conceptual and theoretical developments have influenced the terminology of disability. Terminology such as ‘disabled people’, ‘people with impairments’, ‘people with disabilities’ among others are commonly used in subject literature.

The term ‘disabled people’ associates disability with the social and physical environment, and does not describe people by aspects of their bodies. This terminology is premised from the social model

of disability which is discussed in detail in the following section. The terminology is usually used in the United Kingdom as introduced by disability rights movements, e.g. the UPIAS (Union of the Physically Impaired Against Segregation, 1976) to emphasise that people are disabled by the uncaring environment.

In contrast, the terminology ‘people with disabilities’ has its origin in the disability civil rights movement in the United States and focuses firstly on the person. Miller and Sammons (1999) state that using the first-person language directs the focus to the person rather than on his or her disability. Greyling (2008, p. 12) finds it more accurate and respectful to use ‘student with a disability’ than ‘a disabled student’. Albrecht, Seelman and Bury (2001) contend that using the person-first approach emphasises the value placed on the individual in society and shows one’s understanding that a disability is not inherent in the person. This view is also shared by Sullivan (2011) who states that the term ‘disabled’ presents people with disabilities as one homogeneous group having a similar medical condition, disregarding the different categories of disability and individuals’ uniqueness. Sullivan further states that giving the person prominence, as opposed to the impairment, reflects the social model which considers the person as a valued member of society.

DPSA recommends the use of people with disabilities or disabled people as opposed to “the disabled”, “the lame”, or “the crippled”.

In this study, “disabled people/students,” “persons with disabilities,” and “people/students with disabilities” will be used interchangeably as reflected in the different subject literature sources used.

### **1.15 Structure of the thesis**

Chapter One:	Introduction and background to the study
Chapter Two:	Contextual setting
Chapter Three:	Theoretical framework
Chapter Four:	Literature review
Chapter Five:	Literature review
Chapter Six:	Findings of the study
Chapter Seven:	Discussion of the findings

Chapter Eight: Summary, conclusion and recommendations

For all chapters containing an extended literature review, a section on appraisal of the chapter has been included to highlight the issues arising from the particular chapter.

### **1.16 Chapter Summary**

This chapter has presented an overview of the study by introducing the topic of study and providing the background to the problem. The key issue that has emerged in this chapter is that access to information is a fundamental human right to be enjoyed by everyone. However, for persons with disabilities, access to information is not as straightforward as it should be because of the access barriers that they face in pursuit of this human right. The UNCRPD underscores the significance that is attached to information access for persons with disabilities on the world stage. In terms of education, access to information for students with disabilities is pivotal to their academic success, subsequent increased job prospects and improved standard of living.

The next chapter presents the context of the study.

## CHAPTER TWO: CONTEXT OF THE STUDY

### 2.1 Introduction

This chapter focuses on the policies and legislation that should promote access to and the use of academic library and information services by students with disabilities in public universities in Malawi. The United Nations Convention on the Rights of People with Disabilities is also discussed because of its influence on national policy and legislation.

### 2.2 Prevalence of disability in Malawi

Information on people with disabilities was first included in the 2008 population and housing census (National Statistical Office, 2010, p. 3). All censuses that were conducted prior to 2008 did not include people with disabilities. According to the 2018 census, 10.4% of the population is disabled. Disability prevalence was found to be higher in females (11%) than males (10%). The population of persons living with albinism is indicated as 0.8%. The 2018 census indicates a sharp increase in the disability prevalence rate: from 3.8% in 2008 to 10.4%. This rise is attributed to the adoption of a questionnaire as recommended by the Washington Group on Disability (National Statistical Office, 2019, p. 2). This has improved the accuracy of the data as the national prevalence rate is not too far from the global 15% (World Health Organisation, 2011, p. 23).

According to the World Health Organisation (2011, p. 22), countries that post low disability prevalence rates usually derive their data from censuses, which is restrictive in terms of the selection of impairments. The WHO recommends the use of National Disability Surveys which give more reliable disability data due to their use of comprehensive questions. This has been confirmed by the differences recorded in the 2008 and 2018 censuses.

Table 1 below shows the disability prevalence in Malawi by type.

**Table 1 Prevalence of disability in Malawi by type**

Disability Type	Percentage
Seeing	49
Hearing	24.3
Walking	26.9
Speaking	9.0
Intellectual	15.7
Other	18.2

Source: National Statistical Office (2019, p. 28)

As shown in Table 1 above, the most prevalent disability in Malawi is visual impairment at 49%; followed by mobility at 26.9% and hearing impairment at 24.3%. Speech impairment has the lowest occurrence at 9.0%. Braathen and Loeb (2011) and Loeb and Eide (2004) noted that physical disability is the most highly considered when it comes to inclusion, excluding people with sensory and motor impairments, subsequently causing greater activity limitation and participation among them. It is necessary, therefore, that all impairments be taken into account when planning for public services and infrastructure such as library services.

### **2.3 Disability policy and legislation in Malawi**

The government of Malawi has introduced a number of interventions for the education of people with disabilities. Apart from signing and ratifying international treaties, government has formulated disability specific national policies, which are the National Policy on Special Needs Education (Malawi Government, 2007) and National Policy on Equalisation of Opportunities for Persons with Disabilities (Malawi Government, 2006b). In addition, there are major national policies on education that also demonstrate government's commitment to education for people with disabilities. The policies are: National Education Sector Plan 2008-2017 (Ministry of Education 2008) and National Policy on Education (Malawi Government, 2016b). All these policies are linked to the national constitution (Malawi Government, 2006a) which guarantees the right to education of all citizens, regardless of any disability. Furthermore, upon signing and ratifying the CRPD in 2009 (Chilemba, 2014), Malawi moved on to domesticate the convention by passing the Disability Act in 2012 (Malawi Government, 2012).

Although these policies exist, they emphasise the following sub-sectors of education: early childhood development, primary education, secondary education, and non-formal education (Research for Inclusive Education in International Cooperation, 2014).

In addition, most of the research done in Malawi on the challenges faced by learners with disabilities focuses on those education sub-sectors. Munthali, Tsoka, Milner, and Mvula (2013) carried out a situational analysis of children with disabilities in Malawi. The report focuses only on children with disabilities. Research for Inclusive Education in International Cooperation (2014) conducted an analysis of documents relating to disability issues in Malawi. The analysis revealed that none of the documents covered higher education. Barriers to learners were identified in the

following sub-sectors of education: pre-school, primary, secondary and non-formal sectors. Furthermore, Lang (2008) conducted an analysis of disability policy and practice in Namibia, Swaziland, Malawi and Mozambique. Again, the research report makes no mention of higher education. Chavuta, Itimu-Phiri, Chiwaya, Sikero, and Alindiamao (2008) carried out a situational analysis of the mainstream education system for the inclusion of learners with special needs. This study focused on primary schools in the Shire Highlands Education Division. This shows that disability in higher education in Malawi is under-researched and the magnitude of the challenges students with disabilities face in their pursuit of higher education is not revealed.

### **2.3.1 National disability policy framework**

This section presents the national disability-specific policies as well as general policies on education. The general education policies are included to show whether or not disability issues are considered at the planning stage.

#### **2.3.1.1 National Policy on Special Needs Education**

The National Policy on Special Needs Education aims to “guide government and other stakeholders on how to include learners with special educational needs in education intervention in the Malawi context” (Malawi Government, 2007, p. 4). The policy identifies the following as challenges faced by learners with special educational needs: negative attitudes by the community, a lack of specialist teachers and resource centres, inadequate teaching and learning materials in appropriate formats and inadequate assistive devices, inaccessible infrastructures and information. The policy includes guidelines for its implementation.

Research for Inclusive Education in International Cooperation's (2014) analysis of the policy revealed a number of issues. Firstly, the proposed strategies to be implemented, i.e. sign language, braille and assistive devices, specifically target children with sensory and motor disabilities. Other strategies mentioned are bursaries for needy students and pharmacological treatment to suppress inappropriate behaviour so as to facilitate effective learning.

Secondly, although the preface states that it “includes a detailed overarching statement on inclusion” (Malawi Government, 2007, p. 4), there is no mention of “inclusive education” in the policy. The use of “special education” in the policy, as opposed to “inclusive education”, is another

issue of concern, as the former has been replaced by the latter as an approach to educating children with disabilities (UNESCO, 1994).

### **2.3.1.2 National Policy on Equalisation of Opportunities for Persons with Disabilities**

The National Policy on Equalisation of Opportunities for Persons with Disabilities (Malawi Government, 2006b) is the domestication of the United Nations Standards Rules on Equalisation of Opportunities for People with Disabilities (United Nations, 1994). The policy acknowledges that universal primary education can only be realised if the education system does not exclude people with disabilities. Promotion of the inclusion of people with disabilities in the education system through the provision of teaching and learning materials in accessible formats and the provision of assistive and adaptive devices is the main focus of this policy. It is noteworthy that although the policy has “support and encourage(s) inclusive education” as one of the policy statements (Malawi Government, 2006b, p. 24), it keeps referring to special education instead of ‘inclusive education’ as an internationally acceptable term in line with the Salamanca Statement and Framework for Action on Special Needs Education (UNESCO, 1994).

### **2.3.1.3 National Education Sector Plan (NESP)**

The National Education Sector Plan (NESP) (Malawi Government, 2008) is the principle (principal?) document for policy formulation in the education sector in Malawi. The document consists of three thematic areas: access and equality; quality and relevance; and governance and management. Although the document commits the government to inclusive education, it keeps referring to special education except for the Early Childhood Development sub-sector where it is committed to “promote early detection, intervention and inclusion for children with special health and education needs” (Malawi Government, 2008, p. 6).

Higher education falls under priority area 5 in the NESP, and policy objective 5 is stated as “to enhance equitable access to quality and relevant special and inclusive higher education” (Malawi Government, 2008, p. 25). The strategies under this objective are to “expand the provision of special and inclusive education; build capacity to ensure adequate support to students with special educational needs; upgrade infrastructure to ensure that it is disability friendly” (Malawi Government, 2008, p. 25).

Again, the use of terms referring to both special and inclusive education shows a blurred understanding of the two concepts.

#### **2.3.1.4 National Education Policy**

The National Education Policy (Malawi Government, 2016b) is a revision of the 2013 national education plan (Malawi Government, 2013). The policy acknowledges the inaccessibility of higher education for students with disabilities, which has resulted in very low enrolment.

As observed by Braathen and Loeb (2011), the policy only mentions physical disability. Despite recognising the need to include students with disabilities in higher education, the policy does not include any policy statements on how the needs of students with disabilities will be addressed, nor does it state how the issue of access will be addressed.

On institutional arrangements, the policy mandates the Malawi National Library Service (MNLS) to equip and manage national libraries (Malawi Government, 2016b, p. 11). There is no mention of information in alternative formats nor assistive and adaptive devices for people with disabilities.

On universities, the policy states that the Ministry of Science and Technology will “liaise with universities, colleges and other appropriate institutions and organization to develop and implement programmes and other relevant issues” (Malawi Government, 2016b, p. 12).

Furthermore, the policy requires universities and colleges to provide equitable access to higher education facilities for all eligible Malawians, but no strategies for achieving this are stated.

Finally, the policy charges the Ministry of Persons with Disabilities and the Elderly with the responsibility to advocate for the equalisation of opportunities and rights of people with disabilities.

#### **2.3.2 Disability legal framework**

This section presents the legal status of disability in Malawi. This is followed by a discussion of the United Nations Convention on the Rights of Persons with Disabilities (CRPD), which is one of the underlying principles for this study. The CRPD has shaped national policy and legislation around the world in as much as it has changed people’s perception of persons with disabilities. It has also been an empowerment tool for persons with disabilities.

### **2.3.2.1 The Disability Act**

The Malawi Government enacted the Disability Act in 2012 (Malawi Government, 2012) to replace the Handicapped Persons Act of 1971 (Malawi Government, 1971). The Disability Act is a response to the UNCRPD which Malawi ratified in 2009. Unlike the Handicapped Persons Act, the Disability Act places much emphasis on social and environmental barriers reflecting the social model of disability (Oliver, 1990) which is an underpinning theory for both the disability Act and the UNCRPD. For instance, the Disability Act states in Section 8 that government is committed to ensuring the removal of barriers in the physical environment, transportation, information and communications preventing access by people with disabilities (Malawi Government, 2012, p. 6). To achieve this, the Act states that government will develop, publicise and monitor the implementation of universal standards and guidelines for the accessibility of all public facilities and services (Malawi Government, 2012). Furthermore, Section 24 of the Disability Act prohibits segregation or denial of services or benefits to people with disabilities.

Nevertheless, Chilemba's (2013) analysis of the Disability Act shows that it is not in synch with the CRPD. Section 10 (b) of the Act covers: “taking into consideration the special requirements of persons with disabilities in the formulation of educational policies and programmes, including the provision of assistive devices, teaching aids and learning support assistants.” Chilemba noted that this list could be limiting, causing the Act to miss out on the CRPD’s provisions on education and obligations of state parties.

Secondly, Chilemba noted the absence of further implications of the concept of reasonable accommodation as elucidated in Section 2 of the Disability Act. It is noteworthy that the concept is also not mentioned in Sections 10 and 11 where non-discrimination in education is recommended. With this development, people with disabilities are left with no legal basis to claim entitlement to the provision of reasonable accommodation, which constitutes the right to non-discrimination. This is in contradiction of the CRPD and hence Chilemba (2013) recommends a review of the Disability Act so that sections on education impose reasonable accommodation. Reasonable accommodation is critical to achieving substantive equality for people with disabilities as stipulated by the CRPD (Emong & Eron, 2016).

The Disability Act promises the establishment of the National Advisory and Coordinating Committee on Disability Issues (NACCODI) whose role is “to oversee the implementation,

monitoring and evaluation of disability related programmes” (Malawi Government, 2012, p. 5). Almost six years after the enactment of the bill, the establishment of the committee has not taken place.

It is also worth noting that the standards and guidelines referred to in Section 8 (a) of the Disability Act have not been developed to date. The lack of standards and guidelines is reflected in the haphazard manner of library service provision in higher education institutions, with no standards for access (Chaputula & Mapulanga, 2017).

## **2.4 The United Nations Convention on the Rights of People with Disabilities**

People’s rights are universally guaranteed by the United Nations Declaration on Human Rights (UNDHR) (United Nations, 1948). However, it was noted that disabilities are not explicitly mentioned in this declaration; neither are they mentioned in the International Covenant on Civil and Political Rights (ICCPR) and the Covenant on Economic, Social and Cultural Rights (CESCR), which together with the UNDHR make up the International Bill of Rights (Schulze, 2009). This has led to negative perceptions of disability, whereby people with disabilities were viewed as undeserving of any rights. The CRPD was therefore introduced to ensure equal rights for people with disabilities. Of special interest to this study is Article 9 of the Convention which states:

“To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas. These measures, which shall include the identification and elimination of obstacles and barriers to accessibility, shall apply to, *inter alia*:

(a) Buildings, roads, transportation and other indoor and outdoor facilities, including schools, housing, medical facilities and workplaces;

(b) Information, communications and electronic services and emergency services” (United Nations, 2006, p. 9).

This article gives prominence to accessibility as a prerequisite to various provisions and ensuring equality as full and equal access to the enjoyment of all human rights. According to Schulze (2009), perceiving human rights through the accessibility lens offers an opportunity to remove all barriers

that impede full and effective enjoyment of human rights by people with disabilities. It is disheartening to learn that students with print disabilities only access less than 5% of what is available to their sighted colleagues. The situation is worse in developing countries like Malawi where the fraction is as low as less than 1% (Electronic Information for Libraries (EIFL), 2017). Article 29 of the CRPD is very critical to libraries as it provides a tool to identify obstacles faced by people with disabilities in accessing information, bearing in mind that information is a human right.

Furthermore, Article 21 of the CRPD requires state parties to provide information in appropriate formats for people with disabilities, to ensure equal access.

Thus, the CRPD recognises the inherent dignity of people with disabilities and it serves as a key to unlock numerous social concepts which increase the marginalisation of people with disabilities and the impediment of their rights. Public university libraries have an obligation to grant access to their facilities and services to people with disabilities as stipulated by the above-mentioned article.

Another international instrument that promotes the right of access to information for people with disabilities is the Marrakesh Treaty (Lewis, 2013). According to Electronic Information for Libraries (EIFL) (EIFL, 2016), the Treaty is a remarkable progress to providing information access for blind and visually impaired people. In countries that have ratified the Treaty, libraries have the right to transcribe printed works in alternate formats such as braille and audio, whose copies can also be shared across borders.

Ocholla (2006) notes that some sections of society, which includes people with disabilities, are segregated in information provision despite libraries being historically inclusive societies. Ocholla attributes this to a lack of skills among library personnel and a lack of resources for libraries to provide such services.

## **2.5 Education for people with disabilities in Malawi**

Formal education in Malawi was introduced by church missionaries in 1875. However, education for children with disabilities was only started in the 1950s, by the same church missionaries (Malawi Government, 2007). Government had not taken any responsibility for educating children with disabilities until 1967 when it started providing grants to special needs education institutions (Malawi Government, 2007).

Malawi is now implementing inclusive education, having signed the Salamanca Statement and Framework for Action on Special Needs Education (UNESCO, 1994). Inclusive education is a system of educating children with disabilities in mainstream classrooms together with their non-disabled peers (Chimwaza, 2015), as opposed to special schools. This system is hailed for its ability to enhance social skills in children with disabilities and increasing awareness of disability issues among teachers and the other students without disabilities (Chilemba, 2013; Chimwaza, 2015). For inclusive education to be successful, regular schools must be transformed in order to accommodate all students, whether disabled or not. This transformation must continue to include universities, where students with disabilities are also taught in mainstream classrooms. Library services and facilities too must be transformed to ensure access by students with disabilities owing to the critical role played by libraries in the academic success of students (Association of College and Research Libraries (ACRL), 2016; Thorpe *et al.*, 2016). It has been established that all students have the same academic goals, regardless of disability (Seyama, 2014, p. 26). According to Chimwaza (2015), inclusive education has its roots in the social model of disability, which blames the unaccommodating society for the exclusion of people with disabilities (Oliver, 1990). The social model enforces the equality of all students, whether disabled or not (Hernon & Calvert, 2006). By viewing people with disabilities as victims of an oppressive society (Hanley, 2014, p. 19), the social model demands the removal of barriers by academic libraries in order to facilitate access to services and facilities by students with disabilities.

According to Mambo, Meky, Tanaka, and Salmi (2016), the higher education system in Malawi absorbs only a small fraction of all students with disabilities that have graduated from secondary school, due to a lack of infrastructure, teaching and learning materials and equipment that are appropriate for use by students with disabilities.

The Government of Malawi has put in place a number of interventions for the education of people with disabilities by developing policies such as the National Policy on Special Needs Education (Malawi Government, 2007), National Education Sector Plan 2008-2017 (Malawi Government, 2008) (Ministry of Education 2008), and National Policy on Equalisation of Opportunities for Persons with Disabilities (Malawi Government, 2006b). Furthermore, the National Education Sector Plan (NESP) (Malawi Government, 2008), the country's national framework for education, acknowledges the challenge of a low enrolment of students with disabilities in higher education

and devises mechanisms for meeting this challenge. Vision 2020 (Malawi Government, 1998), the long-term national development framework, has a strategic aim of formulating a comprehensible national policy that would explicitly address issues regarding people with disabilities. All these policies draw their principles from the national constitution (Malawi Government, 2006a). In addition to these policies, the government of Malawi enacted the Disability Act in 2012 which prohibits any form of discrimination against people with disabilities in all sectors, including education.

## **2.6 Public universities in Malawi**

There are four public universities in Malawi, including the University of Malawi (UNIMA), Malawi University of Science and Technology (MUST), Mzuzu University and Lilongwe University of Agriculture and Natural Resources (LUANAR), and Mzuzu University (MZUNI). The University of Malawi comprises four constituent colleges, namely; Chancellor College, College of Medicine, Kamuzu College of Nursing and the Polytechnic. Each of the colleges is serviced by a library headed by a College Librarian. The libraries in the other three universities are headed by a University Librarian.

### **2.6.1 University of Malawi (UNIMA)**

The University of Malawi, the largest and oldest university, was established in 1965.

UNIMA has been enrolling students with disabilities since 1972 (Kamchedzera, 2016, p. 4).

University of Malawi College libraries make up the University of Malawi library system. These libraries were coordinated by the University Librarian, a position which was phased out in 2010. Since then the college libraries operate in a decentralized system, which has led to disparities in ICT utilisation and funding.

#### **2.6.1.1 Chancellor College**

Chancellor College is the largest constituent college, with an enrolment of 4500 undergraduate and about 500 postgraduate students. The college has five faculties, namely Faculty of Humanities, Faculty of Science, Faculty of Law, Faculty of Social Science and Faculty of Education. The college has a total of 25 academic departments. The following degrees are offered at the college: Humanities, Public Administration, Political Science, Science, Social Science, Education and Law

(Honours). Furthermore, the college offers full time and part time masters and PhD degrees in Development Studies, Economics, Public Administration, Environmental Science, Political Science, Informatics, Education, English, Theology, Biology and History (Chancellor College, 2014, p. 5).

### **2.6.1.2 The Polytechnic**

The Polytechnic is the second largest constituent college of UNIMA. With a student enrolment of 3800, the Polytechnic has five faculties, which are: Commerce, Engineering, Applied Sciences, Education and Media Studies and the Built Environment. The college offers degrees in Accountancy, Civil Engineering, Information Technology, Quantity Surveying, Journalism, Technical Education, Mining Engineering, Biomedical Engineering, Geology Engineering, Metallurgy Engineering, Procurement and Marketing. It also offers both part-time and full-time masters and PhD degrees in Business Administration, Engineering, Behavioural Change and Technical Education (The Polytechnic, 2016, p. 2).

### **2.6.1.3 Kamuzu College of Nursing**

Kamuzu College of Nursing, as the name implies, offers degrees in nursing. The college started as a National Nursing School in 1965 and it was incorporated into the University of Malawi as a constituent college in 1979. The college used to offer diplomas only until 1994 when the diploma programme was phased out upon the introduction of a Bachelor of Science degree in nursing. The college has two campuses, in Lilongwe and Blantyre, targeting the big referral hospitals of Kamuzu Central Hospital and Queen Elizabeth Central Hospital respectively.

With a total student population of fewer than a thousand, Kamuzu College of Nursing offers a Bachelor of Science Degree in Nursing and a certificate in midwifery at undergraduate level. At postgraduate level, the college offers the following programmes: Master of Science in Midwifery, Reproductive Health, Child Health Nursing, Midwifery Education and Community Health Nursing. The Child Health programme is offered in partnership with the University of Cape Town (Kamuzu College of Nursing, 2012, p. 8).

### **2.6.1.4 College of Medicine**

College of Medicine was opened in 1991 with the aim of training medical doctors. The college's annual intake has grown from 10-15 when it was just opened to over 100. The programmes have

also expanded to respond to national health needs. Apart from the pioneering Bachelor of Medicine, Bachelor of Surgery, the college now offers undergraduate degrees in pharmacy, laboratory technology and physiotherapy. It also offers masters degrees in public health and family medicine, and PhD degrees which are offered jointly with other universities abroad (College of Medicine, 2017).

### **2.6.2 Lilongwe University of Agriculture and Natural Resources (LUANAR)**

Lilongwe University of Agriculture and Natural Resources used to be a constituent college of UNIMA as Bunda College of Agriculture, until 2012 when it was merged with the Natural Resources College (NRC) to form the third public university in Malawi. Since then the university has registered tremendous growth in terms of both programmes and infrastructure. LUANAR offers degrees in agriculture and natural resource management. Currently, the university has a total of 1600 undergraduate, 172 masters students and 28 PhD students. LUANAR has introduced an Open and Distance Learning (ODL) mode of learning which will likely increase student enrolment.

### **2.6.3 Mzuzu University (MZUNI)**

Mzuzu University was established by an act of parliament in 1997 and was opened in 1999. The university occupies what used to be Mzuzu Teachers' Training College. There are five faculties at the university, namely: Education, Environmental Sciences, Health Sciences, Information Science and Communication, and Tourism and Hospitality Management. The university is the first institution in Malawi to offer training in Information Science.

### **2.6.4 Malawi University of Science and Technology (MUST)**

The Malawi University of Science and Technology is the newest university, having opened in 2014. Although the university has a capacity of 3000 students, it currently enrolls 1300 students as more programmes are still being introduced (Malawi University of Science and Technology, 2017). Currently the university is offering undergraduate degrees in Engineering, Earth Sciences, Climate Science, Water Resources Management, Computer Science and Information Technology, and Energy Resources Management. The university also offers a masters degree in Entrepreneurship and Innovation.

The library, known as the Bingu Resource Centre, was established in 2012 and provides information in both print and electronic formats.

All public university libraries in Malawi and some private universities are members of the Malawi Library and Information Consortium (MALICO). Through this consortium, libraries subscribe to e-resources through PERI/INASP programme, EIFL and Research4Life.

The libraries are funded through the parent institutions, which poses a challenge because in times of budget cuts, as in the current situation facing public universities in Malawi (Mambo *et al.*, 2016; World Bank, 2010), libraries are usually an easy target, forcing them to depend solely on donations (Chaputula & Boadi, 2010) and unable to maintain equipment and renew software licences (Eneya, 2008, p. 78).

By the time this study was completed, a bill had been passed by Malawi parliament to delink the constituent colleges of University of Malawi to form independent universities. The Polytechnic became Malawi University of Business and Applied Sciences (MUBAS), College of Medicine and Kamuzu College of Nursing were merged to become Kamuzu University of Health Sciences (KUHES) while Chancellor College retained the name University of Malawi (UNIMA).

## **2.7 Prevalence of Disability in Malawi Higher Education**

As noted by Mambo *et al.* (2016), there is no reliable data on disability in higher education in Malawi. Even at institutional level, data on students with disabilities is very hard to come by, as experienced by this researcher.

Banks and Zuurmond (2015, p. 10) argue that although there are no exact figures, the number of children with disabilities enrolled in Malawian schools decreased with an increasing educational level. This was elaborated by Mambo *et al.* (2016, p. 26), who stated that in 2015, 500 disabled students out of 3600 who sat for the Malawi School Certificate of Education (MSCE) were eligible for university selection. However, fewer than 50 students of the 500 were selected for university. However, according to the coordinator of the Special Needs Unit at Chancellor College, the enrolment of students with disabilities has been increasing in recent years. A UNESCO (1997, p. 26) study on disabled students at universities in Africa determined that there were only two students with disabilities enrolled at the University of Malawi (the only public university in Malawi when the UNESCO study was being conducted) during the time of data collection. This study found that the number had increased from 2 to 46, representing an increase of over 2000% in two decades. Enabling policies such as the Salamanca Statement and Framework for Action on

Special Needs Education (UNESCO, 1994), which is the basis of education and government education policies that emphasise inclusive education (Malawi Government, 2007; Malawi Government, 2016b), have been linked to the increased enrolment and completion rate of children with disabilities at primary and secondary school levels. Lersilp (2016, p. 61) affirms that the promotion of human rights and equality for persons with disabilities has led to increased opportunities for students with disabilities to enroll in higher education institutions. However, the actual representation of students with disabilities in relation to the overall student enrolment cannot be established due to a lack of data. One thing is clear though: the current enrolment is much too low and does not reflect the overall population of persons with disabilities in Malawi, which stands at 10.4%. One possible explanation for this is a lack of funding for students with disabilities in higher education as there is no government initiative to provide educational grants to such students, unlike other countries such as South Africa (Chiwandire & Vincent, 2019, p. 10).

Table 2 below shows the prevalence of disability in public universities in Malawi.

**Table 2 Prevalence of disability in public universities in Malawi**

<b>Disability</b>	<b>UNIMA</b>	<b>MZUNI</b>	<b>LUANAR</b>	<b>MUST</b>
Totally blind	16	3	0	0
Severe low vision	9	0	0	0
Low vision	7	0	0	0
Hearing impairment	4	0	0	3
Mobility	6	1	0	0
Total	42	4	0	3

Table 2 shows that by the time of this study, there were 49 students with disabilities enrolled in public universities in Malawi. This shows that students with disabilities are seriously underrepresented in public universities in Malawi. Being such a large minority group, they are likely victims of marginalisation and discrimination in the higher education system (Moabelo, 2012, p. 2). It is very likely that the figures in Table 2 above are not a true representation of the prevalence of disability in the institutions under study because, as learnt from the disability coordinator in one of the institutions, some students with invisible disabilities do not disclose their disability. Elwan (1999) noted that disability figures tend to be higher in developed than developing countries due to the differences in the term's definition. According to Singal (2007, p.

11), the language used for disability in an African context can be derogatory, which may deter some students from declaring their disability in higher education. Singal (2007, p. 11) further stated that some diseases such as tuberculosis and epilepsy, which are classified as a disability in developed countries, are not viewed as such in an African context. Hence the variation in data.

## **2.8 Library services for students with disabilities in higher education in Malawi**

The few studies that tackle disability in higher education in Malawi show serious marginalisation of students with disabilities (Mambo *et al.*, 2016; United Nations Educational Scientific and Cultural Organisation (UNESCO), 1988, 1999). There are no reliable statistics for students with disabilities enrolled in Malawi's public universities (Mambo *et al.*, 2016, p. 26). This can be attributed to the higher emphasis on education of children with disabilities at primary and secondary levels than at tertiary level (Braathen & Loeb, 2011). The enrolment of students with disabilities in higher education in Malawi remains very low compared to the total population of people with disabilities (Mambo *et al.*, 2016, p. 26). Being such a minority group, students with disabilities in Malawi's public universities are vulnerable to numerous inequalities, as their needs are likely to be overlooked or neglected. A study by Chaputula and Mapulanga (2017) on library service provision for people with disabilities in colleges and universities in Malawi revealed that some libraries have never considered providing service for people with disabilities because they do not anticipate any such users in their libraries. As a result there was a serious lack of information resources for people with disabilities, in addition to an inaccessible library infrastructure. This lack of services and resources compounds the educational disadvantages suffered by people with disabilities.

Mambo *et al.* (2016) observed that inaccessible library facilities and services are among the factors that keep students with disabilities away from universities in Malawi. In Malawi, university students depend solely on the library for all their reading due to the dearth of books. Therefore, denying library services to some students, i.e. those with disabilities, increases the difficulties they have to encounter to achieve academic success.

In another study by Kamchedzera (2017) on the response of Christian organisations to the needs of people with disabilities, students with disabilities lamented the lack of library resources in appropriate format for their use as one of the challenges they encounter. The current study differs

from the two mentioned above in that this study focuses on library services provision to students with disabilities in while the two above focused on other issues and library issues were raised among the challenges facing students with disabilities.

Libraries find themselves squeezed between a rock and a hard place as they operate under minimal budgets (Chaputula and Boadi, 2010; Mapulanga, 2012; World Bank, 2010), while at the same time being expected to provide quality services for all users.

The National Council for Higher Education (NCHE), a body responsible for the accreditation of higher education institutions in Malawi, set the following minimum standards for academic libraries (National Council for Higher Education, 2015):

- i. All buildings shall provide for special needs access
- ii. Design and construction shall accommodate universal access
- iii. Entrance doors and corridors shall allow for the turning of a wheelchair
- iv. Toilets should have special facilities for wheelchairs and their doors should open outwards
- v. Library and learning resource centres shall have facilities that guarantee the means to access library resources by all learners, including materials suitable for people with special needs (National Council for Higher Education, 2015, p. 23).

As can be observed from the above standards, the NCHE's requirements are not exhaustive and can be limiting when compared to the accessibility obligations outlined by the CRPD. However, it gives a starting point for academic libraries in Malawi to start thinking about accessibility issues. Standard (v) above empowers librarians to source accessible content for students with disabilities. This is consistent with the Marrakesh Treaty (Lewis, 2013), a World Intellectual Property Organisation (WIPO) initiative to increase the availability of information resources for people with disabilities in developing countries, where only less than 1% of globally published content is available in alternative format (EIFL, 2017). However, librarians in Malawi will have an uphill task fulfilling the above-mentioned obligation due to the newly adopted copyright law which has introduced a commercial availability test, which requires ascertaining the commercial availability of content before creating an alternative format copy (EIFL, AfLIA, & IFLA, 2017). This has been condemned by organisations such as Electronic Information for Libraries (EIFL), African Library and Information Associations and Institutions (AfLIA) and International Federation of Library Associations and

Institutions (IFLA) as it contradicts the aim of the Marrakesh Treaty which Malawi herself signed in July 2017 (EIFL *et al.*, 2017).

The IFLA checklist for library services for people with disabilities (Irvall & Nielsen, 2005) is a good guide for all types of libraries worldwide, including academic libraries, in their endeavor to provide services for students with disabilities.

## **2.9 Appraisal of the chapter**

This context discussion acknowledges the efforts by the Malawi government to promote access to education for people with disabilities. The signing and ratification of the CRPD, formulation of relevant policies such as the National Policy on Equalisation of Opportunities for Persons with Disabilities; and the passing of the Disability Act; and the inclusion of disability in key education policies such as NEP and NESP, attest to this. Both policy and legislation demonstrate government's awareness of the existence of barriers in the education system, and government's pledges to facilitate the inclusion of people with disabilities in the system by removing all associated barriers.

The policies and legislation also demonstrate a clear departure from the old medical model to a social model approach to disability. Therefore, instead of expecting students with disabilities to change, libraries must change the way they provide services to make them accessible to these students.

Nevertheless, an analysis of the policies and legislation exposes challenges that are likely to cause continued exclusion and disempowerment of students with disabilities in the higher education environment.

The lack of strategies and regulations to facilitate and enforce policy implementation has left institutions uncompelled to implement the policies and legislation. Thus implementation of the policies and legislation is regarded as an option, and not a priority.

In countries that have successfully implemented disability policy and legislation, such as the United Kingdom and the United States, clear and strong frameworks were put in place to monitor implementation.

Additionally, the policies placed more emphasis on the implementation of inclusive education in primary and secondary schools than in higher education, thereby creating an impression that higher education institutions are exempted from implementing inclusive education.

As the enrolment of students with disabilities increases in secondary schools in Malawi, owing to inclusive education, higher education institutions should anticipate more students with disabilities. Consequently, anticipatory adjustments must be carried out to ensure full inclusion.

The CRPD has brought a paradigm shift in the world's perception of and response to disability. Likewise, academic libraries need to re-examine their service provision as they seek to implement the requirements of the CRPD. Robertson (2007, p. 32) advises that library staff must continuously subject their policies and practice to scrutiny to detect and eliminate any barriers that could hinder library access to students with disabilities.

Social and physical environments that cause accessibility difficulties in universities must be rehabilitated to ensure full participation of students with disabilities. This aligns with the social model, which is an underlying theory of this study.

Furthermore, government policies must be coherent and broad to cover the wide spectrum of issues concerning people with disabilities, with clear and strong frameworks for implementation. A UNESCO study on the access to information and knowledge using ICTs for persons with disabilities (UNESCO, 2015) found that some countries have an enabling policy and legislation with no regulation for implementation. Another study, on disability in higher education in South Africa, (FOTIM, 2011) found that South African higher education institutions responded to disability in a reactive approach due to a lack of strong policy frameworks.

From the researcher's experience at her work place, which is among the study sites, construction of ramps is considered an effective response to the creation of an inclusive higher education environment. This addresses the needs of students with mobility impairment only. Construction of ramps along pathways and corridors is not enough to address accessibility challenges. Higher education institutions should move beyond ramps to create an inclusive environment.

On the other hand, the Marrakesh Treaty brings about some implications that have a bearing on the current study. Under the Treaty, more persons with print reading disabilities in Malawi will

have a wider access to a broad range of works in accessible formats. This would translate into improved access to education and increased participation in the economy.

Secondly, the Marrakesh Treaty creates an enabling environment for libraries to get value for money from their resources, since under the Treaty it is permissible for them to either convert existing works into accessible formats or get them from other organisations where such accessible formats already exist. This easy exchange of works in accessible formats reduces the cost of the local production of works that might already exist in accessible formats elsewhere.

Thirdly, the Marrakesh Treaty implies improved compliance with international commitments. For example, by acceding to the Marrakesh Treaty, Malawi is bound to fulfil obligations under the CRPD and the United Nations Convention on Rights of the Child.

However, two issues emerge clearly from the Marrakesh Treaty. Firstly, only 1-2 % of the world's published material is available in accessible formats in developing countries (Martínez-Calvo, 2014), which includes Malawi. Compounded by the limited number of organisations producing accessible format copies, achieving a wide availability of works in accessible format is a big challenge.

Secondly, the copyright limit of converting legally acquired works into accessible formats for use by persons with print disabilities still remains unclear. Already the Malawi Copyright Act has been found to contradict the Marrakesh Treaty, and this has already attracted international attention (EIFL, 2017; EIFL et al., 2017; Electronic Information for Libraries (EIFL), 2017).

The United Nations Convention on the Rights of Persons with Disabilities and the Marrakech Treaty have brought a new debate on intellectual property protection and disability access. One example is the commercial availability test, which is imposed by the Malawi Copyright Act (Malawi Government, 2016a) but not a requirement in the Marrakesh Treaty. This test hinders the timely provision of information to beneficiaries by authorised entities such as academic libraries. The test has further implications on cross-border exchanges of accessible format works, thereby increasing information deprivation among visually impaired persons.

## **2.10 Chapter summary**

This chapter has discussed the prevalence of disability in Malawi, the national policy and legislation on disability and education, prevalence of disability in public universities in Malawi and library services provision for students with disabilities in higher education in Malawi.

The prevalence of disability in Malawi has provided information on the main categories of disabilities that exist in Malawi.

Table 2 provides the missing data on the prevalence of disability in public universities in Malawi and can be used by institutions to make anticipatory adjustments in their infrastructure and services to improve accessibility to students with disabilities. This data is also essential for policy formulation and implementation.

Several policies that have been introduced by the Malawi government have also been discussed, such as the National Policy on Equalisation of Opportunities for Persons with Disability, the National Education Policy and the National Education Sector Plan.

Despite these policies being in place, it was found that students with disabilities are still marginalised.

The next chapter reviews literature on the provision of academic library services to students with disabilities.

## **CHAPTER 3: THEORETICAL FRAMEWORK**

### **3.1 Introduction**

The importance of theory in research cannot be overemphasised. According to Ngulube, Mathipa and Gumbo (2015), theory helps the researcher to maintain coherence and consistency in data interpretation. Theory illuminates the research focus and enhances the researcher's understanding of the phenomenon under study and how it can be interpreted and applied to solve real-world problems (Ocholla & Le Roux, 2011, p. 62). Thus a theory underpins research, and as Silverman (2010, p. 110) argues, no research can be conducted without theory.

Bringing a theoretical framework in a separate chapter is supported by Creswell (2014, p. 94). Creswell states that placing a theoretical framework in a separate chapter and at the beginning of the thesis helps a reader clearly identify and understand the underlying theory of the study. This positioning of the theoretical framework chapter also provides insight about the use of the theory and its relationship to the study for the reader.

This chapter presents the theory that forms the framework for this study.

### **3.2 Theoretical framework**

The confusion and misconception in the use of theoretical frameworks is widely acknowledged in the subject literature (Anfara & Mertz, 2015; Ngulube *et al.*, 2015; Ocholla & Le Roux, 2011). Ngulube, Mathipa and Gumbo (2015) attribute this confusion to the complexity in the development and use of theoretical frameworks. Ocholla and Le Roux (2011) acknowledge the confusion due to a lack of standard interpretation of the concepts 'theoretical framework', 'theory', 'conceptual framework' or 'model.' The two authors define a theory as "a conceptual explanation of a phenomenon and how it interacts with others in space and time in order to broaden our understanding of the concept" (Ocholla & Le Roux, 2011, p. 62).

A conceptual framework is defined as "the system of concepts, assumptions, expectations, beliefs and theories that supports and informs your research" (Maxwell, 2012). A conceptual framework gives a logical structure of connected concepts and illuminates the relationship between ideas in a study. According to Kumar (2011, p. 40), a conceptual framework is derived from a theoretical framework and relates to the specific research problem.

On the other hand, a theoretical framework provides an anchor to the study by providing its clear structure and vision (Grant & Osanloo, 2014, p. 13). Brink, van der Walt and van Rensburg (2012) contend that using a theoretical framework, the researcher is able to organise the study and provide a context in which a problem is examined, data gathered and analysed. Anfara and Mertz (2015) emphasise that a theoretical framework provides a guide on how to conduct research, and that without this guide the researcher would not know what to do. Therefore, without a theoretical framework, it is hardly possible for the researcher to interpret collected data in a coherent manner.

Ngulube, Mathipa and Gumbo (2015, p. 57) state the following as the functions of a theoretical framework in research. First, a theoretical framework provides the basis for a research plan. A theoretical framework influences the researcher's decisions throughout the research process. In the same vein, Herek (2011, p. 137) states that a theoretical framework guides every aspect of research from the research problem formulation, the identification of variables to the interpretation of research results.

Second, a theoretical framework enables the researcher to immerse him or herself in the scholarly literature in the field of study, thereby locating the study in the broader subject literature. This is achieved through a literature review, which is one of the components of a theoretical framework, the others being a research hypothesis/research problem, a theoretical model and research methodology (Ocholla & Le Roux, 2011, p. 62).

Third, a theoretical framework provides a blueprint for understanding a research problem.

Fourth, it offers a plan for data collection. A theoretical framework guides a researcher on the kinds of questions to ask when collecting data. It therefore acts as a tool for data collection.

Fifth, it operates as a tool to interpret research findings. The research facts or statements must be understood in some context, which is provided by a theoretical framework.

Sixth, a theoretical framework helps a researcher to delimit the scope of the study. A theoretical framework delineates the study from any other theories to those proposed for use by the study, thereby restricting the study within the defined scope (Bwisa, 2015).

This chapter presents the theoretical framework used in the study. Due to the multiplicity of terminologies used for people with disabilities, the chapter sets out by explaining the two most

commonly used terminologies; then the preferentially adopted terminology is stated. This is followed by a definition of disability, which gives a background to the models of disability which are discussed in detail in the subsequent chapter. The chapter ends with a presentation of the model adopted for the study and reasons that have motivated the researcher in choosing this model.

### **3.3 Models of disability**

Models of disability are conceptual frameworks that help us understand disability and provide the basis for particular attitudes displayed by society (Sullivan, 2011). Over the years, disability campaigners and academics have used different models to explain the changing social perceptions of disability and people with disabilities. The major models that are distinctively discussed in the literature are the medical and social models of disability. The medical model is discussed to highlight the basis for the researcher's choice of model used in this study.

#### **3.3.1 Medical model**

The medical model of disability originated in the 18<sup>th</sup> century economic recession. The development of industrial capitalism at that time triggered the classification of the labour force as disabled and non-disabled (Oliver, 1998). People who had a disability were viewed as a problem both socially and educationally and were placed in institutions, separated from the rest of the population (Oliver, 1990). The growth of the medical profession led to the medicalisation of disability, where disability was viewed as a medical problem to be corrected by medical experts (Durell, 2014). In other words, a person with a disability was viewed as a victim of a tragedy in need of specialised care, which leads to their being treated as objects of charity (Gartner & Lipsky, 1999, p. 103). In the medical model, medical professionals are believed to possess expertise and knowledge about disability, ignoring the knowledge and experience of people with disabilities themselves, which is disempowering (Croft, 2010, p. 4).

Hoffmann and Dakroury (2013) contend that the medical model locates disability in the individual and therefore considers impairment as the major impediment to an individual's participation in society and independent living. This view promotes rehabilitation as opposed to adaptation to the environment.

Oliver (1990, p. 49) feels that too much emphasis on medical diagnosis as in the medical model may lead to an individual "missing out" on the subjective view of disability. Oliver further states

that the lived experience of an individual is more crucial to understanding disability than medical facts.

Morris (1993) argues that blaming a disability on the individual portrays impairment as a personal tragedy which leads to a failure to locate the disability-lived experience in its social setting. As will be shown in the social model below, it is erroneous to blame restrictions faced by people with disabilities on their impairment, instead of on society which is structured in favour of able-bodied people (Waddell & Aylward, 2010, p. 13). It has also been argued by Oliver (1990, p. 2) that when disability is defined as a tragedy, people with disabilities are treated as victims and subsequent responses include the formulation of policies which are geared towards compensating victims for the tragedy. In addition, Kanter (2015, p. 420) warns against total dependence on the medical model as this makes society unaccountable to the legal, attitudinal and physical barriers that exclude people with disabilities from all sectors of the society.

In addition, the medical model's view that people are disabled by their impairment which limits their functioning in society leads to the characterisation and defining of disabled people by their impairments. This causes the labelling of individuals, which brings feelings of unacceptance and undervaluation in disabled people (Haegele & Hodge, 2016, p. 202).

Nevertheless, the medical model is said to have a much wider influence, as its elements are still visible in modern society (Sullivan, 2011; Waddell & Aylward, 2010).

### **3.3.2 Social model**

The rise of the disability movement in the United Kingdom in the 1970s brought a paradigm shift in the perception of disability which influenced the development and implementation of disability policy. For once, people with disabilities did not have to blame and pity themselves for their disability, as it was society which was at fault and not them (Shakespeare & Watson, 1997). This perception gave them a sense of liberation.

The fight for emancipation by disabled people through disability organisations such as UPIAS led to the shift in the focus of disability from the individual to the societal barriers that prevent full participation of disabled people, from which Oliver (1990) developed the concept of the social model of disability (Finkelstein, 2007; Oliver & Barnes, 2010; Swain, Finkelstein, French, & Oliver, 1993; Swain, French, Barnes, & Thomas, 2004). Therefore, unlike the medical model, the

social model posits that people are disabled by both the physical and social environment, which is unwilling to change and often does not accommodate people with disabilities (Goodley, 2001; Oliver, 1990). The emancipation campaign, led by the Union of the Physically Impaired Against Segregation (1976), sought a new definition of disability and proposed a two-fold definition as follows:

**“Impairment:** lacking part of or lack of all limb, or having a defective limb, organism or mechanism of the body;

**Disability:** the disadvantage or restriction of activity caused by a contemporary social organization which takes little or no account of people who have physical impairments and thus excludes them from the mainstream social activities” (Union of the Physically Impaired Against Segregation, 1976, p. 4).

It is noteworthy from the definition that the social model delinks the cause of disability from impairment (Oliver & Barnes, 2010, p. 548), explicitly placing causes of disability within society and social organisations (Oliver, 1990, p. 11). As stated by Thomas (2004, p. 578), UPIAS’s definition links to the restrictions of activity resulting from society’s response to impairments.

Oliver and Barnes (2010, p. 552) argue that although impairment brings about restrictions in a person, disability is created by barriers that exist in an unaccommodating cultural, social and physical environment. This view is also supported by Oliver (1998, p. 1446), who states that in modern times, disability is understood as “a social and political phenomenon that requires social and political solutions to challenge disabling discrimination”.

Oliver (1990) gives a dual-view social model of disability; the social constructionist and social creationist view.

The social constructionist view faults the prejudices held by people without disabilities, their hostile attitudes and subsequent formulation of social policies which reflect the medical model of disability. This is similar to the idealist view held by Sheldon *et al.* (2007), which asserts that disability results from a combination of “cultural beliefs, attitudes and prejudices” that are so inherent in a society that was thoughtlessly designed for non-disabled people, leading to the unintentional exclusion of disabled people. Finkelstein (2007) shares the same view and states that disability is entirely socially imposed, which can be changed by correcting people’s attitudes and removing barriers to inclusion created, imposed and reinforced by these attitudes such as exclusionary legislation and inaccessible buildings.

In contrast, the social creationist view holds society responsible for institutionalised discrimination, which usually results from societal institutionalised practices. This is similar to the materialist position of the social model advanced by Sheldon *et al.* (2007). According to these authors, the materialist view associates disability with economic and political structures whose fundamental change to a just society requires a political struggle.

The social model has been hailed for its influence on the change of perception of disability and its dominance in underpinning policy and legislative frameworks and service provision (Lang, 2001). The social model is broadly acknowledged globally as the key to understanding and explaining the economic, political and social barriers faced by people with disabilities (Oliver & Barnes, 2010, p. 553).

Throughout history, people with disabilities were regarded as second-class citizens in society and as such have suffered insurmountable discrimination and marginalisation (Lang, 2001, 2007; Peters, 2009). The social model has helped to raise the status of people with disabilities through the advancement of disability issues on the political agenda and illuminating the socio-economic and political structures that promote oppression, marginalisation and discrimination of people with disabilities (Lang, 2001).

By associating disability with the broader external environment, and not individual deficiencies, the social model illuminates the social cause of disability, thereby drawing attention to politics, empowerment, citizenship and choice (Lang, 2007, p. 3). According to Oliver (2009, p. 44), major changes in the direction of service provision were articulated after the formulation of the social model.

In Great Britain, the social model helped in identifying a strategy which aimed at removing barriers to ensure full participation and enjoyment of rights for disabled people (Shakespeare & Watson, 1997).

In the United States, the social model was fundamental in reclaiming civil rights and the creation of equal opportunities for people with disabilities (Shakespeare & Watson, 2002).

Currently, the social model is the underpinning theory in both national and international policy and legislation by world and regional bodies, the European Commission's Guidance note on disability and development for EU delegations and services (European Commission, 2003), the

United Nations Convention on the Rights of People with Disabilities (UNCRPD) (United Nations, 2006), the World Report on Disability (World Health Organisation, 2011), the Salamanca Statement and Framework for Action on Special Needs Education (UNESCO, 1994), and Standard Rules for the Equalisation on Opportunities for Persons with Disabilities (United Nations, 1994).

The social model is known for its distinction between impairment and disability. The isolation of impairment from disability was necessary because should biology have been mentioned and pain admitted as causes of functional limitations, the “oppressors” would have capitalised on these, ignoring the social and environmental causes. In the same vein, Young (2011) advises that caution has to be applied when discussing impairment and impairment effects to avoid advancing prejudices that disabled people are disadvantaged by their impairments and not necessarily by an oppressive society.

Finkelstein (2007, p. 5) underscores this through her example of a rights-based approach to disability where a parliament grants legal rights to those defined as disabled through an identification process that focuses on individual characteristics rather than societal circumstances. For Finkelstein (2007), people are disabled by an “oppressive” society, and not by their impairments. However, Shakespeare and Watson (2002) maintain that despite the prominence of social barriers as a cause of disability, the role of impairment in causing functional limitations should not be overlooked.

Hughes and Paterson (2006) argue that the social model’s tendency to portray the body as being synonymous with its physical dysfunction makes it ahistorical, meaningless and does not account for constructionism. Unfortunately, this is the dominant view in both scholarly and common thought (Hughes & Paterson, 2006, p. 95). This has given rise to the new debates on body and impairment. The question emanating from this debate is whether the separation between body and culture, impairment and disability is tenable.

Thomas (2004, p. 578) introduces the terms “social relational” and “proprietary” approach to disability.

In the social relational approach, disability is defined in terms of an unequal relationship between the impaired and unimpaired. This is evident from the definition of disability as it appears in the

Fundamental Principles of Disability (Union of the Physically Impaired Against Segregation, 1976), which states that it is a:

“... disadvantage or restriction of activity caused by a contemporary social organisation which takes no or little account of people who have physical impairments and thus excludes them from participation in the mainstream of social activities” (Union of the Physically Impaired Against Segregation, 1976, p. 20).

From the above definition, disability is ascribed to the restrictions of activity posed by society's response to people with impairments. It is noteworthy that restrictions of activity are purportedly socially caused (Thomas, 2004). Thomas favours the social relational approach as it gives a better representation of the social model which should inform Disability Studies.

A proprietary approach to disability personalises disability and attributes any restriction encountered by a person with impairment to a social cause. This implies that all people with impairment experience a disability, which is not actually the case. As posited by Braathen and Loeb (2011, p. 78), a person with a physical impairment living in a fully accessible environment would not experience disability as much as one in a completely inaccessible environment.

Hence, Thomas' (2004) assertion that the social relation approach is a true representation and provides a theoretically sufficient explanation of the social model.

Levitt (2017) identifies two key features of the social model whose discussion is conspicuously missing in subject literature: its scope and relationship to other models. According to Levitt, scope and relationship mirror the social setting in the environment of its application. Levitt further states that limiting the social model to barrier removal is an unnecessary restriction because its scope can encompass other impacts of disability on society.

In his analysis of the social model, Woods (2017) points out that the social model of disability excludes neurodivergent labels, as evidenced by the wide use of the medical model of disability in autistic studies, leading to harsh treatment of autistic individuals, resulting mainly from the language used to describe autism, among the numerous reasons. For this reason, Woods (2017, p. 78) argues for the wide application of the social model to cover neurodivergent labels in order to delink autism research from causes and biological effects on services and social issues,

subsequently enabling autistic individuals to explore the impact of living in a predominantly neurotypical society.

In Hughes and Paterson's (2006) observation, the social model of disability has ignored arguments that problematise the body such as phenomenological, post-structuralist and feminist arguments among others, as new developments in the sociology of the body. By taking a neutral stance, the social model creates a conceptual obstruction to the advancement of a sociology of impairment.

When the body is relegated to impairment, as is the case in the social model, it creates a medical and therapeutic relationship between disabled people and their bodies, while ruling out policy and politics. This binary approach breeds rigid theories that encompass the medicalisation of disabled peoples' bodies and the politicisation of their social lives (Hughes & Paterson, 2006, p. 95).

### **3.3.2.1 Critiques of the social model**

The social model has received its fair share of criticism. Thomas (1999) faults the social model for its inability to account for what she calls impairment-related experiences. Thomas argues that the way people think about themselves and their interaction with others, regardless of impairment, depends on a number of structural and relational processes, which, when examined through a social model lens, should be illuminated. Lourens (2015, p. 29) argues that the social model “over-socialises” disability by placing too much emphasis on barrier removal. Lourens states that a change in attitude does not translate to the disappearance of impairment. No matter how much reconstruction can be done to society, elements of “biologically informed” disability will still be visible. People would still experience considerable effects of impairment.

Oliver (2009) counter-argues that the social model is about the collective experience of disablement, not personal experience of impairment. He further warns against paying too much attention to the experiences of disabled people while ignoring the role of the environment in shaping those experiences, which may indirectly re-emphasise the personal tragedy of disability. In addition, Oliver (1990) contends that the collective voice was significant for the unified front as they all had a common predicament, which was oppression.

The social model has also been faulted for its failure to incorporate other social divisions such as race, gender, and sexuality. Watermeyer (2006) argues that in an attempt to put up a unified political front against oppression, the social model divorced disability from the impaired body. As

a result, individuals lost their unique lives. Some disabled feminists (Thomas, 1999; Wendell, 1996) have also questioned the social model's disregard for unique and diverse lives, which has resulted in some theoretically oppressive identities being invisible and unacknowledged. The two authors argue that the model should have included other oppressing identities such as class, gender and race to make them visible. In the same vein, Goggin (2008) states that a disabled body or mind is also one that is raced, gendered, aged, sexualised and classed, hence disability is intertwined with other sets of different experiences of peculiarity and forms of political engagement. However, Oliver (2009) asserts that the fact that the divisions have not been incorporated does not signify the incapability of the social model, but is due to the non-use of the model by analysts in those divisions.

Further, Corker and French (1998) criticise the social model for its inadequacy as a social theory of disablement. Oliver (2009, p. 49) responds to the two authors by stating that social model proponents have never claimed the equivalence of the social model to a theory of disability. However, according to Oliver, theoretical debates have always been encouraged (Oliver, 2009, p. 49).

Finally, the applicability of the social model in developing countries has been questioned by Lang (2007). Finkelstein (2007) contends that there is a need to examine the validity of some explanations of disability in different contexts. Finkelstein argues that while the social model has proved useful in Western countries, it may not be appropriate in some contexts of developing countries. However, the author commends the social model for its regard of disability as oppression which underpins its political impact. Similarly, Levitt (2017) claims that the social model has made tremendous contributions to the welfare of people with disabilities and the understanding of disability in general.

### **3.4 Implications and applications of the social model of disability**

The social model of disability has several implications for academic libraries. First, an individual's experience of disability is influenced by his or her environment, and an inaccessible environment is a barrier to participation and inclusion. Access to academic libraries is critical for students with disabilities, more especially those with mobility and visual impairment. Inaccessible library facilities exclude students with disabilities from full academic participation.

Second, the unavailability and inaccessibility of information materials restrict educational opportunities for students with disabilities. Information and communication technologies play a significant role in breaking information access barriers for students with disabilities.

Third, stigmatising attitudes towards students with disabilities, perceiving them as incapable, creates a loss of sense of achievement. The availability and awareness of support services and reasonable accommodations increases participation and creates a sense of belonging (Tugli, Klu, & Morwe, 2014, p. 334).

Fourth, overdependence reduces one's dignity and is counterproductive. Academic libraries should address access issues, adapt their facilities and provide assistive technologies for independent access by students with disabilities.

Fifth, the social model implies that university libraries should develop policies that address information services for students with disabilities, including the acquisition of information resources in alternative formats, assistive technologies and adaptive equipment for use by students with disabilities as well as staff training. A lack of policy impacts negatively on library service provision (Mutula & Majinge, 2016). In addition, policies are vital in emphasising the recognition of students with disabilities as potential users of the library services.

### **3.4.1 Application of the social model of disability in related studies**

Despite the criticisms levelled against the social model, it is still dominant in the subject literature.

Wolanin and Steele (2004) used the social model of disability in their study on higher education opportunities for students with disabilities in the United States. The study was conducted to identify barriers facing people with disabilities in attaining higher education. The study found that the barriers were to a large extent man-made and surmountable.

Robertson (2007) uses the social model of disability to draw recommendations for implementing accessible library services in the United Kingdom and beyond. In studying the experiences of students with disabilities studying at Czech universities, Strnadová, Hájková and Květoňová (2015) used the social model of disability to gain insight into the critical issues concerning inclusion in higher education in the Czech Republic. Jones (2002) also used the social model in her study with no recommendations to improve accessibility for disabled users in academic libraries.

On the African continent, the social model has been used by Moabelo (2012) in a study on the marginalisation of young people with disabilities at higher education institutions in South Africa, by Majinge (2014) in her study on library service provision for visually impaired students and wheelchair users in academic libraries in Tanzania, and Mutula and Majinge (2016) in their study on information behavior of students with visual impairments in university libraries. In Malawi, the social model is an underlying theory in Chaputula and Mapulanga's (2017) study on library service provision for people with disabilities in higher education institutions in Malawi.

In addition to these studies, the social model has been used as an underpinning theory in such United Nations treaties and publications as the United Nations Convention on Persons with Disabilities (United Nations, 2006) and the world report on disability (World Health Organisation, 2011).

### **3.4.2 Application of the social model of disability to the current study**

The strength of the social model lies in its focus on the removal of barriers in society which prevent access to services by people with disabilities. As an integral part of society, libraries should remove barriers that hinder access to information. Library buildings and websites must be accessible to people with disabilities.

The social model of disability is therefore adopted for this study.

According to Albert and Hurst (2004, p. 2), the social model offers an analytical framework for understanding why and how discrimination occurs. Using social model in this study helped the researcher to understand how academic libraries create barriers for students with disabilities, which leads to discrimination against them. Albert and Hurst (2004, p. 4) further state that from a human rights perspective of the social model, continued exclusion of people with disabilities from mainstream services promotes discrimination, which is an ultimate violation of human rights. Hence, from a human rights perspective, academic libraries have a legal obligation not to exclude students with disabilities in the way they provide services.

Elcessor (2010, p. 292) contends that the social model acknowledges the physical differences in individuals; however, individuals experience a disability in the context where society does not accommodate their needs. In the same vein, academic libraries have a social responsibility to remove barriers that may stand in the way of users with disabilities.

Elcessor further states that conceptualising disability in terms of rights assists in the formulation of legislation and policies that incorporate a rights-based approach to disability and promotes the use of language that depicts social construction. This approach can help academic libraries to address accessibility requirements for students with disabilities. By examining policies and legislation pertaining to library service provision in the institutions under study, the researcher was able to determine the degree of implementation of national and international disability policy and legal frameworks and how the social model is reflected in library policies. Croft (2010, p. 4) states that the social model is key to formulating policies that focus on removing barriers that prevent people with disabilities from participating fully in society.

By viewing people with disabilities as valuable members of the society, the social model of disabilities recognises them as being capable of making meaningful contributions to social and economic development; and accepts that society is responsible for imposing cultural, structural and attitudinal barriers that prevent them from realising their full potential. This model therefore promotes equal rights and opportunities for people with disabilities in terms of access to such public services as education, health, employment, libraries and others (Babalola & Haliso, 2011, p. 143).

Again, in the light of the social model and in the higher education perspective, academic libraries should remove all obstacles that hinder access to information and create an environment that enables equal access to information in physical libraries as well as that contained in library websites. To achieve this, libraries should provide lifts and other assistive devices, modify library buildings to allow people with disabilities to navigate easily, provide information in alternative formats and ensure that library websites are accessible. Thus, by inspecting library facilities, the researcher was able to identify areas that cause access barriers for students with disabilities.

### **3.5 Information seeking behaviour model**

In addition to the social model of disability discussed in the preceding section, the study also used Wilson's (1999) model of information behavior.

Information seeking models are valuable to the library and information science field because of their ability to predict the information seeking behaviour of individuals which subsequently informs information providers to design services and resources reflecting such behaviour.

Therefore, applying an information seeking behaviour model to this study helped to understand the information seeking behavior of students with disabilities in public universities in Malawi and how academic libraries can design their services and resources to match the behaviour of these users.

Various information seeking models have been developed over the years, some of which are discussed below. The other models have been included to expose the reader to other possible choices of models in order to appreciate how the current model was selected.

### **3.5.1 Ellis's model**

The Ellis model shows the relationship between components which interact in different ways in different information seeking patterns, and explains information seeking activities (Ikoja-Odongo & Mostert, 2006, p. 155). The Ellis model is hailed as the first to depict information seeking for social scientists (Zaremohzzabieh, Saman, Ahrari, & Bolong, 2016, p. 93).

The strengths of the model include: (i) its suitability to be applied in specifying design insights by providing activities for users who want to accomplish tasks within the system, (ii) it functions at many levels of the overall information seeking process, (iii) it is established on practical studies and has been tested in numerous studies that yielded successful results, and (iv) it is more generic.

The following weaknesses characterise the Ellis model: (i) it does not consider the multiple variables, (ii) its lack of feedback loops makes it static, and (iii) components of the model do not reflect phases followed in information searching.

The Ellis model has been used by Makri, Blandford and Cox (2008) to analyse information searching habits of academic lawyers.

### **3.5.2 Kuhlthau's Information search process model**

Kuhlthau's model is said to be complementary to the Ellis model as it extends the Ellis model by adding stages of the information seeking process in order to explain thoughts, feelings and action, thereby making it phenomenological rather than cognitive (Niedzwiedzka, 2003, p. 5). Niedzwiedzka further claims that the information search processes show that an individual refines the problem area gradually whilst the search is still ongoing.

### 3.5.3 Wilson’s (1981) model of information seeking behaviour

Wilson’s 1981 model was the first to recognise informal channels of information transfer by acknowledging that other people are also involved in information seeking behaviour through information exchange (Case & Given, 2016, p. 139). The model also depicted barriers to information seeking efforts. The model presents a triple view of information seeking: the context of an individual seeking information, an information system which can be either manual or electronic, and information resources that might be consulted. Academic libraries exist to meet the needs of users by acquiring, organising and providing relevant information sources supported by suitable and familiar facilities (Oladunjoye, Omiunu and Yomi-Owojori, 2018).

Figure 2 below shows Wilson’s 1981 model.

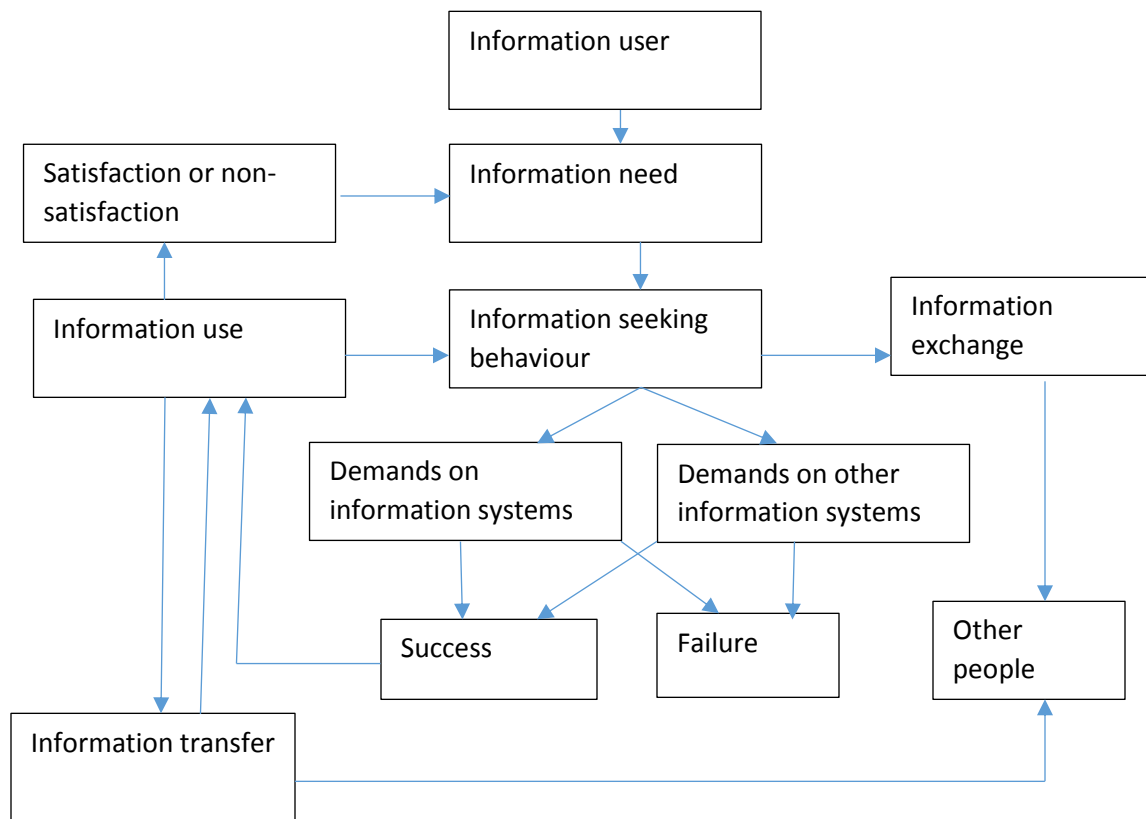


Figure 1 Wilson's 1981 model of Information behaviour. Source: Wilson (1999, p. 251).

Wilson’s model as shown in Figure 2 above shows information seeking being triggered by an individual’s perception of an information need. The model presents a triple view of information seeking: the context of an individual seeking information, an information system which can be either manual or electronic, and information resources that might be consulted.

To satisfy the information need, an individual consults an information system. This action may result in success or failure. If it's successful, the information is used, which in turn satisfies the need either completely or partially. When the information fails to satisfy the need, the individual repeats the process. According to Wilson's 1981 model, information behaviour also extends to other people, in that an information seeker may pass on information that is perceived to be useful for the need at hand; this is shared with other people through information exchange. The model underscores that information seeking is dynamic in nature and is a continuous process. The academic library is an information sources the user. Similarly, librarians are also an information source as some users may consult them directly.

### **3.5.3.1 Criticisms of Wilson's model**

A comprehensive critical analysis of Wilson's model has been provided by Niedzwiedzka (2003, pp. 7-8). Niedzwiedzka argues that separating the context from intervening variables does not make sense, because they are part of the context although they are different in nature. This resonates with Case and Given's (2016, p. 173) argument that Wilson's (1981) model is too general and its components such as context of the person and information need are not specified. Furthermore, Niedzwiedzka (2003) posits that it is not correct to assume that activating mechanisms are only in operation at the point when one makes a decision to seek information; rather they apply to all the other stages. Another criticism of the model concerns its sequential representation of the information seeking process when it is a known fact that it is a back and forth process (Robson & Robson, 2013, p. 181).

Potnis (2015, p. 103) states that Wilson's (1981) model does nothing more than define and solve a problem. Perhaps Potnis draws this from Wilson's (1999, p. 251) own confession about the limitation of the model that "it only provides a map of the research area" and illuminates research gaps without suggesting factors that cause information behaviour.

However, the strengths of the model have also been identified.

Case and Given (2016, p. 173) argue that the Wilson model's ability to identify intervening variables and the methods of information seeking together with related theories to search behaviour makes it universally applicable. Potnis (2015, p. 103) reaffirms that Wilson's model clearly depicts the inter-relationship between information behaviour, information seeking and information

retrieval. In addition, Potnis states that the model gives a framework for explaining “goal oriented information seeking.”

Finally, Potnis (2015, p. 106) asserts that the fact that Wilson’s models continue to be adapted and used as theoretical frameworks to explain the information behaviour of a broad range of groups of users across the world speaks volumes about their consistency, applicability and usefulness. Further to this, the application of Wilson’s model to study the information behaviour of disadvantaged populations and different professions from developing countries is encouraged for the diversity of information behaviour research.

Therefore, this study adopted Wilson’s 1999 model of information behaviour, used in combination with Oliver’s social model of disability. Wilson’s model was used to illuminate information seeking behaviour of students with disabilities in the context of academic libraries from both an individual perspective and on the perspective of socially constructed barriers. Babalola and Haliso (2011, p. 142) classify these barriers into personal, interpersonal and environmental. Personal barriers include lack of awareness of available information services and type of disability which determines information seeking preferences.

By studying information seekers in their context, Wilson’s 1981 model reveals users’ perspective of their information needs, information seeking and information behaviour. Therefore, combining Wilson’s model and the social model of disability helped the researcher to understand and explain the information behaviour of students with disabilities, in addition to identifying the barriers to information access.

### **3.6 Implications of Wilson’s model to academic libraries**

Wilson’s model has several implications to academic libraries. Firstly, marketing and promotion of library resources and services to students with disabilities have a significant impact on information seeking behaviour for students with disabilities. Library promotional materials should include information on disability services. They should also be available in different formats to ensure accessibility to all students, including those with disabilities. Furthermore, academic libraries should design information literacy programmes that do not discriminate students with disabilities. Secondly, interpersonal relationships influence information seeking behaviour of students with disabilities. Wang and Yu (2017, p. 14) state that interpersonal networks for

marginalized communities such as students with disabilities are usually small and unconnected as they are restricted to the disabled community. Therefore, academic libraries should rise up to break interpersonal barriers as per their professional ethos. Providing them with accessible internet facilities is a sure way of opening them up to the outside world. In addition, academic libraries should stock information in different formats to cater for the diverse preferences of students with disabilities as dictated by their disability types and degree of impairment. Academic libraries should also provide assistive technologies for students with disabilities to access information. Šehić and Tanackovic (2014, p. 5) affirm that assistive technologies play a significant role in facilitating information seeking for students with disabilities.

Thirdly, discriminative attitudes and rigid policies can have a negative impact on information seeking by students with disabilities. Academic libraries should train all staff to develop positive attitudes towards students with disabilities. The world report on disability (World Health Organisation, 2011) acknowledges that knowledge and attitudes are critical environmental factors in service provision and social life. Increasing awareness and improving attitudes and training staff about serving students with disabilities improves service delivery. In the same vein, flexible policies that account for information seeking barriers of students with disabilities should be created. Students with disabilities need more time and effort in information seeking and use than their non-disabled counterparts.

### **3.7 Chapter Summary**

This chapter has presented the theoretical foundations of the study. The chapter reveals that while studies abound using the social model of disability and Wilson's model of information behaviour, thus focusing on societal barriers to information access and the user's contextual factors that influence information seeking, there is limited literature that shows the use of these two models in combination. By using the two models in combination, this study investigates the socially constructed barriers that hinder students with disabilities from accessing information in academic libraries, from their individual perspectives.

This chapter contributes to the debate and discussion about the social model of disability and Wilson's model of information behaviour. Moreover, the study will provide a basis for designing

library and information services that respond to the information needs of students with disabilities in academic libraries in Malawi and beyond.

The next chapter presents the literature review.

## **CHAPTER FOUR: LITERATURE REVIEW**

### **4.1 Introduction**

In this chapter the researcher reviews the literature on the provision of academic library services for students with disabilities on an international, continental and local level. The reviewed literature consists of books, journals, published and unpublished reports, theses and dissertations, in both print and electronic format. The chapter is organised in such a way that it addresses the main research question and its sub-questions. The following issues are addressed in this review chapter:

- The role of academic libraries in universities
- Library services for students with disabilities
- Accessibility of information services and resources to students with disabilities
- Accessibility of library websites
- Assistive technologies for students with disabilities
- Challenges faced by academic libraries in providing services to students with disabilities
- Impact of policy and legislation on academic library service provision for students with disabilities.

In addition to these, the chapter also looks at the library services for students with print disabilities, mobility impairment and hearing impairment. Furthermore, the accessibility of e-resources has also been addressed in this chapter. The section on the role of academic libraries in universities is included to highlight the critical role that academic libraries play in students' academic success.

### **4.2 Literature on library services for people with disabilities**

Fink (2005, p. 3) defines a literature review as “a systematic, explicit and reproducible method for identifying, evaluating and synthesising the existing body of completed and recorded work.”

The purpose of a literature review is to situate the research in the context of related existing knowledge. There are usually existing studies addressing a similar phenomenon to the one being researched. Therefore, by reviewing subject literature, the researcher becomes familiar with new developments in the subject area, identifies the most researched areas, current trends and least researched areas (Hart, 1998, p. 28). So by reviewing existing literature, a researcher will avoid

repeating what others have already done, and will be guided on the best approach for his/her own research. Creswell (2009, p. 25) and Maxwell (2005, p. 55) concur that literature review provides a justification for the study as well as a benchmark for its findings of the study.

Therefore this review of literature on the provision of academic library services for students with disabilities in higher education institutions was essential, for the researcher to become familiar with current debate in this area, to identify the gaps and learn the common methodologies used, which also provides a justification of methodology selected for the current study.

### **4.3 The role of academic libraries in a university**

The significance of an academic library in an institution cannot be overemphasised. The library has been described as the heartbeat of the university, the hub of learning. One author even stated that the quality of a university is determined by the size of its library. Haddow (2013) adds that the library represents a physical exhibit of the university's core values and academic accomplishments. In other words, an academic library speaks volumes about the prestige of its parent institution.

Elsewhere, academic libraries have been listed among the factors that influence the decisions of prospective high school students (Soria, 2013).

An earlier study by Jiao, Onwuegbuzie and Daley (1997) on reasons for students' use of the library found that the most common reason students use the library was to get a book or an article for an assignment. The other reasons were to study for a test, access computerised indexes, read newspapers and to socialise. In a survey of the information needs of wheelchair users in Oyo state in Nigeria, Sambo *et al.* (2017) found that 95% of the students need information for education purposes, 86% for recreation, 72% for social or personal purposes, while 67% need information on health issues. This corroborates with the findings of Beyene's (2018) study on digital inclusion in the library context, where the majority of respondents, who were students with visual impairment, indicated that their chief motivation for going to the library was educational. Therefore, as students with disabilities seek to realise their educational goals, academic libraries must ensure that their information needs are satisfied. This can only be achieved when libraries and their services and resources are accessible to these students.

Research shows that libraries have an impact on the academic success of students (Association of College and Research Libraries, 2015; Bell, 2008). A study by Haddow (2013) on academic library use and student retention found that students who were retained used more authenticated resources and borrowed more library books than those who were withdrawn on academic grounds. Another study, conducted by Soria, Fransen and Nackerud (2014), found that there was a positive relationship between undergraduate students' retention and grade point average (GPA) score and their use of the library. This emphasises the academic library's role of contributing to the academic success of students and the need for libraries to level the playing field by ensuring equal access to facilities, services and resources.

The Association of College and Research Libraries (ACRL) (2017) study on the impact of an academic library on student learning and success found that:

- “Library use increases student success
  - Collaborative academic programmes and services involving the library enhance student learning
  - Information literacy instruction strengthens general education outcomes”
- (Association of College and Research Libraries (ACRL, 2017, p. 17).

As noted by Hernon and Calvert (2006), it is the role of the academic library to develop the information literacy skills of students as they become life-long learners. This view is shared by Onatola (2007), who maintains that university libraries are vital in the advancement of intellectual capability, which anchors knowledge production and manipulation, and supports lifelong learning practices essential for the renewal of knowledge and skills.

The population of students in higher education is becoming more diverse as students with disabilities are increasingly enrolling in tertiary education thanks to enabling legislation and policies. These students present unique challenges beyond the apparent issues of physical access to different areas and access to programmes and services. Their learning styles, physical accessibility needs and sensory abilities are different from the presumed needs of their non-disabled colleagues (Herriott, 2006). Academic libraries have a responsibility to assist their parent institutions in addressing these challenges as they fulfil their role of supporting the achievement of the wider institutional education goal. Consequently, libraries' collections must reflect the

courses offered, and be made available in alternative formats whenever the need arises. Hence, equal access to library resources for students with disabilities should be prioritised. Wiler & Lomax (2000, p. 20) contend that libraries should play a leading role in assisting students with disabilities because they contain intellectual resources which must be made available to all user categories. This entails the removal of all barriers that may hinder access to library resources and services for students with disabilities. This is the epitome of the social model of disability and the core of the inclusive education discourse conveyed in the Salamanca Statement and Framework for Action on Special Needs Education (UNESCO, 1994).

Students with disabilities need the library for study and writing assignments just like their non-disabled counterparts (Mutula & Majinge, 2016). In addition, the social contribution of libraries is crucial to students with disabilities. Equality of access to libraries gives students with disabilities an opportunity to socialise with the other students. This lifts their self-esteem, builds their confidence and gives them a sense of belonging (Bodaghi, Cheong, & Zainab, 2016). According to Klemenčič (2016), a sense of belonging is pivotal to students' academic success, intellectual achievement, motivation and even health. It is therefore imperative that academic libraries nurture this sense of belonging in all students, regardless of their ability, by ensuring equality of access to their services, resources and facilities.

Zamarripa and Shields (2008, p. 4) stress that the library is very central to information seeking and exchange for all students in higher education, including those with disabilities. However, for students with disabilities, their experience of using the library may be different. Zamarripa and Shields sadly note that many students with disabilities spend their entire student lifespan without entering the library. According to Copeland (2011), the observance of the Decade of the Disabled led to an increased awareness of the rights of persons with disabilities to improved access to education, employment and information. Consequently, many organisations, including libraries, started placing accessibility high on the agenda.

#### **4.4 Library services for students with disabilities**

Libraries that are known to welcome all users, including the disadvantaged, offering services that do not discriminate against any users on any basis such as disability, should be the objective of any library service. For example, the Library of Congress in the United States is said to have been serving visually impaired persons as early as 1857 (Jaeger & Bertot, 2015). Further to this, Lewis

(2014) states that there already existed at least one special library in each state that was providing for the information needs of the blind and people with low vision, under the auspices of the National Library Service for the Blind and Handicapped, even before ADA.

In Canada, library services for people with disabilities date back to 1984 when the British Columbia College and Institute Library Services (BCLIS) was established to serve the information needs of students and faculty with print disabilities (Epp, 2006, p. 189). Due to the shortage of books in accessible formats, BCLIS was mandated to produce resources in accessible formats.

Several studies were conducted to evaluate the impact of ADA on academic library service provision for students with disabilities. Nelson's (1996) survey, conducted 5 years after the passage of ADA, revealed a positive trend in library service provision for users with disabilities in compliance with ADA. In the survey, 87% of the libraries indicated the provision of special services or adaptive equipment for the disabled. Services for the blind and visually impaired were provided by 55% of the libraries. In terms of adaptive equipment, only 42% of the libraries indicated the availability of assistive technology, the most common being text enlargement.

In terms of staff training, only 39.8% of the libraries trained their staff to serve the needs of disabled users, and only one third of them had a staff member assigned to such users.

In general, special services for wheelchair users were more common than the provision of adaptive equipment.

A follow-up survey by Willis (2012) registered great improvements in some areas, while there was no significant change in others. All except five libraries that were surveyed had carried out modification of physical barriers. A new modification of automatic doors was indicated in addition to the usual modification of computer work stations and restrooms.

Great improvements were registered in the provision of special services and services for the blind. Libraries that provided adaptive equipment had increased from 42% in Nelson's survey to 85% in Willis' survey. Library services for the blind were now available in 81% of the surveyed libraries, up from 55%. Another significant increase was registered in the accessibility of online public access catalogues (OPACs), which had increased from 18% to 100%. Web-based OPACs which had become common in recent years may have contributed to this high improvement. A remarkable

increase was also registered in the use of adaptive equipment, from 42% in Nelson's survey to 80% in Willis' survey.

There was no significant change in staffing levels for library services for students with disabilities. Only less than half of the libraries had a dedicated staff member for the purpose, a slight increase from one third in Nelson's survey. Establishment of campus-wide disability support services which coordinated the needs of students with disabilities may have contributed to this (Willis, 2012).

An interesting finding from Willis's survey was the general impression that reasonable accommodation meant the construction of ramps for users on wheelchairs (Willis, 2012).

However, it is important to note that the above surveys focused on the service provider only. The perspective of the students with disabilities, which is critical to developing accessible library services and resources, was lacking. Moriña, López Gavira and Molina (2017, p. 217) call this "the biographical-narrative", where the voice of the marginalised being researched, whose voice is rarely heard, is heeded without being silenced. According to López Gavira and Moriña (2015, p. 367), studies about exclusion should include the voice of the excluded, which is key to creating an inclusive environment.

In the United Kingdom (UK), library services for the disabled date as far back as 1868, when Thomas Rhodes Armitage established the British and Foreign Blind Association with the aim of promoting education for the blind (Owen, 2007, p. 810). The British and Foreign Blind Association was later transformed into the Royal National Institute of the Blind (RNIB), which is the most prominent non-profit organisation in the UK for all issues related to visually impaired people (Owen, 2007, p. 810). The National Library for the Blind was established in 1882 (Brophy & Craven, 1999). The two organisations have since merged to form a single library service and a lobbying body for visually impaired persons (Robertson, 2007, p. 4). The passing of the Disability Discrimination Act in 1995 (United Kingdom Parliament, 1995) was truly progressive, as libraries were now required to make "reasonable adjustments" to allow access for users with different types of disabilities. However, as was the case with ADA, service providers assumed that reasonable adjustments consisted of constructing ramps for wheelchair users. Pionke and Manson (2017) warn that providing wheelchair accessibility is not enough, as it does not bring convenience in the use of shelves or restrooms. The two authors advise library professionals to go beyond legal compliance for equitable library services to people with disabilities because some critical issues

are not clearly spelt out in the legal provisions such as ADA. Heery (1996, p. 5) points out that what students with disabilities need most are high quality library services and not physical access. Moreover, only a small percentage (7%) of people with disabilities use wheelchairs (Heery, 1996). For this reason, Heery advises that physical inaccessibility should not be an excuse for libraries not providing services to students with disabilities. He further suggests practical methods which can be used by libraries to respond to the needs of students with disabilities, such as assigning a specialist member of staff, conducting training for library staff to raise their awareness of disability issues, and providing special orientation sessions and collaboration within and between institutions.

The need for the training of staff is articulated well in a study by Rugara, Ndinde and Kadodo (2016) on library services for students with disabilities in one specific university in Zimbabwe where library staff bemoaned the lack of training that could prepare them to serve students with disabilities. Library staff stated that they assisted students with disabilities, to whom one member of staff referred as “a forgotten tribe”, out of kindness (Rugara *et al.*, 2016, p. 199). In such an environment, attitudinal barriers are likely to be encountered.

Commenting on the benefits of disability awareness training, Charles (2005) concedes that it has the potential for improved frontline services for people with disabilities. Disability aware staff are likely to improve staff’s attitude, which is an access barrier for students with disabilities (Carter, 2004). Anti-discrimination laws cannot guarantee a change of attitude towards people with disabilities (Lee, 2007a, p. 117), hence the necessity of sensitisation training for library staff. According to Lee, attitudinal barriers rank highest among the barriers that hinder access to libraries for students with disabilities, and they may still exist even when the physical barriers are removed (Lee, 2007a, p. 119). Students with disabilities want to be treated like any other students, without being stared at because of their disability, or being offered unsolicited support (Lourens & Swartz, 2016; Moriña, 2017b). It is for these reasons that students with an invisible disability prefer not to disclose their disability.

According to Kaufmann, Perez and Bryant (2018, p. 3), collaboration means “two equal participants that trust each other and share a common thinking for improving educational experience and accessibility to resources for all students.” Libraries need collaboration to meet users’ increasing expectation of readily accessible services. Hernon (2006) adds that when

librarians work in partnership with disability services, they are likely to design library services and resources that do not leave users with disabilities with a feeling of isolation or perceiving themselves as different whenever they use the resources and services, either physically or electronically.

For a long time, libraries have been working in collaboration with each other. In present times, the increasing roles of libraries and limited resources have forced them to extend collaborative links to publishers, foundations and even government (Gashurov & Kendrick, 2013). In the same vein, Epp (2006) states that among other things, libraries need strategic partnerships and international partnerships to achieve equitable access. Writing about collaboration within an institution, Gaetz (2012, p. 4) contends that necessity and practicality are usually the main drivers of collaboration between the library and academic departments. In practice, no library can be self-sufficient, hence the need to work in partnership in information provision. This is confirmed by Brophy and Craven (1999) in their accessible libraries project in the United Kingdom, where they found that no single library provided adequate services for users with disabilities. Pinder (2005) and Jones (2002) give an example of two successful collaborations in the United Kingdom, Scottish Confederation of University and Research Libraries (SCURL) Special Needs Group, which aims to provide and improve services and facilities for users with disabilities in Scotland, and the Consortium for Libraries in Higher Education (CLAUD) whose aim is to improve the accessibility of library services in south and south west England. Similar initiatives exist in the United States of America, Canada, New Zealand, Singapore, Ireland and Australia (Heron, 2006b, pp. 20-22). Carey (2007, p. 30) proposes the establishment of a global library to address the shortage of alternative formats for visually impaired people.

#### **4.5 Accessibility of information resources and services to students with disabilities**

According to Pionke (2016, p. 318), accessibility refers to a situation where “anyone with any kind of disability can easily use our buildings, spaces, and services without having to make any significant changes to how they normally do things.”

In the library environment, informational accessibility can only be achieved when information is available in accessible formats and is “consistent with the requirements of each library user category” (Rugara *et al.*, 2016, p. 200).

Accessibility of the library itself is a prerequisite to the accessibility of library services and resources (Samson, 2011, p. 271). Since the social model, which is the underpinning model in this study, asserts that people are disabled by barriers imposed by society, academic libraries must endeavour to identify and remove barriers that can hinder access for students with disabilities (Majinge, 2014; Samson, 2011, p. 272) .

Kouroupetroglou, Pino and Kacorri (2011, p. 24) state the following as the basic provisions required by students with disabilities:

- i. “access to interpersonal communication with the members of the academic community,
- ii. access to the structured environment of the university,
- iii. access to the printed or electronic educational material,
- iv. access to the board and the presentations in the classrooms,
- v. access to the exams/tests, and
- vi. access to the information and the WWW content.”

Contextualising these requirements in the academic library setting, it can be said that students with disabilities require:

- i. access to interpersonal communication with library staff,
- ii. access to the library building,
- iii. access to print and electronic library resources,
- iv. access to information literacy programmes; and
- v. access to library websites and electronic databases.

Communication is vital in providing services for students with disabilities. Poor communication is one of the barriers that can prevent students with disabilities from visiting the library (Samson, 2011, p. 271). For instance, Robertson (2007, p. 29) states that students with hearing impairment experience frustration when library staff do not recognise their communication barrier. For this reason, Robertson (2007, p. 41) recommends raising the awareness of front-line library staff about issues concerning communication with people with disabilities. Robertson recommends that staff should keep eye contact when talking with hearing impaired students to enable them to lip read and that staff should also have a basic knowledge of sign language. Charles (2005) makes a good

attempt at describing how academic libraries can conduct fruitful training on disability awareness. Unfortunately, library and information science education, which is supposed to prepare graduates for working with people with disabilities, is not doing so. Instead, LIS education is geared towards services for non-disabled users, in both developed and developing countries (Koulikourdi, 2008b).

Commenting on the role of the Disability Equity Training at Victoria University of Wellington (New Zealand), Gibson (2006, p. 62) states that the training provides an opportunity to reflect on and address people's attitudes regarding users with disabilities. Gibson further states that the training helps to enhance the understanding of staff concerning the experience of people with disabilities and what different impairments imply for library services provision. Carter (2004) contends that academic librarians should pay special attention to bibliographical instruction, web page design and staff training as they strive to satisfy the needs of students with disabilities. Carter further states that the whole student body stands to benefit from improved interpersonal communication among library staff, their understanding of different learning styles and the improved quality of library services which leads to much easier access to information and for independent inquiry.

Cantor (1996) recommends the adaptable method in designing accessible library services. For Cantor, adaptable is an acronym which stands for:

- Assistive Devices
- Alternative formats
- Personal support
- Transport services
- Adaptable furniture
- Building modifications
- Low-tech devices
- Environmental adaptations.

Cantor's adaptable strategy of achieving accessibility of library services and facilities tallies with IFLA's checklist of library services for people with disabilities (Irvall & Nielsen, 2005).

Studies on inclusive education in higher education have singled out universities as being non-compliant with the inclusive education agenda (FOTIM, 2011; López Gavira & Moriña, 2015;

Moriña, 2017a, 2017b). It is even more disheartening that potential students have at times been denied admission at universities because of a lack of capacity for the universities to provide for their needs (Chiwandire & Vincent, 2017, p. 2). The non-inclusive practices are evident from the many structures in higher education institutions, including academic libraries, which were constructed without considering users with disabilities (Kavishe & Isibika, 2018, p. 19; Moriña *et al.*, 2017, p. 355; Moswela & Mukhopadhyay, 2011, p. 316) as dictated by the social model of disability (Oliver, 1990). This poses access challenges for such students (Irvall & Nielsen, 2005; Robertson, 2007). For example, in his study on providing services to persons with disabilities in public and academic libraries in Tennessee, Pemberton (2004) found that public libraries served persons with disabilities better than academic libraries. In most developed countries, modifications to academic libraries have been carried out following the passing of legislation and development of policies aimed at facilitating equal access to information services and resources (Nelson, 1996; Samson, 2011). However, in numerous cases, these modifications are *ad hoc*, usually responding to particular needs of students with disabilities as they arise, not in anticipation of such needs (Emong & Eron, 2016; Pinder, 2005, p. 465; Samson, 2011).

Students with disabilities require information in alternative formats such as audio, large print and braille with their accompanying technologies (Epp, 1999). Students with disabilities should be free. Like all other students, to use any method of their choice to access information from the academic library. However, this is not always the case in academic libraries. Phukubje and Ngoepe (2016, p. 4) observe that students with disabilities face delays in getting reading materials in alternative formats, which impacts negatively on their academic performance. This problem is compounded by the limited availability of alternate formats and the lag between print and the production of alternate formats, which can take as long as two years (Carey, 2007, p. 23). Another complication is the unwillingness by publishers to provide accessible equivalents of their works. Koulikourdi (2008b, p. 145) found that publishers in Greece were reluctant to produce alternate formats of their publications due to the additional expenses of creating audio books and the uncertainty of future markets, lack of knowledge and of partnerships with national associations of persons with disabilities.

Furthermore, there is a lack of provision for some disabilities such as learning difficulties and physical disabilities (those who cannot hold a book) in library policies (Phukubje & Ngoepe,

2016). As a result there is a paucity of reading materials catering for such disabilities. This was confirmed by Matshediso (2007, p. 688) who found that most of the higher education institutions he studied provided services only for students who were visually impaired and those who used wheelchairs. Only four had services for the deaf, while two institutions did not have any services for the deaf at all. Although students with such disabilities do not have visual problems, they still face difficulties in reading ordinary print. Epp (2006) faults organisational attitudes that do not consider the unique needs of students with disabilities in their plans to improve library service delivery.

In her study on educational support for students with disabilities in South African higher education, Mantsha (2016) found that there is a lack of library information resources in accessible formats such as braille, audio and others. This is the situation in most developing countries such as Zimbabwe (Rugara *et al.*, 2016), Botswana (Moswela & Mukhopadhyay, 2011), Mauritius (Pudaruth, Gunpath, & Singh, 2017), Tanzania (Majinge, 2014), Nigeria (Bodaghi & Zainab, 2013; Lawal-Solarin, 2012) and Kenya (Kiambati, 2015; Ochoggia, 2003), to mention just a few.

The single study on library service provision for persons with disabilities in post-secondary institutions in Malawi also found an acute lack of information in alternative formats and technological aids for use by this group of library users (Chaputula & Mapulanga, 2017).

In some academic libraries, services for students with disabilities are provided in special units. Some scholars have argued that this defeats the purpose of inclusiveness and only manages to “ghettoise” students with disabilities (Pinder, 2005; Robertson, 2007). Furthermore, this isolates disability access matters from the broad spectrum of library management (Lee, 2007b). As a result, the unit may be treated as peripheral to the overall library, which may lead to its omission from overall library plans, giving an impression that the services of the unit are not a library priority. However, a special unit arrangement is ideal for visually impaired students who may need to take notes using a Perkins Braille while they are reading, which may disturb other students and also attract the attention of on-lookers due to the noise it produces.

It has been generally observed that although legislation and policy continue to influence service provision and building design, academic libraries still fall short in achieving accessibility due to the a one-size-fits-all approach used in catering for the needs of students with disabilities (Pionke, 2016, p. 319). For example, providing a sign language interpreter for students with hearing

impairment shows a lack of understanding of the population in that segment because some can lip read, just need hearing aids or even a computer in some cases. Thus, Mantsha (2016) and Pionke (2016) warn against this kind of bundling of students with disabilities together as a homogeneous group, because although they may fall within the same segment, they are distinct.

Herriott (2006, p. 51) and Pionke (2016) suggest the application of universal design principles to libraries. Universal design aims to offer enhanced accessibility to a broader range of people by making products and services, and the environment, usable by the majority of the population (Bashiti & Rahim, 2016, p. 412). Unlike accessibility requirements that address prescribed standards, universal design principles recognise the equality of human beings without treating some as special (Bashiti & Rahim, 2016; Herriott, 2006). Article 9 of the UNCRP (United Nations, 2006) urges state parties to the convention to employ universal design principles in the design and development of new infrastructure, products and services to ensure accessibility by all, including people with disabilities. However, universal design has limitations too as it does not address all accessibility problems. For instance, specialised facilities and services such as Braille for the visually impaired are still required despite providing universally accessible facilities.

The sections that follow discuss the different disabilities and their information needs.

#### **4.5.1 Library services and resources for students with print disabilities**

People with a print disability are those who are unable to read traditional print materials (Atkinson & Dhiensa, 2007, p. 2). They include people with visual impairment, other physical impairments that may prevent them from using their hands, and cognitive impairments such as dyslexia.

According to Bernadi (2013), visual impairment is the most common disability in the world. It includes total and partial blindness. Visually impaired people (VIPs) have problems reading traditional print materials. As such they require information in alternative formats such as large print, audio and braille.

Braille is a system in which text is transcribed using raised dots to represent characters, that are read by touch (Kinnell, Yu, & Creaser, 2000). Previously, the transcription was done manually using a braille typewriter but specialised printers, called braille embossers, are currently used.

Audio books are created by reading text and recording it on audio tapes. This has been made easier with developments in ICT as there are software programs that convert text to speech.

Large print books have font sizes ranging from 16 to 20. Such books are published by special large-print publishers (Kinnell *et al.*, 2000, p. 11).

Bernadi's (2013, p. 10) review of library services for the blind found the following:

- Uneven library services provision for visually impaired persons across countries.
- Services are not well developed, are considered low priority and usually underfunded.
- In most cases the services are offered outside the existing library.
- They are primarily established to produce accessible formats (braille, audio, electronic texts, large print).
- Libraries are very slow to harness the benefits of technological advances in electronic library services

This is in agreement with Kinnell, Yu and Creaser (2000) whose study found that although the use of braille and audio was popular among visually impaired persons, participants expressed general dissatisfaction at the shortage of accessible resources. As a result they usually depend on their sighted counterparts as a source of information. Seale *et al.* (2015, p. 127) in their study on the relationship between disabled students and their use of various technologies in higher education found that although students with disabilities valued formal sources of information, they were not conveniently available and students instead turned to their able-bodied peers to fill the gaps. This is also confirmed by Kamchedzera (2015) whose study on access and equity for students with disabilities at the University of Malawi's Chancellor College found that students with visual impairment usually relied on their sighted peers to read to them due to a lack of textbooks in alternative formats. The following narration of one of the participants in Kamchedzera's study confirms the magnitude of the problem:

“Accessibility of important texts is a problem. You find most of the time that those books are not in Braille and that you have to depend on someone to read for you. Sometimes they [read too] fast, so most of our work may be half-baked. Some of our friends also become busy with their assignments and it's difficult for them to help us. Sometimes you have to beg people to assist you” (Kamchedzera, 2015, pp. 86-87).

Thus, the students depend solely on the goodwill of their peers to access information. This reduces their dignity and exposes them to all sorts of abuse, as narrated by one of the female students with visual impairment participating in Kamchedzera's study:

“We are sometimes abused by male students without disabilities especially when we ask them to assist us, for example, to help us with mobility” (Kamchedzera, 2015, p. 84).

In a world where only 5% of published material is available in alternative formats, visually impaired persons face an acute lack of information. In an academic institution, this is a great concern as the scarcity of alternative formats puts students with visual impairment at a disadvantage in terms of academic achievement. They have to succeed using only 5% of what sighted students can access (Kavanagh & Skod, 2005). The situation is worse in developing countries where the percentage is less than 1%. Developing countries struggle to provide for even the basic needs of visually impaired persons due to the lack of such initiatives as libraries for the blind and other voluntary organisations which are very active in developed countries but very rare in low-income countries (Alemna, 1993).

What is disturbing is the fact that despite the long history of libraries' strong provision for visually impaired persons, users still face an acute deprivation of information.

#### **4.5.2 Library services and resources for students with mobility impairment**

Mobility impairment refers to physical disabilities that affect one's ability “to move, manipulate objects and interact with the physical world” (Laabidi, Jemni, Ayed, Brahim, & Jemaa, 2014, p. 30). People with mobility impairment have restricted movement or control of their limbs. Therefore, physical environments that are designed without considering the needs of people with mobility impairment can hinder their participation in mainstream society (Chiwandire & Vincent, 2017). Wolanin and Steele (2004) mention “curbs and stairs that cannot be navigated by wheelchairs or mounted by the physically frail.” Similarly, a lack of elevators, ramps, automatic doors, narrow passages, high service counters and non-adjustable chairs and tables are some of the barriers that keep students with physical disabilities away from libraries (Bodaghi & Zainab, 2013; Lawal-Solarin, 2012; Majinge, 2014; Rugara *et al.*, 2016). Kavishe and Isibika (2018) state that libraries in Tanzania were designed without the disabled user in mind; as a result they are characterised by stairs, high bookshelves, narrow doorways and passages. This is common to many

low and middle-income countries such as Argentina (Todaro, 2005), Greece (Koulikourdi, 2008b), Iran (Bodaghi & Zainab, 2013), Nigeria (Babalola & Haliso, 2011; Ekwelem, 2013; Lawal-Solarin, 2012), Zimbabwe (Rugara *et al.*, 2016), Kenya (Kiambati, 2015; Ochoggia, 2003; Onsinyo, 2018), South Africa (Department of Arts and Culture, 2012; FOTIM, 2011; Matshedisho, 2007; Mutanga, 2017; Mutanga & Walker, 2017), Botswana (Moswela & Mukhopadhyay, 2011) and Mauritius (Pudaruth *et al.*, 2017). Chiwandire and Vincent (2017) emphasise that in addition to ensuring access to the library building, the library's interior must also be accessible and easy to navigate for students on wheelchairs. In an ideally accessible library, all users should be able to move between and browse through bookshelves as suggested by Irvall and Nielsen (2005). This is usually neglected, as academic librarians strive to comply with nominal legislative requirements. It is for this reason that Charles (2005) advises that libraries must go beyond legislative provisions by paying attention to less noticeable adjustments.

Chiwandire and Vincent's (2017, p. 5) study found that the preservation of historical heritage was among the reasons for not modifying buildings to improve accessibility. In the case where a ramp was constructed in the library, it was found to be too steep for wheelchairs. The same problem was reported by Moswela and Mukhopadhyay's (2011) Botswana study, where students with disabilities complained that ramps were too steep and slippery to use with a wheelchair.

#### **4.5.3 Library services and resources for students with hearing impairment**

Unlike other types of disability, deafness or hearing loss is an invisible disability because it cannot be noticed. Again, people with other disabilities can still communicate. The lack of communication of deaf people usually marginalises them in the hearing world when sign language intervention is not considered. There are various degrees of deafness. Some deaf people are hard of hearing, meaning that they can hear some sounds and they just require hearing aids (Mazoue, 2011). Others are profoundly deaf and cannot hear, even with the help of hearing aids. For this category, communication is by lip reading or sign language. For many who were born deaf, their mode of communication may only be sign language (Möbus & Mo, 2010). Unfortunately, most library staff do not know sign language and may develop negative attitudes towards deaf users due to communication problems. It is for this reason that Charles (2005) gives a comprehensive account of disability awareness training for the academic library setting.

The International Federation of Library Associations (IFLA) (2000) acknowledges that the major issue in academic library service provision to hearing impaired students is that communication requires extra effort, knowledge and patience. The degree to which these skills can be applied is determined by the age at the onset of the hearing loss, recognising that while some people's hearing impairment is congenital, others experience hearing loss later in life, after acquiring some language skills (Allen, 2007).

To abate the situation, IFLA has developed guidelines for the provision of library services to deaf people (IFLA, 2000) to enable libraries to achieve equality of service provision to both hearing and deaf users. The guidelines cover all aspects of library service provision, such as staffing, communication, collections services and the marketing of library programmes.

In this study, hearing impairment and deafness are used interchangeably. Thus a hearing impaired or deaf person refers to an individual who is either hard of hearing or profoundly deaf.

In the light of the social model, libraries must remove all barriers to communication and transmission of information for people with hearing impairment to successfully attain their educational goals. Robertson (2007) urges libraries to make extra efforts to create a deaf-friendly environment to remove the general perception that libraries are not welcoming to the deaf.

Robertson (2007, pp. 28-29) identifies the following as barriers to access to libraries for deaf people: staff attitude and lack of awareness of communication requirements for deaf people, security arrangements in times of emergency as they cannot hear alarms, organisation of study areas, language usage, access to services and information overload. To overcome these barriers, Allen (2007, pp. 54-55) outlines the following communication tips for library users who are hearing impaired:

- “Approach the patron so you can be seen. Get the patron's attention before you start speaking. Ask the patron how s/he prefers to communicate and then accommodate the request.
- Do not assume a knowledge of sign language. Do not leave to find a person who can sign unless the patron requests it.
- Reduce background noise or move to a quieter location.
- Always face the patron as you speak and maintain eye contact.

- If you are using an interpreter, be sure to speak directly to the patron, not to the interpreter.
- Speak at a normal pace, enunciating carefully; do not exaggerate your lip movements or mumble as this makes speechreading difficult.
- Keep your mouth visible – do not obscure it with your hands or by chewing gum or food.
- Be aware of lighting. For example, do not stand in front of a light source because that makes it difficult to speech read or to pick up visual cues.
- If a hard of hearing patron has hearing aids or other assistive listening devices, give her/him an opportunity to adjust the equipment.
- If the patron does not seem to understand you, write it down.”

In addition to the above requirements, Playforth (2004, p. 56) stresses that staff attitudes should be the first to be corrected, because negative staff attitude is the most disabling factor in the library, with a high potential to impede access for students with disabilities even if physical barriers are removed.

Based on his own experience as a deaf person with long experience working in a public library, McQuigg (2003, p. 368) states that there is a disconnect between the deaf and libraries. Usually this results from the general perception among librarians associating disability legislation compliance with physical access to the library building and not what takes place in it (McQuigg, 2003, p. 374). Commenting on the general lack of provision for the deaf in libraries, McQuigg states that the libraries’ erstwhile history of focusing on the book and reading has led to strong provision for visually impaired persons, at the expense of other disabilities such as hearing impairment. However, the advent of the internet and the World Wide Web brings an opportunity for libraries to reassess their services in order to reach out to all users, including those with hearing impairment. Communication methods for deaf people are not based on hearing and speech; as such they require technology that is tailored to satisfy their communication needs.

Verbal presentation of information becomes a barrier to people with hearing impairment when there is no sign language interpreter ; this leaves them in a state of hopelessness where they cannot make the same choices and decisions pertaining to the use of library services as their hearing counterparts (Playforth, 2004). This should be a serious concern for academic libraries in present times when they are taking up the role of fostering lifelong learning in students through information literacy programmes. IFLA (2000) recommends that the accessibility of library

programmes and public meetings should be prioritised by the provision of sign language interpreters or computer-aided “real-time captioning.”

IFLA further recommends that libraries should consider accessibility for their deaf users in their marketing of and publicity for library services and resources.

#### **4.6 Accessibility of academic library websites to students with disabilities**

According to the founder of the internet, Tim Barnes Lee, “the power of the internet is in its universality. Access by everyone regardless of disability is an essential aspect.” Echoing this, Jean-Malbuissou (2011, p. 1) states that internet technologies have the potential to give persons with disabilities the means to live on a more equitable basis within the global community in a manner that was previously not possible. The World Report on Disability (World Health Organisation, 2011) emphasises that accessible online information helps people with disabilities to overcome the potential physical barriers. Sachdeva, Tuikka, Kimppa and Suomi, (2015, p. 286) contend that increasing technology adoption for people with disabilities is the first step towards bridging the disability digital divide.

According to Ellcessor (2010), “accessible” means “the ability for people with disability to use technology, possibly in conjunction with accommodative measures.” Therefore access depends on the accommodation of disability and also indicates the significance of usability for a variety of individuals.

Schmetzke (2001) observes that just as the physical environment is characterised by enabling and disabling conditions, so is the web, and this leads to the inclusion or exclusion of people with disabilities. For academic library websites, inaccessibility means the exclusion of some segments of the target population such as students with disabilities.

According to Heaven (2004), in addition to modifications to the physical premises, libraries must harness information and communication technology (ICT) to make web-based resources, electronic journals, books and databases accessible to all users, regardless of ability, because inclusive access provides students with an opportunity to achieve their academic goals, so increasing their future prospects. This is very important as libraries are now increasingly using electronic resources such as online catalogues, journals and periodicals; and also developing their own websites (Carter, 2004, p. 14). Nevertheless, research has shown that many websites are not accessible to people with disabilities. Flatley and Dejong (2004, p. 1) observe that although

libraries in the United States had modified their facilities and improved services, little was done to improve website accessibility. Furthermore, in his study on accessibility of library websites for top universities and library schools in the United States of America, Schmetzke (2001) found that only a few of the surveyed libraries were accessible. He attributed this to a lack of awareness by leaders and trainers in the library profession. For this reason, Kumar and Sanaman (2015) suggest that librarians should be acquainted with the ways people with disabilities access information from the web in order to evaluate and challenge library website design and accessibility of vendor-supplied electronic information resources. Another study, by Ekwelem (2013) on library services for disabled people in the digital era in some Nigerian universities, found a wide gap between disabled and non-disabled users in terms of access to electronic library services. The majority of the libraries (91%) indicated that they were unaware of the needs of their disabled users, while 71% indicated that they believe electronic resources were created for non-disabled users.

In their discussion of guidelines, standards, legislation and mechanisms regarding the accessibility of library websites in the USA, Providenti and Zai (2007) conclude that both public and private college and university libraries must provide accessible websites. Similarly, in her study on web accessibility, e-learning and academic libraries, Caldwell (2006) emphasises the necessity for university libraries to understand and apply web accessibility guidelines as they offer remote e-learning services and resources.

Wijayarathne and Amarasekara's (2011) study on readiness of Sri Lankan academic libraries to serve students with disabilities found that there were limited services for students with disabilities and that the accessibility of library websites was very low. As a result, students with disabilities did not benefit from online information services which made up for the limited and outdated library stock.

In their study on the accessibility of South African websites for people with visual impairment, Venter and Lotriet (2005) found that few website owners were aware of the existence of website accessibility guidelines; they therefore had not considered the issue of accessibility in website design, which resulted in inaccessible websites.

According to Pionke (2016, p. 318), the social model of disability helps us understand the barriers faced by people with disabilities in the world which was designed with the non-disabled person in mind. Thus, by applying the social model in academic libraries, it is possible to create services and resources that include people with disabilities. The power of library websites is in their ability to

offer remote access to users, which is very critical for students with disabilities as it enables them to escape barriers likely to be experienced in the physical library. Kleyhans and Fourie (2014, p. 375) agree that approaches to service provision such as library services are usually dictated by the adopted models of disability, and the social model is central to inclusive library website design.

#### **4.6.1 Web content accessibility guidelines**

Prior to the 1990s, the use of assistive technologies facilitated access to electronic information for people with disabilities. However, the creation of the World Wide Web brought diversity in web content, making it difficult for assistive technologies to interpret (Ellcessor, 2010, p. 292). In addition, there was growing enthusiasm for and popularity of the World Wide Web, coupled with increasing attention to the civil rights of Americans with disabilities and progress on telecommunications accessibility. These factors influenced the Web Access Initiative (WAI) of the World Wide Web Consortium (W3C) to develop guidelines to address accessibility requirements for people with disabilities (Ellcessor, 2010).

The WCAG aim at providing unified standards for web content accessibility that meet the needs of individuals, organisations and governments worldwide (Caldwell, Cooper, Guarino, & Vanderheiden, 2008). The guidelines apply to different web technologies, both currently in use and yet to be developed. The WAI assigns conformance levels ranging from A to AAA, where A is the minimum and AAA is the maximum level of conformance. Conformance level A is where information can be retrieved but people with disabilities find it difficult to use (Khan, Idrees, & Mudassir, 2015). For conformance level AA, the web page is accessible to all users including people with disabilities. Conformance level AAA is achieved when people with disability can access the web page with ease in the same manner as non-disabled people; however, this level is too complex and most web sites cannot attain it (Venter & Lotriet, 2005, p. 5).

#### **4.7 Accessibility of e-resources**

E-resources are now forming a substantial part of the regular library collection, as publishers have responded to the digital revolution by realigning their services to the digital age. Journal publishers have now shifted from print to electronic publishing and are now offering their products in the form of aggregated databases as e-books are becoming an option for most publishers. In addition, university libraries are now digitising their special collections to increase availability and reduce

wear and tear due to frequent usage and photocopying (Southwell & Slater, 2012, p. 457). Furthermore, portals, digital libraries, institutional repositories and databases are now common features in academic libraries, with increased promotion of web 2.0 technologies. With these developments, equal access to electronic information for all students, including those with disabilities, cannot be overemphasised.

Electronic information can be accessed by persons with disabilities using a wide range of assistive technologies. Harpur and Suzor (2014) reiterate the power of technology in ending the book famine experienced by people with disabilities.

However, the benefits of the advances in technology to people with disabilities are yet to be realised. Students with disabilities are still marginalised in the electronic environment. This is demonstrated by Dermody and Majekodunmi's (2011) study on the accessibility of electronic databases for students with print disabilities. The study revealed that the electronic environment is as disabling for students with disabilities as the physical environment. In the study students with print disabilities were found to be unable to accomplish their search for articles in an online database using screen reading software due to the inability of the software to read some PDF formats and non-HTML links. In some cases, many HTML links were loaded and much time was spent waiting for the screen reader to read through them all.

Furthermore, students demonstrated inadequate information searching skills despite being orientated by the librarians.

Tatomir and Durrance (2010) present ten features, called the Tatomir Accessibility Check-list (TAC), and developed by one of the authors, Tatomir. The ten checklist features determine the accessibility of electronic resources to people with disabilities who use assistive technologies (Tatomir & Durrance, 2010, p. 581). The features are as follows:

- **Accessible versions of PDF documents:** Scanned PDF documents saved as images instead of text are inaccessible to screen readers (Southwell & Slater, 2013, p. 36).
- **Skip navigation and jump-to links:** Screen readers would read page by page if there are no such links as skip navigation or jump-to links which direct the user of a screen reader to go directly to a particular section in the document. This can be time consuming and tiresome as demonstrated in Dermody and Majekodunmi (2011, p. 155) where students with disabilities expressed frustration when a screen reader had to read through all 25 links appearing on a page, which is time consuming.

- **Clearly labeled page elements:** A page that has no clear labels or marks, or has some marks missing, reduces the amount of accessible content to the assistive technology users because the assistive technologies would skip the unlabeled content.
- **Text captions for tables, images, graphics, graphs and charts:** page elements such as graphics, figures, form fields and links need an underlying text or alternative text to be interpreted by a screen reader. Where no alternative text description is provided, the screen reader cannot read such elements.
- **Limited use of incompatible programming languages and scripts:** Assistive technologies are not compatible with a number of programming languages such as java. Limited use of such programming languages improves accessibility website accessibility.
- **The absence of identically named page elements:** The use of identical labels to mean different things causes the assistive technology user to miss out on important information because assistive technologies skip a label already encountered on the page.
- **Text transcripts of videos, animations and podcasts:** These features are usually used to improve user experience and improve accessibility. However, they create barriers for persons with disabilities. Whenever a screen reader interacts with videos, animations and podcasts, it reads as they are running. Similarly, these are also inaccessible to persons with hearing impairment.
- **Logical and consistent page organisation:** Logical and predictable structure of a webpage eases the interaction of assistive technology users.
- **Absence of timed responses:** assistive technology users usually take more time to finish an online task. As such, times [timed?] emails or forms can be frustrating, as they would keep on repeating the same process once the task times out.
- **Digital forms and functionalities accessible to and usable with adaptive technologies:** Uniform features and functionalities for all electronic resources ensures access to the same information to all users, whether they use assistive technology or not.

In addition to this checklist, the American Foundation for the Blind (n.d.) suggests that security features associated with PDF documents, such as restrictions from copying, printing, extracting or editing, must not interfere with assistive technologies; it may lead to rendering the document inaccessible to assistive technology users. Southwell and Slater (2013) evaluated the accessibility of finding aids to screen readers using WebAIM (WebAIM, 2001), an automatic open-source web

accessibility checker, and WebIE 3 web Browser, a text-based web browser for visually impaired persons (Southwell & Slater, 2013, p. 37). The errors generated by the two evaluation tools are similar to the Tatomir Accessibility Check-list shown above.

Tatomir and Durrance (2010) used the Tatomir Accessibility Check-list to test the accessibility of 32 subscription databases at the University of Michigan. The study found that 58 percent of the databases contained features which are incompatible with assistive technologies, rendering them inaccessible to people with disabilities. The need for making a number of clicks to get accessibility features in a database is time-consuming and frustrating to assistive technology users (American Foundation for the Blind, p. 3). This is what Tatomir and Durrance (2010, p. 592) call the “front door approach.” In some instances, the accessibility link is placed at the bottom, requiring considerable effort to scroll down the page, which is potentially discouraging for assistive technology users. An example is the Emerald database, where the accessibility link is located at the very bottom.

The accessibility of online databases is an issue for libraries due to the perceived lack of time, resources and skills to test the level of accessibility of subscription databases (Byerley, Chambers, & Thohira, 2007). In addition, anti-discrimination laws do not hold vendors of library databases liable to making their content accessible (Harpur & Loudoun, 2011). So students with disabilities continue to face challenges accessing the electronic resources. The International Telecommunication Union (2013, p. 8) stresses that students with disabilities need screen readers, speech recognition, sign language communication and video relay interpretation to effectively utilise e-resources.

A study by Kiambati (2015) on access to e-resources by visually impaired students at Kenyatta University revealed that the students with visual impairment encounter challenges in accessing the e-resources, such as inadequate provision of assistive technologies, a lack of training that would accommodate their needs and a lack of computer skills.

It is worth noting that studies on the accessibility of e-resources in academic libraries in Africa are rare.

#### **4.8 Assistive technologies for persons with disabilities**

In the academic library context, assistive technologies work to reduce or eliminate access barriers faced by students with disabilities, thereby making access to information for such students

possible. Assistive technologies bridge the accessibility gap for students with disabilities in academic libraries. According to Koulikourdi (2008a), assistive technologies have the power to equalise opportunities for students with different disabilities and empower them to work independently. In the light of the social model, assistive technologies bridge the gap between what people with disabilities wish to do and what they can do under the prevailing social environment (Sachdeva *et al.*, 2015, p. 289).

Academic libraries have a legal obligation to provide assistive technologies to users who need them to augment their functionality, in compliance with international treaties such as the UNCRPD and the Marrakesh Treaty, which many African governments, including Malawi, signed and ratified. The Malawi Disability Act also provides for assistive technology for persons with disabilities to improve their societal participation.

Below are brief descriptions of assistive technologies that can be used in academic libraries.

#### **4.8.1 Assistive technologies for people with print disabilities**

Since persons with print disabilities have difficulty reading standard print text, they must be provided with appropriate assistive technologies that will improve the accessibility of text.

It is worth noting that computer operating systems now come with in-built accessibility attributes for persons with disabilities. For example, the Microsoft Windows Ease of Access consists of magnifier and narrator options, which are very useful for visually impaired persons. The Sticky-Keys option allows a combination of commands such as Ctrl-Alt-Delete to be entered individually. This is useful for people with limited dexterity (Boucher, 2018). In the academic library context, assistive technologies range from the simple magnifying glass to sophisticated computer software that can scan a print book and read the text aloud to the user while highlighting text on the screen (Sanaman & Kumar, 2014). Some of the assistive technologies that can be used in academic libraries are discussed below.

- **ZoomText:** This is a screen magnification software for text enlargement. ZoomText makes everything on the computer screen, including all applications, easy to read by magnifying them.
- **Job Access With Speech (JAWS):** This is a screen reading software widely used by people with visual impairment to read digital texts. Its compatibility with speech

synthesisers and the streamlining of keyboard functions makes learning easier and enhances the productivity of visually impaired persons (ASCLA, n.d.). JAWS is compatible with web browsers such as Internet Explorer, Google Docs, Google Chrome and Firefox among others, in addition to Microsoft Office (Nanopac, 2018).

- **Digital Accessible Information System (DAISY):** This is a digital talking book system that gives a reader a similar flexibility to that enjoyed by print book readers (National Federation for the Blind, 2018). According to Begnum (2010), DAISY comes in three forms, namely audio only, text only and a combination of the two. Audio format is a set of recordings with minimum text. This is the most common. The text only format is composed of text only with no audio recording. The text is read using text-to-speech software or braille display. The full text, full audio format presents the reader with both text and speech to enable the reader to listen to the narration and follow the text to ascertain spelling, punctuation and other features.

With DAISY, a reader can navigate by pages, sections or chapters, just as one browses through print pages. DAISY can be integrated with computer software which enables a user to scan a book, which in turn can be read back to him or her (Atkinson & Dhiensa, 2007, p. 7).

- **Kurzweil 1000:** This technology converts text documents to speech. With this software, persons with visual impairment can access any document in print or electronic format. The ability of this software to incorporate communication and productivity tools simplifies and improves the reading, writing and whole learning experience of persons with disabilities (Nanopac, 2018). Furthermore, the editing facility of the software enables visually impaired persons to write and edit documents individually.
- **OpenBook:** This technology uses the latest optical character recognition (OCR) technology to scan a print document which can then be converted to speech. OpenBook provides two speech options: Realspeak Solo and Eloquence. Realspeak is a voice which sounds natural and human, while Eloquence is a synthesised voice and is most preferred for editing and skimming texts (Nanopac, 2018).
- **Duxbury:** This is braille translation software which can be used by both braille literates and illiterates. Duxbury allows for the review of braille texts before printing with either

ordinary paper printer or braille embosser (Nanopac, 2018). A braille embosser is a special printer that provides braille output (Majinge, 2014).

- **Closed circuit television (CCTV):** This device uses a video camera lens to magnify text up to thirty times the original size (ASCLA, n.d.).
- **Scanners:** These are used to convert printed material to electronic text, which can be saved to the computer and read with text-to-speech software such as JAWS, or printed using a braille printer (Ahmad, 2015).

#### **4.8.2 Assistive technologies for people with hearing impairment**

Boucher (2018, p. 9) states that assistive technologies for people with hearing impairment can be grouped into three categories: hearing, alerting and communicating devices.

Hearing assistive devices augment people's hearing ability by adapting the volume and other qualities of sound so that it is useful to an individual (Boucher, 2018). Examples include hearing aids, listening devices which work to amplify sound and increase its levels within desired frequencies (Boucher, 2018).

Alerting devices are used to alert users of specific events which are usually announced using a voice. The alerts usually come in the form of lights, vibration or a combination of the two.

Communication technologies use a variety of keyboards, touchscreens, video technologies and tools to facilitate communication in face-to-face communication (Boucher, 2018, p. 9).

#### **4.9 Challenges faced by students with disabilities in accessing library resources, services and facilities**

Challenges faced by persons with disabilities in society are well documented in the subject literature. Persons with disabilities face challenges in getting employment, accessing tourism, transportation, physical access to buildings, facilities and services, access to education and training, and access to technologies which can potentially alleviate participation barriers (World Health Organisation, 2011).

The role of academic libraries has already been discussed, in Section 4.3.

Despite academic libraries being pivotal to the academic achievement of students, including those with disabilities, they are usually among the sections of the university which present access barriers (FOTIM, 2011; Klinger, 2014; Moabelo, 2012; Mutanga, 2017; Pudaruth *et al.*, 2017).

Discussing academic libraries in America, Pionke (2016, p. 319) argues that the academic library still falls behind in achieving accessibility due to its one-size-fits-all approach to disability, as more attention is paid to compliance than to accessibility. Pionke states that libraries should take into consideration the variations that exist within the same disability segment; for example, while some students with visual impairment prefer braille, others, especially those with low vision, would prefer large print. In this case, providing braille materials only would not be a solution for all students with visual impairment. Therefore, an academic library should provide a wide range of alternative formats to suit the diverse needs of students with disabilities.

In her study on best practices for disability provision in higher education libraries in England, Howe (2011, p. 162) reports that six of the eight participating institutions indicated that students with disabilities faced challenges in accessing the library building. Samson (2011, p. 271) claims that physical accessibility starts with the reasonable accommodation of students with disabilities getting to the library building. This, according to Samson, includes accessible parking space, accessible walkways leading to an accessible entrance with automatic doors leading to a barrier-free lobby which contains such information as the location of spaces, names of staff who can provide assistance, the location of elevators, accessible equipment and accessible bathrooms. The importance of these is confirmed by Klinger (2014) whose review of post-secondary institutions reveals that persons with disabilities most often cite the following as barriers to physical access to library facilities: inadequate designated accessible parking spaces, which unfortunately in most cases were occupied by non-disabled people thus making their availability quite unpredictable; inaccessible washrooms, heavy push entrance doors, inaccessible signage, obstructed hallways that make it difficult to navigate with wheelchairs, high bookshelves and a lack of ramps and lifts.

Vickerman and Blundell (2010, p. 29) add that despite the improvements registered in disability provision in UK higher education institutions, barriers are still noticeable in the physical environment, access to information and staff awareness. Some parts of library buildings were still reported as being inaccessible, alternative format materials were often inadequate and staff attitudes unwelcoming. This is confirmed by a more recent account by Hannam-Swain (2018) of

how she lost a substantial amount of her PhD time as she waited for some environmental adjustments to the PhD students' research area to accommodate her disability.

In a recent study by Beyene (2018) at a Norwegian university, students with visual impairment expressed their frustration at the lack of alternative formats in the library, which forced them to turn to the National Library for the Blind for their information needs. Bearing in mind that access to information is a human right, a lack of alternative formats equates to a human rights infringement to those who cannot read standard print information. Academic libraries have a legal obligation to provide equal access to information to all students, including those with disabilities.

People with disabilities in Africa face more challenges than those in developed countries, mostly due to critically inaccessible environments and lack of services (Swartz & Marchetti-Mercer 2018). The two authors report meeting a deaf woman who migrated from South Africa to Europe. The woman confessed to be leading a normal life in her newly adopted country but felt disabled each time she came to South Africa due to the lack of services (Swartz & Marchetti-Mercer, 2018). It was also noted by Schulze (2009, p. 49) that while accessibility to public services and facilities such as health, transport and education has been addressed to a large extent, developing countries lag behind in this area.

Alemna (1993) wrote about the almost non-existent library services for people with disabilities in Africa. The situation has not changed much over the years. Students with disabilities in African higher education institutions face numerous challenges in accessing library and information services.

The Foundation of Tertiary Institutions of the Northern Metropolis (FOTIM), the then consortium of higher education institutions in the provinces of Gauteng, Limpopo and North West in South Africa, conducted a study on disability in higher education to explore the provision of services for students with disabilities in tertiary institutions in South Africa (FOTIM, 2011). The study revealed that students with disabilities faced challenges in accessing library services and facilities. These challenges ranged from inaccessible library infrastructure to a lack of information in alternative formats. Students with hearing impairment were cited as the most underserved (FOTIM, 2011, p. 75). This is corroborated in a study by Phukubje and Ngoepe (2016, p. 7) which found that students with disabilities at the University of Limpopo did not have convenient access to library services. Despite the library being built in compliance with legislation and standards, students with

disabilities still expressed dissatisfaction with its services due to a lack of information in accessible formats for students with visual impairments and no sign language for hearing impaired students. It can therefore be stated that the removal of physical barriers does not guarantee accessibility of information and that libraries must go beyond legislation compliance to achieve true accessibility.

Another South African study, by Chiwandire and Vincent (2017) on the accessibility of higher education to wheelchair users, reveals that libraries and their facilities such as toilets and parking spaces are inaccessible to students with mobility impairments. Where ramps were constructed, they were difficult to use as they were too steep and narrow for wheelchairs. One participant even referred to them as “service ramps” for moving trolley loads to the upper floors of the libraries (Chiwandire & Vincent, 2017, p. 6).

Sambo *et al.* (2017) conducted a study on information needs for users in wheelchairs in libraries in Oyo State in Nigeria. The study found that users with disabilities faced the following challenges in accessing library and information services: inaccessible entrances, inaccessible library infrastructure, lack of library orientation programmes, a lack of information in accessible formats, inaccessible facilities such as restrooms, and negative staff attitudes which created an unwelcoming environment for users with disabilities. This defeats the principles of the social model of disability (Oliver, 1990) which calls for the removal of barriers to access to information in academic libraries in order to achieve equal access to information for students with disabilities.

Similar studies in Tanzania (Kavishe & Isibika, 2018; Majinge, 2014; Majinge & Stiwel, 2015; Morley, 2010) also highlight the numerous challenges faced by students with disabilities ranging from access to library buildings and facilities to a lack of information in alternative formats. The authors found that universities in Tanzania were not built with students with disabilities in mind, which makes them highly inaccessible.

Similarly, Rugara, Ndinde and Kadodo (2016) and Pudaruth, Gunpath and Singh (2017) portray the Zimbabwean and Mauritian situations, respectively, of academic library accessibility for students with disabilities. Rugara, Ndinde and Kadodo report infrastructural designs of libraries in Zimbabwe which present access challenges to students with disabilities. In some cases, library entrances were fitted with turnstiles which are a barrier to wheelchair users and to those on crutches. The shelves of books are located on top floors which are reachable only by a flight of stairs, forcing students with disabilities to be completely dependent on their peers to get books

down to them (Rugara *et al.*, 2016, p. 200). This is contrary to the IFLA Checklist (Irvall & Nielsen, 2005, pp. 5-6) which states that library entrances should be wide enough and fitted with automatic doors with security checkpoints that are passable by wheelchair users and those using crutches, with provision for means of access to upper levels such as elevators or ramps.

In Pudaruth, Gunpath and Singh's study (2017, p. 6), students with disabilities rated library services and facilities from poor to very poor. However, the study does not provide more details about the range of library services for students with disabilities.

Reporting on library buildings in Malawi, Chaputula and Mapulanga (2017) in their study on library service provision for people with disabilities found that users face many challenges in accessing library and information services due to the lack of information in accessible formats and library infrastructure that does not take the needs of persons with disabilities into consideration.

Commenting on the newly constructed community colleges in Malawi, Sharra (2016) states that the colleges are not “disability-friendly.” It is noteworthy that the colleges are being constructed after the ratification of the UNCRPD (United Nations, 2006) and passing of the Disability Act (Malawi Government, 2012) which dictate that all infrastructural designs must take into account the accessibility needs of persons with disabilities. The government of Malawi, through the newly launched Malawi Growth and Development Strategy III (Malawi Government, 2017), reiterates its commitment to ensuring the full societal participation of people with disabilities by removing all barriers that hinder them from accessing various services and facilities.

Regarding access to information for people with disabilities, IFLA (Irvall & Nielsen, 2005) implores all libraries to ensure that they provide access to materials that satisfy the diverse needs of their users. This can be achieved by acquiring information materials in different formats such as audio books, braille books and software that enhance the readability of digital information.

Nevertheless, research shows that students with disabilities are in most cases not provided with information that is consistent with their disabilities, nor technology that improves the accessibility of information (World Health Organisation, 2011).

A recent study by Onsinyo (2018), on service provision for people with disabilities in university libraries in Meru County in Kenya, found that the libraries lacked information in alternative formats such as braille and audio books. Of the four university libraries under study, only one was

capable of producing braille materials for visually impaired students. Although all respondents indicated the need for assistive technologies, the libraries were not able to provide such technologies. Only one library provided Text to Speech software for the visually impaired (Onsinyo, 2018, p. 434). This confirms the assertion of the World Report on Disability (World Health Organisation, 2011) that only a small fraction of persons with disabilities who require assistive technologies get them.

Where university libraries are inaccessible and do not have books in alternative text formats such as braille and audio, students with disabilities depend solely on their non-disabled peers to borrow books from the library and read aloud to them as revealed by Kamchedzera's (2015) study on access and equity for students with disabilities at the University of Malawi. The study found that the library is totally inaccessible and has no books in alternative formats. One respondent in the study complained that sometimes the reader would be too fast for them to capture all the critical information for their assignments, which makes them produce substandard work (Kamchedzera, 2015, p. 86). This situation is contrary to the tenets of the social model which calls for the removal of all barriers that prevent access to academic library premises, resources and services. Forcing students with disabilities to depend on the goodwill of their peers to access library resources reduces them to objects of charity, contravening the Convention on the Rights of Persons with Disabilities (United Nations, 2006) which promotes independent living for persons with disabilities.

#### **4.10 Challenges faced by academic libraries in providing services and resources to students with disabilities**

Onatola (2007, p. 97) contends that academic libraries are better placed to break the barriers to information access for students with disabilities in this information age, which is characterised by an information explosion. However, academic libraries face numerous challenges in providing services to students with disabilities.

Most libraries in Africa are experiencing dwindling budgetary allocations, making it very challenging to provide even basic services (Teferra & Altbach, 2017). However, libraries are still expected to provide quality library services for all users, including those with disabilities.

The high cost of materials in alternative formats, assistive technologies and their associated equipment and the after-purchase maintenance, which is usually overlooked, is considered prohibitive to academic libraries (Ochoggia, 2003, p. 29). According to the Disability Rights Commission (2004, p. 15), the dearth of assistive technologies, which generally cost more than consumer software, is usually discouraging for libraries. Libraries have many competing needs and library services may not be considered a priority (Johnson, 2015). For example, one of the campus libraries at the researcher's institution did not receive any funds for the acquisition of library stock for three consecutive years, despite the funds appearing in the every financial year. This forced the library to depend entirely on donations (Chaputula & Boadi, 2010). In such circumstances, the purchase of assistive technologies or alternate format materials can only be a distant dream.

Academic libraries face challenges in providing timely information to students with disabilities due to delays in the production of alternative formats. There is always a time lag between the publication and production of alternative formats. This is compounded by some restrictions imposed by copyright laws. Harpur and Loudoun (2011, p. 154) argue that although advances in technology have simplified the production of accessible textbooks, copyright regulatory frameworks hinder the timely access to recommended texts for students with disabilities so as to excel in their university education.

In some countries, copyright laws require entities to follow long and tiring processes to get permission to produce alternative formats of published copyrighted works. Kouroupetroglou, Pino and Kacorri (2011, p. 26) explain the processes in detail.

The World Intellectual Property Organisation (WIPO) has introduced the Marrakesh Treaty (Lewis, 2013) with the aim of eliminating such copyright barriers in order to ensure timely access to information for people with print reading disabilities. Most importantly, the treaty re-enforces the sharing of accessible materials across countries which makes developing countries like Malawi stand to benefit from developed countries' initiatives. However, copyright laws in most countries, mainly in Africa, are not in sync with the Marrakesh Treaty. An example is the copyright law in the researcher's country which is in conflict with the treaty (EIFL *et al.*, 2017). It is pleasing to note that the Malawi Library and Information Consortium (MALICO), in partnership with the Malawi Library Association (MALA), has initiated lobbying with the Copyright Society of Malawi

(COSOMA), which is the collecting society in Malawi, and the Malawi Law Commission to have the copyright law amended so that it takes the Marrakesh Treaty into account.

Furthermore, Johnson (2015) states that decisions to purchase assistive technologies and equipment are usually made by people who have never experienced a disability, which compromises efforts to make libraries accessible as they may not have any sense of urgency. A scenario similar to this emerged in Onatola's (2007) study. Onatola (2007, p. 96) suggests that library managers must endeavour to recruit librarians trained in either special education or disability studies. These would have a better understanding of the information needs of students with disabilities and how such needs can be met.

Additionally, identifying students with disabilities needing special attention such as those with print reading disabilities may be difficult, especially when such information is not received from the admissions office.

Libraries also face challenges in promoting their services and resources to students with disabilities, mainly those with visual impairment, considering the print-dominated environment in which they operate (Johnson, 2015). Where libraries use their websites to promote their services and resources, they are usually inaccessible to students with disabilities.

Finally, libraries are locked in the default mode of thinking that to implement accessibility you need money, time and tremendous effort. Unless this changes, achieving accessibility of the library will remain an uphill task.

#### **4.11 Impact of policy and legislation on academic library service provision for students with disabilities**

The UNCRPD has brought a paradigm shift in academic libraries' response to disability. The treaty's emphasis on equal access to information, services and facilities to people with disabilities entails that academic libraries have a legal obligation to provide equal access to their services, facilities and resources to all students, including those with disabilities. Furthermore, the Sustainable Development Goal Number 4 emphasises ensuring that students with disabilities have equal access to educational opportunities and benefits to those accorded to all other students.

Following the ratification of the UNCRPD, member states enacted disability policy legislation where none had existed. Most developed countries such as the United Kingdom and United States already had disability legislation and policy long before the introduction of the UNCRPD. The impact of disability legislation and policy frameworks in these countries has been well documented by Bonnici, Maatta and Wells (2009), Bonnici, Maatta, and Brodsky (2015), Nelson (1996) and Jaeger and Bertot (2015) in USA; and Pinder (2005), Owen (2007) and Charles (2005) in the UK.

Most countries in Africa now have disability legislation following the signing and ratification of the UNCRPD. In addition, countries have formulated policies that aim at guiding the implementation of both international and national disability legislation. However, research has revealed a glaring gap between policies and practice.

In South Africa, several studies indicate that there is a disparity between policy and practice in higher education institutions regarding the provision of library services to students with disabilities (FOTIM, 2011; Matshediso, 2007; Mutanga & Walker, 2017).

A study by Jolley *et al.* (2017) on education and social inclusion in selected countries in West Africa reveal that there is a gap between disability policy and legislation and service provision for people with disabilities, for the following reasons:

- Lack of resources
- Ambiguous statements on the needs of people with disabilities which lead to marginalisation and exclusion
- Unequal provisions within the disability groups due to the non-emphasis of some disabilities,

These findings are similar to those of Riggall and Croft (2016) in their study on the fulfilment of inclusive education for children with disabilities in eastern and southern Africa. This study found that although countries in the region had signed and ratified the UNCRPD, children with disabilities still faced barriers in accessing education.

The importance of legislation and policy in academic library service provision to students with disabilities cannot be overemphasised.

According to Mostert (2001), policies play an important role in coordinating such library activities as the acquisition, organisation and dissemination of information. Seyama (2014) further states that policies emphasise the libraries' acknowledgement and recognition of people with disabilities as potential and valued users of information; and their absence is an impediment to library service provision to such users. Academic libraries need to formulate policies that reflect institutional, national and international disability policy and legislation on service provision for students with disabilities. Disability policies would guide library staff on how they can relate with students with disabilities (Rogers, 2006, pp. 61-62). The policies also raise the awareness of both staff and students with disabilities about their legal rights and duties. Furthermore, Rogers states that policies outline the existing services and facilities for students with disabilities, individual assistance that can be provided for them and the procedures to be followed in order to access the available services and facilities.

However, policies are not a common feature in African libraries. Mostert's (2001) study on library services in African libraries revealed that most libraries in Africa were operating without written policies to guide their activities. Majinge's (2014) study on library service provision for people with visual impairment and in wheelchairs in university libraries in Tanzania revealed that the universities did not have policies to guide their service provision. A recent study by Chaputula and Mutula (2018) on the eReadiness of public university libraries in Malawi to use mobile phone services in the provision of library and information services found that none of the five institutions involved in the study had a library policy. Another recent study by Eneya, Ocholla and Mostert (2018) indicates that disability is not covered in most of the public universities' strategic plans (Eneya *et al.*, 2018, p. 12). This failure to account for disability at the planning stage leads to haphazard provision of library services to minority groups such as students with disabilities, and creates an unfriendly environment for students with disabilities, as also evidenced in Chaputula and Mapulanga (2017). These are some of the institutional barriers mentioned by Strnadová, Hájková and Květoňová (2015) which are more disabling and discriminating for students with disabilities

#### **4.12 Appraisal of the chapter**

This chapter shows impressive global evidence of research into the information needs and challenges of students with disabilities in universities. From the reviewed literature a number of issues are identified.

Firstly, most studies on library service provision for students with disabilities in Africa focus on students with visual impairment and those on wheelchairs, with the least focus on hearing impairment. Furthermore, there is a paucity of studies from Africa that look at the accessibility of library websites and electronic resources. The current study bridges this gap.

Secondly, academic libraries, especially in Africa, are lagging behind in providing accessible services for students with disabilities, despite their increased enrollment in universities.

Increased advocacy and enabling legislation and policy have facilitated an increased enrolment of students with disabilities in universities. Therefore, academic libraries should rise above the challenge to extend their service provision to these students. In so doing, they will also be contributing to the inclusive agenda of their parent institution.

Thirdly, there is less collaboration between academic libraries and departments that coordinate students with disabilities. Accessibility issues can be better addressed there is collaboration within and between institutions for policy development and resource sharing.

Fourthly, despite the existence of Web Content Access Guidelines, students with disabilities continue being marginalised in the virtual environment due to, among many reasons, lack of knowledge of web developers. This study raises awareness of academic librarians to start negotiating for increased accessibility of electronic resources which the libraries subscribe to and library websites.

#### **4.13 Chapter Summary**

This chapter has given the global view of academic library service provision for students with disabilities in institutions of higher learning. The chapter has highlighted the challenges facing students with disabilities in accessing academic library services, the different assistive technologies that can enhance information access and the role of policy and legislation in promoting access to library and information services for students with disabilities. Due to the

paucity of related studies in Malawi, most studies reviewed in this chapter are from Europe, America, Asia and other African countries. Therefore, this chapter bridges the knowledge gap in this area. The literature consulted also highlighted the methodologies commonly used in this the study area, so narrowing the research problem.

From this chapter, it is noted that despite the increased awareness of disability issues, and the development of enabling policy, legislation and treaties both at national and international level, students with disabilities in higher education continue to face challenges in accessing library and information services. The chapter shows that implementation guidelines, regulations and funding are key to the successful implementation of inclusive library and information services.

Furthermore, this chapter shows that in developed countries, mainly countries such as the UK, USA and Australia, disability is integrated in the broader institutional diversity agenda, unlike the fragmented manner in which it is tackled in developing countries, where policy is not common and its implementation is more or less voluntary due to a lack of monitoring and accountability mechanisms. Consequently, students with disabilities in developing countries face more barriers than those in developed countries due to poor implementation of policy and legislation caused by a lack of regulations and guidelines for implementation.

Some gaps can also be identified from this chapter. Despite the popularity of the internet as a source of information and its potential to bridge the accessibility gap for persons with disabilities, it is still marginalising to them due to poor designs that do not take their needs into consideration.

Secondly, most academic libraries in developing countries are unable to provide assistive technologies due to their high costs. This places the burden on students with disabilities who in most cases are economically disadvantaged, as they have to meet the costs on their own.

Thirdly, academic libraries in developing countries lack policies and strategies that address library services for students with disabilities. Finally, multi-level library buildings without the provision of ramps or lifts/elevators are a hindrance to students with disabilities.

Through the review of relevant literature contained in this chapter, the researcher was able to identify some possible improvements. Firstly, ordinary computers contain some tools that can

assist students with disabilities in reading electronic text in the absence of assistive software. These include a narrator, magnifier and high contrast display, among others. Secondly, staff training and awareness of disability issues is critical to library service provision for students with disabilities, and poor staff attitude is as disabling as physical barriers. Thirdly, not all initiatives towards accessible library service provision for students with disabilities need great investments. Academic libraries can embark on the accessibility journey with little or no investment, such as assigning a member of staff to disability liaison and introducing telephone services.

By focusing on multiple types of disability, this chapter has bridged the knowledge gap on different types of disabilities, some of which are rarely studied, such as hearing impairment.

The next chapter presents the methodology of the study.

## CHAPTER FIVE: RESEARCH METHODOLOGY

### 5.1 Introduction

Research methodology is a systematic way of solving a research problem (Kothari, 2004). According to Brink, van der Walt and van Rensburg (2018, p. 187), research methodology informs the reader of the steps followed by the researcher to solve the research problem. Therefore, not only does research methodology present an epistemological basis and related guidelines for validating a claim; it also outlines the procedure followed to solve a research problem. According to Babbie and Mouton (2001, p. 647), research methodology comprises the methods, techniques and procedures that are followed in the process of implementing the research design, as well as the underlying principles and assumptions that motivate their use.

This chapter presents the research paradigm, research design, study population, sampling technique, data collection and analysis. Furthermore, validity, reliability and ethical issues are discussed.

### 5.2 Research paradigm

The word paradigm has its origin from *paradeigma*, a Greek word which refers to patterns that define a conceptual model used by a specific community of scientists in conducting research (Kuhn 1970, cited in Blaikie and Priest, 2017, p. 8). According to Kuhn, a paradigm means “an integrated cluster of substantive concepts, variables and problems attached with corresponding methodological approaches and tools.” Thus a research paradigm reflects the beliefs shared by a community of researchers, their views about the nature of reality, and how they conduct the research. A research paradigm guides the production of scientific knowledge. As stated by Moody (1990), a research paradigm is key to the researcher’s logical thinking, observation and interpretation of processes. Neuman (2014, p. 96) sums the concept up by stating that a paradigm is a system of thinking that encompasses basic assumptions, research questions, research techniques to be adopted and models of sound empirical research. The basic assumptions of a research paradigm are its ontology, epistemology and methodology (Brink, 2006, p. 24; Polit & Beck, 2004, p. 13). According to Creswell (2014), Brink *et al.* (2018, p. 19) and O’Leary (2010, p. 5), ontology is the logical set of assumptions about reality, and epistemology refers to the understanding of the reality, while methodology refers to the logic that underpins the research design as a potential answer to the research questions (Mason, 2018, p. 32).

Brink *et al.* (2018, p. 20) give three major research paradigms: positivism, critical theory and interpretivism. Silverman (2014) categorises research paradigms into positivism, naturalism and constructionism. Referring to them as worldviews, Creswell (2014) gives a four-fold classification of research paradigms as constructionism, post positivism, transformativism and pragmatism. On the contrary, Saldana (2011) uses the term “paradigm” for qualitative and quantitative research approaches. Finally, Merriam (2009), while referring to paradigms as forms of research, classifies them as positivist, post positivist and interpretive. All these differences in nomenclature and classification indicate the fluidity and continued evolution of the paradigm concept (Ndengu, 2012). The three major paradigms widely discussed in relevant subject literature are positivism, critical theory and interpretivism. The epistemology of knowledge is a function of ontological assumptions; for instance, the interpretive paradigm produces knowledge that is subjective in nature, while epistemologically, objective knowledge is produced in the positivism paradigm (Ngulube, 2015).

### **5.2.1 Positivism**

The positivism paradigm entails a systematic way of doing research while emphasising the acquisition of knowledge through observation. Natural scientific methods are usually used to understand human behaviour (Pandya, 2012; Welman, Kruger, & Mitchell, 2005). Furthermore, positivism assumes that there is an objective reality and that natural phenomena are regular and orderly. Therefore, this paradigm is not applicable to the current study whose aim is to understand subjective experience of students with disabilities in the context of academic libraries.

### **5.2.2 Critical theory**

This is a post-modern school of thought which is influenced by ontological assumptions of both positivism and interpretivism (Neuman, 2014). Critical theory is also referred to as pragmatism (Creswell, 2014; Ngulube, 2015) and critical research (Neuman, 2014). According to Neuman (2014, p. 111), critical research represents multiple layers of reality where the structures of the deeper levels cannot be observed from outside. Therefore, critical theory shares both positivist values of research objectivity and interpretivist values which stress people’s construction of their reality through multiple perspectives. According to critical theory, research must also empower the people being studied to change their world. According to Ndengu (2012, p. 12), critical theory is emancipatory, having the power “to free people from the shackles of the past thinking.” The

element of positivism rules this paradigm out of the possible choices of paradigm for the current study.

### **5.2.3 Interpretivism**

According to Merriam (2009) and Creswell (2007), interpretivism is often combined with social constructivism, hence the two terms are usually used interchangeably.

This paradigm posits that reality does not exist in its own entirety, but rather that it is constructed. Knowledge is acquired through the construction of meaning about reality (Tracy, 2013, p. 40). According to Hennink, Hutter and Bailey (2011), the interpretive paradigm emphasises the subjective experiences of participants. Similarly, Yunus and Tambi (2013) state that the interpretive paradigm is about observing and interpreting the social world and constructing meaning from it. Neuman (2014) posits that the interpretive paradigm aims at developing an understanding of social life and how people construct meanings from their natural contexts. Therefore, the natural social context is key to capturing the lives of participants for better understanding and interpretation of the associated meanings.

Interpretivism provides a pervasive lens on all aspects of a qualitative research study. The participants in interpretive research represent marginalised groups.

The goal of an interpretivist researcher is to make prominent the views of the participants concerning the situation, usually obtained through interaction (Creswell, 2007).

Viewing measurement as imperfect, interpretivism embraces the use of multiple sources of data to enhance credibility and improve validity. It is for this reason that interpretivist researchers collect data from various sources using various data collection methods with a view to delving into the insider perspective on a phenomenon under investigation.

This being a qualitative study, the researcher adopted the interpretive paradigm to guide the research process. The study involved listening to the experiences of students with disabilities in accessing library and information. Guided by the interpretive paradigm, the researcher was able to learn the different perspectives of each of the participants based on their unique experience (Tracy, 2013, p. 41). The interpretive paradigm relies greatly on the participants' perspective of

their situations, from which the researcher makes an interpretation, usually based on his own background (Creswell, 2007, p. 21).

### **5.3 Research methods**

Research methods refer to the strategy of enquiry. According to Myers (2009), research methods include fundamental assumptions, research design and data collection. Research can be either quantitative or qualitative. It is possible to use both qualitative and quantitative methods in a single study, in which case it is called using “mixed methods”. One’s understanding of the world and the eventual purpose of the research determine the type of method to be used. In turn, qualitative and quantitative methods determine the ways of collecting and analysing data, and how the derived data can be generalised and presented. In the same vein, O’Leary (2010, p. 104) posits that the terms qualitative and quantitative should be understood as adjectives that describe forms of data and how they are analysed. Qualitative data comes in three basic forms: text, images and sound analysed using thematic analysis (Guest, MacQueen, & Namey, 2012, p. 8). On the other hand quantitative data is denoted by numbers and analysed using statistics (O’Leary, 2010, pp. 104-105).

Quantitative research methods were first used by natural scientists in their study of natural phenomena. Quantitative methods are used when the researcher’s aim is to find numerical values about prevalence and population level patterns while qualitative methods provide underlying reasons for such patterns (Silverman, 2013).

According to Brink, van der Walt and van Rensburg (2012, p. 120), qualitative research serves to provide an in-depth understanding of human experiences, which is achieved by talking directly with participants and allowing them to narrate their stories (Creswell, 2007, p. 39).

Yin (2011) outlines the following features of qualitative research:

- i. It studies the meaning of people’s lives under real world conditions
- ii. It gives views and perspectives of study participants
- iii. It covers the contextual conditions within which the people live

- iv. It contributes insight into existing or emerging concepts that may help to explain human social behaviour
- v. It uses multiple sources of evidence instead of relying on a single source only.

Creswell (2014) concurs with Yin that qualitative research design is favourable for exploring and understanding the meaning that individuals associate with a social or human problem; which is achieved by the physical collection of data in participants’ own settings.

According to Creswell, qualitative research involves i) the collection of data in participants’ natural environments where the problem is encountered, ii) the use of multiple sources of data, and iii) inductive data analysis which starts with theme coding. The researcher describes and interprets the research problem and offers recommendations as an intervention to the problem. The research report in qualitative research gives prominence to voices of participants.

Table 4 below shows the differences between qualitative and quantitative research methods.

**Table 3 Differences between qualitative and quantitative research methods**

<b>Orientation</b>	<b>Quantitative</b>	<b>Qualitative</b>
Assumption about the world	A single reality, i.e. can be measured by an instrument.	Multiple realities
Research purpose	Establish relationships between measured variables	Understanding a social situation from participants’ perspectives
Research methods and processes	Procedures are formulated prior to the commencement of the study Hypothesis is formulated before research can begin; - deductive in nature.	Flexible, changing strategies; - design emerges as data are collected; - formulation of hypothesis prior to research is not a requirement; - Inductive in nature.
Role of researcher	The researcher does not participate or influence what is being studied. The researcher assumes an observer role	The researcher is involved and becomes immersed in the research/social setting
Generalisability	Universal generalisation and independent of context	Generalisation based on detailed context

Qualitative research design was adopted for the study to enable the researcher to understand how students with disabilities construct their own meaning of their experiences in the context of academic libraries in public universities in Malawi.

### **5.3.1 Justification for using the qualitative research method**

Qualitative research provides detailed descriptions of participants' lived experiences through the analysis of interviews. It produces data rooted in concrete knowledge and experience, which can rarely be achieved by many quantitative methods. Guba as cited in Merriam (2009) suggests that the selection of a research method should be determined by the paradigm whose assumptions are best met by the phenomenon under investigation. This study is about disability and information access. This, coupled with the fact that qualitative research is more concerned about processes than just outcomes, compelled the researcher to adopt a qualitative research method for this study in order to gain insight into the participants' views on the accessibility of library services and facilities in relation to their disabilities.

The qualitative method was deemed necessary as it provided scope for describing the experiences of participants and analysing data inductively, and hence was most suitable for the purpose of this study. This process ensured some kind of objectivity that would not have been realised by either quantitative or experimental designs. Furthermore, constructed knowledge is different from truth, which is constant and can be generalised across all plausible settings; rather, it is specific to precise settings and perspectives.

According to Oakley (2000), qualitative research provides rich descriptions of participants' lived experiences through the analysis of interviews which yield data more grounded in concrete knowledge and experience. Similarly, Brantlinger *et al.* (2005, p. 196) suggest that descriptive information from qualitative research provides a better understanding of people with disabilities. This is congruent to Messiou's (2016) analysis of research papers on disability, which reveals that most of them are qualitative in nature.

### **5.4 Research design**

Research design is a plan which details how the research process has been undertaken. Yin (2009) states that a research design serves a logical rather than a logistical purpose. It helps the researcher avoid generating evidence that does not address the research question. Creswell (2007) gives five

qualitative research designs, which he calls approaches. They include narrative research, phenomenology, grounded theory, ethnography and case study. Saldana (2011, p. 4) refers to these as genres of qualitative research.

#### **5.4.1 Narrative research**

Narrative research, or narrative inquiry (Saldana, 2011), involves extensive the collection of data from, by, or about participants and transforming it into a formal literary story (Creswell, 2007, p. 57). Thus, the final product of narrative research is a story as lived and told by participants. According to Creswell (2007), this type of research takes the following procedure:

- i) A focus on one or two individuals
- ii) Gathering data by collecting their stories
- iii) Reporting individual experiences drawing meaning from those experiences
- iv) Chronological ordering of the experiences.

Saldana (2011) concurs with Creswell by stating that narrative inquiry involves reordering personal accounts that have been shared incoherently to produce a logical and artistic report in the form of a fictional piece of writing that is aesthetic and orderly.

Creswell (2007) notes that the challenge of narrative research is that the researcher must be well acquainted with the participants' life-context in addition to the extensive collection of their information.

What distinguishes narrative research from the other designs is its use of respondents' accounts as data, the first person accounts of experience recounted in the form of a story (Merriam, 2009, p. 34).

Biography and autobiography are examples of products of narrative research.

#### **5.4.2 Phenomenology**

Saldana (2011, p. 8) defines phenomenology as a research approach with a specific focus on concepts, events or the lived experiences of people. The aim of a phenomenological study is to identify and analyse the prevalence of shared experiences of participants based on their perspective regarding a phenomenon. In a phenomenological study, the researcher becomes intimately aware and gains a deep understanding of how human beings experience something.

According to Brink, van der Walt and van Rensburg (2012, p. 122), the aim of a phenomenological study is to examine human experience by using explanations given by the participants. Furthermore, Brink, van der Walt and van Rensburg state that a phenomenological study is an option in describing participants' experience and its interpretation. Pandya (2012, p. 109) reaffirms that a phenomenological study is conducted to gain a deeper understanding of participants' lived experiences in relation to a human phenomenon. This view is also held by Creswell (2007, p. 57), who states that a phenomenological study serves to describe the meaning attached to individuals' subjective experience of a phenomenon.

### **5.4.3 Grounded theory**

This is a qualitative research design that systematically uses a set of procedures to develop a theory about a phenomenon through inductive collection and analysis of data (Brink *et al.*, 2012; Merriam, 2009). Hussey and Hussey (1997, p. 70) contend that the aim of grounded theory is to develop a theory that illuminates an area under study.

This research design involves the researcher gaining information which is apparent in the collected data, then the deductive approach is followed, where the researcher moves away from the data to think rationally about any missing information to draw conclusions logically. Having drawn the conclusions, the researcher inductively tests these hypotheses with extant or new data to support, refute or modify the deducted conclusions. Grounded theory involves an inductive and deductive approach to data which helps to ground the theory (Hussey & Hussey, 1997).

### **5.4.4 Ethnography**

Creswell (2007) defines ethnography as "a qualitative research design in which the researcher describes and interprets the shared and learned patterns of values, behaviours, beliefs and language of a group sharing the same culture." In this research design the researcher is engrossed in the daily lives of the people being observed and conducts interviews with group members. Ethnography is based on the principle that behaviour can only be understood within the cultural context in which it occurs (Brink *et al.*, 2012, p. 123). Culture can take the scope of the whole tribe or an institution. Regardless of the scope, the main purpose of ethnography is to describe life in another way, the point of view of the natives. The end product of this design is also called an ethnography.

### 5.4.5 Case study

Yin (2009, p. 15) defines a case study as “an empirical inquiry that investigates a contemporary phenomenon within a real-life context, especially when the boundaries between phenomenon and context are not evident.” For Creswell (2007, p. 74), it is a qualitative research design which involves the exploration of a bounded system, which can be single or multiple, through detailed data collection using several sources of information. The sources can be observations, interviews, documents and audiovisual materials. Creswell claims that a case study is both an object of study and also a product of inquiry. Where a case study involves investigating more than one case (bounded system), it is referred to as a multi-case study. Merriam (2009, p. 42) calls the bounded system, or the case, a unit of analysis. It is the unit of analysis that determines whether a study can be a case study or not. According to Merriam, the distinguishing feature of a case study design from the other designs is its “interpretation in context,” where the researcher concentrates on a single phenomenon with the aim of uncovering the interaction of significant factors specific to the phenomenon (Merriam, 2009, p. 43).

Yin (2009) categorises case studies into three types: descriptive, exploratory and explanatory.

A descriptive case study, as the name implies, describes, analyses and interprets a given phenomenon (Yin, 2009). An exploratory case study is used where a researcher aims at defining questions and gaining a deeper understanding of a research problem. Finally, an explanatory case study extends the scope of the descriptive study in giving insight.

Furthermore, a case study can be classified as intrinsic, instrumental or collective (Berg, 2001, p. 225). In an intrinsic case study, the investigator’s aim is to gain insight into a specific case rather than understanding or testing an abstract theory or developing new theoretical explanations. This is also called a descriptive case study. When a case is chosen to gain insight or understanding into an issue or refine a theoretical explanation, it is referred to as an instrumental case study. In an instrumental case study, also known as an explanatory case study, the case is a background against which the substantial research interests will play out. The purpose of an instrumental case study is to gain a better understanding of a theory, rather than just the case itself. When a study involves more than one instrumental case study, with the aim of gaining a better understanding or to increase

generalisability about a broader context, it is called a collective or multiple case study (Saldana, 2011, p. 48).

This study adopted the instrumental multi-case study design, which was found suitable because it gives room for a researcher to study a phenomenon in depth and in the context where it occurs. Furthermore, Yin (2009, p. 61) argues that doing a multi-case study increases the chances of getting a good case and provides substantial analytic benefits. The use of various sources of evidence helps to avert validity and reliability concerns (Berg, 2001; Saldana, 2011).

This multi-case study comprised four sites, as follows:

- (i) Mzuzu University (MZUNI) in the northern region of Malawi
- (ii) Malawi University of Science and Technology (MUST) in the southern region
- (iii) University of Malawi (UNIMA): Chancellor College in the southern region
- (iv) University of Malawi: the Polytechnic in the southern region

These cases were selected because they are all publicly funded and they have similar administrative structures. Therefore, it was hoped that each of the cases would yield comparable results.

Two constituent colleges of the University of Malawi, the College of Medicine and Kamuzu College of Nursing and Lilongwe University of Agriculture and Natural Resources, were dropped from the list of planned sites because they do not enroll students with disabilities.

The multi-case study design has previously been used by other researchers in the field. Strnadová, Hájková and Květoňová (2015) used the multi-case study design to explore the experiences of students with disabilities in four public universities in the Czech Republic. The authors interviewed 24 students with disabilities in the four public universities, eight males and 16 females.

Another study was done by Chiwandire and Vincent (2017), to analyse accessibility and exclusion for wheelchair users in ten South African universities. The authors used semi-structured in-depth interviews to gather data from disability unit staff from ten universities in South Africa.

A recent study by Onsinyo (2018) explores the challenges faced by persons with disabilities in accessing library and information services in university libraries in Meru County in Kenya. The study involved interviews with 55 participants: 31 librarians, 6 visually impaired students, 16 students with mobility impairment, and 2 with a hearing impairment.

The adoption of a case study research design in the present study enabled the researcher to gain a comprehensive understanding of the information seeking behaviour of students with disabilities. By not focusing on the frequencies of occurrence of information seeking behaviour, the researcher was able to gain deeper insights into the patterns of information seeking of students with disabilities, which provided a framework for developing a strategy for information service provision to students with disabilities in perspective of the access barriers presented by the current system.

#### **5.4.5.1 Criticisms of case study research**

Case study research, and qualitative research in general, has had its fair share of criticisms. The first criticism concerns the generalisation of findings. Critics of qualitative case study research question the ability to generalise from a single case. This criticism is raised in comparison with quantitative studies, which usually generalise from a larger sample, for example in a survey. Merriam (2009, p. 51) claims that although the issue of generalisation features higher in a case study than in other types of qualitative research, a single case provides a lot more information.

Silverman (2013) warns against trying to make generalisations from a qualitative study because that is not its goal. According to Stake (2005, p. 8), “the real business of case study research is particularisation, not generalization.” Case study research emphasises understanding the case in itself, not how different it is from others. On the other hand, Yin (2018, p. 20) posits that case studies can be generalised to theoretical propositions and not populations or universes. The strength of a case study research project lies in its ability to yield big insights from a small sample (Silverman, 2013; Stake, 2005). These insights enable the reader to get more meaning in reading the case study report. Furthermore, the insights can be used as hypotheses for future research. Therefore, case studies are fundamental to the advancement of knowledge in a particular field (Merriam, 2009, p. 51). Berg (2001, p. 231) calls this “the scientific benefit” of the case study design.

Secondly, case study research is said to be susceptible to a lack of objectivity. This relates to subjective decisions made by the researcher in the course of the investigation. Berg (2001, p. 232) states that subjective decisions made by a case study researcher should not be a cause for concern since quantitative researchers, too, make subjective decisions on the choice of the level of statistical acceptability, whether it should be 0.05 or 0.01.

To avert objectivity concerns in relation to reproducibility or replicability, Berg (2001) advises the case study researcher to be articulate in the areas that were investigated and the procedures followed so that should anyone doubt the findings they should be able to replicate the study.

Flyvbjerg (2006) discusses the five misunderstandings of case study research and provides corrections to the misunderstandings as summarised in Table 4 below.

**Table 4 Misunderstandings about case study research**

<b>Misunderstanding</b>	<b>Restatement</b>
General, theoretical knowledge that is context independent is more valuable than concrete, practical knowledge that is context-dependent	There are only specific cases and context-dependent knowledge
One cannot generalise on the basis of a single case study, therefore a case study cannot contribute to scientific knowledge	Formal generalisation should not be overrated as a source of scientific development; the strength of a single example is underrated.
The case study is most suitable in the initial phase of a research process as it generates hypotheses	The case study is favorable for both generating and testing of hypotheses, but is not restricted to these activities.
The case study confirms the researcher's predetermined views.	Other forms of research present greater bias toward confirming predetermined views than case
It is difficult to summarise case studies into general propositions and theories.	Difficulty in summarising case studies is not because of the research method; rather it arises from features of the reality under study.

Source: Flyvbjerg (2006).

The researcher found the case study methodology to be most suitable for investigating the research problem as well as addressing the research problem. As stressed by Merriam (2009:50), the strengths of a case study outweigh its limitations where it is the best method for answering research questions.

### **5.5 Study population**

A population refers to the total collection of subjects having a set of characteristics about which the researcher wants to make conclusions (Welman *et al.*, 2005, p. 52). For Brink, van der Walt and van Rensburg (2018, p. 116), a population refers to the whole group of persons that is of interest to the researcher and meets the criteria of interest of the researcher. The target population for this study comprised all students with disabilities in the institutions under study. All disabilities were considered due to the varying nature of the students' requirements. Because of the limited number of students with disabilities in some institutions, the researcher did not set the level of

study as a restriction. Since the institutions had just opened, students with disabilities in the first year of study provided valuable information on their experiences with library orientation programmes, which are conducted during the first two weeks of opening. For library staff, the researcher purposively selected university or college librarians, 2 library assistants and the head of disability support unit or dean of students where there was no disability unit at the institution. The university or college librarians were selected because they provide the strategic and policy directions of the university or college libraries. Library assistants provided information on their practical experience of serving students with disabilities. Disability support units are coordinating centres for students with disabilities and they were key to organising the students for interviews.

Table 5 below shows the distribution of the population.

**Table 5 Distribution of population of the study**

Study site	Visual impairment	Mobility impairment	Hearing impairment	Albinism	College /University librarian	Senior Librarian	Library Assistants	Disability Unit Staff
Chancellor College (UNIMA)	25	5	4	7	1	1	3	1
Polytechnic (UNIMA)	0	5	1	2	1	1	3	0
MUST			1		1	1	2	0
MZUNI	3				1	1	3	0

## 5.6 Sampling technique

According to Brink, van der Walt and van Rensburg (2012, p. 132), sampling is the process of selecting a sample from a population to get information about a phenomenon in a way that represents the population of interest. The aim of sampling is to make the research process manageable.

There are two most commonly used sampling techniques in qualitative research: purposive and theoretical sampling (Silverman, 2014, p. 60). Also known as judgmental sampling, purposeful sampling involves selecting a population sample based on judgment of its representation or knowledge of the phenomenon under study (Brink *et al.*, 2012). In the same vein, Teddlie and Yu (2007, p. 83) posit that in purposive sampling, the researcher selects a sample using prior knowledge of the sample. The aim is to get a sample that is rich in information that will give the desired information. For Brink, van der Walt and van Rensburg (2012, p. 141), purposive sampling focuses on understanding the experience of special segments of the population. With purposive

sampling one is assured of getting high quality data from willing participants. Patton (2015, p. 264) concurs that the purposive sampling technique is a powerful and logical way of selecting information-rich cases for in-depth study.

On the other hand, theoretical sampling involves the selection of participants which can provide relevant, diverse and rich information that would lead to theory generation (Brink *et al.*, 2012, p. 141). This is common in grounded theory.

The cases in this study were purposively selected. Only public universities that enroll students with disabilities were included in this study. This method of purposive sampling is called critical case sampling method of purposive sampling was used. Critical case sampling is a purposive sampling technique which considers only important cases (Etikan, Musa, & Alkassim, 2016, p. 3). Purposive sampling was also applied in selecting library staff and disability unit staff, while total population sampling method of purposive sampling was used for students with disabilities. Total sampling is a purposive sampling technique where the whole population that meets the criteria is included in the study (Etikan et al., 2016, p. 3). This is commonly used for a relatively small sample, as is the case in the current study. Therefore, the researcher interviewed all the registered students with disabilities in all four study sites. Interviewing all students with disabilities ensured that no disability category was excluded owing to the small number of students with disabilities. Marshall and Rossman (2016, p. 109) advise a qualitative researcher to include a sample with reasonable variation in the phenomenon since it is impossible for one to know the universe of a possible population and its variability in order to sample according to all relevant variables.

According to Maxwell (1996, pp. 71-72), purposive sampling seeks to achieve the following four goals:

- i. To achieve the “representativeness” or typicality of the selected settings, individuals, or activities. According to Maxwell, conclusions drawn from a small sample that has been systematically selected for its typicality or homogeneity give far more confidence of adequate representation than a sample of the same size which includes considerable random or accidental variation.
- ii. To capture heterogeneity in a population adequately. A purposively selected sample ensures that conclusions drawn sufficiently represent the whole range of variation.
- iii. To select a sample in such a way that cases that are examined are key to the theories that were set at the beginning of the study or developed in the course of the study. Extreme

cases are critical to testing such theories and help to illuminate the current situation, which cannot be achieved by representative cases.

- iv. To draw comparisons that highlight the reasons for differences between settings and individuals. This is common in multi-case study designs like the present study.

**5.7 Data collection instruments**

The decision on which instruments to use in collecting data for a particular study depends on the type of research method or approach used in the study. This being a qualitative case study, the data collection instruments at the researcher’s disposal were interviews, observations, document review, archival records and physical artefacts (Yin, 2009, p. 101). However, for this study the researcher used interviews and document review.

Saldana (2011, p. 71) gives three advantages of using multiple data collection methods. Firstly, using multiple sources of data guarantees a variety of perspectives for analysis and presentation. Secondly, using multiple methods of collecting data addresses the inherent limitations of the methods. To this effect, Maxwell (1996) advises that triangulation of data sources should be based on their validity threats. Thirdly, the use of multiple data collection methods increases the credibility and trustworthiness of a study through triangulation of data sources.

**5.7.1 Interviews**

O’Leary (2010, p. 194) defines an interview as a method of data collection through which the researcher seeks open-ended answers guided by a set of questions, topics, or themes. Interviews can be structured, semi-structured or unstructured.

Table 6 below shows the differences between these three types of interviews.

**Table 6 Types of interviews**

<b>Structured</b>	<b>Semi-structured</b>	<b>Unstructured</b>
<ul style="list-style-type: none"> <li>• Wording of questions is predetermined</li> <li>• Interview is oral form of a written survey</li> <li>• In qualitative studies, usually used to obtain demographic data (age, gender, ethnicity, education, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Interview guide</li> <li>• Includes a mix of more and less structured interview questions</li> <li>• All questions used flexibly</li> <li>• Usually specific data required from all respondents</li> <li>• Largest part of interview guided by list of</li> </ul>	<ul style="list-style-type: none"> <li>• Open-ended questions</li> <li>• Flexible, exploratory</li> <li>• More like a conversation</li> <li>• Used when researcher does not know enough about phenomenon to ask relevant questions</li> <li>• Goal is learning from this interview to</li> </ul>

	<p>questions or issues to be explored</p> <ul style="list-style-type: none"> <li>• No predetermined wording or order</li> </ul>	<p>formulate questions for later interviews</p> <ul style="list-style-type: none"> <li>• Used primarily in ethnography, participant observation, and case study.</li> </ul>
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Source: Merriam (2009, p. 89).

Semi-structured interviews were used by the researcher to gather data from the participants.

### 5.7.1.1 Semi-structured interviews

In a semi-structured interview, the interviewer develops an interview guide without a specific wording or order, but directs the interview to ensure that it focuses on the study problem (Burns, 2000, p. 424). This flexibility enabled the researcher to get more valid responses based on the participants' view of reality.

Semi-structured interviews conducted with students with disabilities enabled the researcher to probe the students' experiences in accessing the library facilities and services. The researcher strived to create a free environment in which the students were able to express their views regarding the accessibility of library and information services in the academic libraries under study without the researcher imposing her own views (Burns, 2000, p. 425).

Semi-structured interviews with disability resource room personnel enabled the researcher to understand the services that are available to students with disabilities and the challenges associated with their use.

Interviews with library staff provided information on i) library services that are available to students with disabilities, ii) challenges faced by the libraries in supporting users with disabilities, and iii) library policy and strategic direction with regard to services for students with disabilities. The researcher coded each interview using the interviewee's name, disability type and institution. This was done for easy reference should the researcher need more clarification on an issue at a later stage.

### 5.7.1.2 Document review

Documentary evidence is central to data collection in a qualitative case study because documents reflect and represent the ideologies and value systems of those who created them (O'Leary, 2010,

p. 54). In addition, Merriam (2009) contends that “documents of all types can help the researcher uncover meaning, develop understanding, and discover insights relevant to the research problem.” Similarly, Silverman (2014, p. 276) posits that documents provide background for the actual analysis: to what extent the claims in the documents are reflected on the ground. In other words, documents enable researchers to identify the gap between policy and practice.

Several authors (Bowen, 2009; Maxwell, 2005; Merriam, 2009; Patton, 2002; Silverman, 2010, 2014) have written on the value of documents as sources of data. All these authors, and many others not listed here, concur that documents provide contextual evidence, additional questions to be asked, supplementary data, a means of tracking change and development, and verification of findings from other data sources.

The documents that were reviewed in this study included institutional disability policies, library policies, library websites, acquisition policies and institutional strategic plans. These informed the researcher on the strategic and policy directions of the libraries on services for students with disabilities. Institutional strategic plans were downloaded from the institutional websites. The researcher requested library policies from the office of university/college librarians. Through the review of institutional policies and strategic plans, the researcher was able to check the extent to which international and national legislation and policies such as the UNCRPD (United Nations 2006), Disability Act (Government of Malawi 2012) and National Policy on Equalisation of Opportunities for People with Disabilities (Government of Malawi 2006) are reflected.

These documents also provided the basis for the interpretation of the research findings.

In addition to the above stated methods of data collection, the researcher conducted a physical audit of all the libraries under study, to check their compliance with disability laws and policies. The IFLA checklist (Irvall & Nielsen, 2005) was used to develop the audit checklist.

In addition, library websites were tested for accessibility using WebAIM (WebAIM, 2001).

## **5.8 Data analysis**

In data analysis, the researcher consolidates, reduces and interprets what people have said and what the researcher has seen and read (Merriam, 2009). Data in interpretive research is derived from direct interaction with the phenomenon under investigation. A key attribute of data analysis in

qualitative case study is the search for patterns, insights or concepts that seem promising (Yin, 2018, p. 167).

Bogdan and Biklen (2003) concur that qualitative data analysis involves “working with the data, organising them, breaking them into manageable units, coding them, synthesising them, and searching for patterns”. In case study research, Yin (2018) explains that searching the data for “patterns” helps to explain or identify causal links in the case study database.

Thematic analysis was used in analysing the data. Saldana (2011, p. 108) refers to a theme as extended phrases or sentences that summarise the apparent and underlying meanings of data. Thematic analysis is a process of pattern recognition within the data, where emerging themes are categorised for analysis (Guest *et al.*, 2012). The first step in analysing data for the study was bringing together all the data that was generated. This included transcribed interviews, data from documents, physical audit of libraries and library websites. This data was organised into a case database (Yin, 2018, p. 150). A case study database is the data of the study that is organised in such a way that the researcher can easily access specific data during the analysis phase and writing of the case study without having to read through the whole text (Merriam, 2009). Organising the data included editing and formatting the data and assigning codes to it. 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, p. 122). Coding helps to disintegrate the data for possible arrangement into categories that facilitate easy comparison within and between these categories, leading to the construction of theoretical concepts (Maxwell, 1996, p. 78). Therefore, through coding, the researcher was able to recognise patterns within the data. Similar patterns were grouped together to create themes. The thematic analysis was guided by Merriam's (2009, p. 186) principle which states that themes should be informed by the purpose of the study. According to Merriam, themes should:

- i. Respond to a research question
- ii. Be exhaustive
- iii. Be mutually exclusive
- iv. Be conceptually congruent

Some of the themes in this study were set *a priori*, from the research questions, while others emerged from the data. The researcher then reviewed the themes and identified those which could potentially be combined, thereby developing broader themes which embraced all relevant issues. These broad themes were used in interpretation and reporting.

Being a multiple case study, data was analysed in two phases, within-case and cross-case analysis (Eriksson & Kovalainen, 2008; Patton, 2015). In within-case analysis, each individual case was analysed separately so as to develop a comprehensive understanding of the contextual factors that might have an impact on the case. Within-case analysis was followed by cross-case analysis which involved drawing similarities and differences across the cases. In this analysis phase, the researcher reviewed themes from all four cases, identifying similar ones and linking them to form a holistic explanation (Stake, 2005). This enabled the researcher to develop a common explanation for each of the cases, despite there being differences among them (Yin, 2018).

## **5.9 Pilot study**

Brink, van der Walt and van Rensburg (2012, p. 56) describe a pilot study as a mini version of the actual study. A pilot study enables the researcher to identify and correct problems associated with the data collection instruments. Merriam (2009, p. 95) contends that conducting pilot interviews in a qualitative study enables the researcher to recognise confusing questions, critical questions that have been left out as well as helping the researcher to practice interviewing.

In view of the above, the researcher conducted a pilot study at the University of Zululand Library.

The researcher made a formal application to the ethics committee at University of Zululand to conduct the pilot study. Thereafter, permission was obtained from the Director of Library and Information Services at University of Zululand Library. The disability coordinator linked the researcher to students with disability, through the disability society chairperson. The pilot study was conducted within a period of one week. One-to-one semi-structured interviews were conducted with the Deputy Director of Library Services, the Client Services Librarian and two library assistants responsible for short and long loan circulation desks. In addition, four students with disabilities were interviewed: one with a physical disability who uses a wheelchair, one with low vision due to albinism, and one with a medical disability but was interviewed in his capacity as the chairperson for the Disability Society at the university, since medical disability is beyond

the scope of this study. The disability coordinator was also interviewed. Informed consent was obtained from all participants prior to interviews. It included such issues as confidentiality and right to withdraw.

After conducting the pilot study, the researcher noted that one question on the semi-structured interview schedule for students with disabilities made the students emotional which disturbed the rest of the interview. The question was “explain about your disability in relation to library?” Instead the researcher added a question to section E (see Appendix C) of the interview guide for students with disabilities on disability specific challenges. Furthermore, the pilot study enabled the researcher to refine the interview guide for disability support personnel. Two questions from Section B of the interview guide were removed because they were confusing. The questions were (i) “*How are you involved in library service provision for students with disabilities?*”, and (ii) “*What role do you play in library service provision for students with disabilities?*.” These questions were replaced by one question “*how do you ensure that students with disabilities have equal access to library services?*” (see Appendix F).

Being a novice researcher, the pilot study provided an opportunity for the researcher to improve interviewing skills. Ismail, Kinchin, and Edwards (2018, p. 4) recommend pilot studies for novice qualitative researcher investigating human experience which involves considerable interaction between the researcher and researched. The researcher also learnt the idea of the “Six thinking hats” (Ismail et al., 2018, p. 10) used to view decisions from various perspectives which makes researchers to move out of the habitual thinking and get a more rounded view of a situation. During the data collection process, the researcher used the hats of researcher, student and colleague. These hats inspired the researcher’s clear and thorough thinking while directing attention in one direction at a time (Thabane et al., 2010).

### **5.10 Validity and reliability**

According to Welman, Kruger and Mitchell (2005, p. 142), validity is the extent to which the research findings accurately represent the reality in the world, while reliability is the degree to which the findings of the study are independent of accidental circumstances of their production Merriam (2009). Similarly, Neuman (2014) states that reliability refers to the internal and external consistency of the researcher’s observation about a participant or field event. Internal consistency

refers to data that is plausible and free of human deception, whereas external consistency refers to data that is verified by other sources and fits into the entire framework (Neuman, 2014, p. 467). From the above definitions, it is evident that reliability would be problematic to prove in qualitative research because, as Merriam (2009) argues, it assumes the existence of a single reality which yields similar results upon being studied repeatedly. Since qualitative researchers seek to explain and describe the world in the perspective of those who experience it (the research participants), repeated study would yield varying interpretation due to the subjectivity of experience, hence reliability cannot be a measure in this type of research.

Validity and reliability are measures that are associated with quantitative research. However, in qualitative research, these measures are viewed in a different perspective due to the ontological and epistemological differences between the two research approaches (Merriam, 2009). To this effect, Lincoln and Guba (1985, cited in Saldana, 2011, p. 135) propose using credibility and trustworthiness as criteria for measuring quality in qualitative research, as opposed to validity and reliability. Credibility refers to the believability of the investigator's work; that is, the degree to which research findings match reality. This replaces internal validity in quantitative research. Considering the underpinning philosophy of qualitative research, reality is constructed within social contexts, hence there are multiple realities (Creswell, 2007). Therefore, qualitative research is valid to the researcher only due to the multiplicity of realities. The reader judges the degree of credibility based on a personal understanding of the study. From an interpretative point of view, there is no objective reality on which to benchmark the results of a study. Member checking is most highly regarded as a way of improving the credibility of a study (Merriam 2009; Lincoln and Guba 1985, cited in Saldana 2011).

According to Tracy (2013, p. 235), credibility can be achieved through:

- i. **Thick description:** This is achieved by expounding contextual meanings for a particular group under investigation, and providing rich and illuminating material details about people, procedures and activities.
- ii. **Triangulation:** Triangulation refers to any of the following: gathering data from multiple sources, using multiple methods, multiple investigators or multiple theories to confirm emerging research findings (Merriam, 2009).

- iii. **Multivocality and partiality:** This refers to incorporating perspectives from a variety of participants, including those with divergent or disagreeing viewpoints. Multivocality also requires researchers' self-awareness about the different subjectivities that may exist between them and their participants in terms of gender, race, age, education, class or sexuality (Tracy, 2013). Acknowledging the possible inconsistencies in accounts about contextual activities arising from these differences enhances credibility.
- iv. **Engaging in member reflections with participants:** This involves sharing and dialoguing with participants about the study findings. In this way, the participants are given an opportunity to question, critique, give feedback, affirm and collaborate. According to Maxwell (2005, p. 111), this is a very significant way of ruling out the possibility of misinterpreting participants' accounts and actions, and their perspectives of contextual happenings. In addition, this provides an opportunity for the researchers to identify their own biases and misunderstandings of what was observed.

Trustworthiness is established based on three criteria, which are *dependability*, *confirmability* and *transferability* (Brink *et al.*, 2012, p. 127).

Dependability refers to the consistency of getting the same findings as observed by the same or different investigators in similar circumstances (Silverman, 2010). As posited by Merriam (2009), it is the degree to which research findings can be replicated to contexts and participants which are similar in nature. This is equivalent to reliability in quantitative research. Dependability entails that the researcher must account for the changing contexts and situations which are key to the consistency of research results. This is intricate owing to the possibility of getting varied interpretations from different researchers. Therefore, reliability is impractical in qualitative research, hence the dependability criterion.

The problem with reliability in qualitative research lies in the complexity of human behaviour which is dynamic and highly influenced by social factors.

Transferability is equivalent to generalisability in quantitative research. Their difference is that the former is achieved by engaging a random sample and objective scientific practices which produce knowledge that is context-free and formally generalisable (Tracy, 2013, p. 239). According to Tracy (2013), transferability achieves resonance, which is the reverberating and impacting effect

of the text. In this case, the readers intuitively relate research findings to something significant in their own context. In other instances, by reading the research findings, the readers get the feeling that they have been there. The readers appreciate the research findings and intuitively apply them to their own situation. This is referred to as naturalistic generalisation, which is more powerful, because it permits readers to make their own applications, than statistical generalisation in which readers are told the kind of meanings they are to accept (Tracy, 2013, p. 239).

In the same vein, Silverman (2010) states that transferability refers to the applicability of research findings to other contexts, which are similar in nature. Silverman (2010) argues that context is very significant in qualitative research and must always be considered when data is transferred from one context to another.

For Maxwell (2005, p. 116), transferability can be improved by providing a rich, thick description. This entails a description of the context and study participants, accompanied by a comprehensive explanation of the findings with sufficient evidence presented in the form of direct quotes from participant interviews, field notes, and documents (Merriam, 2009, p. 227). Merriam mentions maximum variation as another strategy for improving the transferability of study findings. This is where a diverse sample is purposefully selected so that a wider range of consumers of the research are able to apply the study to their own situations (Merriam, 2009, p. 229).

Confirmability is the degree to which the findings, conclusions and recommendations of a study are supported by the data. In other words, the congruency between the researcher's interpretation and the evidence at hand (Brink *et al.*, 2012, p. 127). This criterion is achieved by a comprehensive description of the research process which allows the reader to evaluate whether the findings are derived from the data (Hussey & Hussey, 1997, p. 271).

### **5.11 Ethical issues**

Researchers do not have complete free reign over their participants to achieve their research goals (Tracy, 2013). Ethical consideration is a key issue in qualitative research because researchers intrude into participants' privacy as they collect data in their natural contexts.

Ethical requirements work to limit researcher intrusion by setting boundaries for permissible intrusion (Neuman, 2014, p. 310). According to Babbie and Mouton (2001), ethical issues cannot be ruled out where there is an interaction with other people and the environment, more so when a

conflict of interest is a most likely possibility. In addition, ethical consideration ensures that participants are not exposed to physical danger, and necessary precautions are taken to avoid putting participants in embarrassing situations that may result in emotional stress. According to Macfarlane (2010, p. 22), the inductive nature of qualitative research poses a risk, as research design parameters dealing with participants tend to be less predictable.

To address these ethical concerns, the researcher sought permission from the authorities in the study sites to conduct the research. Letters to the study institutions were accompanied by an ethical clearance obtained from the University of Zululand. Participants were notified about the purpose and nature of the study prior to the data collection. Each participant read and signed the consent form before commencement of the interview. For visually impaired students, the researcher read the consent form to them and asked for their permission to proceed with the interview. Participants were informed that participation in the study was voluntary and that they could withdraw at any point they may feel uncomfortable to proceed with the interview. Furthermore, participants were assured of their anonymity in the study. Finally, the researcher sought permission from the participants to record the interviews.

### **5.12 Methodological limitations**

As a qualitative study, the current study was subject to concerns about credibility, dependability, confirmability and transferability as raised in **Section 5.10** above.

The interviews were conducted in English, which is the language of instruction from senior primary school to university in Malawi. However, during the interviews participants used to switch between English and Chichewa, the national language in Malawi. This meant that the researcher had to translate parts spoken in Chichewa into English, during which process some information could be missed. This threatened the credibility of the findings. However, the researcher conducted and transcribed all the interviews. Being a native speaker of Chichewa and fluent in English helped the researcher get all participants' accounts in their original form.

Furthermore, the credibility of the findings was ensured by member checking, whereby the researcher replayed the recorded interview script to participants to determine the accuracy of interview data and triangulating sources of data as proposed by Brink, van der Walt and van Rensburg (2018, p. 158).

To enhance transferability, the researcher provided a rich, thick and detailed description of the research methods, sampling, data collection, analysis and interpretation as suggested by Creswell (2013). Providing a rich, thick and detailed description within a context places a reader in that context to make judgements about transferability (Brink *et al.*, 2018, p. 159).

The researcher was conscious of questions regarding the dependability of the study, and this was enhanced by keeping an audit trail of all steps followed in the investigation process. The researcher is retaining the voice recordings of participants and their transcriptions, library physical audit checklists and interview guides. The final research report will also be made available for verification by and audit purposes for any interested individuals.

Conformability rules out bias in research findings. It ensures that data reflects the information given by participants, and interpretations that are not influenced by a researchers' own beliefs and prejudices. The researcher was mindful of her position in one of the academic libraries under study. The researcher took the necessary measures to ensure that her views, beliefs and preconceptions did not influence the research process. To achieve this, the researcher recorded all issues that had potential impact on the attitudes and emotions of both her and the participants (Denzin & Lincoln, 2005).

### **5.13 Chapter summary**

This chapter explained the research methodology and design for this study.

It has also justified the researcher's choice of a qualitative research method and case study design. This chapter showed that no research method is superior to another; the nature of the research problem dictates the research method to be used. Furthermore, the chapter has discussed the limitations of the qualitative methodology and ways employed by the researcher to overcome them.

The chapter contributes to the debate on the essence of qualitative research. It also provides an opportunity for critical discourse on disability research methodologies.

The next chapter presents the findings of the study.

## **CHAPTER SIX: PRESENTATION OF FINDINGS**

### **6.1 Introduction**

This chapter presents the findings derived from data collected through interviews, a physical library audit and document review. Semi-structured interviews were conducted with students with disabilities, disability unit staff, college or university librarians and library assistants working in service points. These were done in four institutions, namely the University of Malawi (Chancellor College and Polytechnic), Mzuzu University and Malawi University of Science and Technology (MUST). Kamuzu College of Nursing, a constituent college of University of Malawi and Lilongwe University of Agriculture and Natural Resources (LUANAR), were not enrolling students with disabilities during the time the research was conducted. In addition, the College of Medicine, another constituent college of the University of Malawi, did not recognise the ethical clearance that was obtained from the University of Zululand. Applying for another ethical clearance in Malawi would have interfered with the timing of the study. Upon consulting with the supervisors, the institution was dropped from the study.

Data was analysed by using thematic analysis.

The results of this study are presented in relation to the main research question and its sub-questions as outlined in Section 1.6.2 of Chapter 1. The main research question was: what is the current status of information service provision for students with disabilities in academic libraries in public universities in Malawi? The following questions emanated from the main research question:

- What information resources and services are available for students with disabilities in academic libraries?
- How do students with disabilities access library and information resources?
- How do libraries incorporate national policies and legislation in designing library services for students with disabilities?
- What challenges do students with disabilities face in accessing information resources in academic libraries?

Through the interviews that were conducted with library staff, students with disabilities, disability unit staff and from the physical audit of libraries and review of relevant documents, the researcher

was able to gather useful information for the study. The participants of the study are described in the following section.

## 6.2 Prevalence of disability in institutions under study

Statistics of students in higher education in Malawi with disabilities are scanty. The absence of disability units in higher education institutions is a major challenge to keeping track of students with disabilities. This was witnessed by the researcher during data collection. In some institutions it was difficult to get the exact number of students with disabilities and finding them was quite a challenge. This gives the impression that should there be proper support mechanisms for students with disabilities, more would come forward to declare their disability. It was also learnt during the study that some students with disabilities do not disclose their disability on the admission form for fear of being denied admission because of their disability.

Table 7 below shows the current enrolment of students with disabilities in institutions under study.

**Table 7 Enrolment of students with disabilities in institutions under study**

<b>Institution</b>	<b>Total enrolment of students with disabilities</b>	<b>Percentage of overall enrolment</b>
Chancellor College (UNIMA)	41	84
Polytechnic (UNIMA)	5	10
MUST	1	2
MZUNI	2	4
<b>Total</b>	<b>49</b>	<b>100</b>

## 6.3 Study participants

The participants in the study included students with disabilities, library staff and disability unit staff. In institutions where there was no established disability unit, the dean of students was interviewed, depending on availability. Table 6.2 below shows the student participants and their respective disabilities.

### 6.3.1 Student participants

Students with disabilities enrolled at institutions under study were interviewed. The details of the interviewed students are given in Table 8 below.

**Table 8 Population of Student participants per institution and programme of study**

Institution	Participant	Gender	Programme of study	Year of study	Disability
University of Malawi (Chancellor College)	A	Male	BA Humanities	1	Mobility (crutches)
	B	Male	B.Ed. Social Studies	2	Blindness
	C	Male	B.Ed. Computer Science		Hearing
	D	Female	BA Humanities	2	Low vision (albinism)
	E	Female	BA Humanities	1	Mobility (wheelchair)
	F	Male	BA Humanities	4	Mobility
	G	Female	BA Humanities	2	Blindness
	H	Male	Social Science (Gender Studies)	2	Blindness
	I	Male	BA Humanities	3	Blindness
	J	Male	B.Ed. Languages	4	Blindness
	K	Male	B.Ed. Social Studies	4	Blindness
	L	Male	B.Ed. Languages	2	Low vision (albinism)
	M	Female	Social Science (Gender Studies)	1	Low vision
	N	Male	BA Humanities	2	Blindness
	O	Male	B.Ed. Social Studies	2	Blindness
P	Female	BA Humanities	1	Hearing	
Q	Male	BA Humanities	3	Mobility (wheelchair)	
University of Malawi (Polytechnic)	T	Male	Bachelor of Accountancy	1	Mobility (crutches)
	U	Male	Information Systems	1	Mobility
	V	Male	Internal Auditing	2	Mobility (Wheelchair)
MUST	W	Male	Bachelor Science (Chemical Engineering)	3	Hearing
Mzuzu University	R	Male	University Certificate in Education	1	Blindness
	S	Male	University Certificate in Education	1	Blindness

From Table 8 above, Chancellor College had the most number of student participants with all the major disability types, followed by Polytechnic, Malawi University of Science and Technology and Mzuzu University. Forty six (94%) of the students are enrolled in non-science programmes. It was learnt from the special needs unit coordinator at Chancellor College that students with visual impairment study mathematics only the first 6 years of primary school due to the inability to write

mathematical notations in Braille, hence they cannot study science in university, whose pre-requisite is Mathematics.

Table 9 below shows the number of student participants per institution.

**Table 9 Number of student participants per institution**

<b>Institution</b>	<b>Number of participants</b>	<b>Percentage of interviewed students</b>
Chancellor College (UNIMA)	17	74
Polytechnic (UNIMA)	3	13
Malawi University of Science and Technology	1	4
Mzuzu University	2	9
<b>Total</b>	<b>23</b>	<b>100</b>

From Table 9 above, a total of 23 students with disabilities were interviewed. The researcher could not interview all 49 students with disabilities because by the time of interviewing the 23rd student, the researcher had reached a saturation point. Chancellor College had the highest number of student participants (74%) while MUST had the lowest (4%). The University of Malawi as a whole (Chancellor College and Polytechnic) contributed 87% of the student participants. This is not surprising, because it is the oldest and largest university in terms of both enrolment and infrastructure. Furthermore, Chancellor College is the only higher education institution in Malawi which has an established a special needs unit. It also enrolls the highest number of students with disabilities as shown in Table 9 in Section 6.2 above.

Table 10 below shows the number of student participants per disability type.

**Table 10 Number of student participants per disability type**

<b>Disability Type</b>	<b>Number of students</b>	<b>Percentage</b>
Sight	13	57
Physical	7	30
Hearing	3	13
<b>Total</b>	<b>23</b>	<b>100</b>

From Table 10 above, all the main disabilities were represented in the data. Sight was the most prevalent disability at 57%, followed by physical disability at 30%. Hearing impairment was the least prevalent at 13%. These figures reflect the national and global trends of disability, and also

show the highest prevalence rate of visual impairment (sight disability) followed by physical disability.

A total of 23 students were interviewed, of whom 18 were male and 5 female. Twelve students had visual impairment (were blind or partially sighted), two had albinism, and seven had a physical disability. Chancellor College, a constituent college of the University of Malawi, had the largest number of students with disabilities. This is the only institution which has an established disability unit (it is referred to as a special needs education unit). According to the head of the special needs unit, there were 41 students with disabilities in the 2018 academic year. Twenty five students were visually impaired (either blind or partially sighted), 7 had albinism, 4 had a hearing impairment and 5 a mobility impairment. Total population purposive sampling was employed for all disability types; however, for students with visual impairment, the researcher stopped the interviews upon reaching the saturation point. For the other impairments, all students were interviewed, except those who were not on campus on the days of the interviews. It is worth mentioning that students with albinism were reluctant to participate in the interviews due to trust issues. The study was conducted at the peak of albino abductions and killings in Malawi. For this reason, the students with albinism were very safety conscious and felt threatened by the interviews. Only two of them agreed to be interviewed.

According to the head of the section for special needs at Chancellor College, there has been an increase in the number of students with disabilities enrolled at the college in the past few years. He attributes this increase to the 2006 Scottish project called Making Wonders Project, which distributed computers loaded with JAWS and a number of electronic books to most primary and secondary schools in Malawi. Students were taught how to use JAWS and they could read and write independently. This motivated the students to work harder and to perform well in the Malawi School Certificate Examinations, earning themselves a place at a university.

Chancellor College started enrolling students as early as the 1970s. Students with disabilities (mainly visual and hearing impairment) selected by other institutions are usually transferred to Chancellor College as it is considered to have suitable resources to accommodate such students. For example, participant M was studying at the Polytechnic before she fell ill, which led to her becoming partially sighted. When she decided to resume her studies at the Polytechnic, she was

transferred to Chancellor College, where she enrolled in a different programme from the one she had been studying at Polytechnic.

There were only two students with disabilities enrolled at Mzuzu University. Both had a visual impairment and had obtained their first degrees from Chancellor College.

### **6.3.2 Staff participants**

Staff that were interviewed for the study included university/college librarians, library assistants, disability unit staff and a dean of students. The deans of students were interviewed in institutions where the disability unit did not exist. A dean of students at Mzuzu was the only one who was interviewed. At Polytechnic, the dean of students was reportedly away during the period of data collection. At MUST, there was no specific office dealing with students with disabilities. Like all other students, they were under the authority of the deputy university registrar.

Table 11 below shows details of staff who participated in the study.

**Table 11 Staff participants**

<b>Institution</b>	<b>Staff participant</b>	<b>Gender</b>	<b>Designation</b>	<b>Highest qualification</b>	<b>Length of service (years)</b>
University of Malawi (Chancellor College)	1	Male	College Librarian	Masters in Library and Information Science	18
	2	Female	Assistant Librarian	Masters in Library and information Science	14
	3	Male	Chief Library Assistant	Certificate in Library and Information Science	37
	4	Male	Senior Library Assistant	Diploma in Library and Information Science	
	5	Female	Library Assistant	Certificate in Library and Information Studies	10
	6	Male	Special Needs Unit coordinator	Bachelor of Education (special needs education)	8
University of Malawi (Polytechnic)	7	Female	College Librarian	Masters in Library and Information Science	18
	8	Male	Assistant Librarian	Bachelor of Library and Information Science	5
	9	Male	Library Assistant	Diploma in Graphics and Design	10
	10	Male	Library Assistant	Certificate in Library and Information Science	17

Malawi University of Science and Technology (MUST)	11	Male	University Librarian	Masters in Library and Information Science	4
	12	Male	Assistant Librarian	Bachelor of Library and Information Science	1
	13	Female	Library Assistant	Certificate in Library and Information Science	4
Mzuzu University	14	Male	University Librarian	Masters in Library and Information Management	14
	15	Male	Assistant Librarian	PhD in Library and Information Science	15
	16	Female	Library Assistant	Certificate in Library and Information Science	7
	17	Male	Library Assistant	Diploma in Library and Information Science	18

The study targeted college and university librarians, client services librarians and library assistants at circulation counters. Two college librarians from the two constituent colleges of University of Malawi (Chancellor College and Polytechnic) and two university librarians from the other two universities (MUST and MZUNI) were interviewed. A client services librarian from each of the participating institutions was also interviewed. In total, 16 library staff and one disability unit coordinator were interviewed. At Mzuzu University, a Dean of Students was interviewed as well as students with disabilities fell under his jurisdiction, in the absence of an established disability unit.

The qualifications of library staff ranged from a certificate to a PhD in Library and Information Science. The minimum qualification for a library assistant in Malawi is a Certificate in Library and Information Science plus the Malawi School Certificate of Education (MSCE), while for

assistant librarian, it is a bachelor's degree in Library and Information Science or its equivalent. The minimum qualification for the position of either college or university librarian is a masters degree in Library and Information Science or its equivalent as imposed by the National Council for Higher Education (National Council for Higher Education, 2015, p. 23).

The years of service of the library staff ranged from 2 to 37 years. MUST staff had the smallest number of service years because it is a new university, which was only four years old at the time of data collection. However, the staff had more experience of working in a library as they had been working in other libraries before joining MUST.

#### **6.4 Chancellor College Library**

This is the largest library in terms of both space and stock amongst the libraries under study. It has over 300 000 volumes of books and periodicals and a seating capacity of 800. The library also offers a number of subscribed electronic resources. Entry into the library is through heavy wooden doors that open inwards. After the door, one passes through turnstiles to get to the security desk. From the security desk there are stairs leading to the upper level floors of the library. All staff offices, service counters and library stock are housed on upper level floors. The ground floor of the library houses the bindery, library computer lab, the special needs unit, bookshop and offices of some academic staff who could not be accommodated in their respective departments due to the shortage of space.

Access to the special needs unit (SNU) is through automatic doors. The SNU consists of an office and a resource room which houses computers for students with disabilities, Perkins Brailers and reading tables and chairs. The staff office is shared among the head of the unit, his assistant and one support staff member. The office also houses a photocopier and a braille embosser which is used to transcribe students' assignments and selected reading materials. According to the head, the functions of the special needs unit include the following:

- Transcribing assignments and exams into braille and vice versa.
- Transcribing reading materials into braille
- Counselling and guidance
- Acting as an intermediary between the students and their lecturers
- Vision screening

- Escorting students with disabilities to the bank and helping them with their account transactions; or escorting them to town for their personal shopping
- Escorting students with disabilities to the hospital whenever they fall sick or have an appointment with the doctor
- Providing sign language services

All these functions are carried out mainly by the head of the section and his assistant, since the support staff member is a messenger. The head of SNU is also responsible for the unit's administrative duties. Both the head of the unit and his assistant have a first degree in special needs education. Together, they serve a population of 41 students with disabilities. According to the head of the unit, serving one student with a disability is equivalent to serving 11 non-disabled students. This indicates the huge task facing the staff in the unit.

#### **6.4.1 Prevalence of disability at Chancellor College**

Table 12 shows the prevalence of disability at Chancellor College, a constituent college of the University of Malawi.

**Table 12 Prevalence of disability at Chancellor College**

<b>Disability type</b>	<b>Number of students</b>
Sight	32
Physical	5
Hearing	4
<b>Total</b>	<b>41</b>

**Source: Chancellor College Special Needs Unit**

From Table 12 above, there are a total of 41 students with disabilities registered with the Special Needs Unit at Chancellor College. A total of 32 students have visual impairment, seven of whom have low vision due to albinism. There are five students with mobility impairment while four have a hearing impairment. The head of the unit believed that there could be more students with disabilities who had chosen not to disclose their disabilities for fear of discrimination. He further stated that some students would only register with the Unit when they faced problems in the system.

## **6.4.2 Status of information provision for students with disabilities at Chancellor College Library**

This was the main research question of the study. It sought to establish the availability and accessibility of library services for students with disabilities. Interviews with students with disabilities, library staff and a document review provided the data for this question.

### **6.4.2.1 Availability of information resources and services for students with disabilities**

In view of the social model, academic libraries are obliged to provide services to all users, regardless of their ability. Here the researcher wanted to know if the libraries had information in alternative formats for those who cannot read standard print. Responses from both students and library staff indicated that the library did not have materials in alternative formats such as braille, large print and audio. In addition, all the libraries did not provide any assistive technologies for students with disabilities. Assistive technologies are especially useful to students with visual impairments as they enhance their reading capabilities. The library has over 100 computers with internet connection for use by students. However, none of the computers was installed with any specialised software, for example JAWS, a text-to-speech software program which is used mostly by blind students to read electronic texts. So students with disabilities depend on the computers in the resource room only.

The lack of alternative texts forced students with visual and mobility impairments to depend on their sighted peers to access library materials and facilities. The students depend on their non-disabled peers to borrow books from the library. For blind students, reading a borrowed book depends on the availability of their sighted peers as there are no readers assigned by either the college or the library. In addition, blind students depend on their sighted peers to lead them into the library whenever they have to work on a group assignment in the library's allocated discussion area.

The researcher inquired from the students how they complement their teaching in class, considering the critical role of academic libraries in this area. The students, mostly the blind, indicated that they depend heavily on electronic resources. Questioned further regarding the type of library databases they use, they stated that they were not aware of any e-resource databases offered by the library; instead they depend heavily on Google.

The students also indicated that they usually get electronic books from their friends and sometimes from lecturers.

### **6.4.2.3 Accessibility of the library, information resources and services for students with disabilities**

For equal accessibility of the library and its resources and services, all barriers that impede access for persons with disabilities must be identified and removed. The researcher wanted to establish the accessibility of the library building and the accessibility of its information resources and services to students with disabilities.

#### **6.4.2.3.1 Accessibility of the library building**

Entrance into the library is through turnstiles, making it impossible for wheelchair users and other mobility impaired users, including the visually impaired, to enter independently. The upper level floors of the library can only be accessed by stairs, which is a barrier to both visually impaired and mobility impaired students. Commenting on the inaccessibility of the library, student E, who uses a wheelchair, laments:

“I want the library to put a lift so that I can also go up and see for myself what is in there. I also want to see the inside of the library, get books from the shelves and even study there like the other students. I want to see how other students study. Here in university there is no other place as conducive to study as the library. I long for the day I will go in there, get a book and sit down to study.”

Interviews with library staff revealed that the library has a lift which has been non-functional for over 20 years. Library staff member 2 has worked in the library for over 30 years and recalls:

“We used to have a lift in the library. Then we did not have many students with disabilities. We just had 1 or 2 blind students and they could go up and down the library using the lift. The lift broke down some 20 years ago and it has never been fixed since then.”

The college librarian corroborated this and stated that plans are under way to replace the lift because it would be too expensive to repair.

Student J who also represents students with disabilities on the student union of Chancellor College (SUCC), an equivalent of a student representative council (SRC) in South Africa, indicated that

he had approached the college administration several times on the need to make the library accessible to students with disabilities, but the response has not been promising, as he narrates:

“I have been to the Assistant Registrar on Student Welfare on countless number of times. I requested that they should consider constructing ramps in the library and replace the lift that broke down many years ago. I was told that the library stairs are too narrow to include a ramp and that the lift cannot be replaced because doing so would weaken the library building. She said when the college finds money they would construct a new library that will incorporate the needs of students with disabilities. But when will that be?”

The inaccessibility of the library has left students with disabilities with no place to study apart from the resource room, which is not conducive to study at all. It is small and noisy as it also houses computers and Perkins Brailers. The braille embosser in the adjacent special needs office also produces noise which can be disturbing, as witnessed by the researcher during the time of interviews. Some students indicated that they study from their rooms, which are not conducive to studying either.

A physical audit of the library showed that bookshelves are too high, with narrow passages between them. The bookshelves were shifted closer together to create more reading space to accommodate the increasing student population. The library was built when the student population was less than 2000, but now it has grown to over 6000. An interview with the college librarian revealed that the library was marked for extension, which would have also incorporated the needs of students with disabilities. Unfortunately, among all the planned structures, only the library was dropped off the list due to rising costs.

Figure 3 and Figure 4 below show the entrance to Chancellor College Library and stairs leading to the top floors of the library, respectively.



Figure 2 Entrance to Chancellor College Library. Photo credit: Researcher.

Note: Consent was obtained from all persons appearing in the photographs



Figure 3 Stairs leading to the top floors of Chancellor College Library. Photo credit: Researcher

#### **6.4.2.3.2 Accessibility of library resources**

The social model of disability demands that libraries identify and remove all barriers that prevent students with disabilities from accessing library resources.

Interviews with both students with disabilities and library staff revealed that the library does not have any information resources in alternative formats. Furthermore, the library does not have any assistive technologies for students with disabilities. Thus students with disabilities, mainly those with physical and sight disabilities, depend on their non-disabled peers for the retrieval of books from the library, since the library has no staff assigned to assist students with disabilities. Blind students also depend on their sighted peers to read the books to them. Most of the students expressed their frustration at having to wait for someone else to read for them:

“It is very frustrating. You don’t get the information at the time you want it. You have to wait until when the person is free to read to you. Sometimes he is free when you are too tired to concentrate

on anything but what do you do? You just force yourself. Sometimes I have to return the book before I find anyone to read for me. It is painful because the lecturers do not give us special consideration. They just give the same due date to all students, yet we do not have instant access to information like our non-disabled friends.”

This was echoed by student O, who narrates:

“It is degrading to always wait on someone to get a book for you from the library and let alone read for you as if you don’t know how to read. And the understanding is not the same. When you read yourself you internalise unlike hearing someone read for you. I am educated enough to read for myself. Why can’t the library provide braille books for us?”

The college librarian acknowledged the need to provide information in alternative formats. However, budgetary constraints were mentioned as a major challenge.

Student K feels that students with disabilities are getting a raw deal from the University of Malawi. He narrates:

“We only access maybe 5% of what non-disabled students get. We feel cheated. We are treated like part-time students. Non-disabled students pay fees and they get new computers, books and full access to buildings. They’re even erecting multistorey buildings for them. But look at us! What do we get? We pay the same amount of fees but we cannot even meet the librarian. We ask them to transcribe books into Braille but they tell us there is no money. But look at what is happening here? Doesn’t the college really have money? It is just lack of political will to help us.”

The students had varying preferences for alternative formats of information resources. Students with low vision, like those with albinism, indicated a preference for large print books and screen magnifiers, while blind students preferred information in braille, audio and electronic formats.

#### **6.4.2.4 Accessibility of Chancellor College Library website**

Libraries are increasingly using their websites to publicise their services. The library websites also act as a gateway to the library’s electronic resources. The researcher used WAVE, an open source web accessibility checker, to evaluate the accessibility of the Chancellor College Library website. The results of the test are displayed in Table 13 below.

**Table 13 Chancellor College Library website accessibility evaluation results**

<b>Error</b>	<b>Frequency</b>	<b>Explanation</b>
Empty links	4	If a link does not contain any text, its purpose will not be presented to the user. This creates confusion for keyboard and screen readers
Null/Empty alternative text	2	When an image contains no alternative text, it creates confusion for screen readers
Contrast errors	30	There is low contrast between foreground and background colours. Adequate contrast is necessary for all users, more especially users with low vision
Unordered lists	10	Unordered lists present navigation problems for assistive technology users
Missing document language	1	The language of the page is not identified. Identifying the language of the page allows screen readers to read the content in the appropriate language. It also facilitates automatic translation of the content.
Heading levels	13	Headings facilitate page navigation for users of assistive technologies. They also provide semantic and visual meaning and structure to the document
Inline frame	1	When an inline frame (iframe) is present, its content is read as if it were part of the page that contains it and its title attribute value will be read by a screen reader whenever iframe is encountered
Redundant links	4	These are adjacent links going to the same URL. When adjacent links go to the same location it results in additional navigation and repetition for keyboard and screen reader users

#### **6.4.2.5 Awareness and use of library electronic resources among students with disabilities**

Considering that the library subscribes to a number of electronic databases, and that students with disabilities, especially the visually impaired, indicated a high preference for information in electronic formats in the absence of braille and audio books, the researcher wanted to know if the students were aware of and used the library subscription e-resources.

Interviews with the students with disabilities revealed that most of them were not aware of any specific electronic databases offered by the library. The students stated that they depend on the internet, specifically Google, to download reading materials for their class work. One student with visual impairment described Google as “our very good brother”. Only one 4<sup>th</sup> year visually impaired student stated that he sometimes accesses library subscription databases such as Emerald. However, he said that sometimes he could only access an abstract and would be asked to pay to proceed to the full text article. He further stated that some of the full text articles in pdf format were not readable by JAWS.

An appalling revelation was made by a visually impaired student who at one time sent a sighted colleague to borrow a book from the library on his behalf. The book was not available at that time, but the staff member on duty offered to download the book for him at a fee of K500 (about US\$0.68). It took him some days before he could get the e-copy as he did not have the cash ready.

The College Librarian stated that awareness of e-resources and their use is covered in the information literacy programmes. Since students with disabilities do not attend these programmes, he expected the head of the special needs unit to come up with the training needs of the students for the library to organise a tailor-made training for them.

#### **6.4.2.6 Accessibility of library services**

The Chancellor College Library offers the following services: book lending, printing and photocopying, and internet access. The library conducts information literacy programmes which introduce users to the different services offered by the library and how to access them (e.g. how to search OPAC), information searching skills, citation and referencing, plagiarism, library e-resources and databases.

Accessibility of these services to students with disabilities is varied. Students with hearing impairment expressed discontentment in the way they are treated by library staff due to communication difficulties, as narrated by student C:

“I mostly use books from the short loan section. Whenever I go to borrow a book and there is a long queue, I start feeling headache. The long queues make me feel very uncomfortable and my head spins. I also don’t like the staff referring me from one person to another when they don’t understand me. Sometimes they show me this kind attitude that tells me that I am bothering them.”

Library staff acknowledged communication challenges with students with hearing impairment due to their lack of training in sign language.

The researcher asked the participants if they get any extended loan period. There were varying responses to this question, with some participants saying they get extended loan periods automatically, some claiming that they only get it upon negotiating with the library staff, while others do not get it at all. For those who got extended loan periods, the extension period was not uniform, ranging from three to five days.

The same was noted regarding queueing up for services. Some hearing impaired students stated that they are usually given priority in that they do not queue with other students. This consideration did not apply to all students, as some still have to endure long queues. The researcher noted that those who got extended loan periods and priority services are mostly in undergraduate years 3 and 4.

However, the college librarian stated that all library staff were advised to give priority to students with disabilities at service counters. This was only a verbal instruction and is not written anywhere. The students are not aware of this either.

#### **6.4.2.7 Accessibility of information literacy programmes**

Considering the importance of information literacy in students’ effective use of the library and subsequent academic success, the researcher wanted to determine the accessibility of these programmes to students with disabilities.

Interviews with students revealed that few of them had attended at least one session of the information literacy programmes. However, they all had the same conclusion about the sessions: “it was a waste of time.” Different reasons were given for this conclusion:

- Difficult to follow due to overcrowding
- Lost interest when I heard from the librarian that the library has no braille or audio books
- It was clear the session targeted only students without disabilities
- No recognition of students with disabilities was made
- I got confused by the end of the session as we were taken on a library tour but I could not see anything.

The following reasons were given for not attending the library sessions:

- The information literacy sessions are conducted on the library first floor which is not wheelchair accessible.
- I have difficulties walking and I can't climb stairs
- I did not know
- I was thinking library staff would come down here and conduct the sessions for us considering that most of us cannot go up in the library.
- I knew the library has no braille or audio books so there is no use wasting my time on something I will not use

The college librarian corroborated the information given by the students, saying that all students are treated the same during information literacy sessions and that the library does not organise special sessions for students with disabilities.

#### **6.4.2.8 Collaboration between the library and the Special Needs Unit**

The researcher wanted to establish if the library collaborates with the Special Needs Unit in supporting students with disabilities to access library services.

Interviews with the College Librarian revealed that there is no collaboration between the library and the Special Needs Unit. For example, the College Librarian stated that his office does not receive any information on students with disabilities enrolled in a particular academic year and their respective disabilities.

The College Librarian feels that for effective information support for students with disabilities, there should be collaboration among the four departments: the library, ICT Department, the Special needs unit and College Administration. He stated that there are some initiatives that would have benefited students with disabilities which the library was unable to implement due to a lack of collaboration with the ICT Department. For example, the library through the Natural Resource and Environment Centre (NAREC), one of the research centres at Chancellor College, acquired an eGranary in 2013. EGranary is a digital library consisting of millions of educational resources which can be accessed through the local area network, without using the internet. Unfortunately, by the time of data collection in September 2018, the eGranary had not been installed yet due to what the College Librarian referred to as ICT issues.

Interviews with the students revealed that they were direct victims of the lack of collaboration between the Special Needs Unit, the ICT Department and College Administration. The researcher learnt that students with visual impairment were paying for the installation of JAWS on their personal laptops. The payments ranged from K2500 (US\$3.45) to K5000 (US\$6.90). The researcher wanted to find out the basis for this payment from one of the technicians from the ICT Department. The technician stated that the college does not have a JAWS licence so they use their own initiative to get the software, hence the charge.

In addition to paying for JAWS installation, the students also stated that when any of the computers in the resource room fails, they pay the ICT technicians for repair. The students stated that they have a welfare fund where they take the money from. These ICT technicians are employed by the college and maintenance of computers is one of their duties.

#### **6.4.2.9 Existence of library policy**

The researcher sought to investigate the policy direction of Chancellor College on library service provision for students with disabilities, and how national policy and legislation and international treaties on disability influence library policy.

Interviews with both the College Librarian and library assistants revealed that the college does not have any library policy. The library assistants stated that they assist students with disabilities out of empathy and sometimes they are not sure whether they are doing the right thing, for example

giving extended loans to some students with disabilities. They think a policy will give them clear guidance on what to do.

The College Librarian acknowledged that the lack of policy on disability service provision was having a negative impact on the students as they were made to pay for supposedly free services. He narrates:

“Where there are no guidelines, crooks rise and feast on the innocent.”

He made this comment when the researcher asked him if he knew that some library staff were in fact selling free downloaded e-books to students with disabilities. The College Librarian was not aware of this and promised to investigate the malpractice and bring the perpetrators to book.

The only documents available in the library which guide library service provision are the library rules and regulations. However, these rules and regulations do not contain any reference to students with disabilities.

The head of the Special Needs Unit also stated that there was no policy to guide the operations of the section or the education of students with disabilities in general. He narrates:

“We don’t have any policy at the moment. We just do things haphazardly. I was told some time back that I should get organised to be part of a team to formulate a policy but up to now, there is nothing.”

The review of the college’s strategic plan showed that it mentions the lack of training of personnel who handle students with disabilities as a weakness. The strategic plan also talks about expanding library services and widening access, but no reference to library and information services for students with disabilities is made (Chancellor College, 2014, p. 37). Throughout the strategic plan, there is no recognition of the challenges faced by students with disabilities in accessing library and information services. In addition, the library website does not contain any information on disability.

#### **6.4.2.10 Awareness of disability policy and legal frameworks and international treaties among library staff**

The researcher wanted to investigate the level of awareness of disability policies and legal frameworks that promote and protect the rights of persons with disabilities.

Library assistants were not aware of any specific law, policy or international treaty that protects the rights of persons with disabilities. However, they were able to mention that the constitution enshrines the equality of all people and that everyone has the right to education, whether they are disabled or not. They further stated that it is on the premise of this constitutional right that they strive to serve even students with disabilities, even though the college and the library are silent on this.

The College Librarian was able to mention the Disability Act and its implications for library service provision to students with disabilities. He was also familiar with the Marrakesh Treaty and how libraries can use it to defend the production of alternative formats for visually impaired students and others who are unable to read standard print. However, he was not aware of the UNCRPD, which is also instrumental in ensuring equality in the provision of library and information services.

The College Librarian also acknowledged the role of the library in inclusive education.

#### **6.4.2.11 Awareness of disability policy and legal frameworks among students with disabilities**

The researcher sought to investigate the students' awareness of disability policy and legal framework. The social model of disability views disability as a human rights issue. The awareness of policy and legal frameworks among students with disabilities was investigated to determine if they are knowledgeable about laws and policies that promote and protect their rights.

Interviews with students with disabilities revealed that they did not know of any laws or policies aimed at promoting and protecting the rights of persons with disabilities. The only point that was made by all the students was that they know they have an equal right to education and that equality extends to access to the library. Only one student was able to mention the Disability Act and its provisions on reasonable accommodation in addition to the constitutional right to education. The

student stated that he had learnt about these in a workshop that was organised by the Faculty of Law's legal clinic.

#### **6.4.2.12 Challenges faced by Chancellor College Library in providing services for students with disabilities**

The researcher sought to investigate the challenges being faced by Chancellor College Library in providing services to students with disabilities. Interviews with library staff provided the data for this.

Library assistants acknowledged that the library was facing challenges in providing services to students with disabilities. Failure to provide alternative formats, a lack of policy to guide service provision for students with disabilities, a lack of training and inaccessible library building were mentioned as challenges hindering the library's ability to provide services to students with disabilities.

The library assistants stated that they need training to equip them with the skills to handle students with disabilities. They indicated that most of the time they do not know how to assist the students with disabilities when they come to service counters.

The College Librarian highlighted a number of challenges faced by the library in providing services to students with disabilities. The first challenge was the lack of a disability policy at institutional level, which has led to the provision of services in a haphazard manner. The College Librarian stated that although the college enrolls students with disabilities, no support mechanism has been put in place. He further stated that all the activities in the college, including expenditure, are suited to non-disabled students.

The College Librarian stated that his office does not receive any information on students with disabilities, and their corresponding disabilities, enrolled in the academic year. As such, the library has not been able to meet all the needs of the students according to their disabilities.

Secondly, the College Librarian stated that a lack of collaboration between the library and the Special Needs Unit was another challenge being faced by the library. He stated that the library does not receive any information on students with disabilities enrolled in an academic year, or the categories of the disabilities, the information which is critical to planning library services for them.

He also linked the lack of collaboration between the library and Special Needs Unit to the lack of awareness among library staff, as he narrates:

“There is no collaboration between the library and the Special Needs Unit, the two departments are detached. This has led to lack of awareness among library staff. I would not be surprised if the majority of them do not even know that we have students with disabilities in this college. Suppose they accidentally bump into one, they would be taken unawares that there also exist such students on campus. They would have challenges to accept and treat them as normal students. This creates discomfort in the disabled students.”

Thirdly, the College Librarian mentioned budgetary constraints as a major hindrance to library service provision to students with disabilities. He stated that although assistive technologies and other equipment have been included in the library budget, they are not funded by the college.

“My observation is that issues of disability are not really a priority in this college. More attention is given to teaching and learning materials for the larger student body, not students with disabilities. Perhaps we do not know the gravity of the problem. Since the establishment of the Special needs unit, everybody seems to have relaxed, thinking that all matters concerning students with disabilities are handled by the section.”

#### **6.4.2.13 Challenges faced by students with disabilities in accessing library information services**

The researcher aimed to investigate the challenges faced by students with disabilities in accessing library and information services. The social model of disability demands that academic libraries should identify and remove barriers that prevent students with disabilities from accessing library services and resources.

Interviews with the students revealed that they face numerous challenges in accessing library and information services, as outlined in the sections that follow.

##### **6.4.2.13.1 Challenges faced by students with visual impairment in accessing library and information resources**

Students with visual impairment mentioned the lack of braille and large print materials in the library as a barrier to access to information. The students also stated that they experience delays in

getting materials transcribed into braille in the Special Needs Unit, while sometimes they cannot get them transcribed at all due to a shortage of braille paper.

While non-disabled students are able to practise with past examination papers, students with visual impairment complained that they are not able to access past examination papers, which are available in standard print only.

Lack of a lift in the library was another barrier mentioned by students with visual impairment because this prevented them from accessing the library independently. The students stated that for them to access the library they had to be guided. This was exacerbated by a lack of assistive devices in the library such as white canes.

The visually impaired students, mainly those who use braille, lamented the lack of special study rooms such as carrels in the library which they could use to study. Students with visual impairment stated they require special study rooms because the Perkins Brailier which they use for writing while studying produces noise. The same applies to braille paper when it is being turned. This noise attracts the attention of other students and is disturbing.

The students also complained about the non-inclusiveness of information literacy programmes. The visually impaired students who had attended at least one library orientation session stated that the programmes were targeted at non-disabled students only. One participant stated that a facilitator of a session he had attended announced that the library did not have any materials or services for visually impaired students. This frustrated him and he never went back.

The students also complained about a lack of training in computer use. When students join the college, they spend the first two weeks learning how to use a computer. This training is important because the majority of the students use a computer for the first time when they go to university. Students with disabilities are not included in the training. Instead, they depend on their sighted colleagues who have gone through the training to help them. The head of the special needs section also trains them, but he is usually overwhelmed with work.

The students stated that they were also facing challenges in accessing computers. The computers in the disability resource room are insufficient. Although the computers are meant for students with disabilities, some non-disabled students also come to the resource room to use the computers. Some of these non-disabled students guide visually impaired students to the resource room and

they use the computers as they wait for their colleagues. One participant complained that sometimes he waits for six hours to find a free computer.

#### **6.4.2.13.2 Challenges faced by students with physical disabilities in accessing library and information resources**

Students with physical disabilities face environmental barriers in accessing the library.

Interviews with the students revealed that the lack of a lift in the library is a major barrier to accessing the library and its information resources.

Students with physical disabilities stated that they were not able to go to the upper level floors to borrow books and to study. They also stated that they fail to attend library orientation sessions which are conducted on the first floor of the library. One student who uses a wheelchair stated that she had attended the classes once, but she had to be carried by her colleagues. She did not continue as she felt she was being a burden and she also felt embarrassed.

Since they cannot go upstairs in the library, the students depend on their colleagues to borrow books from the library. This works to their disadvantage because when the particular book is not available, the colleague just returns, without checking related titles, as student E explains:

“When you ask someone to get a book for you and they don’t find it they just come back and tell you that the book is not available. I know there are other books on the shelf. If I went myself I would check alternative titles.”

The students stated that they have nowhere to study since they cannot access the library and the resource room is usually noisy. Studying in the room is not possible either because of noise.

Although they could send their colleagues to borrow books from the library on their behalf, the students complained that this did not apply to materials from the Malawiana and Reference Sections, which cannot be taken out of the library. The students’ main concern was past examination papers.

Students also mentioned the lack of staff assigned to serve students with disability as a challenge because their student colleagues were not always available to assist as they also have their own workloads. They felt the library should have a specially assigned staff member who would fetch books for them from the library.

However the students felt that the staff needed some awareness workshops to prepare them for this task as they had observed that the staff were not ready to assist students with disabilities.

The students also mentioned the lack of policy as a challenge. They felt that the policy would have spelt out clearly the type of reasonable accommodation they should expect from the library.

Physical inspection of the library revealed that the library did not have wheelchair accessible toilets, which is a barrier to library use for students who use wheelchairs.

Lack of adjustable furniture as observed by the researcher is another challenge that would likely face students using wheelchairs.

#### **6.4.2.13.3 Challenges faced by students with hearing impairment in accessing library and information services**

Persons with hearing impairment face marginalisation when sign language interpretation is not considered. Hearing impaired students in this study stated that they face challenges during information literacy sessions because the classes are usually huge. When they cannot see the facilitator's face, they do not follow because they depend on lip-reading in the absence of a sign language interpreter. The same applies to communication with staff at the service counter.

The students complained that the library staff at the counters do not face them when talking, which makes them unable to understand anything. They also complained that when one library staff did not understand what a hearing impaired student said, he or she referred them to a colleague who would possibly also refer them to another.

Since hearing impairment is an invisible disability, library staff would not recognise a hearing impaired student standing in the queue to be offered priority services. The students therefore complained about long queues mainly at the short loan counter which caused some discomfort for them.

The students also stated that they had faced challenges with some library staff who displayed a bad attitude towards them. They said that some staff showed an unwillingness to help them, probably because communicating with hearing impaired people requires patience as it involves the repetition of words and the raising of voices for clear understanding.

The lack of signage in the library was another challenge that was mentioned by the hearing impaired students. The students stated that the most featured sign that is very visible is the “Silence” sign.

This was corroborated by the physical audit of the library which revealed a lack of clear signage and assistive devices for the hearing impaired such as a hearing loop, text telephone, and hearing aids.

#### **6.4.2.14 Collaboration between the Special Needs Unit and disability organisations**

The researcher sought to investigate the involvement of disability organisations in education support for students with disabilities, mainly in the provision of assistive devices.

Students with disabilities and the head of the Special Needs Unit were interviewed to get this information.

The head of SNU stated that no disability organisation has contacted the Unit to provide any support to students. The head stated that his observation was that disability organisations mainly advocate for basic education learning.

Interviews with students with disabilities indicated that there was no connection between the students and disability organisations. In fact, there is no body that fights for the rights of students with disabilities in universities. Student H cannot hide his frustration:

“I have heard about Malawi Union for the Blind on radio but I have not seen what they are doing for the blind community in Malawi. I do hear them explain their activities but I have never seen anything on ground. I once requested for a white cane from them but I was told they didn’t have any. If they can’t provide a white cane, would they be able to assist with braille books or any equipment? They have never even come forward to assist us with scholarship. I don’t associate with them because I don’t see any benefit.”

### **6.5 Polytechnic library**

The Polytechnic library consists of two floors, the ground floor and the top floor.

Entrance to the library is through heavy wooden doors which are kept open during library opening hours. The ground floor houses the circulation desk, periodicals section, computer lab and study

carrels. All library staff are also housed on the ground floor. The upper level floor contains the short loan collection and the book stock.

There is no disability unit or any office specifically responsible for students with disabilities at the Polytechnic. The students stated that whenever they have issues they go to the dean of students or the college registrar, just like all other students.

### **6.5.1 Prevalence of disability at Polytechnic**

From the information that was sourced from the registrar's office, there are five students with disabilities at the Polytechnic, as shown in Table 14 below.

**Table 14 Prevalence of disability at the Polytechnic**

<b>Disability Type</b>	<b>Number of students</b>	<b>Percentage</b>
Physical	4	80
Hearing	1	20
<b>Total</b>	<b>5</b>	<b>100</b>

From Table 14 above, there are only five students with disabilities at the Polytechnic. The majority of them have a physical disability (80%), with only one (20%) with a hearing impairment. There are no students with visual impairments enrolled at the college because there are no facilities to support such students. If the college unknowingly enrolls such students, or if a student loses the capacity for sight in the course of their study, they are transferred to Chancellor College. Only four students, all with physical disabilities, were available for interviews. In the absence of a disability unit, finding the students was quite a challenge.

### **6.5.2 Availability of information resources for students with disabilities at the Polytechnic Library**

The researcher interviewed both students with disabilities and library staff to establish the availability of information resources in the library. All library staff stated that the library does not have any special information for students with disabilities. They stated that the library did not have materials in alternative formats such as braille, large print and audio. In addition, the library did not have any assistive technologies for students with disabilities. The library has over 100 computers with internet connection for use by students. However, none of the computers was

installed with any specialised software, for example JAWS, a text-to-speech software program which is used mostly by blind students to read electronic texts.

The College librarian stated that the only services offered to students with disabilities are book loans, internet access and access to electronic resources. She was only aware of one student with a physical disability, who uses a wheelchair. However, library assistants indicated that apart from students with physical disabilities, they also serve students with albinism and one female student with hearing impairment.

### **6.5.3 Accessibility of the library, information resources and services for students with disabilities**

The researcher sought to investigate the accessibility of the library, information services and resources at the Polytechnic. This was achieved through interviews with both students with disabilities and library staff.

#### **6.5.3.1 Accessibility of the Polytechnic library building**

Entry into the library is through turnstiles, making it impossible for wheelchair users and other mobility impaired users, including the visually impaired, to enter independently. The library has no lift and access to the upper level floor of the library is by stairs only. Students with disabilities interviewed for this study at the college complained that they face difficulties in accessing the top level floor. Student T, who uses crutches, explains:

“It is very difficult for me to go to the short loan section which is located on the first floor. I feel pain in my legs when climbing the stairs so I move very slowly. By the time I get to the short loan I find that the book I wanted to borrow has already been taken. So I just go back to my room and sleep.”

Another student V, who uses a wheelchair, had this to say:

“I can access the ground floor only. At first I was using the back door to get into the library but now they removed one of the gates [turnstile] at the main entrance so I am able to go through it like any other student.”

The College Librarian acknowledged the architectural challenges posed by the library to students with physical disabilities, as she narrates:

“The library was built over three decades ago without any consideration of the needs of people with physical disabilities. The furthest a physically disabled person can go in the library is the ground floor because there is no lift or ramps.”



Figure 4 Stairs leading to the upper floor of The Polytechnic Library. Photo credit: Researcher

Physical audit of the library revealed the following:

- the library service counters were too high and not adjustable
- the reading tables were not adjustable
- passages were too narrow and often blocked by old furniture
- bookshelves were also too high, as narrated by student U:

“The shelves are too high for me. I cannot reach the books. So whenever I want a book that is too high up I request a nearby colleague to fetch it for me.”

Inaccessibility of the library top floor has left students with disabilities with nowhere to study because that is where study spaces are located. The ground floor is reserved for group discussions so it is often noisy. Student V narrates:

“I have challenges finding a conducive environment to study. Since I can’t access the top floor which is a quiet study area, I just go to my room although it is not a good place for study because students play loud music there.”

The College Librarian sympathised with the student on the lack of a conducive study environment as she narrates:

“This student who uses a wheelchair is disadvantaged because the library ground floor is for group discussions and usually too noisy for him to study. Unfortunately as a library we are overwhelmed, we do not have space so we can’t provide for him.”

The College Librarian stated that when student V first joined the college, he could not enter through the main entrance because of the turnstiles. Whenever he wanted to go into the library, he would approach the security guard, who would then lead him to the back door. It was later that the library removed one of the turnstiles to provide a passage for the wheelchair.

When asked if the library has wheelchair accessible toilets, Student V responded that he didn’t even know if the library had any toilets.

Library staff confirmed that the library had no wheelchair accessible toilets.

Physical inspection of the library showed that there were signs pointing to collections but none pointing to toilets.

### **6.5.3.2 Accessibility of library resources**

On the accessibility of library resources, all the students that were interviewed stated that they face challenges in accessing library resources.

Books in high demand are placed on the short loan shelf, which is on the first floor. The students stated that they cannot access books from the short loan section because they take long to get there as they struggle to climb the stairs. By the time they reach the counter they find that the books they wanted have been taken out.

The College Librarian stated that the student who uses a wheelchair presents the details of the book he requires to the library staff member at the issue counter, who in turn fetches it from the shelves on the top floor. This contradicts the information given by the library assistants, who stated that students who cannot go to the short loan section use their friends to get books. They just get their ID and present it to the staff. Since the students with disabilities are few, the library assistants stated that they knew them all.

With this access challenge, the students stated that they usually depend on electronic books which they get from classmates and lecturers.

Student T stated that although his classmates share electronic books, he has challenges to access them, as he narrates:

“As a class we share electronic books and class notes provided by lecturers. But I still face problems. I don’t have a good phone with WhatsApp to enable me to receive the information. Even if I get a flash disk to save them I cannot read using library computers because to access them I have to pay and I don’t have money. I don’t even have a laptop so everywhere I face difficulties to access information.”

The library provides free Wi-Fi. Students with smartphones are able to use the Wi-Fi to access electronic information, as Student U explains:

“I use the library Wi-Fi to download materials on my phone since I don’t have a laptop.”

The library also offers a wide range of electronic resources which are accessible through the library website. Upon inquiring whether these are accessible to students with disabilities, the College Librarian stated that the e-resources are only offered with the general user in mind. The researcher inquired further whether she was familiar with Web Content Accessibility Guidelines and she stated that she did not know them. However, she acknowledged the need to provide library resources to all students on an equal basis, because students with disabilities have a constitutional right to equal access to library services and facilities.

### **6.5.3.3 Accessibility of library services**

According to the College Librarian, the Polytechnic library offers the following services: book loans, internet, library induction and information literacy. None of the students had attended any information literacy sessions because they were not aware that the library offers such programmes.

The researcher interviewed both students with disabilities and library staff to determine the accessibility of these services.

Two of the three students that were interviewed for the study at the Polytechnic (Students U and V) indicated that they had attended the library induction programme but found it unhelpful. The students complained that the class was too crowded and they did not benefit.

Student T did not attend the induction because he was busy negotiating with the dean of students for an accessible room in the student hostels.

In addition, the students stated that they feel that the sessions are targeted at non-disabled students only because there was no recognition of them at all. Even the library tour did not take students with physical disabilities into consideration.

The College Librarian concurred with the students that students with disabilities are grouped together with all other students in library induction sessions.

On book loans, only Student V stated that he is able to get an extended loan period after negotiating with library staff. Students T and U did not know whether they could get an extended loan period.

Library assistants stated that they do not extend loan periods for students with disabilities.

Interviews with both library staff and students with disabilities revealed that the college does not have any staff assigned to assist students with disabilities.

#### 6.5.3.4 Accessibility of the library website

The researcher conducted an accessibility evaluation test for the library website using WAVE, an open source web accessibility evaluation tool. The results of the accessibility evaluation are presented in Table 15 below.

**Table 15 Polytechnic Library website accessibility evaluation results**

<b>Error</b>	<b>Frequency</b>	<b>Explanation</b>
Empty links	8	If a link does not contain any text, its purpose will not be presented to the user. This creates confusion for keyboard and screen readers
Null/Empty alternative text	4	When an image contains no alternative text, it creates confusion for screen readers
Contrast errors	25	There is low contrast between foreground and background colours. Adequate contrast is necessary for all users, except users with low vision [true?]

Unordered lists	15	Unordered lists present navigation problems for assistive technology users.
Heading levels	11	Headings facilitate page navigation for users of assistive technologies. They also provide semantic and visual meaning and structure to the document
Redundant links	3	These are adjacent links going to the same URL. When adjacent links go to the same location it results in additional navigation and repetition for keyboard and screen reader users

#### **6.5.4 Awareness and use of library e-resources among students with disabilities**

As students with disabilities indicated a preference for electronic formats of information, the researcher wanted to determine if the students were aware of electronic resources being provided by the library. Only one student (Student V) was aware of library electronic resources. However, he stated that he does not use them. He stated that the last time he wanted to use the e-resources he was told that they had not been paid for. Since then he has not had any interest. He depends on electronic books shared by classmates on their class WhatsApp forum, class notes received from lecturers and other materials he downloads from the internet.

The library's information literacy programmes cover information searching, where students are taught how to search e-resource databases and how to evaluate information downloaded from the internet.

#### **6.5.5 Existence of library policy**

The researcher sought to investigate the policy direction of the Polytechnic on library service provision for students with disabilities, and how the library incorporates national policy and legislation and international treaties on disability in library policy.

Interviews with both the College Librarian and library assistants revealed that the library does not have any policy. The only documents available in the library which guides library service

provision are the library rules and regulations. However, these do not make any reference to students with disabilities.

Review of the college's strategic plan showed that it mentions the provision of special needs infrastructure as one of its strategic goals. The college plans to improve teaching and learning facilities by, among other things, accommodating staff and students with special needs throughout. The key performance indicators listed are: provision of lifts, special needs computers, special needs books, special needs printers and training special needs staff (The Polytechnic, 2016, p. 18).

#### **6.5.6 Awareness of national disability policy and legal frameworks and international treaties by library staff**

Interviews with library staff revealed very limited knowledge of national disability policies and legal frameworks that promote and protect the rights of persons with disabilities.

Mostly library assistants referred to equality of education for students with disabilities as enshrined in the national constitution. They stated that they were aware that students with disabilities have the right to access all library resources, services and facilities. One library assistant was able to make specific reference to the Disability Act on the need to make the library accessible to students with disabilities.

The College Librarian indicated awareness of the Disability Act and its implications for library service provision in academic libraries.

#### **6.5.7 Awareness of disability policy and legal frameworks and international treaties by students with disabilities**

The researcher wanted to investigate if the students were aware of any policies and laws that promote and protect the rights of persons with disabilities.

Interviews with the students revealed that none of them was aware of any policies or laws that promote and protect their rights as students with disabilities. However, they stated that they were aware of their right to education as enshrined in the Malawian constitution.

### **6.5.8 Challenges faced by libraries in providing services for students with disabilities**

Both the College Librarian and library assistants indicated that as a library they were facing challenges as far as service provision is concerned. The library assistants stated that since students with physical disabilities send their non-disabled colleagues to borrow books from the short loan collection on the first floor, they sometimes present incomplete information.

Secondly, the library assistants stated that they face challenges when communicating with hearing impaired students because they do not know sign language. They indicated that most of the time they resort to communicating through writing, which is time consuming.

Lack of training on how to handle students with disabilities was another common challenge among the library staff. They stated that sometimes there is tension because they do not even know the language to use in describing the students. This was evident as during the interviews the staff switched between terms: “special needs students”, “physically challenged”, “disabled” and “handicapped”.

The College Librarian mentioned budgetary constraints as the major setback in providing services to students with disabilities. She stated that the extension of the library was part of the African Development Bank Project through which the college has constructed laboratories, lecture theatres and purchased equipment. Unfortunately, the library was removed from the list of buildings to be constructed due to rising costs. According to the College Librarian, the library extension was designed with disabled users in mind.

The College Librarian further stated that the library’s priority is on the existing disabilities, as she narrates:

“We don’t have a budget for students with disabilities as at now, we prioritise on the current students, not on those who are yet to join the college. Our fear is that we may spend money buying equipment, say special computers for blind students. And many years may pass before any blind student joins the college until the computer becomes obsolete.”

### **6.5.9 Challenges faced by students with disabilities in accessing library services and facilities**

Students with disabilities stated that they faced challenges in accessing the library.

Firstly, they stated that they were being affected in their academic work by not being able to access the short loan collection which houses most of the prescribed texts for their programmes of study. They feel that their non-disabled colleagues have access to more information than them.

Secondly, the students stated that they do not have a conducive environment to study, citing the noise on the library's ground floor as a distraction. The residences are not better as students usually play loud music.

Thirdly, the students complained that they did not gain anything from library induction sessions due to overcrowding and that the time was too short. They requested that the library consider separate sessions for students with disabilities in future.

Library assistants stated that the lack of ramps and a lift to the upper floor of the library was denying students with disabilities an opportunity to explore other books that may be useful for their studies, and that may not have been included in their course outlines.

The non-adjustable furniture in the library was another challenge for students in wheelchairs.

Students also complained about the lack of specially assigned staff to help them with the timely retrieval of books.

## **6.6 Malawi University of Science and Technology (MUST) Library**

The MUST library consists of three floors.

The ground floor houses staff offices, auditorium, main issue counter and the general collection. On the first floor one finds the reference collection, staff offices, and the reprographic area. The second floor houses computer laboratories. Reading spaces are located on all three floors. There are also toilets on all floors, including wheelchair accessible ones.

Entry into the library is through turnstiles, with a separate entry for wheelchair users. The upper level floors can be accessed by stairs. There is also a lift that is used by users with disabilities.

The library has three computer labs, one for undergraduate students, another one for postgraduate students, and the third one is a geographical information systems lab. Students are able to access library electronic resources on computers in these labs.

### **6.6.1 Prevalence of disability at MUST**

At the time of data collection, there was only one student with a disability enrolled at the university. The student was in the third year, studying Chemical Engineering, and had a hearing impairment.

The researcher learnt that there had also been a student with albinism, who had since been withdrawn on academic grounds.

### **6.6.2 Availability and accessibility of library services and resources at MUST**

The MUST library offers the following services: book loans, internet access, library orientation. Library orientation is conducted for all first time students during the first week of the academic year.

An interview with the university librarian revealed that the library does not have any materials in braille or audio formats, assistive technologies or devices.

Library assistants indicated that there has never been any request for any special material or equipment by students with disabilities.

They also stated that there was only one student with a disability who comes to the library. They said that the student had a hearing impairment and most of the time they communicated through his cousin who is also a student at the university. However, they stated that from time to time they get some students with temporary disability, mainly those who get injured during football matches and other accidents. This group was beyond the scope of this study.

The hearing impaired student stated that he was able to use the library although he faced communication challenges with the library staff.

### **6.6.3 Accessibility of the MUST library building**

Stairs lead to the entrance of the library with the provision of a ramp. Since the library building is multi-storey, there is a lift for those who cannot use stairs. The library is spacious and the paths are wide enough to allow navigation by wheelchair users. The circulation desk has a lower end for users on wheelchairs. There are special reading tables which are adjustable, reserved for wheelchair users.

The library also has toilets that are accessible to wheelchair users.

#### **6.6.4 Existence of policy at MUST**

Interviews with library staff revealed that the library did not have any policy. The University Librarian stated that being a newly opened university, some policies were still being developed, including the library policy. The university had no disability policy and there was no specific office responsible for students with disabilities.

The University Librarian was aware of the existing legislation on disability. He was also familiar with international treaties such as the UNCRPD and the Marrakesh Treaty. However, he was not aware of any national policy on disability.

#### **6.6.5 Challenges faced by the library in providing services for students with disabilities**

Library assistants stated that they faced challenges in communicating with the current student with hearing impairment. They mentioned a lack of training in sign language as the main challenge they were facing then.

The library staff mentioned the lack of materials in alternative formats and assistive technologies as another challenge they may face should a visually impaired student join the university.

The University Librarian acknowledged the lack of provision for other disabilities apart from physical disability. He stated that plans are underway to purchase braille embossers for the production of braille reading materials once a visually impaired student gets admitted to the university. The University Librarian felt that it was not prudent to spend money on something that might not be used in the near future, considering the high cost of such equipment.

#### **6.6.6 Challenges faced by students with disabilities in accessing library services and resources**

An interview with the only student with disability at MUST revealed the need for staff training in disability awareness. The student stated that he faced difficulties in communicating with staff which made him use the library rarely. He stated that whenever he did not understand the library staff he would ask them to repeat until he understood. This attracted the attention of other students because they ended up speaking loudly, to the irritation of the hearing impaired student. He also stated his displeasure as some library staff would refer him to their colleagues, a clear statement that they did not want to assist him because of the communication challenges.

## **6.7 Mzuzu University Library**

The Mzuzu University library is housed in a makeshift building, which used to be an assembly hall, because the library was gutted by fire in December 2015. Almost all library materials and equipment were destroyed in the fire.

The library is accessible to wheelchair users. There is a ramp leading to a special door that is used by wheelchair users. The library has computers that are used by students to access library electronic resources. However, none of the computers has any specialised software such as JAWS installed.

It is worth noting that the library also runs a children's library which serves the surrounding communities. Most interestingly, the children's library also conducts reading sessions for children with disabilities from a nearby special primary school. The sessions include storytelling, reading children's story books, and watching children's videos and music. The researcher was privileged to attend one such session during data collection.

### **6.7.1 Prevalence of disability**

At the time of data collection, there were three students with disabilities enrolled at the university. All of them were visually impaired. However, only two were available for interviews.

### **6.7.2 Availability and accessibility of library services and resources at Mzuzu University Library**

Interviews with both library staff and students with disabilities revealed that the library does not have materials in alternative format for students with visual impairment. Although the library has a number of computers for use by students, none of them is equipped with specialised software such as JAWS.

Student R narrates:

“I am not happy that there are no specialised computers installed with JAWS software which one can use to download materials from the internet.”

This concern was genuine, because the student could not use his laptop which is installed with JAWS because access to the library's subscribed electronic resources was IP authenticated.

Library staff member 10 indicated that the library had a computer installed with JAWS which was once used by a visually impaired student who graduated in the past five years. However, the computer was being kept in the office of the Dean of Students and he was not sure of its working condition. Meanwhile, the university engages a specialist teacher from one of the nearby schools

to assist with transcription of reading materials into braille. Since the university did not have braille embossers, the specialist teacher would collect all materials requiring braille embossing to Bandawe School for the Blind, which is 40 km from the university.

The students interviewed at the university stated that the library did not have any information materials in braille or audio formats. Student R stated that he had been to the library and he was assisted by one lady staff who had noted his areas of interest so that she could download materials for him. This student has a laptop which is installed with JAWS. He relies on electronic information.

Student S does not have a laptop and he has not used JAWS before. He relies on braille materials. He is worried about how he is going to manage his studies. He has just joined the university. He had a Perkins Braille which he used to write. The library had no special room which he could use for study.

The library subscribes to electronic resources which are accessible through the campus network.

On the topic of library orientation, library staff member 10 stated that the library conducts special sessions for students with disabilities. However, this contradicts Student R's experience:

"I attended library orientation together with the rest of the class. There was no special session for visually impaired students. They did not even show any recognition of those of us who are visually impaired."

Furthermore, Student R felt that universities were lagging behind in terms of information provision for students with disabilities, as he narrates:

"Secondary schools have gone a step further in terms of equipment and resources. But universities have not taken any steps. Theoretical books cannot be downloaded for free. Only the journals are free but still you can't compare the two. E-books like those on Amazon are expensive. Mzuzu University might not have had any pressure to be in this state. At Chanco (Chancellor College) things have improved because there was pressure."

On whether the library had an assigned staff member to assist students with disabilities, the students stated that they had not been told about it. Student R narrates:

"There is no assigned staff to assist students with disabilities otherwise I would have been told when I first went there because when I went there nobody knew what to do. If there was anyone assigned, they could have referred me to that person there and then."

### 6.7.3 Accessibility of the library building

The library's main entrance is accessed by stairs. However, there is a special door at the back of the library that is used by students with disabilities. A ramp was constructed leading to this door. The door is kept closed, but there are always security staff nearby to open for students.

Although the library is just improvised, it was arranged in a way that a wheelchair user would be able to move around.

According to the Dean of Students, the university employs people to guide students who are blind around campus.

### 6.7.4 Accessibility of the library web page

The university website has a link to the library web page. The researcher evaluated the library page for accessibility using the WAVE accessibility evaluation tool. The results of the accessibility evaluation are shown in Table 16 below.

**Table 16 Mzuzu University Library website accessibility evaluation results**

Error	Frequency	Explanation
Empty links	3	If a link does not contain any text, its purpose will not be presented to the user. This creates confusion for keyboard and screen readers
Null/Empty alternative text	20	When an image contains no alternative text, it creates confusion for screen readers
Contrast errors	89	There is low contrast between foreground and background colours. Adequate contrast is necessary for all users, except users with low vision
Unordered lists	1	Unordered lists present navigation problems for assistive technology users
Device dependent event handler	26	An event handler is present that may not be accessible. The JavaScript events in use do not appear to be accessible to both mouse and keyboard users. To be fully accessible, critical

		JavaScript interaction should be device independent
Redundant links	4	These are adjacent links going to the same URL. When adjacent links go to the same location it results in additional navigation and repetition for keyboard and screen reader users
Link to PDF document	4	Unless authored with accessibility in mind, PDF documents often have accessibility issues. Additionally, PDF documents are typically viewed using a separate application or plug-in, and can thus cause confusion and navigation difficulties.

**6.7.5 Existence of policy**

The researcher wanted to establish if the university had any policy on disability. Interviews with library staff revealed that the university did not have any policy on disability. When asked about library policy, the library staff responded that the library too did not have any policy. Library staff member10 narrates:

“We don’t have any policy. We are just guided by professional ethics to say that there has to be equitable access, but in terms of policy, no. We just look at ourselves as professionals, that we have the obligation to assist all people to access information irrespective of their status or whatever.”

Library staff member 11 stated that students with disabilities are given special treatment in that they do not queue like other students and that books are fetched for them. He stated that this is not based on policy but from training that library management organised in the past 6 or 7 months. He narrates:

“There’s not policy but we were trained on how to assist students with disabilities. Like when students with disabilities come to the library, they have to be treated in a special way. For example, we were taught that when a student comes to the library and we discover that he or she has problems with hearing, we need to move closer to him or her to communicate well.”

Student R wondered if the special assistance he received from the library was based on policy, as he narrates:

“I am thankful to the lady who assisted me in the library. The other staff were taken unawares and it was clear they did not know what to do with me, but this lady came to my rescue. I don’t know whether it is based on policy or not. My fear is if it’s not policy I may not get the same assistance if I go there and find a different person, or if my colleague goes.”

The University Librarian stated that there were two policies that were awaiting the approval of Senate: the Institutional Repository Policy and the Disaster Preparedness Policy. The latter was motivated by the previous fire accident.

#### **6.7.6 Challenges faced by the library in providing services for students with disabilities**

Library staff acknowledged that the library faced challenges in providing services for students with disabilities. The challenges were compounded by the fire incident they had suffered in 2015.

The University Librarian stated that they respond to the needs of students with disabilities on a case-by-case basis, which makes them unprepared for other disabilities. He gave an example of how they constructed ramps leading to the library when the university enrolled a physically disabled student who was using a wheelchair. Now the University has enrolled visually impaired students and they were at a loss as how to assist them since they did not have any materials in alternative formats or any assistive technologies and devices.

The University Librarian also stated that some students do not indicate their disability on admission forms for fear of marginalisation. Their disability is only discovered after they have joined the university, most often at a later stage, which is challenging to accommodate them in the design of information service delivery. Library staff member 10 confirmed this information and stated that the marginalisation fears of the students with disabilities were founded because in the previous years all students with disabilities were selected to Chancellor College, even if they did not choose any programme offered there.

Library assistants indicated that they lacked skills needed to handle students with disabilities. They stated that most of the time they were not sure about the right terminology to use as the students seemed uncomfortable with some terms. This was evident during the interviews as the students preferred “students with special needs” to “students with disabilities.”

This was corroborated by library staff member 10, who stated that staff needed more training, such as sign language.

The lack of adjustable furniture was another challenge mentioned by library staff as they had witnessed a student on a wheelchair struggling to use the current library furniture. Library staff member 12 narrates his experience with serving a student on a wheelchair:

“We had a certain student, a lady, who was using a wheelchair. She had challenges using the library furniture, mainly sitting on the chairs and using the tables. It was difficult.”

Another challenge that was mentioned was the long route used by students with physical disabilities to get to the library, since the most direct route has stairs. Library staff member 10 narrates:

“Access to the library is a challenge for students with physical disabilities because they have to use a longer route to avoid the stairs on the direct route. Another challenge is that they use a door that is always locked for security reasons. Each time they want to come into the library or go out they have to wait for someone to open for them. We once had a student who complained about this kind of arrangement. She felt she was disturbing the staff as she had to knock each time she wanted to come in. In some cases she could notice some staff display an attitude showing like they were being bothered. She also faced delays having to wait for someone to look for a key to open for her. She indicated that she wished she could use a door that was used by everyone else.”

Another challenge mentioned was a lack of information from Administration to the library on students with disabilities enrolled in a particular year. As a senior librarian responsible for readers' services, library staff member 10 again narrates:

“The university responds more vigorously when it comes to students that are blind. They look at that as a bigger challenge, I don't know why. But we have more students with mobility challenges. When it comes to mobility, the interface between the Administration and the library is not there. So we reach out to the students ourselves. Whenever we see them we respond to their needs. I think the university in conjunction with the office of the Dean of Students arranges for an escort for students on wheelchairs. But when it comes to students with visual impairment the university really realises that it is a bigger challenge.”

Interviews with library staff and the Dean of Students revealed that the university has an Inclusive Education Centre whose role is to coordinate students with disabilities. The interviewees stated that the centre did not have any alternative formats, materials or special equipment. It just had print books on special education. The researcher learnt that the centre had been established by a staff member who had specialised in inclusive education. However, the staff member had left the university as she had been seconded by

government to head a newly opened Teachers' Training College. Since the departure of the staff member, the centre had become defunct.

### **6.7.7 Challenges faced by students with disabilities in accessing library services and resources**

Interviews with students with disabilities revealed that the students were facing numerous challenges with regard to access to library and information services.

The students expressed anxiety as to how they were going to manage their studies because in their opinion the university was not ready for them, as narrated by student R:

“The university does not have its own specialist to assist us. They engage a teacher from a nearby school who only comes whenever we need assistance, which is a big challenge for us. The university doesn't even have Braille paper. The specialist teacher was generous enough to bring me some today.”

Upon inquiring if the university had any resource room for students with disabilities, Student R responded:

“I'm told there used to be a special room in the old library that was gutted down. However my feeling is that people in top positions in this university are ignorant of disability issues. They are reactive instead of being proactive. If the fire incident happened then and until now no room has been assigned it means there has been no student with visual impairment ever since.”

And student S adds:

“There is an Inclusive Education Centre but the room is always locked. It is just a name. The coordinator is blank. He doesn't even know where to start from.”

On whether disability organisations are involved in ensuring that students with disabilities in higher education have equal access to information, Student S states:

“To say the truth I have never heard of any disability organisation helping students in higher education institutions. I only know one incident where they assisted one girl with a talking computer. They are mainly involved in primary education.”

On the same topic, Student R narrates:

“I am very sorry to say that that is a very big problem we have in Malawi. They are not helping at all. I am very sorry to say that those people are there just to make money for themselves because we have problems but they are not doing anything. But they have everything they need. They have

braille embossers, they have assistive technologies so they can't pressurise at university level. They are doing nothing!"

#### **6.7.8 Awareness of disability policy and legal frameworks by library staff**

Interviews with library staff indicated that library assistants were not aware of existing policy and legal frameworks on disability; however, they were aware that everyone has a right to equal education as provided for by the national constitution.

The University Librarian and the senior assistant librarian were familiar with the Disability Act and the Marrakesh Treaty. They acknowledged the implications of the two for academic libraries. They also acknowledged the role of the library in inclusive education.

#### **6.7.9 Awareness of disability policy and legal frameworks by students with disabilities**

Interviews with students with disabilities showed that the students were aware of the existing disability laws. Student R was quick to mention that although the country had enacted the Disability Act in 2012, it was yet to be gazetted, which made it difficult for anyone to use it to claim their rights, as he narrates:

"I think it is deliberate for government not to gazette the Disability Act until now. It is a political decision because they know there will be fire if it is gazetted. It ratified and signed the UNCRPD. We have the constitution which emphasises on equal rights. But we get nothing. The problem is government rests the responsibility for disability issues with the donors. Look what they do. They change the curriculum but they print no single book in Braille. Instead they ask donors to do this. So it's like an orphaned child who is waiting for support to come from somewhere."

For student S, he was aware of the Disability Act but did not know what it contained, as he narrates:

"I am aware of the existence of the Disability Act but I don't know its contents. Even my fellow teachers do not know. May be it is only with those in high offices."

### **6.8 Physical audit of the libraries**

In addition to interviews, the researcher conducted a physical audit of each of the libraries under study. The IFLA Checklist was used in the physical audit. The table below shows the results of the physical audit, which was carried out to identify inaccessible areas and to point out good practice where it existed. The results of the physical audit are shown in Table 17 below.

**Table 17 Results of physical audit of libraries under study**

Feature	Chancellor College	Polytechnic	MUST	MZUNI
Wheelchair access to building	No	Yes	Yes	Yes
Wheelchair access to all floors	No	No	Yes	N/A
Accessible toilets on all floors	No	No	Yes	No
Visual alarm system	No	No	No	No
Good lighting	No	No	Yes	Yes
PC and study desks with adjustable height	No	No	Yes	No
Non-slip floor with colour contrast	Yes	Yes	Yes	Yes
Lower level service desks	No	No	Yes	No
Study rooms	No	No	Yes	No
Designated staff to assist students with disabilities	No	No	No	No
Information resources for students with disabilities (Braille, audio, large print)	No	No	No	No
Assistive technologies (CCTV, scanner, JAWS etc)	No	No	No	No

## 6.9 Proposals for improvement

The researcher asked both library staff and students with disabilities to propose improvements to the current status of library service provision for students with disabilities. The proposals from each of the two groups are shown below:

**Table 18 Proposals for improvement**

Institution	Proposals for improvement	
	Library Staff	Students with disabilities
Chancellor College	Replace library lift Collaborate with Special Needs Unit Train students with disabilities how to access e-resources Transcribe prescribed texts in Braille Train library staff Remove turnstiles Write funding proposals for library extension which failed under ADB Project Install e-Granary on the network and make it accessible from computers in the disability resource room	Install a lift in the library or construct ramps to the upper level floors. Provide Braille or audio materials. Assign staff to assist students with disabilities Conduct special information literacy sessions for students with disabilities in the disability resource room Establish an e-library containing materials from the short loan collection Train library staff in disability awareness

	<p>Organise special information literacy programmes for students with disabilities to be delivered in the disability resource room</p> <p>Develop library policy on disability service provision</p>	<p>Set up a library of Braille materials in the disability resource room</p> <p>Transcribe past examination papers in Braille</p> <p>Develop a library policy to guide service provision to students with disabilities</p> <p>Make JAWS freely available to students with visual impairment</p> <p>Extend loan period for students with visual impairment</p> <p>Increase number of computers in disability resources room</p> <p>Increase number of special needs staff</p> <p>Library should conform to the laws of Malawi by making library services and resources equally accessible</p>
Polytechnic	<p>Provide ramp to the top floor Lobby for funding for library extension which failed under the ADB Project</p> <p>Train library staff</p> <p>Develop policy to guide disability service provision</p> <p>Purchase equipment for transcription of materials into Braille</p> <p>Extend remote access to e-resources to students with disabilities</p>	<p>Install lift to enable access to first floor</p> <p>Assign staff to assist students to help with fetching books from the short loan and general collection</p> <p>Organise special orientation sessions for students with disabilities</p> <p>Promote e-resources to students with disabilities</p> <p>Provide free access to computers for students to access e-resources</p>
MUST	<p>Once students with visual impairment enrol, engage specialists from nearby Montfort Special Needs College to transcribe needed materials into Braille. Also engage them to provide training to library staff</p> <p>Designate special rooms in the library for students with disabilities, equipped with computers with specialised software installed</p>	<p>Train library staff in sign language</p> <p>Make library staff disability aware and equip them with skills to handle students with disabilities</p>
MZUNI	<p>Train staff</p> <p>Provide study tables with adjustable height</p> <p>Create a Braille collection</p>	<p>Develop library policy to guide service provision for students with disabilities</p>

	<p>New library building in the offing to replace the burnt one will include needs for students with disabilities</p> <p>Assign staff to assist students with disabilities</p> <p>Engage students with disabilities</p> <p>Purchase equipment to be used in Braille transcription</p> <p>Promote e-resources to students with disabilities and make them accessible remotely</p>	<p>Assign library staff to assist students with disabilities</p> <p>Provide a resource room for students with disabilities, equipped with specialised computers installed and relevant assistive technologies.</p> <p>Provide books in Braille</p> <p>Recruit a full time specialist to assist students with visual impairment</p>
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**6.10 Chapter summary**

This chapter has presented the findings from the study focusing on information support for students with disabilities in selected academic libraries of public universities in Malawi. The study has revealed that there are inconsistencies in library service provision for students with disabilities, both within and across institutions. The study has also presented findings on challenges being faced by students with disabilities in accessing library and information services as well as challenges being faced by libraries in providing library and information services to students with disabilities. Proposals for improvement, suggested by both students with disabilities and library staff, have been included.

## **CHAPTER SEVEN: DISCUSSION OF FINDINGS**

### **7.1 Introduction**

This chapter presents the interpretation of the findings of the study as presented in Chapter Six. Interpretation involves drawing inferences from facts arising from an analytical or empirical study (Kothari, 2004, p. 344). Kothari (2004) further states that interpretation is vital because the practicality and value of research findings lie in proper interpretation. McGregor (2018, p. 391) concurs that the discussion chapter serves to summarise and explain findings as well as to examine implications.

The discussion is based on the study's research questions, which were as follows:

1. What information resources and services are available to students with disabilities in academic libraries?
2. How do students with disabilities access library and information resources?
3. How do libraries incorporate national policies and legislation in designing library services for students with disabilities?
4. What challenges do students with disabilities face in accessing information resources in academic libraries?

### **7.2 Existence of disability units in public universities in Malawi**

Of the four institutions under study, only Chancellor College had an established disability unit, which is commonly known as the Special Needs Unit. The fact is that only one institution of the four under study has an established disability unit, a departure from the practice in many universities in Africa which have established disability units, such as selected higher education institutions in Tanzania (Majinge, 2014), South Africa (FOTIM, 2011) and Zimbabwe (Rugara, Ndinde and Kadodo, 2016). Disability units provide specialised services to students with disabilities to facilitate their integration at the institutions (FOTIM, 2011, p. 10). The absence of these units from the institutions under study raises concern about the extent and quality of support given to students with disabilities. Students with disabilities at the Polytechnic and Mzuzu University fall under the Office of the Dean of Students, and the Registrar's Office at MUST. The

Offices of the Registrar and Dean of Students are busy offices that are responsible for administrative matters and the welfare of all students, and therefore cannot provide the adequate specialised support that students with disabilities require. Furthermore, the Office of the Dean of Students is occupied by a member of staff on a rotational basis. These officers are not trained in disability issues and are less likely to offer advice on accessibility issues.

The Special Needs Unit at Chancellor College appears to have played an undeniably significant role in preparing students with disabilities to cope with the demands of university education. However, elements of the medical model of disability were noticeable, where for example the students were confined to the disability resource room, away from the rest of the students. This is consistent with Mutanga's (2017, p. 145) assertion that while disability units are important, they can alienate students with disabilities from other students, and lead them to be viewed as 'second class citizens.' A study by FOTIM (2011) found that some people did not favour the establishment of disability units as they separated students from the activities of mainstream higher education and the rest of the students. However, in the present study, the disability unit at Chancellor College played a vital role in assisting with the transition of students with disabilities from secondary school to university. The unit also worked as an intermediary between the students and their lecturers.

The findings revealed that disability is defined differently by different institutions. While students with albinism were regarded as disabled at Chancellor College, this was not the case in the other institutions, such as Polytechnic and MUST. Persons with albinism often have poor vision and therefore require materials in large print (Amnesty International, 2016, p. 37). The researcher learnt that a student with albinism at MUST had been withdrawn on academic grounds. This poor performance could possibly be attributed to the lack of suitable reading material. However, during his time at the university, the student was not regarded as disabled, hence no special provision for information materials was made.

No medical or psychosocial disability was recorded in any of the institutions under study. This does not mean that they do not exist; on the contrary, these are rarely considered as disabilities in Malawian culture. Similarly, a person who is affected may not have been aware that it is a disability and requires support (Singal, 2007, p. 11).

The study also found that students with disabilities, specifically those with visual impairments who were selected by other colleges within the University of Malawi, were redirected to Chancellor College as it was thought to have facilities that could accommodate such students. This contradicts the principles of inclusive education, which are also underpinned by the social model of disability, which requires the restructuring of the education system to ensure the full participation of students with disabilities.

### **7.3 Availability and accessibility of library information resources to students with disabilities**

The social model requires academic libraries to provide information resources in formats that are suitable for students with disabilities. In addition, information use is determined by its availability and accessibility to users. Student participants in the study indicated that they need information from the library to write their assignments, prepare for exams, revise lectures as well as prepare next lectures. The International Federation of Library Associations and Institutions (IFLA) (Kavanagh & Skod, 2005, p. 28) emphasises that print disabled students in academic institutions need the same support for textbooks and supplementary reading materials as those who can read standard print. On the other hand, Majinge and Stilwell (2014, p. 152) concur with Bagandanshwa (2006) that information is a fundamental human right that must be enjoyed by all regardless of their abilities. The students with disabilities complained that they were not treated equally in as far as access to information was concerned, despite their right to education and non-discriminative provision of information being enshrined in the constitution and the Disability Act. The students expressed dissatisfaction with this situation considering that they pay equal fees to other students but do not get equal access to information. This echoes Howe's (2011, p. 173) claim that students with disabilities are becoming more aware of their right to equal access to information and that as more universities raise tuition fees, academic libraries should anticipate increased and more diverse demands for information.

The study revealed that although some of the information needed by students with disabilities was available in print format, such as core texts placed in short loan collections, and past examination papers in special collections, it was not accessible as none of the academic libraries under study had such information in alternative formats. Even core curriculum materials had not been transcribed into accessible formats. Information sources and formats are also part of information seeking behaviour components.

This situation has forced students with visual impairment to rely only on class notes and some electronic information shared by friends or lecturers. Students with visual impairment complained that some lecturers were not ready to share lecture notes, which was a huge inconvenience as the students did not have voice recorders to record lectures for revision later on. Although all libraries under study were offering subscription electronic resources, most students with disabilities were not aware of them. One student at the Polytechnic indicated an awareness of e-resources, but that on the day he wanted to use them, he was told that the library had not renewed its subscription and access had been blocked. This discouraged the student and he never considered using the e-resources again.

Thus, students with disabilities had a very narrow information base compared to their non-disabled colleagues. This confirmed a statement by Electronic Information for Libraries (EIFL) (2017) that persons with print disabilities in developing countries access less than 1% of what their non-disabled colleagues access. Robson and Robson (2013, p. 173) emphasise that a person's awareness of information sources determines the method that is followed in information seeking.

This also serves to confirm the WHO's world report on disability (World Health Organisation, 2011), which found that students with disabilities are not provided with information that is consistent with their disabilities, nor technology that improves access to information. An earlier study by UNESCO (1997) also found a very limited provision of study materials in alternative formats to students with disabilities in African universities, including the University of Malawi (the only public university in Malawi during the period of the UNESCO study), which restricted their participation in higher education. A recent World Bank commissioned study by Mambo *et al.* (2016), confirmed that poor infrastructure and a lack of study materials in alternative formats in Malawian universities are some of the factors that keep students with disabilities out of higher education. This in turn validates Strnadová *et al.*'s (2015) claim that it is the impediments that are created by universities that exclude students with disabilities and not necessarily their disabilities, which is also consistent with the social model of disability.

From the findings of this study, it is noted that the lack of information materials in alternative formats forced students with disabilities to rely on their peers for information retrieval, particularly with regard to reading in the case of students with visual impairments. This was compounded by

the lack of designated library staff to assist students with disabilities as well as the non-provision of readers. In addition, students with disabilities were forced to use information sources that met their access needs, not according to their preferences. In relation to Wilson's model of information behaviour, academic libraries should be cognisant of the information needs of their different user groups in order to fulfil them, considering their distinct ways of seeking information.

In some cases, students could not get reading materials transcribed at the Special Needs Unit due to the shortage of braille paper. In this case they had to wait for a sighted friend to read to them. The availability of the friend depended on his or her workload at a particular time. Hence in some cases the loan period would expire before a friend was available to read to the students. Other students stated that they had no friend to read to them so they never used the library. Whenever the students were lucky enough to have the material transcribed, they had to wait for long hours to get the transcribed material due to the heavy workloads of staff in the unit. This placed the students in a difficult position of discrimination on the one hand and dependence on their peers on the other (Moriña & Morgado, 2018, p. 15). Tugli *et al.* (2014, p. 106) posit that "overdependence is counterproductive" and academic libraries should design formal support systems that would allow students with disabilities to access information independently.

The situation stands in contrast to Majinge's (2014, p. 160) study, which found that students with visual impairments and in wheelchairs in the surveyed Tanzanian academic libraries depended on library staff and readers employed by the universities to access information from the library. None of the libraries in this study had a designated staff member to assist students with disabilities or readers for students with visual impairments.

The situation for visually impaired students at Mzuzu University proved to be even more complicated. To get their reading material transcribed, the students had to wait for the part-time specialist teacher from a nearby school to collect the material and travel almost 90km to Bandawe School for the Blind, a special school for children with visual impairments, for transcription. It was not possible to make the trip daily due to the long distance. This meant that the students could not get transcribed materials as or when required, leading to difficulties in writing assignments, considering that they did not get any extensions on submission dates.

The findings are in agreement with Phukubje and Ngoepe's (2016, p. 7) and Seale *et al.*'s (2015, p. 127) observation that students with disabilities do not get convenient access to formal sources of information, and instead turn to their non-disabled peers to fill the void. Similarly, Strnadová, Hájková and Květoňová (2015, p. 1092) assert that the support given to students with disabilities in higher education is usually informal, from peers rather than institutions, and that students with disabilities do not count on the support provided by the library in any of the strategies that they employ to overcome barriers to library information access. This also supports Wilson's model, used in the study, that when a user senses an information need, he or she makes demands on an information system or other sources of information which can be either formal or informal, and that an information seeker can use intermediaries in information to seek information.

In view of the social model of disability (Oliver, 1990) and in the context of this study, the barriers or hurdles created by the universities were actually responsible for hindering students with disabilities' access to libraries. These barriers mirror intervening variables in Wilson's model.

Moriña (2017a, p. 5) argues that while it is important to guarantee diverse students access to education, ensuring their inclusion by providing them with all the support they need to succeed in their studies is also of paramount importance. Harpur and Loudoun (2011, p. 162) concur that a university library that does not provide information support to legally enrolled students with disabilities by providing reading materials in accessible formats is liable to accusations of discrimination. The UNCRPD implores academic libraries to ensure equitable provision of information to students with disabilities.

Interviews with university/college librarians revealed that academic libraries under study were not in collaboration with any institution or agency, whether nationally or internationally, to help them meet the information needs of students with disabilities. The study also revealed that there was little or no collaboration between the libraries and other departments, including those responsible for students with disabilities, within institutions. Kaufmann, Perez and Bryant (2018, p. 2) reaffirm that collaboration between the library and other departments increases the library's potential to become innovative and to provide value added services that benefit the whole university/college community. IFLA (2005, p. 32) urges libraries in developing countries to cooperate with other libraries and agencies in order to reduce costs and increase access to information. Academic

libraries in Malawi stand to benefit from cooperating with international agencies and libraries in the absence of a national library for the blind or any local agency providing accessible information for persons with visual impairment.

### **7.3.1 Provision of assistive technologies**

The social model of disability demands that libraries have measures in place for students with disabilities to access otherwise inaccessible information. One such measure is the provision of assistive technologies. Academic libraries in Malawi are obliged to provide assistive technologies to students with disabilities, as stated in the Disability Act of 2012 (Malawi Government, 2012).

The findings of this study revealed that none of the libraries involved in this study provided any assistive technologies to students with disabilities. Although the libraries provided computing services, the computers were not installed with any assistive software. At Chancellor College, assistive technology was only installed on computers in the Special Needs Unit. Although the unit is housed within the library, administratively it falls under the college, and the study revealed that there was no collaboration between the library and the Unit, although the Unit had equipment for transcribing materials to braille, which the library didn't have. Collaboration between the library and disability unit has been hailed in the subject literature as being instrumental in meeting the information needs of students with disabilities (Arzola, 2016; Gaetz, 2012; Gashurov & Kendrick, 2013).

The computers in the Special Needs Unit were few compared to the number of students with disabilities. The visually impaired students who owned a laptop therefore opted to have the assistive software JAWS installed on their personal computers by the ICT department. Unfortunately, the students were charged for the service. The study revealed that the college did not have a JAWS licence and the ICT technicians had used their ingenuity to access the licence, hence the charges. The SNU coordinator confirmed that the computers in the resource room and the associated software were donated by the Scottish government. This highlights the welfare attitude to disability, a clear departure from the social model of disability.

### **7.3.2 Accessibility of library buildings, facilities and services to students with disabilities**

The social model demands that the society, in this case academic libraries, should adapt their facilities, services and programmes to enable full participation and access by all people, irrespective of their disability (Kanter, 2015, p. 428).

A physical audit of the libraries revealed the different levels of accessibility of the libraries. For instance, Chancellor College library was completely inaccessible to students with physical disabilities and visual impairments. Turnstiles at the library entrance were an obstacle to the two groups. At the Polytechnic, students with physical disabilities were restricted to the ground floor only. The stairs leading to the top floor, which houses the short loan section, quiet reading area and the rest of the book stock, rendered the top floor inaccessible to the students. Only the MUST library building was fully accessible since it had a lift to all the library floors. Mzuzu University had made some modifications for wheelchair entry into the library.

The findings of the study revealed that the following services were provided by the participating libraries: book loans, internet access, library orientation and information literacy training. However, there was minimal use of these services by students with disabilities in all the libraries under study.

The inaccessibility of the Chancellor College and Polytechnic library buildings prevented students with visual and physical impairments from using the library services independently, and the two libraries did not have designated staff to assist the students. Instead, the students depended on their friends to borrow books for them from the libraries. The Polytechnic librarian acknowledged that this practice deprived the students of the opportunity to browse related titles, thereby narrowing their information resource base. The students were quick to conclude that the library was not meant for them, because of what they described as the ‘uncaring attitude’ of both college administration and library staff.

From the findings, students with hearing impairments at Chancellor College and MUST were discouraged from borrowing books due to communication problems. Hearing impaired students from both institutions showed a dislike of librarians’ shouting in trying to communicate with them or being referred to several other staff members before being assisted, as these scenarios drew the attention of other students. In addition, the students said that they found long queues in the short

loan section tiresome. Robertson (2007, p. 29) confirms that persons with hearing impairment are faced with confusion, embarrassment and frustration whenever they think that library staff may not be aware of their communication barrier. Some visually impaired students stated that they never borrowed books from the library because they could not find any friends to read to them. Although library staff indicated that they were able to offer priority services to students with disabilities, those with hearing impairments did not get such consideration. This finding confirms McQuigg's (2003) observation that the needs of persons with hearing impairments are usually overlooked by libraries as they pay more attention to physical barriers, which are the focus of compliance with disability legislation.

All the libraries in this study provided internet access to their users. However, students with disabilities did not benefit from this service. The library computers were not installed with any assistive technology, which made it difficult for students with visual impairments. Furthermore, the computer desks and chairs were not adjustable, making them difficult for students with physical disabilities to use. The findings also showed that students had to pay for internet access when using library computers at Polytechnic. This was a hurdle to students with disabilities, as most indicated that they could not afford to pay for access to the library computers and they did not have personal computers to use the library's free Wi-Fi.

The findings also revealed that most students with disabilities did not attend library orientation and information literacy programmes. At Chancellor College, students with visual and mobility impairments indicated that the programmes were conducted on the first floor of the library, which was inaccessible to them. Those who had attended at least one session indicated that they had found the programmes unhelpful. Students with hearing impairments who had attended the library orientation programmes stated that they had found the sessions unhelpful because they could not follow them, as the classes were overcrowded and noisy. An overcrowded classroom creates a barrier to persons with hearing impairment who depend on lip reading, and the noise associated with such an environment interferes with the proper functioning of hearing aids (Playforth, 2004, p. 55).

Finally, students with disabilities from all the institutions stated that they felt the library information literacy programmes were designed for non-disabled students only, because staff did

not acknowledge or assist students with disabilities throughout the sessions. The sessions were conducted with the assumption that all the students had equal abilities. Although the college and university librarians indicated an awareness of the existence of students with disabilities and the accessibility challenges that they faced, they did not make any effort to organise special information literacy and library orientation sessions for them. IFLA (Irvall & Nielsen, 2005) urges libraries to conduct separate library induction programmes and library tours for users with disabilities so that the needs of this group of users are not overshadowed by those of the non-disabled.

This reflects societal attitudes that look down upon students with disabilities, as incapable and not worth the effort. Eide and Ingstad (2011, p. 8) argue that students with disabilities are at a disadvantage from the outset, and therefore need more support in order to be on an equal footing with their peers. This was confirmed by one of the student participants, who stated that if students with disabilities were given more support, they would perform as well as their non-disabled colleagues. The student lamented the higher repetition rates among students with disabilities resulting from the lack of support for equal access to educational information.

### **7.3.3 Accessibility of library websites**

Academic library websites are an increasingly preferred media for publicising as well as delivering library services. Accessing library services and resources via the library website enables students with disabilities to overcome the challenges presented by the physical library environment (Ballesteros, Ribera, Pascual, & Granollers, 2015). The social model of disability demands that libraries should identify and fix access barriers to websites to reduce the marginalisation of students with disabilities in the web environment.

The findings of this study showed that the academic libraries used websites to publicise and deliver their services and resources. MUST's library was the only one that did not have a running website as it was still under development. Chancellor College, Polytechnic and Mzuzu University libraries' websites offered the following resources: electronic journals, OPAC, electronic books, library guides and institutional repositories. None of the library websites included information on disabilities. The three evaluated websites of Chancellor College, Polytechnic and Mzuzu University libraries exhibited errors such as empty links, redundant links (adjacent links pointing

to the same URL) and heading levels, among others, all of which present navigation difficulties to assistive technology users. In addition, all the webpages generated significant contrast errors, which is the low contrast between foreground and background colours. Contrast errors cause problems to almost all users, and especially partially sighted users. These errors reflect a lack of consideration of users with disabilities in website design.

Public universities in Malawi desire to widen access to higher education by adopting the Open Distance Learning (ODL) model of providing education (Chancellor College, 2014; the Polytechnic, 2019) to those who may not be able to attain higher education qualifications due to work commitments, geographical location and disability. Therefore, the need for accessible library websites cannot be overstated. Mzuzu University is already offering ODL programmes.

Librarians also need to be knowledgeable about how persons with disabilities source information from the web in order for them to evaluate and challenge library website design (Kumar & Sanaman, 2015). The findings revealed that all the college and university librarians were not familiar with Web Content Accessibility Guidelines (Caldwell *et al.*, 2008) as provided by the World Wide Web Consortium (W3C), and therefore they were not in a good position to advise the ICT department, which is responsible for the design of the websites, on accessibility issues. Just as Wilson's models of information behaviour are applied by human computer interaction experts to develop ICT interfaces customised for specific user groups (Potnis, 2015, p. 106), web developers too can apply these models in developing websites that present less or no access challenges to persons with disabilities.

All the university and college librarians interviewed for the study acknowledged the significance of library websites in bridging the accessibility gap for students with disabilities and reiterated their plans to increase the provision of electronic resources to students with disabilities. This runs counter to Ekwelem's (2013) study which found that 71% of the librarians in Nigerian universities believed that electronic resources were not created for persons with disabilities, which further highlights the marginalising attitude that students with disabilities are subjected to in higher education institutions. Academic librarians should take a leading role in harnessing ICTs to improve information access to students with disabilities. The social model of disability dictates

that website design should incorporate the needs of disabled students to ensure their full participation in the web environment.

Remote access to library e-resources was only available at the Polytechnic library, and only postgraduate students were registered for this service. For the rest of the libraries, e-resources were only accessible from computers on the local area network (LAN). The remote availability of e-resources offers an opportunity to all (able and disabled) students at the Polytechnic to overcome physical barriers, and the library should take advantage of this.

#### **7.4 Existence of library and institutional disability policy and compliance with national policy and legal frameworks**

Disability policies serve to describe existing services and facilities for students with disabilities; the types of individual assistance that can be provided; and procedures to be followed in order to access the available services and facilities (Rogers, 2006, p. 61). Seyama (2014) posits that library disability policies emphasise the library's recognition of persons with disabilities as anticipated and valued users. The social model of disability entails that library staff should be proactive in scrutinising their policies and practices to establish and address access barriers to students with disabilities.

The findings of this study revealed that none of the participating libraries had, not only no disability policy, but any kind of library policy. In addition, the parent institutions did not have any policy on disability despite the government of Malawi signing and ratifying the UNCRPD and subsequently passing the Disability Act in 2012. A review of the Disability Act reveals that it does not address library service provision in general, and provision to persons with disabilities in particular. Unlike other countries where oversight bodies that regulate library service provision exist, such as the Committee of Higher Education Libraries (CHELSA) (Committee of Higher Education Libraries in South Africa, 2019) in South Africa and Library and Information Council in Namibia (Republic of Namibia, 2001, p. 4), Malawi does not have any such entity. The country also does not have a national library policy, and the Malawi Library Association is less involved in quality assurance in library service provision. Therefore university/college librarians' responsiveness towards the planning of library services and provision to users with disabilities largely depends on the university/college librarian's attitude towards and awareness of disability

issues. This was confirmed at Mzuzu University where a senior library staff member who had published a paper on disability initiated the disability awareness training of library staff. The research he conducted to publish the paper raised his own awareness of the challenges facing persons with disabilities in accessing library and information services.

Although the National Council for Higher Education has disability library service provision as one of its accreditation standards, this standard emphasises on physical access only (National Council for Higher Education, 2015, p. 23). Therefore, academic libraries in Malawi are not accountable to any external body other than their parent institutions, and there is no consequence for failure to implement any legal or policy frameworks, which puts students with disabilities at risk of continued discrimination and marginalisation.

Although the Disability Act obliges all players in the information industry to provide information access to persons with disabilities and to remove architectural barriers in all public and private premises, it does not make any specific mention of libraries. The same applies to the National Policy on Equalisation of Opportunities for Persons with Disabilities (Malawi Government, 2006b). None of the objectives of this policy addresses disability in education (Malawi Government, 2006b, p. 19), let alone higher education, nor the provision of teaching and learning materials in accessible formats to persons with print and hearing disabilities.

The lack of policy and the consequent inadequate service provision to students with disabilities in all the libraries under study confirms Seyama's (2014) assertion that the absence of policy hinders the provision of library services to students with disabilities. Similarly, Kinnell, Yu and Creaser (2000) state that library services for persons with disabilities cannot develop where there is no policy to offer guidance. Wazakili *et al.* (2011, p. 19) concur that in the absence of policy it is hard to identify challenges facing persons with disabilities in need of priority funding. Although Chancellor College and the Polytechnic included some disability statements in their strategic plans, they were not strong enough to influence any changes, as they merely outlined the aspirations of the institutions to become inclusive. Although Polytechnic indicated the purchase of special needs books and equipment as one of its strategic goals, this was not reflected in the budget as stated by the college librarian. These findings corroborate those of an earlier study by UNESCO on disabled students at African universities (UNESCO, 1997) which found that only four of the 24

participating universities (17%) had disability specific policies. Another study by Mostert (2001) found that most libraries in Africa operated without any written policy. Most recently, Chaputula and Mutula (2018), writing on the e-readiness of public university libraries in Malawi to use mobile phones in the provision of library and information services, found that none of the five participating public university libraries had a policy.

The effects of the lack of any policy to guide library service provision for students with disabilities were noticeable. From the study's findings, the students faced exploitation at one of the participating universities where they were being charged for electronic books when the print versions were not available in the library. Furthermore, at the same institution, visually impaired students were being charged for the installation of Job Access with Speech (JAWS) (software that reads text into speech) on their personal computers. This supports Lersilp's (2016) determination that students with disabilities spend more on education than their non-disabled peers as they meet assistive technology costs where these are not provided.

The selective provision of reasonable accommodation, such as loan period extension, is another consequence of a lack of policy. From the findings, provision of reasonable accommodation was based on the library staff's personal empathy, mostly to senior students as they had become more familiar with them on campus over the years. This finding is confirmed in Hong's (2015:4) study, which found that many students with disabilities enter higher education without self-advocacy skills to ably communicate their needs. A policy could provide proper guidelines for the equal benefit of all students with disabilities. This finding also concurs with that of Bodaghi and Zainab (2013) that inclusive library services can only be achieved if there are inclusive policies in place.

Another effect of the lack of policy was the reactive response to disability, on a case-by-case basis. From the findings, none of the participating libraries, except MUST, made anticipatory accommodations for students with disabilities, and accommodation was provided on a case-by-case basis. Only MUST library had a working lift, accessible toilet, adjustable reading tables and a circulation desk with a lower end and special study rooms for students with disabilities. It is worth noting that the library is newly built by the Chinese government. Mzuzu University had constructed ramps upon the enrolment of a student in a wheelchair a few years previously. At the time of data collection, the university had enrolled students with visual impairments for the first

time in about 10 years, yet it had no structures in place for such students, not even braille paper. The university had not yet identified a resource room for the students, which made it difficult for them to study. Additionally, the Polytechnic and Malawi University of Science and Technology, the two institutions in the study that did not have students with visual impairments enrolled at the time of data collection, were not ready to spend money on assistive technologies and accessible materials before the admission of potential users for fear of spending on facilities that might not be used and could become obsolete further down the line. This confirms Chiwandire and Vincent's (2017, p. 4) observation that costs are usually used to justify non-provision to students with disabilities.

#### **7.4.1 Awareness of disability policy and legislation by students with disabilities**

The social model of disability requires that persons with disabilities should be aware of existing laws and policies in order for them to be able to defend and claim their rights. From the findings, most of the students were not aware of any disability specific law or policy, such as the Disability Act and the National Policy on Equalisation of Opportunities for Persons with Disabilities. However, all the students knew of the basic equality right as enshrined in the Malawian Constitution (Malawi Government, 2006a). The students claimed that they had an equal right to education, which also entails the right to equal access to information. At Chancellor College, only one student was aware of the Disability Act and its requirements for reasonable accommodation and the provision of accessible information to the print disabled. The student indicated that he had learnt about the Disability Act from one of the workshops run by the Chancellor College's legal clinic. The Special Needs Unit coordinator mentioned that the legal clinic organises disability sensitisation workshops on campus, but attendance is voluntary for students with disabilities. Neither the SNU nor the college administration conducted any disability rights awareness workshops. The study found that the students were not briefed on law or policy or provisions that were available to them during the period of their study. Since attending the workshops conducted by the college's legal clinic was optional, most of the students indicated that they had not attended. One student at Mzuzu University also mentioned the Disability Act and explained how it would change the lives of students with disabilities if it were enforced.

The findings revealed that students with disabilities were aware of their right to education and they felt this right was being violated by being denied access to library services. Consequently, the

students felt that they were not getting value for money for their education. This confirms Herriot's (2006, p. 53) claim that academic libraries should recognise that service quality and satisfaction applies to all users, including those with disabilities. Furthermore, the study found that although the students realised that their rights had been violated through the library's failure to meet their information needs, they had not taken any measures to claim these rights. The findings revealed that students with disabilities were not empowered to defend their rights. This supports Rogers' (2006, p. 62) finding that policies raise the awareness of students with disabilities about their legal rights. Similarly, Wazakili *et al.* (2011, p. 23) assert that the lack of representation for persons with disabilities at senior level and a lack of empowerment prevent persons with disabilities from advocating their inclusion at all levels in society.

From the interviews with the students, one could see their helplessness and resignation to their fate. Some of the students with disabilities hailed library staff for the adaptations made in the library, such as removing turnstiles to allow for wheelchair access at the Polytechnic and considerations for extended loan periods at Chancellor College. Collins, Azmat and Rentchler (2018, p. 8) warn against this individualised approach to accommodating and supporting students with disabilities, arguing that it only succeeds in creating a sense of dependence which may lead to exploitation. This was also confirmed by a librarian at Mzuzu University, who corroborated that a student on a wheelchair once protested against using a special door which required her to ask someone to open for her when going in and out of the library, as she felt that asking for permission to get in or out was not demanded for all the other students. The student wanted to use the same door that was used by all the students. This practice reaffirms that higher education institutions in general, and academic libraries in particular, have not embraced the human rights approach to disability. Thus, the social model of disability advocates the restructuring of the higher education environment to ensure that all students, whether with a disability or without, have equal opportunities.

#### **7.4.2 Awareness of disability policy and legislation by library staff**

In line with the social model, library staff should be knowledgeable about laws and policies that aim to protect and promote the rights of persons with disabilities. The study found that university and college librarians were knowledgeable about the Disability Act, which promotes the provision of accessible information in formats that are suitable for persons with disabilities. However, most

of the librarians were not familiar with the UNCRPD and the Marrakesh Treaty, overarching international instruments that aim to provide equitable access to information for persons with disabilities. The library assistants were not familiar with the Disability Act or the UNCRPD, but they demonstrated knowledge about the right to education for persons with disabilities as enshrined in Malawi's Constitution. All members of the library staff were not familiar with the National Policy on the Equalisation of Opportunities for Persons with Disabilities. Herriott (2006) emphasises the need for librarians' awareness of legal requirements in order to better serve users with disabilities.

### **7.5 Challenges facing students with disabilities in accessing library services**

Previous studies (UNESCO, 1997; Deines-Jones, 2007; Robertson, 2007; FOTIM, 2011; Department of Arts and Culture, 2014) have highlighted the challenges facing students with disabilities in gaining access to library services in the higher education setting.

The current study determined that students in public universities in Malawi were facing numerous challenges in accessing library and information services. The challenges are grouped into physical, systemic, and social and cultural challenges, as discussed below.

#### **7.5.1 Physical challenges**

The social model of disability demands that academic libraries remove physical barriers that prevent students with disabilities from accessing library buildings and related facilities. The current study determined that the architectural designs in most of the library buildings under study were not favourable to students with disabilities, and consequently they relied on their colleagues to assist them.

The study also found that the inaccessibility of libraries left the students with no place to study. For example, students with disabilities at Chancellor College were confined to the Special Needs Unit resource centre, which was not conducive to study due to noise and lack of suitable furniture. Visually impaired students who use screen reading software such as JAWS need a quiet environment to listen to the information, as confirmed by a related study by Irval and Nielsen (2005, p. 4), who highlight the need for special reading rooms in academic libraries.

In the other institutions where disability units did not exist, students studied in their rooms, which were not conducive due to the noise in students' residences. Students' frustration with being denied access to the library underscores Majinge and Mutula's (2018, p. 526) assertion that students with disabilities need the library as much as their non-disabled colleagues to study and write assignments. This was confirmed by one student who uses a wheelchair and expressed a strong desire to study with other students in the library to gain motivation and exchange knowledge. Confining students with disabilities to the Special Needs resource centre works against the principles of inclusion, which is against the social model of disability principles. The participants in this study stated that they felt that the library was not meant for them. Bodaghi, Cheong and Zainab (2016, p. 94) observe that prolonged and repetitive negative experiences influence and restrict the sense of belonging and psycho-emotional needs of students with disabilities, which are pivotal to academic success.

The study also found that students with disabilities faced ICT barriers. While the students with visual impairments were able to use JAWS to search and read electronic documents, they lacked information literacy skills because they were excluded from information literacy training programmes. Furthermore, some students who had used the library electronic databases reported problems with reading some of the PDF documents with JAWS. This echoes an observation by Tilley, Bruce and Hallam (2007, p. 80) that students with disabilities have to confront both technology and information illiteracy barriers. The inability of assistive technology to read electronic documents or navigate websites is referred to as a disability digital divide (Sachdeva *et al.*, 2015, p. 284) or second digital divide (Burgstahler, 2002, p. 421). These ICT challenges faced by students with disabilities show that technology is not a panacea to information accessibility as was the thinking of most library staff interviewed in this study. This is also confirmed by the accessibility test results shown in Tables 13, 15 and 16.

### **7.5.2 Systemic challenges**

Systemic challenges are challenges that are created by the library systems themselves. They arise from the inherent overall system, and not from isolated factors.

This study found that all the libraries lacked policies that cater for students with disabilities, such as a policy that would oversee the acquisition and distribution of information materials in suitable

formats. The result has been the lack of information in alternative formats for students with visual impairments. According to Moriña and Morgado (2018, p. 14), a lack of policy is a barrier in and of itself. In the absence of a policy, there were no written standards for acceptable conduct and the libraries had no mechanism to identify barriers that prevented students with disabilities from accessing library services and programmes. Kanter (2015, p. 428) posits that a society committed to justice and equality demonstrates commitment by enacting laws and creating policies and programmes aimed at fostering these values, which was not the case in the libraries under study. The challenges arising from the absence of policy have been discussed at length in Section 7.5.

Another systemic challenge faced by students with disabilities was the lack of coordination of disability issues by college or university authorities. From the findings, relevant information on the number of students with disabilities and their disability types was not passed on to the library. At Mzuzu University, only information about students with visual impairments was passed on to the library, excluding those with other physical disabilities. At the Polytechnic, the librarian was informed about students with disabilities through management meetings, and the information was not complete, as evidenced by the librarian's knowledge of only one student with a physical disability when there were in fact five, including one with a hearing impairment. At MUST, the librarian became aware of the existence of a student with a disability after the first semester. This placed all these students at a disadvantage because it was impossible for the libraries to provide the much needed information support without knowing the number of students and the types of disabilities they needed to cater for.

The study found that despite the existence of national legislation and policy, and the signing and ratifying of international treaties aimed at the equal provision of information services to persons with disabilities, there was no enforcement mechanism. As discovered in the academic libraries under study, students with disabilities did not count on library support for their information needs.

From the findings of this study, disability organisations in Malawi have not extended their rights campaigns to universities and relevant government ministries, and departments have not moved to act upon the infringement of the right to information by students with disabilities. The students stated that primary and secondary schools were much better resourced in as far as access to educational information was concerned. This is confirmed in earlier studies by Moriña, López-

gavira and Molina (2017, p. 355), FOTIM (2011), and Moswela and Mukhopadhyay (2011, p. 316), which found that universities were lagging behind in implementing inclusive education as envisioned by the social model of disability. Strnadová, Hájková and Květoňová (2015) stress that identifying barriers to students' participation in universities is crucial for initiating systemic change that regards inclusive education as a key to guiding legislation and the provision of university education. Academic libraries are fundamental to achieving inclusive education due to their pivotal role in students' academic success.

The study also revealed that students were not empowered to claim and defend their rights as evidenced by their lack of awareness of legal and policy frameworks aimed at promoting and protecting their rights. As a result, the students were made to beg or pay for services that were supposedly free. Examples include payment for e-books, installation of JAWS, and repair of university computers.

### **7.5.3 Social and cultural challenges**

The social model of disability maintains that disability is a social and cultural construction. Students with disabilities experienced challenges due to poor attitudes towards and cultural beliefs about disability. For a long time, Malawian society regarded disability as a bad omen, and children with disabilities used to be hidden. This instilled longstanding negative attitudes towards persons with disabilities.

The social model of disability demands changes to the negative attitudes towards persons with disabilities. Viewing disability through social and cultural prisms shifts the blame and guilt from the persons with disabilities to society, an acknowledgement that inaccessibility is not their fault (Braathen & Loeb, 2011, p. 10). In view of the social model, society should develop positive attitudes towards persons with disabilities in order to create an enabling environment that guarantees their full participation.

The study found evidence of negative attitudes towards disability issues among library staff. This was demonstrated in part by a general lack of provision to reasonably accommodate students with disabilities. The study also revealed that the lack of recognition of students with disabilities during library orientation sessions was problematic, as the students felt unaccounted for by library staff. This might have been due to a lack of awareness and knowledge about disability issues by library

staff. One student with visual impairment complained that during his first attendance of a library orientation programme, the librarian trainer stated outright that the library had no information materials for visually impaired students. The student was frustrated by this announcement and never went back. The student stated that he had felt unwanted and chased away by the librarian. This clearly demonstrates a poor attitude towards persons with disabilities.

The study revealed that all the libraries except MUST's were included in an infrastructural development project under the African Development Bank where the parent institutions received a grant to build, among other things, science laboratories and lecture theatres to improve the teaching of science and technology. All three libraries had planned for extensions to the existing structures to incorporate the needs of students with disabilities. Unfortunately, in all three institutions, libraries were dropped in the course of the project, shortage of funds being cited due to devaluation, which was quite surprising because the project had been quoted in United States dollars. This is consistent with Nawe's (2004, p. 381) observation that although libraries are regarded as the heart of the university, they are not usually given attention that is commensurate with this status because of the high investments necessary, and returns that are not visible directly.

The exclusion of the libraries from the project also makes the institutions' commitment towards improving library services in general, and towards disability issues in particular, questionable and leaves one wondering whether the libraries were merely used as bait to get funding. Commenting on this, one of the college librarians interviewed for the study observed that disability issues were not a priority at his institution and that students with disabilities were at the periphery of the college system. This statement was made on the basis of the college's uncaring attitude towards challenges facing students with disabilities in the institution. This in turn supports the notion that universities have stigmatising attitudes towards students with disabilities as they are regarded as having no future in higher education. Similarly, Moabelo (2012, p. 4) notes that university management and staff in developing countries, including Malawi, lack commitment towards disability issues, hence the requirements of students with disabilities are not prioritised. However, this contradicts Copeland's (2011, p. 223) claim that academic libraries have responded positively to international disability treaties and national disability legislation by adapting their environments to accommodate users with disabilities. The study has revealed that academic libraries in Malawi do not have much to show in response to UNCRPD and the Disability Act since the two instruments

came into effect in 2009 and 2012 respectively. In all the institutions, students with disabilities were helpless and uninformed, with no formal platform to share their challenges and engage with authorities.

The perception of disability through the lens of the medical model of disability by library staff has resulted in the failure to reasonably accommodate students with disabilities, for example through the provision of extended loan periods for all disabled students. The study found that in some of the libraries, students with disabilities were even charged overdue fines for returning books late. Bodaghi, Cheong and Zainab (2016, p. 93) warn that these kinds of experiences impact students with disabilities negatively and demonstrate a lack of understanding by library staff, which is a barrier to library access. Traces of the medical model of disability were apparent from the library staff's continued use of terms such as *physically challenged*, *abnormal* and *crippled* in their reference to students with disabilities. Koca-Atabey (2017, p. 138) weighs in on the significance of terminology as it reflects on the conceptualisation of disability by a particular community. Describing students with disabilities by using medical labels leads to discriminating attitudes. Lee (2007b, p. 119) concurs that attitudinal barriers rank the highest among the barriers facing students with disabilities in academic libraries.

The students also faced a lack of structured support from the library. The lack of designated staff in all the libraries forced students to rely on their peers during information seeking activities. This demonstrates the lack of an inclusive mindset, which is a formidable obstacle as posited by Lopez-Gavira, Moriña and Morgado (2019, p. 8). The general lack of provision for students with disabilities highlights society's perception of disabilities as a tragedy, and spending on persons with disabilities is considered wasteful as the return on investment is considered low (Chataika, Mckenzie, Swart, & Lyner-Cleophas, 2012).

#### **7.5.4 Challenges faced by libraries in providing services to students with disabilities**

University and college librarians acknowledged the importance of offering inclusive library services to students with disabilities. However, the results of the study revealed that there were numerous challenges that prevented them from providing proper services to these students.

The study revealed that academic libraries did not receive information about students with disabilities enrolled in a particular year. At Mzuzu University, the library only received

information about students with visual impairments, perhaps because of their apparent need for special reading materials.

Library assistants mentioned a lack of training on disability awareness in order to better serve students with disabilities. The initial disability awareness training conducted at Mzuzu University library was a positive development and was hailed by staff as an eye-opening experience. There was a request for more such training and a call for it to be offered to all members of staff. The impact of the training was noticeable in the way the staff described how they could assist students with different types of disabilities. This in turn echoes Lee's (2007a, p. 117) emphasis on the sensitisation training of library staff, considering that compliance with anti-discrimination legislation is not enough to change staff attitudes.

The study also revealed a lack of awareness about assistive technologies by members of staff. For example, the library staff claimed that the provision of electronic information was a solution to the accessibility challenges faced by students with disabilities, without considering the potential challenges facing assistive technology users in the electronic environment as evidenced by the web accessibility evaluation tests performed in this study.

The study also found that lack of funding was a common challenge facing all the academic libraries under study, and that this was hampering efforts to provide accessible library and information services. One college librarian indicated that the library had been including equipment and resources for students with disabilities in their budget, but none had been funded.

The contradiction between the Malawi Copyright Act (Malawi Government, 2016a) and the Marrakesh Treaty is another challenge facing academic libraries in Malawi. The revised Act requires libraries to seek consent from the responsible minister before implementing or adopting alternative formats, which is impractical.

## **7.6 Chapter Summary**

This chapter discussed the findings as presented in Chapter 6. The discussion was based on the research questions, literature review, Oliver's (1990) social model of disability and Wilson's (1999) model of information behavior.

The chapter revealed that library services in the academic libraries under study in Malawi were not comprehensive and information support to students with disabilities was minimal. The chapter also revealed that students with disabilities faced more difficulties in gaining access to library and information services than their non-disabled colleagues, despite their entitlement to equitable access to information by law.

In light of Wilson's model, this chapter has revealed that students with disabilities, as the use in context, are confronted with numerous barriers in their efforts to seek information as also posited by Šehić and Tanackovic (2014, p. 4). This chapter has also re-affirmed Seyama's modification of Wilson's model (2014, p. 59) to include the disability unit, where students with visual impairment often turn to for transcription of information into suitable formats which are not available in the library. Hence, it can be concluded that Wilson's model, as it is, is not applicable to persons with visual impairment as their information seeking goes beyond the information system. Consequently, it is only when academic libraries understanding of such information needs and information seeking behaviour that they can mitigate against access barriers and develop information systems and services that respond to the various information media preferences for students with disabilities. Thus, Wilson's model has helped to illuminate information seeking behaviour of students with disabilities in the context of academic libraries. Furthermore, from this chapter, Wilson's model entails that libraries should design information literacy programmes that do not discriminate students with disabilities. As students with disabilities rely more on their peers to find information, interpersonal relationships influence information seeking behaviour of these students. Wang and Yu (2017, p. 14) state that interpersonal networks for marginalized communities such as students with disabilities are usually small and unconnected as they are restricted to the disabled community. Therefore, academic libraries should rise up to break interpersonal barriers as per their professional ethos. Providing them with accessible internet facilities is a sure way of opening them up to the outside world.

The findings also show that users' preferences of information source was influenced by the type and degree of impairment, which can be related to contextual factors in Wilson's model. For example, students with low vision, like those with albinism, expressed a preference for large print or electronic information that they could read using ZoomText, while blind students preferred electronic information that was compatible with JAWS. This also confirms Potnis's (2015, p. 104)

assertion that the overall information behaviour of an information seeker is largely shaped by his/her context. This implies that academic libraries should provide information in various formats to suit the diverse needs of their user populations.

The chapter has also revealed that failure by the libraries to adapt their environments to address the needs of students with impairments has created (in some cases) insurmountable obstacles, validating the social model of disability. Beyond the physical barriers, students with disabilities also faced discrimination resulting from poor attitudes due to a lack of awareness of disability issues. Students with disabilities lacked awareness of their rights and the libraries' obligation to uphold these rights, which prevented them from being proactive in standing up for their rights. In addition, the lack of policies that address library service provision to students with disabilities has led to their neglect and exclusion. Although the disability policy and legislation demand equitable access to information, this is not the practice in academic libraries in Malawi. It was also noted that the medical model of disability prevailed despite the fact that Malawi adopted the social model of disability by committing to inclusive education practices.

The haphazard manner in which library services were offered led to inconsistencies and discrimination against students with disabilities. It was noted that students with disabilities did not receive any formal support from libraries. Instead, they depended on their colleagues in their information seeking activities, thereby risking marginalisation and exploitation.

The study also revealed gaps in the provision of information literacy training which excluded students with disabilities. Most importantly, the awareness of library staff of disability policy and legislation, and the implications for library practice, needs to be addressed as it has a huge bearing on library service provision to students with disabilities.

Finally, from this chapter it is noted that the lack of computer skills training, shortage of computers installed with assistive devices, and costs associated with the use of library computers caused students with disabilities to experience a 'second digital divide'.

The next chapter presents a summary of the findings, conclusion and recommendations.

## **CHAPTER EIGHT: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **8.1 Introduction**

This chapter presents a summary of the research findings, conclusion and recommendations.

The purpose of the study was to determine the information support for students with disabilities in public universities in Malawi. The study investigated the availability of library services for students with disabilities; accessibility of library services and facilities; existence of library policy on library services for students with disabilities and its relationship to national disability policy and legislation.

Oliver's social model of disability and Wilson's model of information behaviour were used as theoretical frameworks to guide the study, which was qualitative and used an interpretive paradigm to address the research question.

The study adopted a case study design. The sample population was drawn from students with disabilities and library staff at selected public universities in Malawi. The following universities were involved in the study: University of Malawi (Chancellor College and Polytechnic), Malawi University of Science and Technology, and Mzuzu University.

Data was collected from 23 students with disabilities (7 with mobility impairment, 13 with visual impairment and 3 with hearing impairment) and 12 library staff, using semi-structured interviews. One disability unit coordinator was interviewed, since only one institution had an established disability unit. Where disability units did not exist, the dean of students was interviewed, depending on his/her availability. In addition, data was collected through a physical inspection of the libraries and review of documents such as the university/college strategic plans, library rules and regulations and library websites. Library websites were evaluated for accessibility errors using WEBAIM, an open source accessibility checker. Data from semi-structured interviews was analysed by thematic analysis.

This chapter provides a summary of the research findings, conclusions and recommendations for policy development and improved practice as well as future research.

## **8.2 Summary of findings**

This section presents a summary of the findings under each of the study objectives. The summary is then used to draw conclusions and propose recommendations.

### **8.2.1 Objective 1: To examine the availability and accessibility of information resources and services for students with disabilities in academic libraries**

The corresponding question to this objective was:

- What information resources and services are available to students with disabilities in academic libraries in Malawi?

The study investigated the availability and accessibility of information resources and services for students with disabilities in academic libraries.

The study findings indicated that academic libraries were providing services for students with disabilities in the same way as for all the other students. The most common services offered were book loans, internet services and library orientation and information literacy training.

Further, the study found that none of the libraries conducted special library orientation programmes or information literacy trainings for students with disabilities. Instead, students with disabilities were expected to attend library orientation sessions together with non-disabled students. The inaccessibility of the training venue and lack of recognition of students with disabilities kept the students away from the training sessions. As a result, the students were not aware of services they could access from their resource room, such as electronic databases.

The study also found that participating libraries had no information in alternative formats such as braille and audio for visually impaired students. Students with visual impairments used the available print library resources, which was difficult as they depended on their colleagues to read to them. There were no readers employed by the universities, nor staff specially assigned by the libraries to assist students with disabilities. The academic libraries also did not provide book fetching services or telephone services for students with mobility impairments. Furthermore, students with hearing impairments were under-served as no sign language interpretation was offered. This was aggravated by the lack of awareness and training among library staff on how to assist students with disabilities. The researcher noted that this was fueled by the continued absence of disability and library services for persons with disabilities in library school curricula.

The lack of assistive technologies for transcribing information, such as braille embossers, caused delays for the students to get information as transcription services were sourced elsewhere.

The study further found that the libraries were not getting enough funding to procure assistive technologies and information resources for students with disabilities. The two institutions that did not yet have students with visual impairment were not ready to spend money on assistive technologies or information resources before the admission of such students to the university.

In general, the study found that services for students with disabilities in academic libraries in Malawi were not treated as a priority and that no academic library had plans to develop a policy to this effect.

In terms of training, only one library of the four had organised at least one sensitisation workshop for its members of staff, following research conducted by one of the senior members of staff.

However, the study found that academic libraries were obliged not to discriminate against students with disabilities, as provided for in the Disability Act of 2012.

### **8.2.2 Objective 2: To examine the accessibility of library buildings for students with disabilities**

This objective was addressed by the following research question:

- How do students with disabilities access library buildings?

The study found that information housed in academic libraries was out of reach for students with disabilities, mainly those with mobility and visual impairments, due to the architectural design of the libraries. The libraries had no lifts/elevators or ramps to enable students with mobility and visual impairments to access library resources and services which were located on upper floors. With no designated library staff in all the libraries under study, students with mobility and visual impairments depended solely on their friends to obtain access.

Only the MUST library was fitted with a lift/elevator for easy navigation of the library by users with disabilities. However, the single student with hearing impairment interviewed at this university indicated a limited use of the library due to difficulties in communicating with library staff.

In all the libraries that were studied, bookshelves were too high, with narrow passages between them making it difficult for wheelchair users to browse the books on these shelves. The researcher learnt that in two of the libraries, shelves had been shifted closer together to create more reading space, with no regard for wheelchair user space requirements.

In addition, the study found that the libraries did not have study carrels for use by students with disabilities. There were no wheelchair accessible toilets, making it difficult for students using wheelchairs to stay in the library; no adjustable reading tables and chairs, computer tables and service counters. Only the MUST library had low end-service counters and adjustable tables to accommodate wheelchair users.

Furthermore, the passages in the libraries were too narrow and most often blocked by old furniture, making the movement of wheelchair users and students with visual impairment difficult.

### **8.2.3 Objective 3: To examine the implementation of policy and legislation in academic libraries**

This objective was addressed by the following research question:

- How do libraries incorporate national policies and legislation in designing library services for students with disabilities?

The study found that current national disability policy and legislation, specifically the Disability Act of 2012, did not explicitly address library services for persons with disabilities, and that none of the libraries had developed a policy addressing library services for students with specific disabilities, and students with disabilities in general.

The lack of frameworks to monitor compliance with the Disability Act has created room for complacency among institutions such as the universities under study.

Fundamentally, the study found that inclusive higher education in Malawi is very hazily covered in relevant documents, which makes the universities not feel obliged to implement it.

### **8.2.4 Objective 4: To establish challenges facing students with disabilities in accessing library and information services in academic libraries**

This objective was addressed by the following research question:

- What challenges do students with disabilities face in accessing library services and resources in academic libraries in public universities in Malawi?

The study revealed that students with disabilities are confronted by numerous challenges in accessing library and information services in academic libraries in Malawi.

The challenges ranged from physical to systemic and social.

#### **8.2.5.1 Physical challenges**

The study found that the students experienced access challenges posed by the architectural design of library buildings.

Library buildings were characterised by stairs with no provision of lifts or ramps except at one library in a newly-opened university, which was fitted with a working lift/elevator.

Students with disabilities faced challenges regarding access to ICT. Firstly, while all other students were trained in basic ICT skills during the first two weeks at university, this training was not offered to students with disabilities. The students had to learn on their own.

Secondly, there were a limited number of computers in the disability resource room, which were also shared with sighted students who guided their visually impaired counterparts, and even others who preferred using these computers to the ordinary ones in the library. This caused further deprivation to students with disabilities who were already facing information access challenges.

#### **8.2.5.2 Systemic challenges**

The study found that students experienced challenges caused by the university systems at large.

Firstly, the study noted that there was poor coordination of disability issues in the universities being studied. All the libraries indicated that they did not have information on the students with disabilities enrolled in their specific university and their particular disability categories.

Secondly, the lack of disability policies at both library and institutional level led to fragmented library service provision to students with disabilities, as the reasonable accommodation they received depended on the goodwill of library staff, which was not consistent. This also left the students disempowered because they did not know what services to expect from the libraries.

The study also noted that disability organisations are not involved in higher education in Malawi, which left the students voiceless as far as claiming their rights was concerned. The study noted that students with disabilities were only aware of their basic right to education, and not the fundamental rights enshrined in the Disability Act such as the right of access to information and the right to access all public infrastructure.

### **8.2.5.3 Social challenges**

The study revealed an uncaring attitude by the management of institutions in alleviating challenges facing students with disabilities. For example, despite students with disabilities petitioning management about the inaccessibility of the library building and its resources at Chancellor College, the students were told that there was nothing that could be done to improve accessibility of the library. The exclusion of students with disabilities in library orientation and information literacy training highlights the low status accorded students with disabilities. In addition, in all the libraries, university/college librarians did not receive information about students with disabilities from the admission offices. The lack of formal support systems forced students with disabilities to depend on their colleagues, which put them in risk of marginalisation and exploitation.

### **8.2.5 Objective 5: To propose strategy for the provision of library services for students with disabilities**

The current level of library service provision in public university libraries in Malawi is worrisome. The inequality in access to information between students with disabilities and those without disabilities is huge. The ad hoc provision of library services mirrors the lack of direction for academic libraries to implement library services for students with disabilities. This strategy serves to offer direction to academic libraries, and all other types of libraries, as they seek to provide services to users with disabilities. The strategy is drawn from the research findings, a literature review (Chapter 4) and the recommendations that were suggested by both students with disabilities and library staff who participated in this study. The IFLA checklist was also used.

Table 19 below outlines the proposed strategy.

**Table 19 Strategy for providing library services to students with disabilities**

Goal	Outputs	Related activities
Coordinated library services for students with disabilities	Disability liaison officer assigned	Promote library services to persons with disabilities Represent the library in meetings and other forums concerning disability issues

		<p>Develop in-house training programmes.</p> <p>Work with persons with disabilities and disability organisations.</p> <p>Facilitate cooperation with other libraries and agencies.</p> <p>Formulate policy to guide the provision of library services to students with disabilities.</p>
Awareness of information needs of students with disabilities	Conduct research on needs of students with disabilities	<p>Libraries are to take an active role in getting information about library users with disabilities and assessing their information needs in order to design appropriate services, plan and select appropriate materials, equipment and technical expertise. Information is to include, but not be limited to:</p> <p>Number of persons with disabilities</p> <p>Prevalent categories of disabilities</p> <p>How they access the library</p> <p>Baseline provision of technology vs what is available on the market</p>
Improved staff attitudes towards students with disabilities	Conduct disability awareness for library staff	<p>Disability awareness training to be conducted for all staff, from library managers to support staff, whether full time or part time, including library volunteers. Induction of new staff is also to include a disability awareness. This prepares them to handle basic issues that do not require the attention of the designated staff.</p> <p>The training should focus on eliminating attitudinal barriers and promoting human rights. The implication of the Disability Act on libraries is to be highlighted.</p> <p>In addition, staff are to be trained in the use of assistive technologies available in the library. More training needs to be given to staff by conducting a training needs assessment. Libraries are to liaise with disability organisations to conduct such trainings.</p> <p>Special training targeting library managers to be conducted focusing on legal responsibility, making anticipatory and appropriate adjustments.</p>
Increased availability and accessibility of library services to students with disabilities	Use of ICT to deliver library services to students with disabilities	<p>Libraries are to utilise ICT in library services delivery for students with disabilities. More content is to be digitised (digitisation projects are now common in academic libraries in Malawi). Other information includes library guides, links to free electronic libraries and information on specific disabilities.</p> <p>All video information is to be captioned.</p>

		Library website design is to conform to web accessibility standards as discussed in Section 4.6.
Increased awareness and use of library services among students with disabilities	Inclusive library user training	Libraries are to conduct user training with content that matches the needs of students with disabilities. Training is to be conducted in rooms that are accessible, with enough lighting and furniture suitable for students with disabilities. Huge classes are to be split. Library tours are to be conducted separately for students with disabilities,
Increased university management support.	Increased funding and prioritisation of disability issues.	University management must be lobbied for increased funding and the prioritisation of materials and equipment for students with disabilities. An institution-wide disability policy must be drafted, published and implemented.

**8.3 Conclusion**

The study showed that information support for students with disabilities in public university libraries in Malawi is inadequate. While libraries recognised the presence of students with disabilities in their institutions, little effort was made to assess the needs of these students and address the barriers that hamper their access to library services and resources.

The study concluded that academic libraries should provide comprehensive services to students with disabilities, considering that everyone one has a right to accessible information, regardless of any disability they may have. For academic libraries to provide inclusive services, their facilities should reflect the principles of universal access design and adopt the human rights approach to disability. This would translate into library buildings which are equipped with working lifts/elevators or ramps, stocked with information materials including alternative formats, and equipped with assistive technologies.

Furthermore, the study concluded that academic libraries require staff that are trained and sufficiently knowledgeable to assist students with disabilities, which entails that universities and other providers of library and information science training should incorporate disability service

provision in their curricula. A positive staff attitude is critical to library usage by students with disabilities and should be developed to create a sense of belonging among these students.

A library policy that favours students with disabilities is crucial for libraries to be able to provide comprehensive services and allocate funding for the provision of services for students with disabilities.

In addition, library orientation and information literacy training are key to the effective utilisation of library and information services including online information which has the potential to bridge the accessibility gap for students with disabilities.

Furthermore, not all electronic information is accessible, and badly designed websites pose access challenges to assistive technology users.

In relation to the social model, the study concluded that it is not yet entrenched in higher education institutions in Malawi. Therefore, as championed by the social model of disability and Wilson's model of information behaviour, academic libraries should install enabling mechanisms that allow students with disabilities to seek, access and use information resources and services.

Finally, no single library is self-sufficient and able to satisfy the information needs of students with disabilities. Collaboration, both within and between institutions, is key to library service provision for these students. As libraries in Malawi are already collaborating in providing electronic resources through the Malawi Library and Information Consortium (MALICO), this collaboration could be extended to provide accessible resources to students with disabilities.

#### **8.4 Originality of the study**

The major contribution of this study lies in that it is the first study conducted in Malawi focusing on library services provision for students with disabilities in public universities in Malawi. Extant literature on this subject is dominated by studies from developing countries, mainly United Kingdom and the United States of America, many of which are discussed in Chapter 4. In Africa, South Africa and Nigeria are the main contributors to studies on library service provision for students with disabilities in academic libraries.

In terms of contribution to theory, the combination of Oliver's social model of disability and Wilson's 1999 model of information behaviour is unique to this study as only social model is usually used in studies of this nature. Usage of the two models is vast in library and information studies, however, they are rarely used in combination. Combining the social model and information behaviour model provided a complete picture of the information behaviour of students with disabilities while taking into account societal barriers as portrayed by the social model of disability which in turn informs better design of library systems that reflect the needs of this group of students.

Furthermore, the research can claim the originality of this study from the research findings which were a result of a process of literature review, collecting data using multiple instruments and physical observation. The study findings expose the dire situation of students with disability with regards to information support in academic libraries in Malawi. This study stimulates academic libraries in Malawi to rethink library service provision for students with disability.

#### **8.4.1 Contribution to theory**

By adopting the social model of disability and Wilson's model of information behaviour, the study contributes to the debate and dialogue on the two models.

The combination of Oliver's social model of disability and Wilson's 1999 model of information behaviour is unique to this study, as only the social model is usually used in studies of this nature. The use of the two models is widespread in library and information studies; however, they are rarely used in combination. Combining the social model and Wilson's model of information behaviour provided a complete picture of the information behaviour of students with disabilities, while taking into account societal barriers as portrayed by the social model of disability, which in turn informs a better design of library systems that reflect the needs of this group of students.

Studies using the two models in combination are not common, hence this study contributes to literature on the viability of using the two models together in studying accessibility of library services for persons with disabilities.

#### **8.4.2 Contribution to policy**

The study found that none of the four participating libraries had a policy on disability, or any other library policy. The study concluded that lack of policy to address library services for students with disabilities caused marginalization of these students. The study also found that library services for persons with disabilities are not addressed in current policy and legislation. Therefore, this study provides a benchmark on which academic libraries and all types of libraries in Malawi and beyond can base their policies on library services for students with disabilities. The study also provides insight for policy makers to re-look current policy and legislation to ensure explicit coverage of library services for persons with disabilities.

#### **8.4.3 Contribution to practice**

The study highlighted the current provision of information support for students with disabilities in academic libraries in Malawi. It raises the awareness of library staff about the different challenges facing students with disabilities in accessing library and information services by exposing the gaps in library service provision to this group of students. The study also raises awareness of both library staff and students on the existing laws and policies which promote and protect the right to accessible services and facilities for students with disabilities. Therefore, this study will act as an advocacy for accessible library services for students with disabilities. Furthermore, the study raises awareness of library staff on the potential barriers of electronic information resources to students with disabilities who use assistive technologies.

As the study revealed that only one out of the four participating institutions had an established disability unit, the findings of this study can be used as a basis for established disability units in the institutions that have none.

### **8.5 Recommendations**

The study has established numerous challenges that confront students with disabilities in accessing and using library and information services. The study has also identified challenges facing academic libraries as they seek to provide library and information services to students with disabilities

This section, therefore, provides recommendations for improving the accessibility of library services and resources to students with disabilities.

### **8.5.1 Availability and accessibility of library services and resources to students with disabilities**

The study established that library services and resources provided by public university libraries in Malawi were not inclusive. Libraries lacked resources in formats suitable for students with disabilities and the necessary assistive technology to bridge the accessibility gap.

As academic libraries serve to complement teaching, learning and research activities in any institution of higher education, library services and resources should be equally accessible to students with disabilities so that they can also succeed in their academic endeavours.

This study recommends that academic libraries in Malawi should provide services and resources that are fully available to students with disabilities. Awareness of such resources should then be increased to ensure maximum utilisation. Academic libraries should assign a staff member to assist students with disabilities, and also promote library services and resources to these students

In addition, this study recommends that government must explicitly address library services for persons with disabilities in terms of the Disability Act of 2012. In addition, the establishment of a national library for the blind should be explored in order to increase information availability for persons with disabilities.

### **8.5.2 Capabilities of library staff to assist students with disabilities**

The study established that library staff lacked skills needed to assist students with disabilities due to a lack of training. Therefore, it is recommended that academic libraries develop staff training and awareness programmes that aim to address staff attitudes towards disability and improve the competency of staff to serve students with disabilities. In addition, institutions that provide library and information science training should also include modules on library services for persons with disabilities so that graduates are equipped to serve this group of library users.

Academic libraries should also harness technology to improve access to information for students with disabilities, while accounting for the potential barriers of electronic information to these

students. Remote access to electronic resources should be implemented so that students with disabilities are able to access them using their laptops with JAWS installed. In addition, academic libraries should utilise the freely available technology found in Microsoft Office software and assign adequate computers to students with disabilities.

Funding of libraries should prioritise the acquisition of hardware and software required by students with disabilities to enable them to access information for their education. University/college librarians should exploit funding opportunities by writing grant proposals to external agencies rather than waiting for government funding, which may never come.

### **8.5.2 Accessibility of library buildings for students with disabilities**

This study recommends that libraries remove turnstiles that prevent students with disabilities, mainly those with mobility and visual impairments, from entering the library; lifts and ramps should be provided for easy and independent movement across the library floors.

It is also recommended that academic libraries provide accessible furniture for use by students with disabilities, and that all passages be cleared of old furniture that makes movement difficult. In addition, libraries must designate special carrels or rooms in which students with disabilities can study. Similarly, at least one accessible toilet should be provided in the library.

Furthermore, the study recommends that academic libraries designate a member of staff as a liaison officer for students with disabilities whose contact details and location should be made known to students with disabilities. Academic libraries should also provide basic services such as short loan use, reservations and renewals via telephone. Such initiatives may not need extra funding.

### **8.5.3 Library policy on students with disabilities**

This study recommends that the Disability Act of 2012 be reviewed to include explicit statements that address library services for persons with disabilities. Government should also finalise the national disability policy which is currently in draft form.

Furthermore, the study recommends that academic libraries should formulate policies to address library services for students with disabilities to guide the acquisition of resources, assistive

technologies and staff training. In addition, the policies should include statements to make library users aware of the services they can expect from the library.

#### **8.5.4 Collaboration**

The study revealed a lack of collaboration within and across institutions which led to the lack of library service provision to and thus the exploitation of students with disabilities as they were made to pay for supposedly free services. Therefore the study recommends that the library coordinate with other stakeholders which are key to information provision such as the ICT departments.

Where a disability unit exists, like at Chancellor College in the present study, academic libraries should collaborate with the units to produce accessible information formats, since these units usually have the necessary equipment. Through this collaboration, academic libraries could also get information on students with disabilities much sooner and design library programs for these students to increase their awareness of library resources and services. The disability unit is also better placed to provide disability awareness training for library staff. The study recommends the establishment of disability units in institutions which have none.

Academic libraries should also establish formal partnerships with special schools which may be better resourced to transcribe materials in alternative formats, as is the case at Mzuzu University. Academic libraries should also form a partnership with Montfort Special Needs Teachers Training College which has the capacity to produce large volumes of braille materials. Partnerships with international agencies interested in promoting information access for persons with disabilities should also be explored. One such agency is the Accessible Books Consortium.

#### **8.5.5 Library standards for students with disabilities**

The minimum requirements imposed by the National Council for Higher Education (NCHE) on library access for students with disabilities were hailed by the college librarian at the Polytechnic. As the college was preparing for accreditation, the library was funded to make some modifications like the removal of turnstiles to accommodate a student who uses a wheelchair.

Therefore this study recommends that NCHE develop clear standards for library services for students in higher education with disabilities. The standards would provide a benchmark for

libraries to measure performance as well as create awareness of the needs of students with disabilities. The standards should be enforced and compliance monitored.

### **8.6 Recommendations for further research**

This study investigated information support for students with disabilities in public university libraries in Malawi. The study was limited to institutions that were enrolling students with disabilities. Further study of all public university libraries to assess their readiness to serve students with disabilities is recommended. The study could also be extended to private universities as they are governed by the same laws and policies set by government.

Furthermore, further investigation should be conducted to establish whether the paucity of information resources among students with disabilities has a direct impact on their academic performance.

Another study is also recommended to investigate the challenges facing students with disabilities in public universities in Malawi in the context of the classroom.

A baseline study on the prevalence of disability in higher education should also be conducted to ascertain the disability prevalence rate in higher education in Malawi.

In addition, a study should be conducted to explore and assess the attitudes of library staff towards students with disabilities.

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## **APPENDICES**

### **Appendix A: University of Zululand Ethical Clearance**



**ETHICAL CLEARANCE CERTIFICATE**

Certificate Number	UZREC 171110-030 PGD 2017/181				
Project Title	INFORMATION SUPPORT FOR STUDENTS WITH DISABILITIES IN SELECTED ACADEMIC LIBRARIES IN MALAWI				
Principal Researcher/ Investigator	DD Eneya				
Supervisor and Co-supervisor	Prof DN Ocholla	Prof J Moster			
Department	Information Studies				
Faculty	Arts				
Type of Risk	Medium Risk – Data Collection from people				
Nature of Project	Honours/4 <sup>th</sup> Year	Master's	Doctoral	x	Departmental

The University of Zululand's Research Ethics Committee (UZREC) hereby gives ethical approval in respect of the undertakings contained in the above-mentioned project. The Researcher may therefore commence with data collection as from the date of this Certificate, using the certificate number indicated above.

- Special conditions:
- (1) This certificate is valid for 3 years from the date of issue.
  - (2) Principal researcher must provide an annual report to the UZREC in the prescribed format [due date-01 July 2018]
  - (3) Principal researcher must submit a report at the end of project in respect of ethical compliance.
  - (4) The UZREC must be informed immediately of any material change in the conditions or undertakings mentioned in the documents that were presented to the meeting.

The UZREC wishes the researcher well in conducting research.

  
Professor Gideon De Wet  
Chairperson: University Research Ethics Committee  
Deputy Vice-Chancellor: Research & Innovation  
20 September 2017

<p><b>CHAIRPERSON</b> UNIVERSITY OF ZULULAND RESEARCH ETHICS COMMITTEE (UZREC) REG NO: UZREC 171110-30</p> <p style="font-size: 1.2em;">20-09-2017</p> <p><b>RESEARCH &amp; INNOVATION OFFICE</b></p>
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## **Appendix B: Approval to conduct research, Mzuzu University**



**MZUZU UNIVERSITY**  
**OFFICE OF THE UNIVERSITY REGISTRAR**

Private Bag 201  
Luwinga  
Mzuzu 2  
MALAWI  
Tel.: (265) 01 320 722/575  
Fax: (265) 01 320 505  
E-mail: ur@mzuni.ac.mw

**Ref: MU/1/P1.04**

**20<sup>th</sup> August 2018**

Mrs. Dorothy D. Eneya  
University of Zululand  
P.O. Box X1001  
KwaDlangezwa, 3886

Dear Mrs. Eneya,

**RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT  
MZUZU UNIVERSITY**

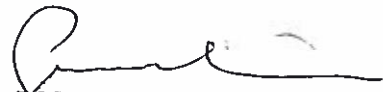
Thank you for your request as captioned above.

I am pleased to inform you that permission is granted for you to conduct research at our institution.

In view of your study title, your contact person is the University Librarian, Mr. Felix Majawa. His contacts are mobile number 0888757934 or e-mail [fmajawa@yahoo.com](mailto:fmajawa@yahoo.com).

I wish you well as you prepare for the research.

Yours faithfully,

  
**JAMES KWILIMBE**  
**ACTING UNIVERSITY REGISTRAR**

cc: University Librarian, Mzuzu University

## **Appendix C: Interview guide for students with disabilities**

### **A. Student Profile**

Name of university \_\_\_\_\_

Gender \_\_\_\_\_

Disability type \_\_\_\_\_

Age \_\_\_\_\_

Programme of study \_\_\_\_\_

Level of study \_\_\_\_\_

### **B. Availability of library services**

1. Do you use any library services?
2. What type of services do you use?
3. How do you get instruction on how to use the library?
4. What are the terms of your library materials loans?

### **C. Accessibility of library services facilities**

5. What can you say about the accessibility of the library facilities and services?
6. Does the library building layout allow you to get into the library and access the information resources?
7. Are information resources available in other alternative formats suitable for your use?
8. Does the library have signs which you can read and follow easily?
9. In your opinion are the restroom facilities designed in such a manner that students with disabilities should be able to use them independently?
10. How do you locate an item you need in the library?
11. What adaptive equipment and assistive technologies are available in the library?
12. Are the adaptive equipment and assistive technologies adequate?
13. Is there any arrangement made by the library to assist you to get information resources you need?

**D. Implementation of legal and policy framework**

14. Are you aware of any legal and policy frameworks that promote your rights of access to information?

15. Are you aware of the library's policy on services for students with disabilities?

16. In your opinion do the library services conform to the legal and policy provisions that you are aware of?

**E. Challenges faced in accessing library services and facilities**

17. What challenges do you face in accessing and using library services?

**F. Proposal for improved services**

18. What do you think the library should do to improve library services for students with disabilities?

19. Is there anything you would like to add?

## **Appendix D: Interview guide for library staff**

### **A. Staff Profile**

University/College \_\_\_\_\_

Gender \_\_\_\_\_

Age \_\_\_\_\_

Qualification \_\_\_\_\_

### **B. Availability of library services for students with disabilities**

1. Does the library provide services for students with disabilities?
2. Are the services adequate?
3. What library services are demanded most by students with disabilities?
4. What adaptive equipment or technologies are available in the library?
5. Are any specialised services or adaptive equipment provided by the library to students with disabilities?
6. What library services are demanded by students with disabilities? How often?
7. Have you ever assisted students in the library with disabilities?
8. What alternative materials for students with disabilities does the library have?

### **C. Accessibility of library services and facilities**

9. How do students with disabilities get into the library?
10. How do they access information resources?
11. How do they get instruction on using the library?
12. Does the library have computers for use by students with disabilities?
13. Are the study carrels, computer workstations, tables and chairs suitable for students with disabilities?
14. Are students with disabilities able to use the restroom facilities in the library independently?

### **D. Implementation of legal and policy framework**

15. Are you aware of any legal and policy frameworks that guide information provision for students with disabilities?
16. Has any student with a disability lodged any complaint against the library about the violation of rights to access to information?

**E. Challenges faced**

17. What challenges do students with disabilities face in using the library?
18. What challenges do you face in assisting students with disabilities?
19. Which category of disability do you mostly cater for?
20. What challenges does the library experience as it seeks to provide services to students with disabilities?
21. What are the hindrances to access and use of library services by students with disabilities?
22. Have you ever received any training to help you assist students with disabilities in the use of library services?

**F. Proposals for improved service delivery**

23. What can be done to improve library services provision to students with disabilities?
24. Is there anything you would like to add?

## **Appendix E Interview guide for University/College Librarians**

### **A. Staff profile**

University/College \_\_\_\_\_

Gender \_\_\_\_\_

Age \_\_\_\_\_

Highest qualification \_\_\_\_\_

### **B. Availability of library services for students with disabilities**

1. What services does the library provide for students with disabilities?
2. What adaptive technologies and assistive equipment do you provide for students with disabilities?
3. How do you conduct library orientation for students with disabilities?

### **C. Accessibility of library services and facilities**

1. How do students with disabilities access the library building?
2. Are students with disabilities able to access library websites and other libraries' electronic resources?
3. Are you familiar with Web content accessibility guidelines?
4. Do you apply the guidelines in developing your library's website?
5. Do you collaborate with the Disability Centre in providing services for students with disabilities?
6. What are the areas of your collaboration?

### **D. Implementation of legal and policy framework**

10. What is the mission of the library?
11. What is your motivation for providing services to students with disabilities?
12. What is the library's strategy in service provision for students with disabilities?
13. Does the library have any policy relating to the provision of library services to students with disabilities?
14. Are students with disabilities aware of the provisions in the policy?
15. Has the library ever received a complaint from a student with a disability on the violation of their rights to access to information?
16. Do you anticipate any complaint of this nature in future?
17. What is the library's policy on the acquisition of resources for users with disabilities?

18. What national or international policy and legislation frameworks inform the library policy and strategy?

**E. Challenges faced in providing services to students with disabilities**

19. What challenges do you face in providing services for students with disabilities?

20. What challenges do students with disabilities face in using the library?

21. What initiatives are taken to minimise the challenges?

22. Does the library have a budget for acquiring alternative materials and assistive equipment for students with disabilities?

23. Is there any training offered to library staff to equip them with skills to handle students with disabilities?

**F. Proposals for improvement**

24. Does the library have any plans to improve library services for students with disabilities? What are they?

25. Is there anything you would like to add?

## **Appendix F: Interview guide for Disability unit staff**

### **A. Staff Profile**

Institution \_\_\_\_\_

Gender \_\_\_\_\_

Qualification \_\_\_\_\_

Number of students per disability type:

Visual impairment \_\_\_\_\_

Mobility impairment \_\_\_\_\_

Speech impairment \_\_\_\_\_

Hearing impairment \_\_\_\_\_

Cognitive impairment \_\_\_\_\_

### **B. Library services for students with disabilities**

What do you do to ensure that students with disabilities have equal access to the library services and resources?

### **C. Accessibility of library services and facilities**

4. How do you collaborate with the library in the provision of accessible information to students with disabilities?

5. Have students ever complained to your office concerning the inaccessibility of the library and its resources? If your reply is “yes”, how did you deal with it?

### **D. Implementation of legal and policy framework**

6. What legal and policy frameworks do you use in promoting the rights of students with disabilities?

7. Are students aware of these legal and policy frameworks?

8. How do you ensure that the rights of access to information for students with disabilities are not violated?

### **E. Challenges faced**

9. What challenges does the unit face in ensuring that students with disabilities access the library to support their learning?

10. Does the unit have a dedicated budget for students with disabilities? What items can you purchase directly for students?

11. What challenges do students with disabilities face in accessing library services?

**F. Proposals for improvement**

12. What do you think can be done to improve the accessibility of library services for students with disabilities?

13. Do you have anything to add?