

ACCESS TO INFORMATION BY VISUALLY AND HEARING-IMPAIRED PATRONS  
AT THE SELECTED PUBLIC LIBRARIES IN DRAKENSTEIN MUNICIPALITY

by

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submitted in accordance with the requirements  
for the degree of

MASTER OF INFORMATION SCIENCE

at the

UNIVERSITY OF SOUTH AFRICA

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FEBRUARY 2023

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## **LIST OF ACRONYMS**

CPD	Continuing Professional Development
ICT	Information Communication Technologies
IFLA	International Federation Library Association and Institutions
IT	Information Technologies
UNESCO	United Nations Educational, Scientific and Cultural Organization
JAWS	Job Access with Speech
LIASA	Library and Information Association of South Africa
LIS	Library and Information Service
NLC	National Library of China
NLSA	National Library of South Africa
NUL	National University of Lesotho
PAIA	Promotion of Access to Information Act
POPIA	Protection of Protection of Personal Information Act
SAHRC	South African Human Rights Commission SAHRC
SALB	South African Library for the Blind
UAE	United Arab Emirates
UNISA	University of South Africa
WHO	World Health Organization



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## **ABSTRACT**

Access to information by all, including the visually and hearing-impaired people, is a crucial service to unlocking opportunities, as it can contribute to nation-building, economic growth, and good governance. In South Africa, access to information is also a fundamental and socioeconomic human right for all citizens. Libraries are considered to be the main drivers of access to information, and this must also include the visually and hearing-impaired patrons as they have the same human rights as other citizens. However, various studies divulge that visually and hearing-impaired patrons are often excluded from access to information due to many factors ranging from inadequate facilities, resources, or trained library employees. This study explored access to information by visually and hearing-impaired patrons at the selected public libraries in Drakenstein Municipality, that is, Paarl, Drakenstein and Groenheuwel public libraries. The three public libraries within Drakenstein Municipality were selected as they are collaborating with the South African Library for the Blind (SALB) mini library project to cater information services for the visually and hearing-impaired patrons.

This study used purposive and snowball non-probability sampling to select the participants within targeted public libraries and Drakenstein communities respectively. Qualitative data were collected within the interpretive paradigm through interviews with visually and hearing-impaired patrons, SALB project coordinators, sign language interpreters, library assistants and librarians responsible for providing service to visually and hearing-impaired patrons, as well as document analysis, and observation guided by a conceptual framework that includes constructs from the International Federation Library Association and Institutions, Social Model of Disability and literature. Data were analysed using content analysis and the thematic data analysis method.

The study revealed that all three libraries did not have specific policies or guidelines designed to cater to the information services for visually and hearing-impaired patrons. Furthermore, when it comes to hearing-impaired, there are communication barriers as librarians do not understand the South African Sign Language. This study established that the visually impaired have limited braille resources and Afrikaans audiobooks collection. It is concluded that the SALB mini-library project and public libraries have significant work to do in marketing the SALB mini-library services to the target patrons,

introducing skills development programmes for visually impaired and hearing-impaired patrons. Moreover, the policies and legislative framework need to be drafted, reviewed, and debated to ensure that visually and hearing-impaired receive all support and their information needs are prioritised like other South African citizens. The study recommends that the three libraries establish and develop a policy addressing information access issues for visually and hearing-impaired patrons. This policy should address insufficient facilities, budget and funding, skill development, library marketing, user need assessment, and the need to learn basic Sign Language by librarians.

**Key terms:** visually impaired patron, hearing-impaired patron, public libraries, access to information, Paarl, Groenheuwel, Drakenstein Municipality, Western Cape, Library, and Information Service.

## ACKNOWLEDGEMENT

First and foremost, I thank the **Lord, God of Mount Zion**, for giving me the discernment and strength to finish this dissertation. I sincerely thank everyone who helped me to complete my studies. I want to express my heartfelt gratitude:

- To my supervisor, Prof Mpho Ngoepe, and co-supervisor, Dr Makutla Mojapelo, for the advice, constructive feedback, and professional assistance throughout my studies. It has been an arduous journey full of obstacles and challenges. However, I have completed my studies with the guidance and continuous support of the two academics.
- To my first employer, Richfield Graduate Institute of Technology for having played a significant role in my study and my former colleague Lisa Nqala for encouraging me to apply and register for a Masters' degree even though the situation was not favourable to do so due to financial constraints. She provided support and constructive suggestions for my research proposal.
- To the Drakenstein municipality's management and public library staff from Groenheuwel, Drakenstein, and Paarl public libraries for allowing me to conduct my research in their libraries and for devoting their busy schedules and sharing information with me to ensure the success of this study.
- To the anonymous participants for taking their time and agree to share their perceptions and experiences, as well as the believe that this research may assist in addressing the information service access challenges experienced by visually and hearing-impaired library patrons.
- To my friends, Mr Patrick Kgaphola and Mr Chuene Kaka, for their continuous support and advice throughout my study.
- To Ms Letitia Greenberg and Information Giant team for editing my research proposal and dissertation respectively.

- To my mother and brothers for the endless love and support throughout my studies.

## **DEDICATION**

This dissertation is dedicated to my son Kgotlelelo Innocent Molepo and my beloved late grandmother, my namesake Raesetja Lydia Mashishi – Molepo, as well as to all visually and hearing-impaired people experiencing exclusion and challenges in all spheres of their lives, particularly in accessing library information services.

## DECLARATION

Name : Raesetja Lydia Molepo

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Degree : Master of Information Science

### **ACCESS TO INFORMATION BY VISUALLY AND HEARING-IMPAIRED PATRONS AT THE SELECTED PUBLIC LIBRARIES IN DRAKENSTEIN MUNICIPALITY**

I declare that the above dissertation is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.



SIGNATURE

11/10/2022

DATE



## CHAPTER ONE

### INTRODUCTION: SETTING THE SCENE

#### 1.1 Introduction and background to the study

Access to information by all is a crucial service to unlocking opportunities, as it can contribute to nation building, economic growth, and good governance (Western Cape Department of Cultural Affairs & Sports 2019). Furthermore, access to information is a globally recognised right that is supported by several statutes, statements, and directives such as the Universal Declaration of Human Rights (1948); The Convention on the Rights of Persons with Disabilities (2006); the European Union Copyright Directive (2019), and the International Federation of Library Association and Institutions (IFLA) Statement on Libraries and Intellectual Freedom (1999) (Sitdikova, Safin, Starostina & Norvoselova 2018; IFLA 2019a). Therefore, access to information is a nationally and internationally protected human right. Nevertheless, access to information is also referred to as freedom of information and is supported by international organisations that influence governments to implement legislation (Kaye 2017). In South Africa, access to information is a constitutional right, as stipulated in section 32(1) of the 1996 Constitution of the Republic of South Africa, which states that "everyone has the right of access to any information held by the state as well as any information that is held by another person and that is required for the exercise or protection of any rights."

The Republic of South Africa abides by the Universal Declaration on Human Rights (UDHR) as the country has passed legislation that promotes access to information, that is, the Promotion of Access to Information Act (PAIA) (Act No. 2 of 2000). According to this Act (PAIA), all citizens have freedom of access to information. Public libraries play a significant role in promoting access to information. Such information should be made accessible to all patrons, including impaired patrons. All libraries, including public libraries, must ensure that people get access to information as the Constitution guarantees everyone the right to information (Nkondo, Brown, Dick, Hart, Molawa, Nassimbeni & Teffo 2014). Thus, every South African citizen has the right to access information freely, irrespective of race, social class, religion, occupation, disability, or cultural affiliation (Western Cape Department of Cultural Affairs and Sports 2019). However, very often, visually, and hearing-impaired patrons in this

dissertation referred to as impaired patrons are excluded from accessing information due to inadequate information technology assistive devices in libraries, such as braille machines and printers, screen reader computers, screen enlargement software, synthetic speech, adaptive keyboards, and library building infrastructure that is suitable for various impaired patrons (Kiruki 2018). The impaired patrons are supposed to enjoy the same fundamental, basic, and socio-economic human rights just like anyone else in the country as stated in the Bill of rights.

The World Health Organization (WHO) estimates that over 136 million people suffer from hearing impairments in African regions (WHO 2021a). WHO (2021a) further predicted that in the year 2050, over 337 million people might suffer from hearing impairment in Africa. South Africa has over four million population living with hearing impairment (Western Cape Government 2020a). For instance, in the study conducted in the Cape Town Metropolitan, 12,34 % of 2494 adult participants suffered from hearing impairment, and 4,25% were children under four years (Ramma & Sebothoma 2016). According to WHO (2021b), there are over 2.2 billion people suffering from visual impairment in the world. The statistics of visually impaired people in developing countries appear to be four times higher than in developed countries (Bourne, Flaxman, Braithwaite, Cicinelli, Das, Jonas, Keeffe, Kempen, Leasher, Limburg & Naidoo 2017). This is related to WHO's (2021b) predictions, as the organisation reports that 80% of the visually impaired are Africans, while less than 10% are in developed countries such as North America, Australia, Western Europe, and Asia. In the South African context, there is a high rate of visual impairment as compared to other impairments; 97% of the visually impaired people are unemployed (Life Healthcare 2018).

Various studies reveal that the information needs of impaired patrons are not adequately met in most libraries, which gradually undermines the founding principle of equality as charged by the 1996 Constitution (Kuscus & Fombad 2017; Phukubje 2019). Consequently, this factor can lead to impaired patrons losing interest and confidence in utilising the library and information services (Muzite 2016). For example, a study by Phukubje (2019) revealed that at the University of Limpopo Reakgona disability unit, visually hearing-impaired patrons were experiencing challenges in seeking library reference services due to inaccessible formats of information sources.

Specifically, the librarians and hearing-impaired patrons experienced challenges in communication due to inadequate sign language skills (Phukubje & Ngoepe 2017). Such circumstances are likely to become barriers to equal access to information service among various impaired library patrons. Despite legal and constitutional provisions, it is evident that impaired patrons are deprived of this constitutional right to communicate efficiently and to access library and information services. For instance, Kaunda and Chizwina (2018) assert that this might be due to many factors, ranging from unavailability of facilities, resources, technology, or skilled library officials. The Constitution of Deafblind of South Africa (DbSA) as amended in 2008, 23rd of August and Article 14 of South Africa's Disability Rights Charter stipulates that the impaired shall have the right to communicate freely and that measures aimed at ensuring the satisfaction of this right shall include the provision of audio recorded resources and Braille for visually impaired people, as well as the use of sign language for people who are hearing impaired (Marwexu 2019).

The study by Mamafha, Ngulube and Ndwandwe (2016) found that most public libraries in the City of Ekurhuleni Municipality in South Africa hardly provide access to Information and Communication Technology (ICT) equipment such as braille machines. Scholars such as Zulu, Ngoepe, and Saurombe (2017) argue that most public libraries in Zambia still lack facilities because buildings, shelves, and library settings are old and structured in an unplanned manner that is incompatible with adequate library service requirements, including access by impaired patrons. Kiruki (2018.) established that public libraries in Kenya do not have a long history of serving impaired patrons compared to academic libraries. Due to various information access barriers, including inadequate facilities, impaired patrons are denied their fundamental human right to access information and freely integrate into the information society. Thus, this study explored access to information by the visually and hearing-impaired patrons at the selected public libraries in Drakenstein municipality.

### **1.1.1 Conceptual setting**

Information access in the context of this study is the ability to access library and information services that are readily available in public libraries without the access barrier that may prevent visually and hearing-impaired patrons from accessing

information. Throughout the study, the visually and hearing-impaired patrons are referred as impaired patrons unless otherwise specified. The study provides an understanding of the experiences and perceptions regarding access to library services by minority individuals with impairments. The current study addressed knowledge gaps in the literature regarding access to information services in public libraries for visually and hearing-impaired patrons. Hence, the study also recommends what can be done to address access barriers that librarians face.

### **1.1.2 Contextual setting**

Drakenstein is a local municipality situated in the Cape Winelands region district in Western Cape province, with a demographic population estimated to be 284 475 in 2019 (Western Cape Government 2019a). Paarl is one of the Drakenstein towns located in the Western Cape Province in South Africa. It is in the eastern part of Cape Town on the Groot-Berg River, in between the Drakenstein Range and Paarl Mountain (Britannica Encyclopaedia 2019). It is well known to be the third oldest and most significant town in the Winelands region, and it is also one of the European settlement towns in South Africa (Paarl Travel Information 2022). The three public libraries in Paarl were selected as the locations of this study because they are collaborating with the South African Library for the Blind (SALB) mini-library project. These libraries also cater the information services for the visually and hearing-impaired patrons. The libraries are Groenheuwel, Drakenstein, and Paarl libraries. These public libraries fall under the Drakenstein municipality. Figure 1.1 shows the Drakenstein municipality

map and the location of the study in Paarl. All the libraries are in Paarl within this municipality.



Figure 1.1: Drakenstein Municipality map showing location of study area in Paarl (Drakenstein Municipality 2022)

The Drakenstein municipal headquarters are in Paarl. According to the statistical information sources in Stats SA's 2018 Mid-Year Population Estimates (2002–2020) in the Drakenstein Socio-Economic profile, the municipality was estimated to have about 284 475 and 71 686 households in 2016 (Western Cape Government 2019b). The Groenheuwel library is in the underprivileged Drakenstein community (Sias 2012). The library started in 2006, and in 2014 it joined the Violence Protection through Urban Upgrading Project (VPUU), which initiated the new library building design in collaboration with the community and Western Cape government (Western Cape Government 2020b). First, Groenheuwel library accommodated over 50 users, and the new library provided 7000 new library members (Western Cape Government 2020b). The Paarl library started in 1967, and the Minister for Cultural Affairs and Sport, Dr Meyers Ivan, opened the new library building facility on 9 March 2012 (Western Cape Government 2012). The new library facility has 12 workstations and provides free internet access through the ICT Rural Connectivity project (Western Cape Government 2012). These libraries provide free reading materials and assistive

resources to visually and hearing-impaired patrons, such as JAWS (screen reading, Zoom Text, Daisy reader and envoy connect.

## **1.2 Conceptual framework**

According to Van der Waldt (2020), a complete conceptual framework is an essential organising tool, principal focus, mind map, and strategy used in the whole study. In this regard, Van der Waldt (2020) further argues that the study will have a weak research methodology argument without a conceptual framework and will incorporate irrelevant theory. The same is supported by Ngulube (2020), who reveals that research methodologies and theories should be applied in the study context to produce transformative knowledge. Furthermore, Ngulube (2020:30) illustrates the following five ways of formulating a conceptual research framework:

- Putting together various concepts from different theories
- The aspect of a theory
- Incorporating aspects of theory or theories, concepts from literature, personal experiences, knowledge of the contexts and models
- Integrating all the concepts from more than one theory
- Combining concepts from the extent of literature

In this study, the researcher incorporated the aspects and concepts from theory, literature, knowledge of context, and model to formulate the conceptual framework to guide the objectives, literature review, and methodology engaged. The proposed conceptual framework addressed the constructs in this study. The construct includes information service (Irvall & Nielsen 2005), skills, library infrastructure and information service convenience (Phukubje & Ngoepe 2017), and accessibility (IFLA Checklist for Libraries for Persons with Disabilities). Accordingly, this study used these constructs to explore information service accessibility by impaired patrons in public libraries over time. Furthermore, these constructs influenced the study's objectives, literature review, data collection, and formulation of research questions to fulfil the stated purpose of providing conclusions and recommendations in this study. The proposed conceptual framework served as the foundation of this study. This study used the constructs from the IFLA Checklist for Libraries for Persons with Disabilities, Access

to Libraries for Persons with Disabilities, and Social Model of Disability and Literature to design the conceptual framework for this study. The IFLA Access to Libraries for Persons with Disability addresses convenience to information resources. At the same time, the Social Model of Disability was used to figure out what hypothetical factors might make it hard to get information.

The constructs are also considered to explore the possible hypothetical elements that can cause access barriers to information service for visually and hearing-impaired patrons in public libraries. According to the Social Model of Disability, the key hypothetical elements that cause institutional barriers include poor building design; discrimination; community isolation; inaccessible transport and packing; and a lack of specialised language experts (Inclusion London 2020). The Social Model of Disability assumes the exclusion experiences of disabled individuals to consider overcoming their information barriers and promoting equality to achieve justice (Berghs, Atkin, Graham, Hatton & Thomas 2016). Therefore, this study is based on the conceptual framework depicted in Figure 1.2 with guidance from literature and the identified models. The constructs are discussed in detail in the following subsections.

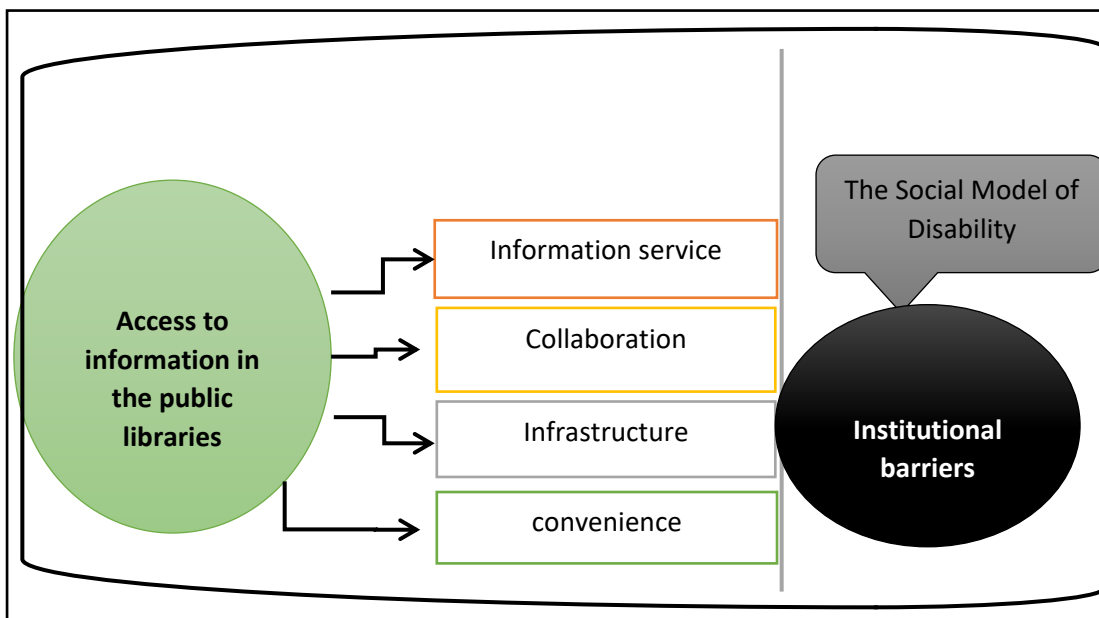


Figure 1.2: The proposed conceptual framework (synthesised by the author 2020)

### **1.2.1 Information service**

The information services offered to impaired patrons involve the adequacy of communication skills and sign language interpreters; braille experts; braille facilities; accessible information sources and formats; and transcription services. According to the International Federation of Library Associations Checklist for Persons with Disabilities, libraries should provide guided tours about services, materials, and programmes in alternative formats to address the reading difficulties of various impaired patrons (Irvall & Nielsen 2005). Hence, the IFLA checklist is used in this study to access the information service standards and the level of communication adequacy between the librarians.

Saar and Arthur-Okor (2013) show that hearing-impaired patrons experience difficulty communicating with librarians. This is associated with the situation at the University of Limpopo Disability Library, as the study undertaken by Phukubje and Ngoepe (2017) indicates that, sometimes, librarians struggle to address the needs of the hearing-impaired patrons due to a lack of trained personnel and adequate supportive infrastructure and equipment. Such barriers can be overcome by employing experts such as technical, sign language, and braille experts and facilitators to provide more training for patrons. In a way, this can address the library's service barriers. In the situation of the City of Cape Town Libraries, Muhambe and Davis (2019) state that the librarians must be up to date with the latest developments and demands of the profession and must develop skills in terms of communication, research, teamwork, and education; therefore, regular training is significant to overcome many challenges. IFLA Checklist for Libraries for Persons with Disabilities states that library employees must be well informed about all impairments to see how best patrons can be assisted (Irvall & Nielsen 2005).

Libraries need to have policies that govern them, in general, to provide information service for all South African citizens, including impaired patrons. Public libraries' operations should be guided by written guidelines or improved policies that indicate the commitment to equal access to service by all patrons, including minority patrons with impairments. Therefore, operational strategies should be reviewed regularly to implement library service and information technology (IT) facilities. Kiruki (2018) states



that the Social Model of Disability can potentially recommend effective access information service strategies in libraries. Accordingly, the model has potential strengths to allow the libraries to review their services and systems to address information access barriers experienced by impaired patrons (Eneya & Mostert 2019) with a common view to supporting access to information service. The model can be important for influencing library service and educational perspectives (Kleynhans & Fourie 2014).

### **1.2.2 Collaboration**

The IFLA Checklist for Libraries for Persons with Disabilities states that collaboration with organisations of people with impairments is crucial for maintaining the credibility of library services and programmes for all citizens (Irvall & Nielsen 2005). According to the National Policy for Library and Information Services in South Africa (NPLIS) (2018), public libraries should collaborate closely with academic libraries, specialised schools, information centres, and organisations to make information accessible to the visually impaired. If collaboration of this nature can be exercised in many countries, the information accessibility experience of most impaired groups can be transformed to promote social inclusion in the libraries. In China, for instance, there are fewer specialised libraries for impaired patrons, and the library resources for impaired patrons are minimal in most of the libraries, just like in other countries (Zhao, Lin & Zhang 2019). However, the Chinese have initiated the establishment of joined libraries since 1997 to perform multiple functions for academic and public library purposes to give care and support to impaired community groups who need it more than the non-impaired (Zhao, Lin, & Zhang 2019).

### **1.2.3 Library infrastructure**

The library infrastructure includes but are not limited to the library building facilities, seating areas, accessible lifts and stairs, proper lighting, good parking areas, and accessible buildings that are structured to accommodate impaired patrons. Therefore, public libraries should have safe access to facilities, exits, parking, and space to promote physical accessibility by patrons, regardless of the nature of their impairment (Stilwell & Majinge 2013). According to the constitution of South Africa, the Promotion

of Equality and Prevention of Unfair Discrimination Act No 4 of 2000, Section 6, prohibits unfair discrimination against people living with disabilities, including failing to remove barriers that limit or restrict disabled people from enjoying equal opportunities or failing to take appropriate measures to accommodate the needs of such people. This Act goes hand in hand with the IFLA Checklist for Libraries for Persons with Disabilities as it states that the library setting, the entrance, restrooms, stairs, lifts, and special rooms should be accessible for patrons with various kinds of impairments (Irvall & Nielsen 2005). Furthermore, some factors that contribute to access barriers resulting from libraries that are not designed to cater to the needs of impaired patrons have been proven to exist (Chaputula & Mapulanga 2017). The barriers include poorly designed buildings, poor lighting, broken lifts, poor seating, and a lack of facilities (Kiruki 2018). In this case, the researcher used the IFLA Checklist for Libraries for Persons with Disabilities to assess the Groenheuwel, Drakenstein, and Paarl public library facilities' building structures during the data collection process.

#### **1.2.4 Information services convenience**

The convenience of the information service to impaired patrons can be affected by attitudinal factors. Attitudinal factors are shared norms, beliefs, and attitudes that influence cooperation among a group of individuals (Ricigliano 2015). These factors include perceptions and treatment that impaired individuals receive from community members; for instance, community isolation and discrimination against impaired individuals (Inclusion London 2020). Such examples can inhibit impaired individuals from participating in most community activities, including library usage, and exercising their rights to access information freely. Therefore, Kiruki (2018) highlights that the Social Model of Disability emphasises the exclusion of barriers that limit the full participation of impaired patrons in the community.

Impaired patrons are often unenthusiastic about using public service. Amongst others, the challenges of using assistive technologies lead to a lack of confidence. Such situations can be another emotionally influential barrier that limits impaired individuals from participating in the communities of developing countries such as South Africa. Kiruki (2018) states that societal change, including but not limited to negative and associated attitudes, should be at the epicentre of education and informing other

general library patrons about the needs of impaired library patrons. Therefore, the educated notion in this study uses literature supported by Majinge and Stilwell (2015) and Eneya and Mostert (2019) and applies the Social Model of Disability to support the access to information service of public service. In this case, the integration of the interpretivism paradigm during data collection is handy for this study in exploring the convenience information services offered to visually and hearing-impaired patrons at the selected public libraries in Drakenstein Municipality, Western Cape province.

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

Public libraries do not seem to have adequate information resources and facilities designed to cater to the visually and hearing-impaired library patrons needs. (Choukimath & Angadi 2018; Soman & Sudhier 2015). The impaired patrons are deprived of a constitutional right to access library and information services due to inadequate resources and skilled library officials. For example, Phukubje and Ngoepe (2017) elucidate that the information needs of impaired patrons are not effectively met in the libraries in less developed countries. Libraries fill an important responsibility by developing communities through access to information (Garrido & Wyber 2017). Moreover, access to information is significant because it can empower communities and promote equality, sustainability, and prosperity in the districts (Garrido & Wyber 2017).

The study conducted by Stilwell and Majinge (2013) found that the library policies in Tanzania do not address the service delivery needs of impaired individual affected by unfair discrimination. Almost all institutional facilities are inaccessible to most impaired patrons. Nevertheless, when observing patrons with special needs, there is a need to explore their ability to access information in the form of facilities and services (Kaunda & Chizwina 2018). The study seeks to explore the experiences of impaired patrons concerning access to information in terms of policy, information service, collaboration, library infrastructure, and information service conveniences. The study also provided recommendations on what can be done to maintain this adequate access to information service for a minority group of visually and hearing-impaired patrons in the Groenheuwel, Drakenstein, and Paarl public libraries.

## **1.4 Purpose and objectives**

The main purpose of this study is to explore access to information services for the visually and hearing-impaired library patrons in selected public libraries in Drakenstein Municipality, South Africa. The specific objectives of the study are to:

- identify the information service offered for the visually and hearing-impaired in the selected public libraries in Drakenstein Municipality
- determine the nature of collaboration between the selected public libraries in Drakenstein Municipality and organisations representing the visually and hearing-impaired patrons.
- assess compliance of library infrastructure with relevant guidelines for the visually and hearing-impaired patron in the selected public libraries in Drakenstein Municipality
- assess the convenience of information service to visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality.

## **1.5 Research questions**

The main research question is, how accessible is information service by the visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality? The specific research questions are:

- What is the information service offered to cater to visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality?
- How is the collaboration between the selected public libraries in Drakenstein Municipality and the organisation representing the visually and hearing-impaired patron?
- How is the compliance of the library infrastructure with relevant guidelines for the visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality?
- How convenient is the information service that is offered to the visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality?

## **1.6 Scope and delimitation of the study**

The Western Cape Province has 355 public libraries with almost 1 000 200 registered patrons (National Library of South Africa 2015). There are 30 municipalities in the province, divided into: one metropolitan municipality (the City of Cape Town); and five rural district municipalities, namely: the West Coast District; Overberg District; Garden Route District; Central Karoo District; and Cape Winelands District (Western Cape Government 2019a). Statistics South Africa (2018) has presented a 2016 Western Cape community survey that shows that 81 240 visually impaired people are suffering from severe visual difficulties and an additional 4317 people are unable to see at all. While the hearing-impaired people were experiencing severe hearing difficulties is 27 944, another 4458 people reported being unable to hear completely (Statistics South Africa 2018).

This study involves the selected public libraries that fall within the Cape Winelands District. The Cape Winelands is an interior district between the West Coast and the Overberg coasts (South African Venues 2022). It includes the Western Cape rural and small towns such as Drakenstein, Somerset West, Stellenbosch, Witzenberg, Breede River valley and Langeberg Winelands. The public libraries include Groeneheuwel, Drakenstein, and Paarl public libraries in Drakenstein Municipality. The Western Cape library service is the biggest of the nine South African provinces (National Library of South Africa, 2015). As a result of the limited budget for the study expenses and time, this study cannot cover all 355 public libraries in the Western Cape.

The study covered only visually and hearing-impaired patrons, librarians, and other library employees who could provide information that could help to achieve the objectives of this study. There are various impairments such as epilepsy, mental illness, spinal cord impairments, cognitive or learning impairments, psychological disorders, and physical impairments such as impairments without legs and arms. The study concentrated primarily on the following elements: experiences of librarians and visually and hearing-impaired patrons regarding; information service; collaboration; infrastructure; and information service conveniences. Furthermore, this study aims to discover the access to library and information services from librarians to patrons of the public libraries in the Groenheuwel, Drakenstein, and Paarl Public Libraries.

## **1.7 Justification of the study**

The study sought to highlight the experiences of the visually and hearing-impaired in their daily use of public information services. The study makes a compelling case for public librarians to consider improving their library service for visually and hearing-impaired patrons. The study objective allows the researcher to determine the study's flexibility and incorporate new information while collecting information (Kumar 2011). This study is intended to teach the community about the impaired patrons' library access experiences, attitudes, and perceptions. Hence, the research results can be used to come up with the recommendations that need to be considered for effective information service.

Kaba and Ellala (2019) explain that there is a need to investigate factors affecting the information service accessed by impaired patrons. Furthermore, there is a gap in literature regarding the delivery of information services for specific impaired individuals (Getts & Stewards 2018). The study generates new knowledge that adds to the existing knowledge in the field of Library and Information Science. This study is critical because the results have the potential to motivate the Groenheuwel, Drakenstein, and Paarl public libraries to apply best practices to implement equal access to information service for visually and hearing-impaired patrons. The study also aids in decision-making regarding the service for the visually and hearing-impaired patrons in the libraries and suggests recommendations that can trigger policy reforms and development for library and information services for all South African citizens, including the impaired patrons. Public libraries' operations should be guided by written guidelines or developed policies that indicate the commitment to equal access for service to all patrons, including minority patrons with impairments. Therefore, operational strategies should be reviewed regularly to implement reforms to information service and information technology (IT) facilities.

## **1.8 Definition of key terms**

This section defined the most critical key terms used in this study. These include the following key terms: access to information, hearing-impaired, impairment, public library, and visually impaired.

### **1.8.1 Access to information**

Access to information means access to information for all. Access to information is a basic principle of the library to ensure that services are equally and readily available for all patrons, including minority individuals with impaired vision (IFLA/UNESCO 2001). This includes individuals who depend on special assistive devices to access information or visually impaired individuals who cannot reach the library physically.

Access is about two aspects:

- access is about physical access to the library location like the reading space, entrance, lifts, passage, bookshelves and other locations where the library material is kept.
- in addition, access also refers to the content in terms of intellectual content by impaired people, for instance, materials in braille, large print books, JAWS (Screen reading), ZoomText (Screen magnifying) programmes, Daisy Reader and Envoy Connect.

### **1.8.2 Hearing-impaired**

Individuals with hearing impairments are also called deaf or hard of hearing. Hearing impairment is an invisible disability that involves hearing loss and hearing problems (Eggermont 2019). The hearing impairment condition can lead to learning difficulties, inability to interpret speech sounds, language difficulties, social exclusion, and stigmatisation.

### **1.8.3 Public library**

Public libraries are community information centres established and funded by the government. It provides, to community members, access to organised information and knowledge regardless of race, disability, religion, gender, nationality, language, and employment status (IFLA/UNESCO 2001). Services delivered by the public library include the following: schoolwork assistance, community outreach, information literacy programs, skills development and enterprise advice, computer workshops, and cyberspace access for all community members (Dube 2018).

#### **1.8.4 Visually impaired**

The visually impaired depend on auditory and tactile signals to process information. However, they also utilise various adaptive technologies to access resources (Kaunda & Chizwina 2018). Visual impairment is the result of damage to or functional limitation of the eye (Ravenscroft 2019). It can be short-sighted or partially sighted, like people who have one eye impaired or unable to see completely. Impairment refers to loss or defect of psychological, physiological, or functional structure (Kiruki 2018). In the context of the current study, the impaired patrons are those who depend on special library resources such as audio-computers, braille devices, tape recorders, audiobooks, and many more assistive devices to access library information (South African Human Rights Commission 2017).

#### **1.9 Preliminary literature review**

The literature review uses other scholarly literature to build another research project (Harris 2019). The reviewed literature is necessary to provide the foundation of knowledge of the research topic and problems of the current study. The literature review section is vital as it lays the foundation for the study (Harris 2019). This means the review of works of literature is necessary for the development of this study. In this study, a literature review addressed research problems, knowledge gaps, and research questions related to the topic of this study. Chapter Two covered the detailed discussion of the literature review in subsequent sub-sections guided by the proposed conceptual framework and the objectives of this study. The thematic areas covered in the literature review in this study are as follows:

- information services for the impaired patrons.
- collaboration between libraries and organisations representing the impaired people.
- compliance of library infrastructure with relevant guidelines, and
- information services convenience.



## 1.10 Research methodology

Research methodology is defined by strategic philosophical principles, procedures, processes, and techniques that can identify the research problem in a study (Mukherjee 2019). The multiple case study utilised a qualitative approach to collect data. The interpretivism paradigm is used to guide the qualitative design, and the employment of multiple cases included the in-depth interviews, document analysis, and observations of public libraries. Furthermore, the purpose of this study is to explore the provision of access to information services to a specific group of people, namely visually and hearing-impaired patrons. Therefore, qualitative data provides deeper, more in-depth research answers.

The pilot test was conducted on one research participant to identify potential issues with the research design and data collection instruments. This study's sample includes visually and hearing-impaired patrons, librarians in charge, project co-ordinator and sign language interpreters. The study focuses on the public libraries in Groenheuwel, Drakenstein, and Paarl. The study's non-probability sampling strategies included a mixture of purposive and snowball sampling. The data were analysed and transcribed manually. The researcher manually analysed primary data sets from interviews, documents, field notes from observations of public library facilities and coding functions. The data in this study were analysed thematically, with the themes guided by the study's objectives. The researcher identified and coded themes to analyse and interpret research data systematically. Chapter Three contains a detailed discussion of the research methodology used in this study.

## 1.11 Structure of the thesis

This study is structured into five chapters.

**Chapter One** provides an introduction and background to the study information, the proposed conceptual framework, topic problem statement, objectives, research questions, delimitation and scope, justification, and significance, explanation the of crucial terms, methodology application overview, and ethical considerations in this study.

**Chapter Two** discusses the related research topic, works of literature reviewed from books, peer-reviewed journals, proceedings, and other internet resources; international, regional, and local publications. The literature review is discussed according to the key themes guided by the study's proposed conceptual framework and objectives. The literature review also aids in answering the research question and addressing the objectives discussed in the first chapter.

**Chapter Three** provides a discussion of the research methodology and methods such as research paradigms, research approaches, research designs, target population and sample, sampling methods, data collection methods, and tools, including pilot tests, reliability, and validity, as well as ethical considerations.

**Chapter Four** covers data analysis and the presentation of results. Qualitative data is analysed using content analysis and thematic data analysis.

**Chapter Five** discusses the findings, recommendations, and conclusion. This chapter contributes to the new knowledge acquired from the study. The recommendations to implement access to information are discussed, guided by the proposed conceptual framework.

## **1.12 Ethical consideration**

Roth and Von Unger (2018) define research ethics as practising ethical and legitimate rights in research practice. This study is guided by the University of South Africa Research Ethics Policy that was initially approved on 21 September 2007 by the University Council (Dube, Mhlongo & Ngulube 2014) and amended in 2016. The Unisa research ethics policy (2016) stipulates that the study projects that are conducted under the university should be ethically cleared by the Unisa ethical committee. This study adheres to the University of South Africa's research ethics policy.

The ethical clearance was obtained from the University Research Ethics Committee. The study adhered to the following key ethical principles as stipulated in the University of South Africa Policy on Research Ethics (2016).

- **Anonymity** - ethical principle involves exercising the right to privacy and keeping the participants anonymous.
- **Beneficence** - ethical principle has to do with the benefit of this study to the community.
- **Non-maleficence** - the safety of the researcher, the participants, and the entire population should be maintained. For instance, no one should feel insulted or emotionally violated because of their participation in the study.
- **Justice ethical principle** - includes fair treatment of participants. The participants deserve to be treated with dignity throughout the study. These also include data collection, analysis, and dissemination of the research results (Ngulube 2015a).

In the current study, the researcher observes the following research ethical-moral principles: anonymity and confidentiality; informed consent; voluntary participation; justice moral principle; beneficence and non-maleficence; as well as intellectual property. The participants were informed about the main purpose and objectives of this study before participating. The participants were informed that the participation was voluntary and that they could withdraw at any time from participating if they were uncomfortable. The right to privacy was respected as the participant information was strictly kept confidential. That means the participants are anonymous, and the information about the participants is protected and used strictly for academic research only. Permission was sought from the Drakenstein municipality and Groenheuwel, Drakenstein, and Paarl Public Libraries management before data collection. All the sources that were used in this study were acknowledged according to the approved departmental referencing techniques. The completed work was taken to a similarity index software, Turnitin which yielded a score of 24 percent including direct quotation and references. Furthermore, all the sources consulted were cited and listed at the reference section of this dissertation.

### **1.13 Summary**

The first chapter provided introductory and background information about patrons with impairments accessing information services in libraries in general. This chapter discusses a summary of what is covered. These include an explanation of the problem

statement, the proposed conceptual framework, problem statements, study objectives, research questions, delimitation and scope, justification and significance of this study, definition of key terms, methodology application, and ethical considerations in this study. The study's literature review is presented in detail in the next section, Chapter Two.

## CHAPTER TWO

### LITERATURE REVIEW: ACCESS TO INFORMATION BY IMPAIRED PATRONS

#### 2.1 Introduction

The previous chapter has laid the foundation by providing the introduction and background to the study; conceptual framework; statement of the problem; purpose and objectives; research questions; scope and delimitation; justification of the study; definition of the key terms; preliminary literature; research methodology; and ethical considerations. The current chapter focuses on the literature review. According to Galvan and Galvan (2014), a literature review is an organized, replicable method for identifying, evaluating, and synthesising existing knowledge produced by researchers, scholars, and practitioners. A literature review is also using previous scholarly literature from credible sources to build a study (Machi & McEvoy 2016).

Literature searches have been done on general search engines, open-access sites, and subscribed databases. The examples of subscribed databases are Emerald, JSTOR, ProQuest, Sabinet, EBSCOhost, Scopus, Science Direct/Elsevier, SA thesis and dissertation, Springer, Juda law journals, and LexisNexis for law, only to name a few. Some of these databases are subject-specific, and others are multidisciplinary. Multidisciplinary databases provide access to information sources from various disciplines, whereas subject-based databases focus on one subject or a specific related subject area of information sources. Google Scholar is another multidisciplinary database that provides access to peer-reviewed sources, books, theses, abstracts, and articles from universities, publishers, and other scholarly organisations (Creswell 2014). The database sources are recommended for academic research purposes since they provide credible, authentic, and peer-reviewed sources. Creswell (2014) recommends the utilisation of both free online resources and subscribed databases, including those on the academic library website for research purposes.

This chapter reviews the relevant literature that is related to the current research topic. Furthermore, the literature has been reviewed from international, national, and local sources. The purpose of the literature review is outlined below.

## **2.2 Purpose of the literature review**

According to Harris (2019), the purpose of the literature review is to discuss the reasoning and the contrast of previous studies that influenced the researchers' choice of topic. On the other hand, the literature review can be used to determine the literature gaps that can support or motivate the researcher to choose the study topic. Creswell (2014) posits that a literature review serves as a guideline to establish the significance of the study and reveal the contrast between the finding of the various studies. Harris (2019) explicates that the review of the literature background outlines the theoretical choices being applied in the study. The same is observed by Ridley (2012), as the author explicates that a literature review can be used to identify models and previous studies that motivated the choice of study topic and the methodology applied throughout the study. Pan (2016) also elucidates that the theory origins, the applicability of the theory, and the validity of the theory can be covered in the literature review.

Ridley (2012) demonstrates that a literature review can be purposeful to identify the research problem and gaps that the researcher endeavours to address in his or her study. Ridley (2012) also explains that the literature review gives a researcher a chance to understand and to respond to the explicit knowledge concerning the study. The knowledge can be accepted, shared explicitly, and utilised to identify ideas that go hand in hand with the current study (Harris 2019). That clarifies that new knowledge is generated from existing knowledge, as Oliver (2012) postulates that existing knowledge gives a direction to support new ideas. The reviewed literature is necessary to provide the basic information of the research topic and problems of the current study. On the other hand, the review of the literature also supports the research methods applied in this study. The literature aids with the formulation of comprehensive research questions for interviews (Zulu, Ngoepe & Saurombe 2017). Harris (2019) argues that the literature review chapter allows the researcher to reveal

various authors' opinions and ideas that give the direction of questions that need to be asked in the study.

The literature chapter provides the existing knowledge of the literature related to the research topic, guided by the research objective that represents the themes of the research topic (Oliver 2012). In this study, the thematic areas in the literature included the information services, collaboration, library infrastructure, and the convenience of information services. The thematic areas are guided by a conceptual framework formulated from the literature, IFLA Access to Libraries for Persons with Disabilities and the Social Model of Disability by Mike Oliver (1990). There is a scarcity of literature on the information accessibility of visually and hearing patrons in public libraries. Most of the research was done on visually impaired people in academic libraries, with only a few studies done in public libraries. The related literature revealed several gaps in the information accessibility of the marginalised group of impaired people that must be addressed.

### **2.3 Information service for the impaired patrons**

As mentioned in chapter one, the IFLA Checklist for Libraries for Persons with Disabilities states that information should be provided in accessible formats to address the reading difficulties of various impaired patrons (Irvall & Nielsen 2005). This goes hand in hand with the IFLA Libraries for the Blind in the Information Age Guideline for Development, which states that libraries may depend on various technologies for the patron to access information (Kavanagh & Christensen Sköld 2005). That is often happening in libraries where assistive technologies are used to create, store, and access information services, particularly for impaired patrons. This helps marginalised individuals, especially impaired people, process, and access information without reading difficulties (Rayini 2017). Libraries need to provide access to assistive technologies and alternative formats so that impaired patrons can easily access knowledge. Public libraries are expected to provide free internet and information services to community members because they are built and funded by the government (Khati 2013). With the inclusion of internet services, public libraries play a critical role towards bridging the digital split in the world. Khati (2013) defines a "digital split" or "digital divide" as an increasing gap between people who can access information

utilising ICT and those who cannot. For instance, marginalised groups, such as poverty-stricken people, might not be able to afford ICT equipment and data bundles for internet connection, resulting in their inability to access information through ICT infrastructure. Therefore, the personal development of those disadvantaged groups can be affected due to the scarcity of information.

In developed countries, knowledgeable hearing-impaired people positively contribute to government, enterprise, political economy, and recreation activities (Akerlele, Egunjobi, Awoyemi & Ogunniyi 2018). The hearing-impaired people are excellent communicators as they can provide optimistic guidance better than non-impaired people (Akerlele et al. 2018). Abdulrahman (2015) mentioned that access to information for the impaired people is significant, although they may be inconvenienced. However, most of them are smart, and they should not be excluded because of their condition. Public libraries should be the information hub for everyone, ranging from learners, children, impaired people, prisoners, agriculturists, and hospital patients (Abdulrahman 2015). Furthermore, public libraries should provide access to vacancy opportunities, residential, legal, and medical information (Abdulrahman 2015). In the case of medical information, for example, Berget (2020) reveals that impaired people frequently need to search for medical-related information more frequently than non-impaired people. Therefore, it is essential to improve public library information search systems to ensure accessible medical information to all patrons with various impairments (Berget 2020).

The South African Public Library and Information Services Bill (2012) states that information literacy and electronic communication technology education must be promoted and provided as part of information services for library patrons, especially impaired patrons. The former National Library of South Africa Chief Executive Officer (CEO) and National Librarian, the late Prof Rockey Ralebipi (2014-2019), proclaimed that a good way to address and implement changes in the communities is to consider the investment of library employees' skills development (National Library of South Africa (NLSA) 2015). The former CEO further declared that the Library and Information Association of South Africa (LIASA) has implemented Continuing Professional Development (CPD). LIASA is a professional body responsible for regulating the code of conduct and compliance of the registered libraries and information centres and



encouraging members to participate in CPD (LIASA 2021). CPD has been implemented to keep information workers in South Africa up to date on the latest trends and developments through skill development programmes and workshops (NLSA 2015). However, to attend this CPD presented by LIASA, the registered members and non-registered are supposed to pay the training fees (LIASA 2021). However, in this case, that means those institutions and individuals who did not make payment will not access the CPD.

As Zhao, Lin, and Zhang (2019) point out, to remove technical barriers for patrons with impairments, there is a need for the library to execute training, especially on how to navigate library resources and search literature using special devices. Zhao, Lin, and Zhang (2019) further propose that, for the first time, patrons' detailed user guides for the devices should be provided together with the technician or librarians to answer the possible questions.

In most cases, visually and hearing-impaired people are being isolated in their communities, libraries, schools, and families. Although the situation is different in Al Ain University, where the hearing-impaired and able-bodied students always attend some sessions with a sign language translator present, which offers all students an opportunity to learn sign language. In this way, hearing-impaired patrons can also have a chance to socialise with non-impaired students after classes (Kaba & Ellala 2019). This is beneficial because involving sign language and braille experts in educational institutions such as libraries and universities can help normal people understand the communications of impaired people to avoid isolation among impaired and normal patrons.

Saar and Arthur-Okor (2013) reveal that impaired patrons experience failure in communicating with librarians. This is associated with the situation at the academic libraries in Ghana as the study undertaken by Ayoung, Baada and Baayel (2021) reveals that no single academic library has specialised librarians to address the needs of the impaired patrons and all academic libraries had no librarian who was trained to assist sign language patrons. This is also observed by Zhao, Lin, and Zhang (2019) as the scholars declare that most patrons are unskilled in using certain devices, equipment, facilities, and library resources because of limited knowledge and practice.

Such barriers can be overcome by specialised skills and the employment of technical, sign language, and braille experts and facilitators to provide more training for patrons and librarians to address the library's service barriers.

Majinge and Stilwel (2014) suggest that visually impaired and wheelchairs patrons need specialised resources in libraries as well as remotely in Tanzania. Majinge and Stilwel (2014) emphasise that information service delivery should include installing assistive software such as Job Access with Speech (JAWS) and training on how to use assistive devices. In terms of an electronic library, it is the responsibility of the librarian to ensure that e-books, journal articles, online databases, webinars, and pictures and videos are accessible to patrons living with impairments (Getts & Stewards 2018). Getts and Steward (2018) further argue that the electronic resources that offer alternative transcripts to audio-visual sources can be considered accessible to normal and hearing-impaired patrons.

Payne (2016) investigated the extent to which hearing-impaired people in the United States use public library services. According to this study, the majority of hearing-impaired people rarely visit the library. However, hearing-impaired patrons have a huge interest in library resources such as book collections. Payne (2016) also found that there are still communication barriers, an absence of sign language interpreters, and an anti-barrier free building layout, contributing to the impediments to regular usage of public libraries by hearing-impaired patrons.

In academic libraries, students do not visit because they are not aware of the availability of library services for visually impaired patrons (Jamoh, Barman & Devi 2021). Librarians are expected to take steps to educate the impaired patrons about the services available to them, as this will attract more impaired patrons. To increase information service usage, the library setting should be favourable to visually impaired patrons (Vyas & Patani 2021). The librarians should promote library services for the hearing-impaired and provide up-to-date communication equipment since the communication tools are not available in the information service hub (Akerlele et al. 2018).

Bushman and Fagan (2019) conducted a study to investigate literacy development and public library accommodations for the deaf and hearing-impaired patrons in the United States. The study employed qualitative interview and quantitative survey data for data collection. In this study, almost 500 public libraries in the United States participated, and the results indicated that less than half of the public libraries that participated in the study offered library services for the deaf and hearing-impaired. This simply indicates that most libraries are offering information services that are not accommodative for the hearing-impaired. The study report indicates that public libraries experience a challenge in providing accommodative reading programmes for deaf and hearing-impaired patrons.

In contrast, some public libraries do not cater to the information needs of the deaf and hearing-impaired at all. The current study argues that increased information service awareness about the library service and literacy programmes for the deaf and hearing-impaired is required. The awareness of the information services for the hearing-impaired can encourage other public libraries to initiate the development of library services that accommodate the hearing-impaired communities.

A policy is important as it explains the workplace standard expectations of the employees in their practise (Saeed, Afsar, Hafeez, Khan, Tahir & Afridi 2019). The policy also ensures that the organisations comply with the regulations as they guide the daily operations and procedures of the organisations (Smallwood 2019). The policy is part of long-term strategic plans that govern how the libraries operate. The policy and legislative framework are beneficial to any organisation if they are properly adhered to by employees. This section of the literature discusses the policy and legislative framework affecting the accessibility of information services for impaired library patrons. The Social Model of Disability requires libraries to implement policies that address information access issues for disabled patrons, such as information resources, assistive technologies, and staffing (Eneya & Mostert 2019). Reasonable library policy should cover the following key issues, namely: information services, funding, integration, and collaboration (Bosedede, Ekoja & Yusufu 2015; Mosia & Phasha 2020).

The IFLA Library Services for Deaf People states that libraries should accommodate hearing-impaired people by providing collections, services, and information literacy programmes accessible by the hearing-impaired communities (Day 2004). This guideline is interlinked with the South African Public Library and Information Services Bill (2012) since it states that special measures need to be in place to encourage equal service for impaired people and other marginalised people affected by unfair discrimination. Seyama, Morris, and Stilwell (2014) explored blind and visually impaired information-seeking behaviour at the University of KwaZulu-Natal in South Africa. According to Seyama, Morris and Stilwell (2014), the university has developed the policy; however, service delivery is still insufficient to meet the information needs of the visually impaired student.

Rayini (2017) conducted a study that proposed strategies for improving library and information service for visually impaired patrons. Rayini (2017) suggests that libraries for the visually impaired should implement solid policies and techniques to ensure patrons can access information resources in an alternative format. Rayini (2017) further opined that such a policy should emphasise the condition of the loaning period and the circulation procedures of the library items.

Eligi and Mwantimwa (2017) declared that Tanzania did not have a specific policy for accommodative education. Education is included in policy information on disability policy and education policy with limited information on how education should be applied and assessed (Eligi and Mwantimwa 2017; Hayes (2020). Eligi and Mwantimwa (2017) suggests that the application of education and ICT policy and legislative framework for impaired patrons should be monitored. Such a policy and legislative framework should state how visually, and hearing-impaired patrons may have assistive technology for effective learning. The library and information service policies must consider new ICT for information dissemination while maintaining the traditional sharing of information services in libraries. The librarians need to promote traditional and ICT-advanced ways of disseminating information services (Horsfall 2020). As a result, both methods must be used to accommodate impaired illiterate patrons.

Impaired patrons can access information services effectively with special information technology devices in a digital library environment. According to Wójcik (2019), investing in new technologies can make the library more attractive and increase the usage of local library services for impaired patrons. Wójcik (2019) further explicates that the introduction of assistive technologies involves financial expenditure and operational stages, which is a difficult aspect for public libraries. Appropriate funding is essential for the development of libraries. Zulu, Ngoepe and Saurombe (2017) argue that it will be challenging for public libraries to develop public libraries' policies to maintain library resources' practical usage and convenience without adequate funding. In the context of Kenya libraries, Kiruki (2018) recommends that a library services policy for impaired patrons should be established to address issues of budget for library equipment and user education. Adetoro (2014) mentioned that the Nigerian government pays less attention to public library funding and there is less commitment to public library facilities and infrastructure. That may be why there are no electronic resources for the visually impaired in public libraries (Adetoro 2014). Zulu, Ngoepe and Saurombe (2017) also recommend that Zambian governments be accountable for library funding to build and renovate more libraries. In the context of academic libraries, Majinge and Mutula (2018) suggest that libraries should work closely with the government to lower taxes on assistive technologies to make them more affordable for impaired patrons. This can also be applied to public libraries, mainly because public libraries provide a wide range of information services to every member of the public, regardless of their affiliation (IFLA/UNESCO 2001), whereas academic libraries only serve the information needs of students, academic employees, and everyone affiliated with the institution. During policy development, organisations should involve organisations that provide support to impaired people, and the input of the impaired patrons should be taken into consideration (Cowne, Frankl & Gerschel 2018). Such integration might help libraries develop policy and legislative frameworks that promote services that meet the needs and expectations of their impaired patrons.

Impaired people need various formats of copyrighted materials to participate in education, culture, social and scientific activation (Ncube, Reid & Oriakhogba 2020). According to Nicholson (2012), the International Human Rights Conventions, the Constitution of the Republic of South Africa, and anti-discrimination laws provide regulation that protects the rights of the impaired community. Nonetheless, the

government and legislature are paying less attention to the rights of the visually impaired to access information. Such circumstances lead to some of the libraries experiencing access barriers due to copyright regulations. Majinge and Mutula (2018) assert that library assistive technologies, experts, and copyright regimes can eradicate barriers that hamper impaired patrons from accessing print and electronic information sources in libraries.

For example, section 13 of the South African Copyright Act (Act No. 98 of 1978) stipulates that "The reproduction of work shall be permitted as prescribed, but in such a manner that is not in conflict with the normal exploitation of the work and is not unreasonably prejudicial to the legal interest of the author." Such copyright regulations limit visually and hearing-impaired patrons from accessing information. For instance, the regulation restricts the digitisation of printed copyrighted materials and prevents converting copyrighted materials into braille format for visually impaired patrons and visual materials for hearing-impaired patrons (Nicholson 2012).

The copyright concerns also hinder vendors and librarians from considering captioning or translating audio-visual resources for hearing-impaired patrons (Getts & Stewards 2018). The visually impaired patrons depend on IT facilities to access information materials in alternative formats but making reading materials accessible in alternative formats without the original author's permission restricts libraries. One of the mechanisms used to eradicate information service access barriers for visually impaired patrons in Russia is adoption of the Marrakesh Treaty (Sitdikova et al. 2018). The Marrakesh Treaty is a treaty that facilitates access to copyrighted material for patrons who are visually impaired without seeking permission from the author or the original creator of the work (IFLA 2019b). The goal of the Marrakesh Treaty is to make more published information readily available for patrons living with impairments throughout the world. The treaty agreement also makes it easier for visually impaired patrons, academic institutions, non-profit organisations, and government agencies to convert inaccessible printed information into an accessible format without copyright restrictions (Sitdikova et al. 2018).

In the Czech Republic, the Association of Library, and Information Professionals (SKIP) collaborated with the Ministry of Culture and the Czech parliament committee

on the preparation of copyright legislation, and good reforms were implemented in libraries (IFLA/UNESCO 2001). For example, the Czech Republic is one of the European Union countries that considered adopting the Marrakesh Treaty. The state also stresses the significance of the treaty agreement to facilitate inclusivity of information access to patrons living with visual impairments (Sitdikova et al. 2018).

In the context of South Africa, Van Wiele (2014) asserts that while South Africa has not adopted the Marrakesh treaty, it intends to review its copyright regulations in future. For South Africa to have progressed in development, the country should permit citizens to participate fully in democracy by reviewing the copyright regulations so that both patrons and creators can access information with ease (Nicholson 2012). The legal frameworks need to be implemented to do away with barriers that prevent the creation and usage of copyrighted materials by the impaired while the economic rights of the authors are protected (Ncube, Reid & Oriakhogba 2020). Copyright Act regulations also need to be amended in a manner that addresses education and library services so that an alternative format can be made readily available to impaired patrons. South Africa needs to urgently pay attention to the copyright regulations to address the gaps in the information needs of impaired patrons (Nicholson 2012).

#### **2.4 Collaboration between libraries and organisations representing the impaired people**

Information centres and libraries should provide services that allow everyone to participate fully in information service activities and programmes, without discriminating against patrons with impairment. Chaputula and Mapulunga (2017) further explicate that government intervention may eradicate discrimination and challenges faced by impaired patrons due to a lack of facilities. Zulu, Ngoepe and Saurombe (2017) explain that to improve quality services and facilities, the government must implement appropriate legislation for public library services. Chatupula and Mapulunga (2017) also recommend that the Malawi government address the need to recognise impaired patrons through the Ministry of Gender, Children, Disability and Social Welfare.

There are no joined libraries in South Africa; however, community members can access university libraries if normal operations are not disrupted, and the interests of main university patrons are not compromised (NPLIS) (2018). This means that students, academics, and other university employees should be given preference. According to Zhao, Lin, and Zhang (2019), investment in joint libraries between government and tertiary institutions can lead to more funding opportunities. Rayini (2017) emphasises that public libraries should collaborate with other stakeholders to ensure an accommodative library and information service for the visually impaired patrons.

Zhao, Lin, and Zhang (2019) state that it is vital to collaborate with social charities, disability organisations, local entrepreneurs, community members, and individuals to raise funds (Zhao, Lin & Zhang 2019). There is no public library that can meet all the needs of the patrons independently. Collaboration with other libraries and networking with related organisations makes it possible for the libraries to meet the needs of the patrons (IFLA/UNESCO 2001).

The issue of collaboration with other institutions was emphasised by Saurombe & Ngulube (2018). According to Saurombe and Ngulube (2018), the only way libraries can successfully contribute to the development of society is through collaboration with other institutions interested in the promotion of access to a wide range of information. For instance, the SALB has established small libraries for visually impaired patrons in 120 selected public libraries in South Africa, and only 14 SALB mini libraries are based in the Western Cape (Swira 2016). The SALB is collaborating with public libraries to meet the information needs of visually impaired patrons.

The government should permit the visually impaired to launch library agencies (Vyas & Patani 2021). Rayini (2017) proposes that libraries and visually impaired agencies collaborate to support assistive technologies and patrons' information needs. Rayini (2017) emphasises that public libraries should influence collaboration rather than duplicating services that can be expensive for the public library to deliver independently.



The South African Public Library and Information Services Bill (2012) states that public libraries must provide access to information materials and services that can be easily accessed by the visually impaired, small children, and the aged. IFLA library services guidelines for the hearing-impaired state that libraries should have a collection for the hearing-impaired that can be used by both hearing-impaired and hearing patrons (Day 2004). In other words, the libraries must provide library materials that can be of interest to both impaired and non-impaired patrons.

In South Africa, the Minister of Sport, Arts and Culture proclaimed that free-based internet services in public libraries have been advanced due to collaboration with the Bill and Melinda Gates Foundation (National Library of South Africa 2015). The minister further declares that collaboration with Bill and Melinda Gates has addressed the digital split in South African communities since public libraries can now have access to free ICT equipment and internet services through the National Library of South Africa (2015). The Bill and Melinda Gates Foundation donated R32 million to the NLSA to support the public library project in South Africa (Department of Sports, Art, and Culture 2020). The Bill and Melinda Gates Foundation project was in line with the national Department of Sports, Art, and Culture mandate as the two organisations supported the public libraries with grants to enhance the internet and information technology facilities in public libraries (South African Department of Sport, Arts and Culture 2020).

The Bill and Melinda Gates Foundation has also been involved in training library employees in South Africa so that they can use the resources to assist the needs of the community members (South African Department of Sport, Art, and Culture 2020). According to the foundation, South Africa's destiny is grounded on relying on its scientific expertise and other resources to fill the gaps of health issues, social inequalities, and inadequate opportunities for young people (Bill and Melinda Gates Foundation 2021). The South African government needs to invest in public library facilities to address the social inequalities in accessing the information services in public libraries.

In South Africa, the information needs of the visually impaired are met through collaboration with the public library and SALB (National Library of South Africa 2015).

The SALB is an agency of the Department of Sport, Art, and Culture that works closely with libraries to cater for the information needs of visually impaired patrons. The online membership of the SALB is open to all citizens of South Africa who are living with visually or physically impaired family members. The members of SALB lend information sources online through the SALB website. SALB is collaborating with some of the information centres and public libraries in South Africa. For instance, some of the SALB mini-libraries are based in Western Cape Province library and information centres, which are Athlone School, Bellville-South Library, Delft South Library, Edgemead/Monta Vista Library, Fish-Hoek Library, Fitzpatrick Library, Gugulethu Library, Helen Keller Society, League of Friends of the Blind, Meadowridge Library, Mfuleni Public Library, Pioneer School, Stellenbosch Biblioteek, Strand Library, Suider Strand Library, and Volvertroue Dienssentrum. The George Public Library in Western Cape province is the first library to offer services that accommodate visually impaired patrons, and the librarians are trained to serve the visually impaired library patrons (Swira 2016). The service offered by the selected public libraries in Drakenstein Municipality includes participation in community outreach, storytelling, reference, and information services competitions (Drakenstein Municipality 2022).

## **2.5 Compliance of library infrastructure with relevant guidelines**

Planning, designing, and constructing library facilities, including parking and roads, toilets, reading rooms for the impaired people, and bookshelves, should be suitable for all patrons living with all kinds of impairments (Zhao, Lin & Zhang 2019). Inadequate infrastructure can have an impact on the quality of information services delivered in various libraries. The library sets a structure that enhances the libraries' ability to provide quality services to all patrons. The infrastructure is discussed based on the information technology facilities and equipment, building structures, transport, and mobile libraries.

### **2.5.1 Information technology facilities and equipment**

Zhao, Lin, and Zhang (2019) emphasise that reading rooms should be equipped with special computers, audio-visual facilities for the blind, braille resources, and reading aids, just to name a few. Furthermore, aspects such as IT facilities and equipment of

information services should be evaluated by library employees to maintain equal and adequate accessibility of information for everyone, including impaired patrons.

Ayoung, Baada and Baayel (2021) reveal that library employees in academic libraries in Ghana are not knowledgeable of the existing challenges of the impaired patron and the fundamental right to access information. The study suggests that the government should correct the Disability Act in Ghana and educate people about the importance of access to information for impaired patrons (Ayoung, Baada & Baayel 2021). The visually impaired have been disadvantaged due to the scarcity of accessible information resources (Rayini 2017). For instance, even the academic libraries in Lahore, Pakistan, also face the same challenge as Ahmed and Naveed (2021). They also reveal that students can access information, but the main challenge is information resources that do not support the file format of the retrieved information sources.

The public libraries must implement a plan to inform the government and investors about the scarcity of alternative formats available in the libraries for local and international donors to provide adequate alternative formats (Adetoro 2014). The government should provide public libraries with the required resources to assist the public in accessing information irrespective of the nature of their impairments (Abdulrahman 2015). For instance, the braille resources were obtained from the private sectors that aid in the transcription of the library resources into braille in the public libraries in Nigeria (Adetoro 2014). However, public libraries are not transcribing the resources, which explains the insufficient collection of alternative formats in public libraries (Adetoro 2014). Public libraries might not have all kinds of information resources for patrons with various demands because assistive equipment is expensive (Berget 2020). Adetoro (2014) reports that patrons use their devices in public libraries since the available alternative format does not meet their desired expectations and information needs. Berget (2020) proposes that patrons can use their own assistive devices to search for information with the help of a librarian who understands assistive technology.

According to Kaba and Ellala (2019), patrons living with impairments experience digital library access barriers due to their need to rely on precise facilities. Patrons with disabilities, unlike regular patrons, cannot access digital library facilities at any time or

place. Wei, Lirong and Chunming (2012) elucidate that traditional libraries have limitations in the provision of library services for impaired patrons due to their geographical location and the lack of adequate special resources for these patrons. The nature of the degree of the impairment can also contribute to the difficulties of accessing resources regardless of the availability of assistive technology devices (Wójcik 2019). On the other hand, studies reveal that public university libraries in Kenya did not have a web page in the website section to provide information for impaired patrons (Kiruki & Mutula 2021). The webpage provided insufficient information on the available digital resources for impaired patrons (Kiruki & Mutula 2021). However, the study suggests that to increase the maximum utilisation of web resources, public librarians and web developers need to consider factors that contribute to access barriers (Kaba & Ellala 2019). Wójcik (2019) emphasises that it is significant to use technologies for library services and education, particularly for impaired patrons. Wójcik (2019) further argues that technologies should be employed in libraries as they make the library more accessible and attractive.

Kaba and Ella (2019) conducted a study to explore the attitudes of the non-impaired and hearing-impaired patrons towards using the digital library resources at Al Ain University in the United Arab Emirates. The study employed survey questionnaires to collect data from a sample of 59 hearing students and 53 hearing-impaired students. The results indicate that 90 per cent of all respondents are using digital resources for educational activities and informal social communication. This study indicates that non-impaired patrons are using digital resources more than the hearing-impaired. That means most visually impaired people rely on ICT technologies to access information for learning purposes independently (Ashraf, Hasan, Lewis, Hasan & Ray 2016). This study suggests a need to conduct related studies that focus on what motivates and challenges the hearing-impaired to access digital information resources and databases.

Nsanja (2015) proposes that university employees in Malawi should make sufficient IT facilities and equipment available to meet the impaired patrons' needs. Library employees in the disability centres should be knowledgeable about the significance of considering the students' needs and inform the universities about the challenges experienced by impaired patrons (Nsanja, 2015). In the study conducted in Tanzania,

Mwantimwa (2021) reports that the IT facilities and equipment provision is not a problem in the University of Dar es Salaam; the only challenge is low usage. This is supported by Ngonyani and Mnyanyi (2021). The authors reveal that the University of Dar es Salaam provided IT facilities and equipment for various impaired patrons and basic refresher training for maintenance of resources (Ngonyani & Mnyanyi 2021). Mwantimwa (2021) pinpointed issues like being technophobic, inadequate knowledge, and skills affecting the usage of assistive devices. Ngonyani and Mnyanyi (2021) reveal that they also have issues with a lack of IT expertise for the equipment used by the impaired patrons. Mwantimwa (2021) proposes that the disability unit and libraries work closely to conduct a refresher workshop for the IT facilities and equipment available for the impaired patrons (Mwantimwa 2021). The universities should also have an advisor committee and conduct workshops to provide and gather information to produce the report about impaired students (Nsanja 2015).

Wei, Lirong and Chunming (2012) state that the National Library of China (NLC) also introduced the China Digital Library for visual impairment websites. Should this type of website be implemented in public libraries the information needs of visually impaired would be properly met. Public libraries should address the information gaps of the groups of impaired patrons in society (Ghazizadeh & Alipour 2020). Public libraries should be the primary information access points and equally be in the front-line in removing the information access challenges faced by impaired patrons (Feizabadi, Vaziri, Hosseini, Akbarfahimi, Sakhaei & Ghaneifard 2020). Mutia (2016) proposes that public libraries can learn from academic libraries and try to procure resources that can cater to various special needs of all patrons with impairment. Zhao, Lin, and Zhang (2019) revealed that the Chinese government and tertiary institutions established joint libraries to perform multiple functions for the academic and public. However, the service of joined libraries is not limited to specific patrons like the special library and academic libraries; it caters to all public members, including students, academics, and impaired patrons. Equal access and the right to information are considered in most of the libraries in China, and the joined libraries were initiated to save expenses and investment (Zhao, Lin, and Zhang 2019).

### **2.5.2 Building structure**

The study conducted at the National University of Lesotho by Mosia and Phasha (2020) discloses that the impaired people experience movement impediments because of the inaccessible buildings and class timetables that are not convenient for students with mobility impairment. Berget (2020) proposes that universal design should be implemented, not limited to public and special libraries and academic libraries. The law requires equal access for all but does not suggest how to achieve accommodative services (Berget 2020). There should be a unit that is specifically designed for people who are impaired (Abdulrahman 2015).

Scholars such as Kaba and Ellala (2019) and Khan and Mudassir (2015) emphasise that in Al Ain University in the United Arab Emirates and Pakistan libraries, impaired library patrons cannot physically visit and access facilities without limitation in the same way as non-impaired patrons. This corresponds to the Australian scenario where Fitzgerald, Hawkins, Denison, and Kop (2015) indicate that 90 per cent of the impaired patrons are not utilising the public library, as is evidenced by the fact that the library services are not favourable for patrons with special needs. This situation is dissimilar to the context of Malaysia, as reported by Bodaghi and Zainab (2017), who report that the University of Malaysia library has committed to providing carrel room for visually impaired library patrons. According to Bodaghi and Zainab (2017), the visually impaired patrons expressed a sense of gratitude, appreciation, and pride in being members of the library. The visually impaired patrons use the carrel to study in a private space and contact meetings with colleagues.

Zhao, Lin, and Zhang (2019) assert that libraries and educational centres should provide equal opportunities to access information resources, especially for hearing and speech-impaired patrons. Zaid (2017) conducted a study to examine the level of information provision for visually impaired students regarding the service delivery of the Braille Project at the University of Logos in Nigeria. Zaid (2017) attests that most libraries in Nigeria are structured without considering the needs of visually impaired patrons. Zaid (2017) further mentioned that library materials in accessible format are not purchased for easy accessibility and retrieval by visually impaired patrons.

Majinge and Stilwell (2015) conducted another study that examined the library resources for visually impaired patrons in five academic libraries in Tanzania. The pragmatic paradigm was used in the study's Mixed Method Research approach. Majinge and Stilwell (2017) revealed that 43 per cent of the libraries are not suitably designed to accommodate visually impaired patrons. The study further indicated that no library policy addresses the information needs of visually impaired patrons. The management also confirmed that the resources and facilities for visually impaired patrons are kept in the disability unit. Majinge and Stilwell (2017) also observed that libraries provide access to materials, photocopy services, and the internet. However, building accessibility is impaired since there is a shortage of well-functioning lifts, ramps, and appropriate signage.

In Indonesia, Bonk, Nurdiani, and Katarina (2021) disclose that public libraries in Jakarta provided the facilities to meet the information needs of visually and mobility-impaired patrons. In a study conducted in Malawi, Chaputula and Mapulanga (2017) surveyed patrons and indicated that some library buildings were not barrier-free since the library was designed with stairs without a lift. Another wheelchair patron raised a concern that there was a special door for wheelchair patrons, which was sometimes inconvenient for the patrons (Chaputula & Mapulanga 2017). In the Jakarta public library building, the automatic entrance is operating, and there are yellow colour lines on it for partially sighted patrons (Bonk, Nurdiani and Katarina 2021). That is dissimilar to the Malawi situation as the study discloses that sometimes the door is always locked, sometimes the keys can be misplaced, or the door refuses to open in the presence of the patron (Chaputula & Mapulanga 2017).

Chaputula and Mapulanga (2017) also mentioned that in some libraries, patrons complained about the steepness of the ramps as it was contributing to the impediments of independent usage of the library infrastructure for wheelchair patrons. The automatic entrance to the Jakarta public libraries has been made 220 cm wide to allow wheelchair users to pass through without difficulty (Bonk, Nurdiani and Katarina 2021).

According to the South African Public Library and Information Services Bill (2012), the physical infrastructure of the public library and information services must include a

building structure that is accessible to patrons who are visually impaired, small children, or elderly. This bill is interlinked with the IFLA Checklist for Libraries for Persons with Disabilities as the guidelines stipulate that a visually impaired person using a cane or guide dog can enter library premises without barriers (Irvall & Nielsen 2005). The library building facilities and parking must be barrier-free for impaired patrons. The library employee should make sure that building facilities are utilised and managed efficiently so that the facilities can be conveniently used by the whole community (IFLA/UNESCO 2001).

### **2.5.3 Transport service and related services**

Libraries should create welcoming architectural library facility designs and spaces that allow impaired patrons to exercise their fundamental right to access facilities and information (Ilako, Maceviciute & Muwanguzi 2020). It is significant to have access to free transportation to increase maximum access to the library resources and design the Braille map of the entire library buildings (Khasseh, Yamchi, Azimi, Ghazizadeh & Alipour 2020).

Zhao, Lin, and Zhang (2019) disclose that most Chinese library settings are not suitable for wheelchair impaired patrons, particularly those finding it hard to enter and travel to the library facilities (Zhao, Lin, and Zhang 2019). This was also seen at the Msunduzi Municipality library in South Africa, where Marwexu (2019) says that the main problem that keeps visually impaired people from using the library's resources is the lack of accessible transportation to and from the library.

There must be regular vehicles to offer transport, library, and information services to impaired patrons with support from the local authorities and community stakeholders' support. The special vehicles can be in the form of mobile libraries or other means of transport to serve those residing in isolated areas (IFLA/UNESCO 2001). However, the special transport should be designed in a way that is easy to access and aligns with the requirements of occupational health and safety (Quinn & McCallum 2012). Marwexu (2019) proposes that mobile libraries be placed in areas where the visually impaired conduct their meetings, and library materials should be issued to them with a return date closer to their next meetings.



On the other hand, transport service may not be the only solution, and the impaired may fail to come to the library due to the nature of deformity conditions such as severe physical impairments or libraries that are located far from residents. Nonetheless, libraries can also introduce door-to-door services whereby the requested resources are delivered to the patron's home or sent through email (Zhao, Lin & Zhang 2019). The IFLA Checklist for Libraries for Persons with Disabilities, in terms of special services, emphasises the home delivery of library materials to those who cannot visit the library (Irvall & Nielsen 2005).

## **2.6 Information service convenience**

The IFLA Checklist for Libraries for Persons with Disabilities states that impaired patrons are challenged by physical barriers and psychological problems to visit the library (Irvall & Nielsen 2005). Bodaghi, Cheong and Zainab (2016) revealed that the visually impaired patrons were feeling uncomfortable, frustrated, confused, and reluctant to seek librarian assistance and experienced a lack of understanding from the librarians in Malaysia University. Such circumstances can lead the impaired having low self-esteem and feel reluctant to visit the library. Everyone can benefit from using an online library for information access services, and when using digital libraries, patrons with disabilities frequently do not self-identify as requiring special library services (Getts & Stewarts 2018). According to Zhao, Lin, and Zhang (2019), if patrons with impairment are not treated properly by other library patrons, particularly library employees, the impaired patrons may feel uncomfortable visiting libraries.

There is a need for the libraries to have a welcoming environment in terms of their services for all patrons (Zulu, Ngoepe & Saurombe 2017). The well-structured library and the availability of library equipment make the library environment convenient for use by patrons with impairments as well. Accordingly, libraries should take part in addressing barriers hampering impaired patrons from conveniently accessing library services (Chaputula & Mapulunga 2017). Nevertheless, some of the mechanisms that need to be considered to address these barriers that hamper patrons in accessing information services include the library's employment of relevant guidelines and research recommendations based on studies conducted by scholars.

Eligi and Mwantimwa (2017) report that ICT facilities like computers and other assistive devices are costly. Hence, it affects students' learning experiences at tertiary institutions since most of the visually impaired students come from disadvantaged backgrounds in Tanzania. Scholars like Zhao, Lin, and Zhang (2019) concur that people with impairments usually come from low-income families who can hardly afford transport fares and library and information services expenses like printing, copying, and scanning services. Eligi and Mwantimwa (2017) articulate that a lack of ICT facilities can hinder the learning of visually impaired students, which can deny students a chance to discover their potential. Nahar, Jaafar, Ahamed and Kaish (2015) also state that ICT facilities simplify the learning experience of the visually impaired student together with non-impaired students. Such facilities can also assist the impaired patrons in having confidence and positive learning attitudes.

The study conducted at the National University of Lesotho reveals that lecturers support impaired students since they are being bullied. There is no therapeutic counselling for victims and no punishment for the bullies (Mosia & Phasha 2020). Such circumstances affect the wellbeing and academic performance of the students (Mosia & Phasha 2020). The future of the successful information services for impaired patrons' education and library sectors counts on the attitude and support of the library employees and their good professionalism towards the library service and education (Vyas & Patani 2021). The libraries should provide the appropriate information service and awareness campaign to educate people about the nature of the condition of the impaired people and the problems that they may face in accessing the library's service and facilities (Abdulrahman 2015).

## **2.7 Summary**

This chapter was devoted to a review of relevant literature. There is a significant gap in the literature regarding the information accessibility of hearing-impaired individuals in public libraries that needs to be filled. Furthermore, the other researchers investigate the transformations that can be implemented in public libraries to promote the inclusivity of information services for people who are visually or hearing-impaired. The related literature identified the research problems that can influence the research

question of this study. The following chapter goes over the extensive research methodology used throughout the study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The second chapter covered the literature review related to the topic of this study. The following key themes derived from the research objectives were also covered in the literature review: information service, collaboration, library infrastructure, and information service convenience. To learn about the existing knowledge of the related topic, a review of the literature was required. In this chapter, the researcher discusses the research methodology and methods used in this study. Research methodology is "how the study is carried out." Methodology is a systematic, theoretical examination of the research method used to conduct a study (Igwenagu 2016).

Research methodology is the specific procedures or techniques used to identify, select, process, and analyse information about a topic (Rahman 2017). Using systematic research methods, the research can help in obtaining answers (Nayak & Singh 2021). According to Ukwoma and Ngulube (2021), the research problem influences the methodology choice because it is critical for problem solving and acquiring new knowledge. The research can discover previously unknown truths and facts. The research methodology is used in this study to attain the study's goal (Nayak & Singh 2021). The following topics are covered in this chapter: philosophical paradigms, research approach, research design, population, sampling techniques, data collection method, and data analysis procedures. Figure 3.1 depicts how research methodology was applied in this study.

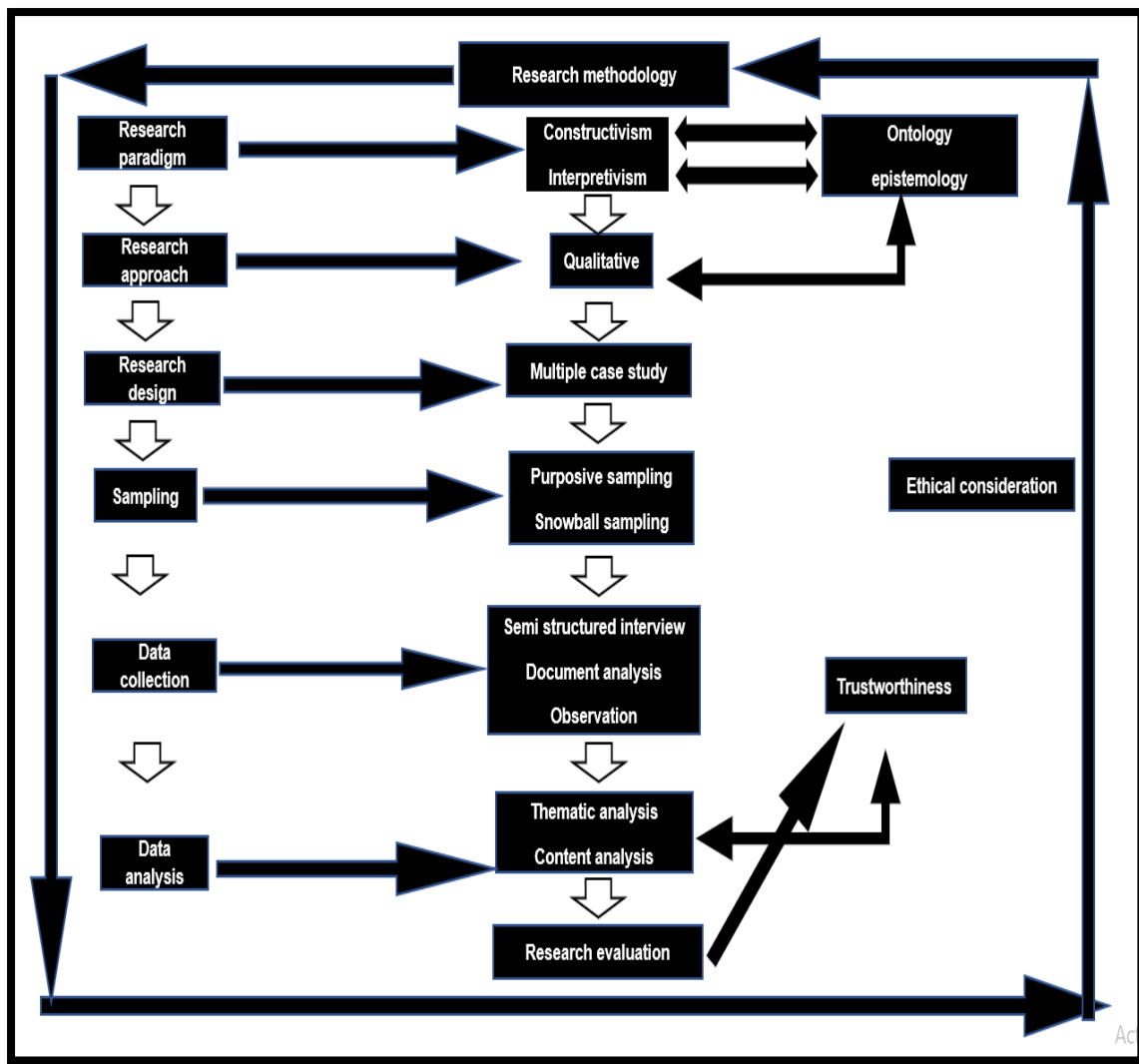


Figure 3.1: Methodology of the study

As reflected in Figure 3.1, this chapter covered philosophical paradigm (ontology and epistemology which are interpretivism and constructivism), research approach (qualitative), research design (multiple case study), sampling (purposive and snowball), data collection tools (interviews, document analysis and observation). Other areas covered include data analysis, which is thematic, as well as trustworthiness of collected data, ethical considerations, and research evaluations.

### 3.2 Philosophical paradigm

A paradigm is a set of assumptions that a researcher includes in a research project (Leavy 2017). Within a philosophical paradigm there is ontology and epistemology. Ontology describes the philosophical world view about the nature of social reality and knowledge; epistemology is "the way of knowing" and what establishes knowledge (Ngulube 2015a). Ontology and epistemology are the philosophical basis of social research (Ngulube 2015a). In research planning, the researcher needs to think about the philosophical paradigm that guides the research design and research methods and procedures that translate the approach into practise (Creswell 2014). According to Neuman (2014), the philosophical paradigm is a systematic organisation in research that includes the theories and research methods that are applied to find research questions' answers. To understand methodology as a researcher, there is a need to understand the philosophical paradigms (Neuman 2014).

According to Cohen, Manion and Morrison (2017), research is influenced by the research objectives but not the philosophical paradigms. The objectives can be elucidated through the application of paradigms (Cohen, Manion and Morrison 2017). Therefore, the application of the paradigm can influence the organisation and explanation of the perception of the research (Cohen, Manion and Morrison, 2017). Therefore, it is essential to realise that the researcher's perception or worldview can influence the research and choice of research design (Tombs & Pugsley 2020). Sometimes, the researchers are not explicit about the philosophical paradigms or methodological choices (Tombs & Pugsley 2020). These can lead to inappropriate methodological choices if the researcher is not explicit about the philosophical paradigms. The researcher's assumptions and perceptions need to be explicit (Tombs & Pugsley 2020). In social science, the key philosophical paradigms are positivism, constructivism as well as pragmatism (Creswell & Creswell 2018). The ontology associated with each are constructivism (interpretivism), realism (positivism) and pluralism (pragmatism) (Creswell & Creswell 2018).

The knowledge gained through the positivism paradigm is based on the observation and measurement of real-world objects. This paradigm focuses more on quantitative information than qualitative information (Creswell 2014). In the pragmatic paradigm,

researchers consider what addresses the precise research questions and what is effective in the study (Leavy 2017). Leavy (2017) argues that any theory and method reviewed in the study can be suitable for a pragmatic paradigm design. The pragmatic paradigm incorporates the collection of mixed methods data in a research project (Creswell 2014). Researchers are expected to use philosophical paradigms with ontology and epistemological justifications to conduct well-written and logical mixed methods research (Parvaiz, Mufti & Wahab 2016). Experienced researchers also find it difficult to justify or support the ontological and epistemological worldviews in mixed methods research (Parvaiz, Mufti & Wahab 2016).

The interpretivism paradigm which was applied in this study is often referred to as the social construction of reality as it focuses on the interpretation of the meaning of daily interaction and experiences, perceptions, circumstances, and situations of particular people (Leavy 2017). Furthermore, with interpretivism, the researcher focuses on individual participants' perceptions (Creswell 2014). The interpretivism paradigm is the underlying support of a qualitative research approach that is closely related to the definitions and qualities of case study design (Starman 2013). Accordingly, the application of the interpretivism in qualitative study approach during data collection can also create opportunities to learn about unexpected and new things regarding the experiences of access to information by impaired patrons in public libraries.

### **3.2.1 The selected research paradigm for the study**

According to the above-mentioned descriptions of research paradigms, the interpretivism paradigm was appropriate for the study because it sought to discover and interpret the experiences, viewpoints, opinions, circumstances, and situations of the impaired patron and librarian in relation to access to information services. The interpretivism paradigm incorporates a qualitative approach into its design, and qualitative data is gathered to learn about participants' personal experiences and daily interactions with library services for visually and hearing-impaired patrons. Observation and interviews are used to collect qualitative data. The qualitative approach, combined with the integration of the interpretivism paradigm, allows the researcher to understate the experiences of librarians and impaired patrons in this study context.

### 3.3 Research approach

The research approach is a strategy and process that involves the step from broad assumptions to a detailed method of data collection and analysis (Creswell 2014). The three major approaches to social science research are qualitative, quantitative, and mixed methods research (MMR). Qualitative research mainly focuses on discovering the clarifications of situations, attitudes, perceptions, beliefs, values and experiences of a specific, focused individual or topic (Kumar 2011). The qualitative data is extensive while the data is collected and built from several sources (Ngulube 2015b). Qualitative research can be used to investigate public needs and influence reforms that help to address challenges (Jason & Glenwick 2016).

The quantitative approach is often described by deductive approaches aiming to validate, invalidate, or attest to the existing theories (Leavy 2017). Neuman (2014) elaborates that the quantitative approach uses methods of data collection and analysis that result in numerical data. Mixed-method research is a combination of both qualitative and quantitative research approaches. According to Creswell (2014), MMR involves collecting, analysing, and, in some ways, integrating both quantitative and qualitative data in a single study. Although all approaches have weaknesses and biases, the combination of quantitative and qualitative data reduces the weaknesses of each form of data (Creswell & Creswell 2018). It is not possible to acquire in-depth information about the phenomenon with the nature of the quantitative approach as it focuses more on quantities (Rahman 2017). According to Ukwoma and Ngulube (2021), the benefit of the mixed method is that it delivers detailed information on the phenomenon as it allows the participant to provide comprehensive information that can assist the researcher in presenting enough evidence in research. The pragmatic paradigm is linked with the mixed method (Parvaiz, Mufti & Wahab, 2016). Table 3.1 below presents the discussion of philosophical paradigms, research approaches, and the main features of this study.



Table 3 1: The philosophical paradigms, research approach and the key features of this study (Creswell 2014); (Creswell & Creswell 2018).

<b>Philosophical paradigms</b>	<b>Research approach</b>	<b>Key features</b>
Positivism	Quantitative	Measurement Fact independent of the theory Formulate hypotheses Test hypotheses Hard to produce in-depth data
Interpretivism	Qualitative	Social construction Interpretation Contextual understanding In-depth description In-depth data
Pragmatic	Mixed method	Measurement versus words

### 3.3.1 The selected research approach for the study

A qualitative approach was chosen over quantitative and mixed method approaches. The qualitative approach's strength is that it provides extensive information and in-depth details of a phenomena (Szilvia 2013). The qualitative approach best fits the description of the study and, therefore, it is adopted as a research approach in this study. The reason for opting for the qualitative approach is that this study focuses on how effectively, why, and how conveniently the impaired can access information services in public libraries. Accordingly, with the qualitative research approach, the objectives allow exploration of the study topic as much as possible (Kumar 2011). Additionally, the purpose of this study is to explore and explain the provision of access to information services to a specific group of people, namely the visually and hearing-impaired patrons. Therefore, qualitative data can provide deeper, more in-depth research answers. Accordingly, this study can contribute to the theoretical knowledge that aims to offer a deeper knowledge of the visually and hearing-impaired patrons' experiences regarding access to information services in libraries.

### **3.4 Research design**

Research design is a strategy for developing the structure of a study to obtain answers to the research project's research problems (Kumar 2011). The examples of qualitative research design are phenomenology, the Delphi technique, grounded theory, narrative, participatory action research, ethnography, and case study. Phenomenology lays a foundation in philosophy; it explores phenomena and the experiences of people in a society (Pathak 2017). The grounded theory studies the experiences of the participants and uses the collected data from the participants to develop a theory (Chun Tie, Birks & Francis 2019). Narrative theory occurs when the researcher explores the social phenomena by analysing data that was collected through the narration of the stories by the participants (Nyström 2018). A case study entails a comprehensive examination of a single person, a group of people, a phenomenon of interest, or an institution (Neuman 2014).

A multiple case study of the Groenheuwel, Drakenstein, and Paarl was used as a research design. As a result, using this design in research questions can help improve understanding and knowledge of this study topic. Furthermore, it also creates opportunities to learn about unexpected and new things regarding the experiences of access to information by visually and hearing-impaired patrons in public libraries. The interpretivism paradigm is the underlying support of a qualitative research approach that is closely related to the definitions and qualities of case study design (Starman 2013). The daily interactions and information used by librarians in their service delivery to the visually and hearing-impaired patrons can be explored by incorporating the interpretivism worldview in the case study of this research project. The employment of the case study includes in-depth interviews, a review of documents, and observations in the public libraries. The multiple case study concentrated on the accessibility of information for visually and hearing-impaired patrons in the Drakenstein public libraries.

### **3.5 Population and sampling**

Population refers to the specific group of people and objects on which the study can be focused (Neuman 2014). The population of this study was library officials and

patrons of the Groenheuwel, Drakenstein, and Paarl public libraries. Sampling is the process of selecting a subset of a larger population (a sample) (Kumar 2011). The sample of this study is public librarians, visually and hearing-impaired patrons, and additional specialists such as sign language interpreter and project coordinator. This study targeted the Groenheuwel, Drakenstein, and Paarl public libraries. The study employed a non-probability sampling technique due to the nature of the population targeted. Snowball sampling involves referral techniques; for instance, research participants are selected by the researcher who can nominate and identify the other potential primary participants relevant to participating in the study (Nayak & Singh 2021). This process of referrals was done until the required information was collected. Snowball sampling was suitable in this study since the impaired population is the minority group. This helped in minimising difficulties of locating visually and hearing-impaired patrons in libraries. Consequently, the researcher used the technique of requesting referrals to other relevant participants. The referral technique included contacting the visually and hearing-impaired people who are not always in the library to participate in the study. Therefore, the researcher sought referrals from the library employees by asking for the contact information of the prospective visually and hearing - impaired participants. Furthermore, the refereed prospective participants were contacted to check if they were available to participate in the study. The five patrons participated in the interviews, three visually and one hearing-impaired, and the sign language interpreter in Paarl communities.

Purposive sampling is also called judgemental sampling. Using this sampling technique, the target population is selected to answer certain research questions (Nayak & Singh 2021). The researcher selected relevant participants from the library officials from Groenheuwel, Drakenstein, and Paarl public libraries in the Western Cape. Furthermore, the selection is based on the participants who could give information that can aid in achieving the research objective. This study included six library employees, three librarians in charge of each library, two library assistants from only two libraries, and one SALB library Coordinator who represented all libraries. The librarian in charge and the project coordinator were identified by the public library director. The library assistants were identified and selected by the librarian in charge. In this case, only participants who were willing to share the information were being selected. Moreover, employing a combination of sampling techniques in this study

assisted in overcoming the disadvantages of various techniques. Therefore, the purposive and snowball non-probability sampling techniques make it easy to get a sample as it saves time and money (Showkat & Parveen 2017). The study used snowball sampling to select the visually and hearing-impaired patrons.

### **3.6 Data collection tools**

According to Ukwoma and Ngulube (2021), the research method involves data collection methods and samples that are influenced by the type of research problem in the study. Creswell and Creswell (2018) explain data collection as the systematic step involving sampling and data collection methods such as observation, interview, and document analysis and procedures followed for recording information. Szilvia (2013) highlights that data collection can be used for information sharing and decision-making on important issues. Data is gathered from participants in the Groenheuwel, Drakenstein, and Paarl Public Libraries through observations, document analysis, telephonic interviews, and email interviews.

#### **3.6.1 Observations**

Observation is a systematic data collection that takes place when watching and listening to interactions and phenomena (Queirós, Faria & Almeida 2017). In this study, observation takes place by observing the library infrastructure, such as building structures, building layout, library environment, library resources, and equipment available for visually and hearing-impaired patrons in public libraries. The patrons' interactions with librarians are also observed. The IFLA checklist is utilised as a guide to the observation, and the data collected from an observation is recorded on an observation form or note pad. With the observation data collection method, the researcher can observe private and confidential information that cannot be reported in the study (Creswel & Creswel 2018).

#### **3.6.2 Document analysis**

The document analysis data collection method is used in this study. Document analysis includes the systematic examination of the contents of written documents

such as newspapers, meeting minutes, reports, journals, diaries, letters, and emails (Creswell & Creswell 2018). The documents that the researcher in this study analyses also include photographs, websites, government documents, magazines, reports, and books. This method is used to validate the data gathered through interviews and observations.

### **3.6.3 Interviews**

The interview is a technique for gathering information and data from participants (Kumar 2011). In this study, librarians in charge, library assistant, and a project coordinator were interviewed. Semi-structured interviews with an interview schedule are used as the interview method. The interview includes both unstructured and structured questions that allow participants to express their thoughts and opinions (Creswell & Creswell 2018). Open-ended questions were asked of participants to allow them to explicitly explain their understanding of a particular phenomenon. Semi-structured interviews allow the participants to have an open discussion and to explore the participants' opinions and beliefs about personal and sensitive issues concerning the research topic (Dejonckheere & Vaughn 2019). This method allows the researcher to collect open-ended data to investigate participant perceptions and attitudes toward a specific research problem or topic that involves personal and sometimes sensitive issues. The interviews were conducted in the form of email, telephonic interviews, and face-to-face interviews. Telephone and email interviews are convenient in terms of adhering to COVID-19 regulations. In a telephone interview, on the other hand, audio records are used to record information, which the researcher can then type up.

### **3.7 Data analysis**

Qualitative data analysis occurs when the researcher changes the unprocessed data by coding, planning, discovering, arranging, evaluating, and describing the thematic or coded data so that it can be interpreted in a meaningful manner (Ngulube 2015b). The data is analysed and evaluated to come up with the results of the study. Neuman (2014) explains that data analysis improves understanding, expands theory, and advances study knowledge. In this stage, data analysis expands the knowledge and understanding of the experiences of the visually and hearing-impaired library patrons.

Qualitative data is analysed using content analysis and the thematic data analysis methods. Thematic analysis occurs when qualitative data is analysed by themes (Alhojailan & Ibrahim 2012). Content data analysis is derived from oral and written text from email interviews and transcribed audio recordings from face-to-face interviews. In the context of this study, the theme is based on the data collected from interviews and observations guided by the objectives of the study. This includes identifying themes and coding them to analyse and interpret research data systematically. The themes are coded. Coding is a process of categorising data, turning raw data into communicative and reliable data so that data can be readily accessible for data analysis (Stuckey 2015). The research question provides a guideline for the data analysis, as each research question can be used as a coding section that is organised into subsequent sections (Ngulube 2015b).

A qualitative approach is used to verify the credibility of the results. The data is analysed manually by the researcher. The researcher analysed the primary data from interviews, observations, and documents. The researcher also coded and transcribed the audio records from interviews and field notes from observations of public library facilities.

### **3.8 Trustworthiness**

The trustworthiness of this study was ensured by maintaining credibility, dependability, and confirmability. Then the pilot test was done to ensure the research rigour of the data collected in this study. A pilot test describes the methodology in detail, including the data collection instruments, sampling methods, and results (Leavy 2017). Pilot testing was carried out on one participant to identify potential flaws in the research design and data collection instruments. The pilot test was carried out on one library assistant from Drakenstein Municipality's Paarl public library. The email interview questions were answered during the pilot test. The library assistant stated that she prefers telephone and face-to-face interviews over email interviews because telephone and face-to-face interviews provide quick responses and allow participants to ask questions when they need clarification regarding the research questions. All the research questions, according to the participant, were clear and understandable. The pilot test results encourage the researcher to incorporate the face-to-face interview

because it was easier for the researcher to get quick responses from participants when compared to an email interview. Credibility was ensured by recording the semi-structured interviews of the participants, analysing documents, and making observation notes by the researcher during data collection. The observation and the review of documents were used to validate the data collected from participants. Credibility was further ensured by doing member checking. Member checking occurs when the participants check and verify the accuracy of the results (Hadi & Closs 2016). The copy of the transcribed data was distributed to the participants for checking, and participants who had queries were encouraged to contact the researcher (Baillie 2015).

The dependability of this study was ensured by providing detailed explanations of systematic steps and procedures of how data was to be collected from the participants. The dependability included a systematic explanation of the collection techniques and procedures, data analysis, and finding. The reporting of the findings under the developed themes consisted of the quotations from the participants (Cope 2014). The participants answered the semi-structured interview questions that emanated from the objectives. The content of the observation focused on the contrasts emanating from the conceptual framework developed in this study. This helped the researcher to maintain consistency when reporting the results in this study. To ensure conformability in this study, the researcher was not biased when analysing and reporting the results (Cope 2014). This study focused on the participant's research answers rather than the perceptions of the researcher.

### **3.9 Ethical consideration**

According to Wiles (2013), ethics is concerned with moral behaviour in research contexts. The present study complies with the University of South Africa's research ethics policy that was updated in 2016. Additionally, this study also adheres to the Research Governance Framework for Health and Social Care. Most importantly, the researchers also adhere to the following research ethical-moral principles: anonymity and confidentiality; informed consent; voluntary participation; justice moral principle; beneficence and non-maleficence; and intellectual property.

### **3.9.1 Anonymity and confidentiality**

In this study, the research participants were protected. The participants remained anonymous, and responses were kept confidential by using codes to refer to the specific participants instead of mentioning their names. Furthermore, this study adhered Protection of Personal Information Act (POPI Act) No. 4 of 2013 regulation, as the researcher ensured that the personal information of participants was used for research purposes only. The researcher did not subject the participants or public libraries to any procedures or risks unrelated to the research project. The researcher ensured the anonymity of the participants by using the codes instead of the personal name of the librarian in charge, Library assistant, sign language interpreter, and visually and hearing-impaired patrons.

### **3.9.2 Informed consent**

The research participants were requested to submit a signed informed consent before participating in the research project. The researcher went over the specifics of the study and the procedures that were relevant to the participant. Furthermore, prior to the interview, they were given a participant the information sheet. The participant information sheet contains all the study's pertinent information, allowing participants to fully comprehend what the study entails. Participants would be given enough time to read and understand the contents of the information sheet. Once they agree with the contents of the information sheet, they were be given informed consent for their signatures and verbal agreement. Therefore, the researcher sought referrals from the library in charge by asking for the contact information of the prospective participants. The research sought permission from the prospective participants before inviting them to participate in the study.

### **3.9.3 Voluntary participation**

The research participation is strictly voluntary; library employees, visually impaired and hearing-impaired patrons were not forced to take part in the study. The participants were provided with the information sheet and asked to sign a consent form and answer the consent declaration question about the interviews. Other patrons who did the email



and telephone interview were asked to answer the consent declaration question on the interview. Therefore, participants were allowed to withdraw at any time and without providing a reason, if needed.

#### **3.9.4 Justice moral principle**

The researcher treated the participants with dignity and respect throughout the study. The participants were treated with fairness. They were allowed to ask any questions during the study.

#### **3.9.5 Beneficence and non-maleficence**

This study adheres to beneficence and non-maleficence ethical principles since the research is not intended to harm any participant. The participants' and researchers' health were not put in a risky situation since this study paid attention to COVID-19 regulations during the data collection process. The potential negative consequence for the research is the possible risk of being infected by COVID-19 during data collection observation and face-to-face interviews in various libraries. However, to deal with this matter, the COVID 19 health and safety measures were implemented. The researcher kept social distance during observation. The sanitiser was used, and face mask was worn.

The participants may experience discomfort during data collection in the study. However, if the participants experienced such feelings, the researcher asked if they felt comfortable continuing. If the feeling gets worse, the researcher allows them to withdraw from participating. In such situations, participants were not forced to take part in the study to avoid any potential harm in this proposed study. Moreover, the Unisa Research Ethics Policy was adhered to, to avoid any potential harm or injury to participants.

#### **3.9.6 Intellectual property**

The sources used in the study are properly cited and referenced according to the Harvard reference technique to avoid plagiarism.

### **3.10 Evaluation of research procedure**

This section evaluates the research methodology adopted in this study. It is crucial to evaluate the research procedures used in this study to determine the limitations and delimitations of this study (Masenya 2019). As attested by Ngoepe (2012), the evaluation of the research procedure adopted in an investigation can identify the limitations of a study. In a similar study, the researcher experienced limitations while applying the research procedures.

The data collection methods and instruments used in this study were structured interviews, observation, and document analysis. The integration of these methods was used to collect data from the study participants. However, the research encountered several challenges. One of the major challenges was the application to request permission to conduct a study in another municipality in the Western Cape. The application process took about five months, and the duration and time frame of completing this study was affected. Due to the delay, the researcher decided to resolve the challenge by changing the study location to the selected Groenheuwel, Drakenstein, and Paarl public libraries. The researcher approached the three libraries that work with the SALB, and the management granted the researcher permission to carry out the research.

The researcher faced difficulties while collecting data. During the first few weeks after sending the email to potential participants, a few participants took part in the email and phone interviews. The researcher resolved this problem by visiting the libraries and conducting face-to-face interviews. The librarians in charge and the project coordinators were willing to participate in the study. However, some library assistants refused to answer the research question. others stated that they were not comfortable in answering the research questions. In contrast, other states are not comfortable in answering the research questions. Since the study was voluntary, they withdrew from participating. Some participants ignored the email interviews. Again, some participants were not answering all the questions in the email interviews. The researcher resolved this challenge by integrating the telephone and contact interviews to gain more information for the research questions.

There were low participants of the visually and hearing patrons as referrals through snowball hit the cul-de-sac. The researcher interviewed three visually impaired and one hearing-impaired patron residing in the Drakenstein areas. It was challenging to apply the snowball sampling technique to get the contact details of the prospective patrons who are visually and hearing-impaired. Furthermore, the researcher managed to get one Sign Language Interpreter who provided information based on their dealing with the Deaf community. To supplement interview data due to the low number of participants, observation and document analysis were used.

### **3.11 Summary**

This chapter presents the research methodology, philosophical paradigms, and data collection methods and procedures pertinent to the nature of the research problem addressed in this study. The research question's target population, sampling, and data collection method and procedures were all clearly explained. This research also looked at data analysis techniques, reliability and validity, and ethical concerns. The research findings derived from interviews, observations, and document analyses are presented in the following chapter.

## **CHAPTER FOUR**

### **DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION**

#### **4.1 Introduction**

The previous chapter discussed methodology, which includes philosophical paradigms, research approach, research design, population and sampling, data collection method and procedures, data analysis, trustworthiness, ethical consideration, and research procedure evaluation. The current chapter analyses present, interprets, and discusses data. The data are analysed and presented in accordance with the conceptual framework constructs derived from the study's objectives. The specific objectives of this study were to:

- Identify the information service offered to library patrons with impairments in the selected public libraries in Drakenstein Municipality.
- determine the nature of collaboration between the selected public libraries in Drakenstein Municipality and organisations representing the visually and hearing-impaired patrons;
- assess the compliance of library infrastructure guidelines for the visually and hearing-impaired patron in the selected public libraries in Drakenstein Municipality; and
- assess the convenience of information service service to visually and hearing-impaired patrons in Groenheuwel, Drakenstein and Paarl public libraries.

#### **4.2 Data analysis, presentation, interpretation, and discussion**

To collect data for this study, telephone, face-to-face, and email interviews, observation, and document analysis were used. During data collection, the researcher gathered participant perceptions. The researcher recorded the interview with the participants' permission to collect accurate data. The researcher used a voice recorder to capture both telephone and in-person interviews. Furthermore, some interview data were collected by written email interviews. All the recordings were saved on the cloud storage and encrypted to prevent unauthorised access. Furthermore, the researcher recorded the observation information by writing notes in the observation form. The interviews, observation notes, and the reviewed documents were compared and

analysed in this chapter. The information was analysed and presented qualitatively, as well as through tables, figures, pictures, and verbatim. The researcher transcribed the field work data from interviews by hand and generated the participant and library codes shown in Table 4.1. During data collection, the researcher followed ethical principles to protect participants' privacy, confidentiality, and anonymity.

Due to privacy concerns, the coding function protected the identities of the participants, and the study did not reveal the individual identity of the participants. The researcher generated codes according to the sequence of the interviews of the participants. Therefore, public libraries' names were not mentioned in the data analysis. Table 4.1 presented the library codes, the libraries' names, and the number of participants per library, including the project coordinator, who is a representative of all libraries, while table three shows the participant codes, positions, and library names.

Table 4.1: The participants' codes, position, and the library name

<b>Codes</b>	<b>positions</b>	<b>Libraries</b>
PCW	Project coordinator	Western Cape Region
LCG	Librarian	Groenheuwel Library (A)
LCD	Librarian	Drakenstein Library (B)
LCP	Librarian	Paarl Library (C)
LAG	Library assistant	Groenheuwel Library (A)
LAP	Library assistant	Paarl Library (C)
VIP1	Visually- impaired patron	Paarl community member
VIP2	Visually- impaired patron	Paarl community member
VIP3	Visually- impaired patron	Paarl community member
HIP	Hearing-impaired patron	Paarl community member
SLI	Sign Language Interpreter	Paarl community member

As per Table 4.1, the participants of this study were the project coordinator, the librarians in charge, the library assistants, and the visually impaired residing in Paarl. As elucidated in the preceding chapter, the participants were selected using purposive and snowball sampling techniques. The participants were five library officials with over four years of work experience working in public libraries and one project coordinator who is a representative of all three libraries. Each library has a librarian in charge and library assistants. The researcher interviewed all the librarians in charge of the three

libraries and two library assistants. Some of the library assistants were not willing to participate in the study. The libraries did not provide the researcher with the personal details and contact details due to the policy and legislative framework associated with the POPI Act. The researcher interviewed one visually impaired and one hearing-impaired patron. There were six female participants and one male participant. Table 4.2 presents the demographic background information of the participants in this study.

*Table 4.2 The demographic background information of the participants*

<b>Position</b>	<b>Gender</b>	<b>Year of work experience</b>	<b>Highest qualification</b>
Project coordinator	Female	5	Degree
Librarian in charge	Female	25	Master's Degree
Librarian in charge	Female	15	National Diploma
Librarian in charge	Female	6	Bachelor's Degree
Library assistant	Male	8	Higher Certificates
Library assistant	Female	6	National Diploma
Visually impaired patron	Female		National Senior Certificate
Visually impaired patron	Male		Grade 9
Visually impaired patron	Male		National Senior certificate
Hearing-impaired patron	Female		Grade 11
Sign Language Interpreter	Female	8	Honours

Table 4.2 represents information about the positions, gender, work experience, and highest qualification. There are three male and eight female among the participants. The librarians in charge, library assistants, project coordinator and the sign language interpreter each had over five years of work experience. The librarian in charge, assistant librarians, project coordinators, and sign language interpreters all had tertiary education ranging from National diplomas to degrees, honours, and master's degrees, with only one library assistant holding a National Senior Certificate. Three visually impaired people, three females and one male, were interviewed by the researcher. The highest qualifications of the impaired people were all from high school, ranging from National Senior Certificates to Grade eleven and Grade nine. The people with

disabilities lacked tertiary education compared to the librarians in charge, library assistants, project coordinator, and sign language interpreter.

Data was collected, and the study's findings were presented and analysed in conjunction with the key themes of the study's specific objective. These key themes emanated from the conceptual construct and the objectives of this study. Table 4.3 presents the key themes and categories used in the data collection method and procedures and informs the presentation of this study.

*Table 4.3 The key themes, categories, and data collection method*

<b>Key themes and categories</b>	<b>Data collection method</b>
<b>Information services</b> <ul style="list-style-type: none"> <li>• Information services offered in libraries.</li> <li>• Policy and legislative framework</li> <li>• Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews</li> <li>• Document analysis</li> </ul>
<b>Collaboration</b>	<ul style="list-style-type: none"> <li>• Interviews</li> <li>• Document analysis</li> </ul>
<b>Library infrastructure</b> <ul style="list-style-type: none"> <li>• Library parking</li> <li>• Building structure</li> <li>• Library resources and equipment</li> <li>• Availability of braille and sign language resources</li> </ul>	<ul style="list-style-type: none"> <li>• Interviews</li> <li>• Document analysis</li> <li>• Observations</li> </ul>
<b>Convenience library services</b>	<ul style="list-style-type: none"> <li>• Interviews</li> <li>• Document analysis</li> </ul>

#### **4.2.1 Information service for the impaired patrons**

The first objective of this study is to identify the information services provided to library patrons with impairments in the public libraries of Groenheuwel, Drakenstein, and Paarl. The participants were asked to identify the information service provided to library patrons with impairments in the public libraries of Groenheuwel, Drakenstein, and Paarl. According to the researcher's interviews, observations, and document review, the three librarians provide the services listed in Table 4.4.

Table 4.4: Services offered in the public libraries.

Library codes	Libraries
(Library A)	Audio books, copy and printing services, computer lab, junior information service, community outreach, learner and student support, board games, circulation service, renting the library hall and skill training workshops, and recreational literature in braille or tactile.
(Library B)	Document certifying, large print books, copy and printing services, computer lab, junior information service, community outreach, learner and student supports, circulation service, renting the library hall, skill training workshops, and recreational literature in braille or tactile.
(Library C)	Document certifying, reading programmers, audio books, copy and printing services, computer lab, junior information service, community outreach, learner, student supports, circulation service, renting the library hall, skill training workshops and recreational literature in braille or tactile.

The researcher wanted to know what kinds of information services are available to visually and hearing-impaired patrons. According to the participant (LAP):

*"Visually impaired patrons have access to recreational literature in audio, braille, or tactile at the municipal library provided by the South African Library for the Blind through the Mini Library for the Blind project. Those who are computer literate can access the computer, which has screen reading and screen magnifying software installed on it, provided through the project."*

The study sought to determine how well visually and hearing-impaired patrons in the public libraries of Groenheuwel, Drakenstein, and Paarl had access to information. During the interviews, participants (VIP2 and VIP3) stated that the visually impaired patrons hardly go to the libraries, but they prefer to use the audiobooks and the information on the internet. Participant (VIP3) remarked that:

*"I used to visit the libraries before I became visually impaired. I was using library facilities to conduct research for high school assignments, requesting dictionaries, encyclopaedias, and novels for reading. I visited libraries three times a week to seek information for the assignment and research back then when there was no internet"*.

The interview with the participant (HIP) confirms the library was helpful in terms of accessing books, newspapers, internet connection and free Wi-fi and to find the



information about job opportunities, bursary applications and reading materials. Whereas participants (VIP1 and VIP2) stated that they do not like to visit the libraries because most of the time information they are looking for was unavailable in the libraries.

Participant (SLI) indicated that information access is very poor, particularly for hearing-impaired patrons as opposed to visually impaired patrons because they can use braille resources or magnifying glasses, but resources are limited. According to Pionke (2020), librarians in various libraries were not prepared to meet the information needs of the visually impaired patrons. The participant (SLI) notice that the impaired patron is having the worst experience; if they have a question, they write it down, and some of them are illiterate.

The library participants (LCP and LCD) mentioned that the information service for visually and hearing-impaired patrons is not good. Participant (LCP) stated that:

*"We received a computer for the visually and hearing-impaired patrons a few years ago, and staff never received any training as to how the equipment works."*

Participant (SLI) stated that while they occasionally receive recorded materials for visually impaired patrons, sign language interpreters are difficult to come by. Participant (SLI) go on to say that sign language interpreters are available for events and by appointment. Participant (HIP) stated that most of the time, when there is no sign language interpreter escorting the patron, the librarians find it difficulties to understand communication and lose patience. However, this prevents them from accessing the library's information. The participant (HIP) proposed that libraries should consider employing interpreters to be available whenever the hearing-impaired are interacting with librarians. The librarian communicates with the sign language interpreter that escorts the visual and hearing - impaired patron to assist them with library resources. Participant (HIP) further suggested that if there are no sign language interpreters the librarians should provide reference assistance by writing down, to make the communication with the hearing-impaired easy. In all libraries, there are no sign language interpreters or resources for hearing-impaired patrons. All the participants agreed that no sign language interpreters were employed by libraries. the IFLA guidelines for the library services to the deaf people when it suggest that libraries

should attempt to recruit people who have or are likely to have credibility in the hearing-impaired community when employing people to provide services to hearing-impaired people (Day 2000).

The Participant (LCP) went on to say that visually and hearing-impaired patrons rarely use computers because they have trouble connecting to the internet. The researcher then enquired whether there is any specific funding available to assist in addressing the issues associated with information access barriers for visually and hearing patrons. The participants (LCG, LCP, PCW, SL) stated that there is insufficient funding for public library information services for visually and hearing-impaired patrons. This is not just a problem with this public library; other public libraries in other countries are experiencing a similar problem. For example, a study conducted in the Public Libraries of Iran a Case of East Azerbaijan Province discovered that 56,9% of the libraries do not have enough funds to provide services to patrons who are visually impaired (Khasseh et al. 2020). Ayoun and Baada (2020) argue that public institutions should invest in, fund libraries and continue providing information services to the visually impaired. This can be implemented in public libraries as well. The Western Cape government supports public libraries with funding in the provincial strategic plan 2019/24 to allow public libraries access to knowledge and information that can improve socioeconomic status.

All the participants also mentioned that the SALB mini library project benefits public libraries by providing resources. According to the Western Cape Annual Review 2019/20, the SALB mini library project has been improved and expanded in some public libraries, and visually impaired residents have been trained and encouraged to use the SALB mini library resource and services. According to the Western Cape Annual Review 2020/21, the Western Cape Library Service's strategic goal is to assist municipalities in providing public library services by constructing SALB mini libraries in existing public libraries.

The participants (LCG, LCD, LCP, LAG, and LAP) observed that they always try to assist visually and hearing patrons with available resources. All participants' interviews confirmed that visually and hearing-impaired patrons rarely use library services, and only a few patrons visit libraries. The participants (PCW and LCP) stated that this is

due to libraries not being proactive in creating awareness of special services to the designated group of impaired patrons and organisations that represents impaired patrons.

The researcher inquired about the skills development workshop held in public libraries and how it benefited visually and hearing-impaired patrons. All participants agreed that the library did not offer any skill-development workshops for visually and hearing-impaired patrons. All the participants (VIP1, VIP2, VIP3 and HIP) confirmed that they have not attended any skills development workshop in their libraries.

On the other hand, Participant (SLI) explained that there had been two workshops where sign language was used to help with basic sign language training, and that there was an intern learning braille so that they could transcribe texts into braille format for visually impaired patrons. The participant (SLI) also mentioned:

*“One other interesting activity is having the visually impaired patrons participate in the reading festivals that are held annually. It at least makes them feel a sense of belonging and feel part of the community.”*

The interview with library officials and project coordinators confirmed that there was no training designed specifically for visually and hearing-impaired patrons. Participants (PCW), on the other hand, stated that:

*“We are in the process of re-energising the project in the region. We will be training all library staff involved with the project and engaging with more organisations in each municipality that would be able to benefit from the project.”*

Interviews with all participants confirmed that the librarians and library assistants had not been trained on how to serve visually and hearing-impaired patrons. The participant (LCG) stated that some librarians took the initiative to privately enrol in LIASA membership to receive the regular general workshops and training programme for the development of librarian skills. Participants (PCW and LAG) also stated that no sign language or braille training was provided in the libraries.

Participant (LCG) suggest that librarians go and study or join LIASA to improve their skills and knowledge to provide services in our communities. The IFLA Guideline for the Library Service to the Deaf People suggest that each library association should

create a group within its structure to serve as the portion of its members dedicated to providing library services to hearing-impaired people (Day 2000).

Participants (LCP and LAG) proposed that South African for blind mini libraries introduce training programmes to assist libraries in serving visually and hearing-impaired patrons. The participant (SLI) believe that library professionals should be aware of and educated about the needs of all library patrons, including those who are visually impaired. The participant (SLI) also stated that:

*“The more critical ones are the hearing-impaired ones because their disability is not visible and most of the time they are mistaken to be coping. I think to get a true reflection of the specific facility providing information, the facility should have a proper channel that is known by the impaired people to provide feedback about their service.”.*

Information policy is the key theme emanating from research objectives. The first research objective was to determine the policy and legislative framework affecting the information service accessibility for the visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality.

The study sought to find out about the policy and legislative framework affecting information services for the visually and hearing-impaired patrons in public libraries. The interview with the participants (VIP1 and VIP3) also confirmed that the patrons have no ideas about the information policies that facilitate the information services for the visually and hearing-impaired patrons. Whereas participants (VIP2 and HIP) expressed that information policies are procedures that guide the operation of the libraries in providing access to information reading materials. All three libraries stated that they did not have a specific policy or guidelines designed to cater to the information services for impaired patrons. While other participants did not identify policy and legislative frameworks relating to library services for visually and hearing-impaired patrons, the language interpreter mentioned the following policy and legislative framework as relevant, although they have not been used by libraries to cater for the visually and hearing-impaired patrons:

- National Disability Strategy

The impaired patrons are the members of society who should receive equal access to library services (Khasseh et al. 2020). The goal of the Integrated National Disability Strategy (1997), as stated by the White Paper, is "society for all". The participant (SLI) emphasise that the white paper stated that "Nothing for us without us". This should make the librarians serve impaired patrons the way they should be served.

The Social Model of Disability is based on the assumption that it is society that must change if society cannot serve the impaired. These issues of impairment must be dealt with in the government strategies, planning and programmes (Rayini 2017). In Nigeria, for instance, Adetoro (2014) found that the government was not proactive in public library funding and that there was less commitment to public library facilities and infrastructure. Zulu, Ngoepe and Saurombe (2017) also proposed that governments be accountable for library funding to build and renovate more libraries. The Social Model of Disability believes that physical changes should be made to give disabled people the fundamental right to participate fully in society (Jackson 2018).

- Employment Equity Act

The Employment Equity Act No. 55 of 1998 promotes equal employment opportunities and fair treatment. The regulation prevents employers from discriminating against employees through employment policies and procedures regardless of race, impairment, age, gender, position, and religion. The emphasis on affirmative action procedures in this act addresses employment challenges faced by designated groups such as women, people with disabilities, and black people. Payne (2016) reveals that public libraries experience communication barriers due to the absence of a sign language interpreter to serve the hearing-impaired patrons. Libraries should comply with this regulation by hiring a representative and specialist who can cater to the needs of visually and hearing-impaired patrons, such as braille experts and sign language interpreters. This is to ensure that all the designated groups are represented and get equal opportunities.

- Skills Development Act

The purpose of the Skills Development Act 97 of 1998 is to build knowledge and skills in the working class to enhance competitiveness, increase job opportunities, improve service delivery, and fund skills development. The compliance of this regulation in libraries can help to address the challenges of service delivery in libraries. According to Muhambe and Davis (2019), librarians must keep up with the most current trends and demands of the profession, as well as develop skills in communication, research, teamwork, and education; thus, regular training is essential to overcoming many challenges. Such challenges can be overcome by the specialised skills and job opportunities of sign language and braille experts and facilitators to provide more skills development for patrons and librarians to address the library's challenges. The SLI remarked that:

*“South African Public Library and Information Service Bill – 2019 (draft) especially for the hearing-impaired.... There is a section that talks about the culture of reading to create the nation of readers. How will the hearing-impaired do that? They have their own way of doing things. Government is still failing to redress inequality to certain point and access is limited”.*

According to the participant (LCG), the libraries follow the general standard procedures put in place by the municipality. According to the participants (LCG) and (LCP), libraries do not have a stand-alone policy that guides information accessibility for visually and hearing-impaired patrons. The participant (SLI) stated that since the government has introduced legislation to make sign language an official twelfth South African language, public libraries must also plan for its implementation. Moreover, the IFLA Guideline for the Library to the Deaf People also proposes that all library employees should be educated in communication skills with hearing-impaired people. They also stated that visually and hearing-impaired patrons rarely use public library facilities. The participant (LCG) proposes that the public library and SALB hold a discussion and implement a new policy and legislative framework for visually impaired patrons who use public library facilities.

In contrast to the participant (LCD), other participants (PCW, LAP, LCG, and LCP) stated that there is no specific policy and legislative framework guiding the visually and hearing-impaired patrons in their public libraries. Participant (LAG) refused to

comment on policy-related interview questions due to a lack of knowledge about policy issues; the participant stated that only senior management would address policy-related questions. According to the participant (LCG), there are no policies that affect visually and hearing-impaired patrons because all citizens have the right to use the library as much as they need. As the participant (PCW) indicated, there are insufficient resources to accommodate the visually impaired patrons:

*"There are limitations to accessing information for visually impaired patrons that do not necessarily come from a specific municipal policy. I think that there is a general lack of urgency around having any kind of information accessible to people who cannot read standard print. This, I would say, is not only an undertaking for library service and should be looked at on a greater scale."*

During the information policy interviews, the participant (LCG) agreed that there should be a policy that guides general services, training, and workshops to understand what services to provide to visually and hearing-impaired patrons in public libraries. The participants (LCG and LCP) also suggested that young professionals develop operational policies to make a difference in the Library and Information Service profession.

Public libraries are required to exercise their constitutional right to provide information to all members of the community. As stated in (1.2.1), the operations of public libraries should be guided by written guidelines or an improved policy and legislative framework that demonstrate a commitment to equal access to service for all patrons, including minority patrons with disabilities. As Saeed et al. (2019) pointed out, policy is critical because it explains the workplace standard expectations from employees in their practise.

Participants were asked to explain briefly how the Copyright Act affects the information needs of visually and hearing-impaired library patrons. One of the participants (PCW) stated that he is unfamiliar with the Copyright Act. Participant (PCW) expressed that; Afrikaans reading materials are scarce in public libraries. The participants (LCD and LCP) stated that visually and hearing-impaired patrons had not requested that the library reading materials be converted into an accessible format. Patrons never request that available resources be converted into alternative formats. The interview

with all the participants (VIP1, VIP2, VIP3 and HIP) confirmed that they have less knowledge about the copyright regulations that affect their information accessibility in the libraries.

#### **4.2.2 Collaboration between selected public libraries and organisations representing the impaired persons**

According to the IFLA Checklist for Libraries for Persons with Disabilities, collaboration with organisations of people with disabilities is critical for maintaining the credibility of library services and programmes for all citizens (Irvall & Nielsen 2005). There is no public library that can meet all its patrons' needs on its own; collaboration with other libraries and networking with related organisations allow libraries to meet their patrons' needs (IFLA/UNESCO 2001).

The researcher questioned the participants about the collaboration between the public libraries of Groenheuwel, Drakenstein, and Paarl, as well as the organisation of visually and hearing-impaired patrons. During the interviews, all the participants confirmed that public libraries do not actively collaborate with organisations that serve visually and hearing-impaired patrons. Participant (SLI) also state that collaboration between public libraries and organisations serving disabled patrons is not well established. There is insufficient funding for the services proposed by the organisations. According to participant (PCW):

*"Covid-19 regulations prohibited the public libraries from doing proper outreach and collaboration in and around the communities the projects are in, so we look forward to establishing great partnership and hope to have a more significant association."*

The government should allow visually impaired people to open libraries (Vyas & Patani 2021). According to Rayini (2017), libraries should influence collaboration rather than duplicating services that can be costly for the library to provide independently. According to the IFLA Checklist for Libraries for Persons with Disabilities, community outreach should include the following activities: regular meetings with impaired patrons and their organisations to discuss new initiatives; providing instruction to impaired patrons on how to use computers and assistive technologies; and holding conferences



and workshops to educate the public about disability issues. Pionke (2020) proposes that libraries should undergo more informative training that focuses on information service offered to the visually and hearing-impaired in selected public libraries.

#### **4.2.3 Compliance of library infrastructure with relevant guidelines**

The researcher observed the library infrastructure of the three public libraries using the IFLA Checklist for Libraries for Persons with Disabilities guide.

##### **4.2.3.1 Parking close to the library**

Public libraries should provide safe access to facilities, exits, parking, and space for patrons with various disabilities (Stilwell & Majinge 2013). According to the researcher's observations, the parking lot in (library B) is close to the main library entrance and have enough space for visually impaired patrons walking with sticks and wheelchairs, whereas parking in (libraries A and C) are a little further away from the main entrance and located at the back of the library building. In any of the three libraries' parking lots, there are no reserved parking signs for disabled parking spaces. Another parking lot, almost off-street, is located in front of the two libraries (A and C). Figure 4.1 depicts library (C)'s off-street parking.



Figure 4.1: A picture of off-street parking lot (Google Map 2017)

#### 4.2.3.2 Building structure and layout

Disabled patrons' difficulties are caused by institutional discrimination, according to the Social Model of Disability (Manago, Davis & Goar 2017). This model is based on the assumption that impaired people's situations are a societal phenomenon that has little to do with the people's impairment (Jackson 2018). Datta, Halder, Talukdar, and Aspland (2019) propose that libraries change their infrastructure and buildings to meet the needs of their visually impaired patrons. According to Khasseh et al. (2020), providing special services such as free transportation is critical to improve access to the resources.

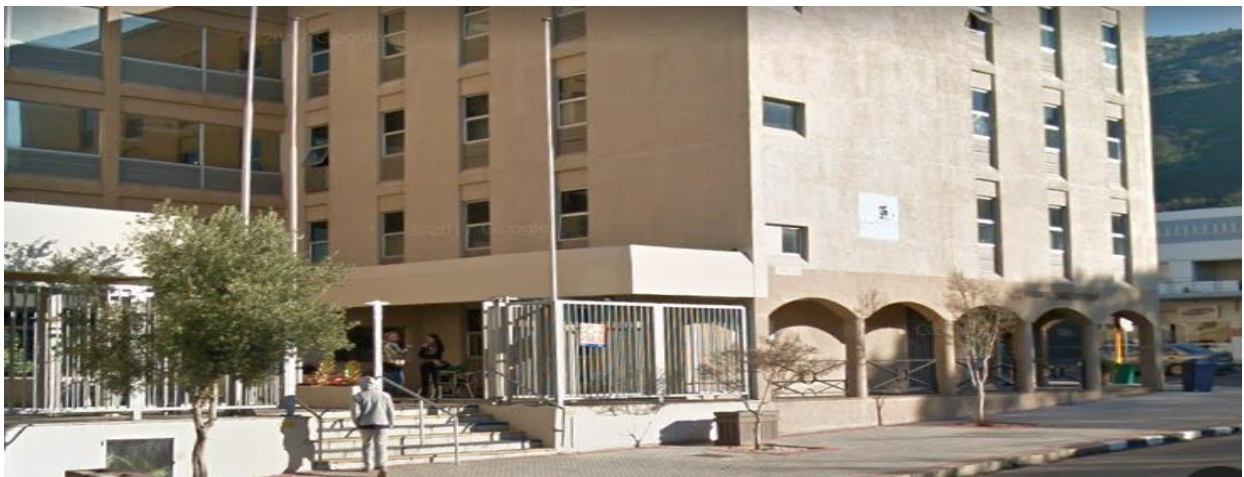
The building designs in the three libraries were observed by the researcher and the special services and resources are available on the ground floor in all libraries. The library building is also convenient for the impaired patrons. It simplified information access for visually impaired customers. However, the participant (SLI) stated that only new infrastructure is accessible to visually impaired patrons; however, the old monument building cannot be renovated to change the building. Participants mentioned that the:

*“The rights to renovate the buildings are with the national heritage council and it is not easy to convince.”*

There are no user-friendly vibrating alarm systems available for the hearing-impaired patrons. The researcher also observed that the library (A and C) has non-impaired patrons' doorsteps as well as a wheelchair ramp for patrons with mobility impairments. Figures 4.2 and 4.3 depict the wheelchair ramp and main entrance steps of the two libraries.



*Figure 4.2: A picture of library wheelchair ramp and main entrance steps*



*Figure 4.3: A picture of library wheelchair ramp and main entrance steps (Google Map 2017)*

The library setting, entrances, and passages are all accessible to visually impaired patrons. The doorways and passages are wheelchair accessible, whereas library (B) is a smaller on the ground floor. All library entrances were wide enough to accommodate patrons with mobility impairments, including those walking with a stick. The libraries were all spotless and well-ventilated. The library (A and B) has multiple floors. There is no lift in every library, but there is a chair lift that patrons with various disabilities can use to climb the stairs in the libraries (A). The wheelchair lift shown in Figure 4.4 is used by the library (A) to assist patrons who are unable to walk on the chairs. The wheelchair user instructions are also posted on the wall near the lift. However, there is no braille instruction posted on the wall.



*Figure 4.4: A picture of a chair lift in one of the public libraries*



Figure 4.5: A picture of chair lift instructions

#### 4.2.3.3 Special rooms designed for the impaired patrons.

According to the literature, visually impaired people value having a secure private space like a carrel room in the library for meetings and studies (Bodaghi & Zainab 2017). However, according to the current study, none of the library's buildings have any carrels or special rooms for visually and hearing-impaired patrons. They sit in the same area as non-impaired customers. Only one computer with the assistive technology is set aside for visually impaired users. Participants (LCG, LCD, LCP, and PCW) stated that patrons of advanced age or any interested user are welcome to use the computer station equipped with assistive devices.

#### 4.2.3.4 Library resources and equipment

Several impaired patrons have difficulty accessing information. Information about services, access, and resources for the visually and hearing-impaired should be provided in large print, audio, braille, accessible website, sign language audio visuals, telephone text, and email, according to the IFLA Checklist for Libraries for Persons

with Disabilities. Indeed, observations and interviews with librarians, library assistants, and project coordinator confirm that public libraries do not provide visually and hearing-impaired patrons with assistive resources and equipment. The assistive facilities were provided by the SALB mini library project, which collaborates with Paarl public libraries. Some participants (LCG and LAG) stated that they bring their own braille machine to write short stories, whereas participant (LCD) states that some patrons bring their own headphones to listen to audio information on the computers. Participants (SLI) state that IT technicians working in government sectors face challenges because their budgets are limited. Many things, however, can be accomplished if the department provides more funding. The participants (SLI) notice that:

*“Even the software that is provided by the IT department are not of premium level, but we always rely audio and digital books.”*

This is similar to the situation in South African public universities, as scholars such as Kaunda and Chizwina (2019) reveal that the North-West University lacked adequate resources and assistive technologies. According to Kaunda and Chizwina (2019), management should establish policies that address the information needs of impaired patrons and collaborate with impaired people organisations to improve access resources.

The library computers and printing facilities are all available on the ground floor of the libraries. There are computer facilities available, but only one computer per library. JAWS (Screen reading) and ZoomText (Screen magnifying) programmes are installed on the PC.





*Figure 4.6: A picture of library computer installed JAWS (Screen reading) and ZoomText (Screen magnifying) programmes*

The alternate keyboard features large characters that are appropriate for visually impaired and partially sighted older patrons. Eye Pal Solo is only connected to one computer per library (Document Reader). The Eye Pal Solo device was well connected at the two libraries, and it was available but still sealed in the box and not connected at the third. All libraries have Daisy Reader and Envoy Connect (Audiobook Readers). One library has board game entertainment facilities.

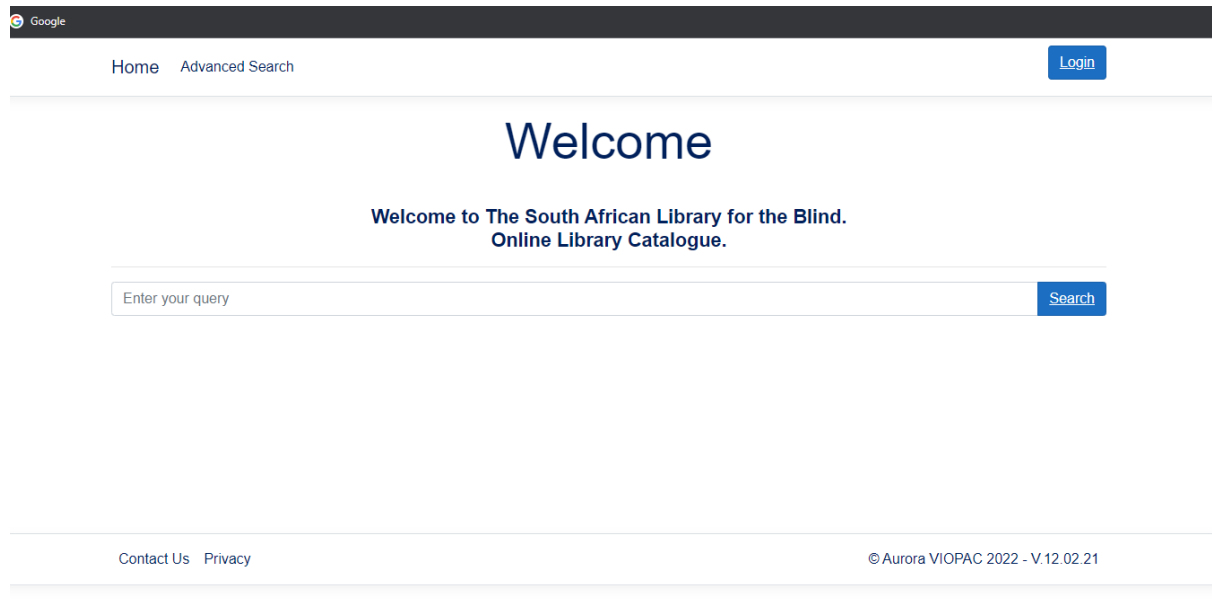


*Figure 4.7: A picture of Daisy Reader and Envoy Connect*

Limited audio, braille, and tactile book catalogues are also available on library computers with and without the JAWS screen reading and Zoom Text programmes. The catalogue is available on the website of the South African National Library for the Blind. (PCW) participants commented on the records' limited Afrikaans language resources. The three catalogues are available to patrons via the SALB Website,

VIOPAC, Overdrive, and Press Reader. Participant (PCW) confirmed that registered members who use the SALB resources have free access to the resources on their website.

The first catalogue is VIOPAC, the online catalogue for assistive reading. The screen reader software catalogue allows users to search for reading materials. Figure 4:8 depicts a screenshot of the VIOPAC version 2022 - V.12.21 home page.



*Figure 4.8: A picture of VIOPAC Catalogue on the SALB website*

The Overdrive audio catalogue, which allows registered users to access and retrieve audio books, is the second catalogue. Users can borrow the audio book for two weeks. Users can filter search results by languages, subject, audio book, eBooks, audience, and availability status in this catalogue. Figure 4.8 depicts a screenshot of the SALB Website's Overdrive catalogue.



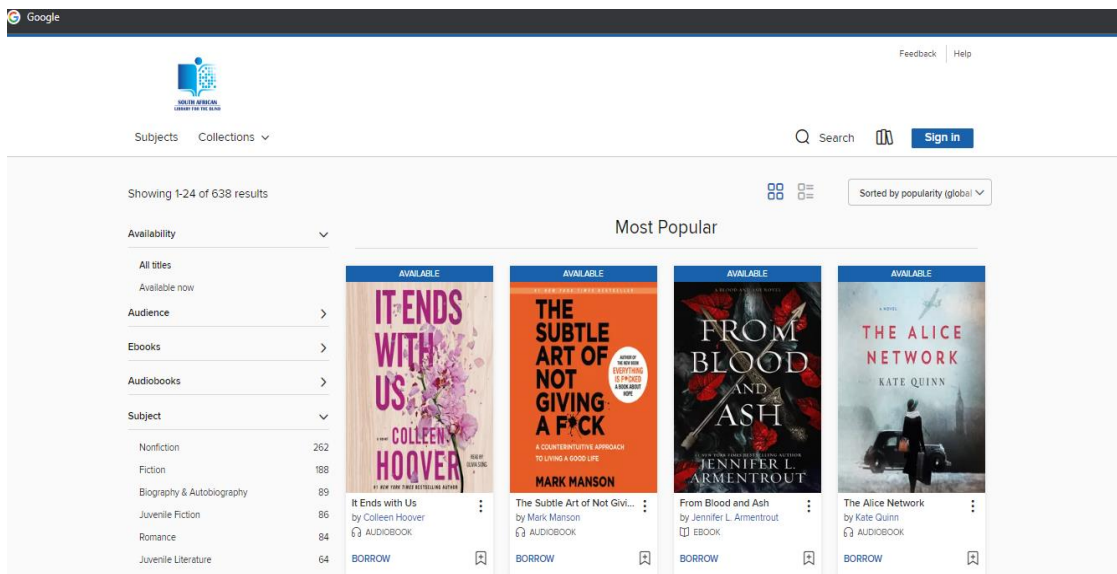


Figure 4.9: A picture of Overdrive catalogues on the SALB website

The most recent catalogue is Press Reader. Each registered user has access to thousands of magazines and newspapers. The software allows registered users to retrieve and download newspapers. Users can filter the periodicals based on their preferred language and country of publication. There is an audio function for patrons who cannot see. Patrons who are visually impaired may use the option to access press reader magazines and newspaper content. Figure 4.9 shows a screenshot of the Press Reader from the SALB website.

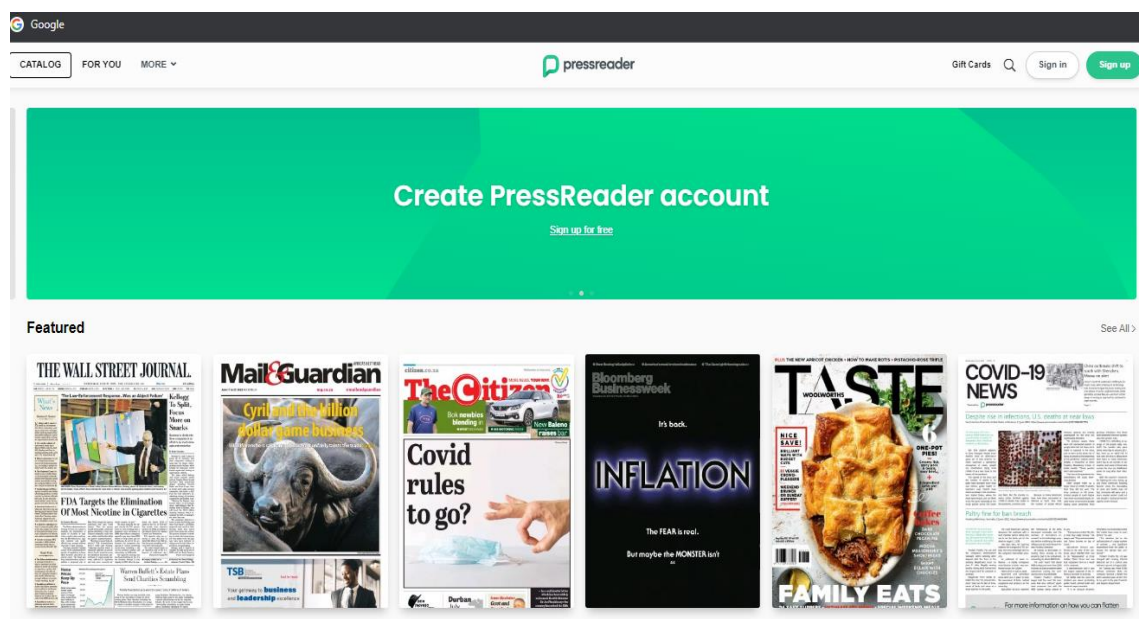


Figure 4.10: A picture of Press Reader on the SALB website

Public libraries do not have a dedicated website for electronic resources and databases. The researcher did not find the public library's online catalogues on the main public library's website. The main website included navigation links to the library's address list, membership form, event information, order form, librarian email, operating hours, and eBook and audio book links.

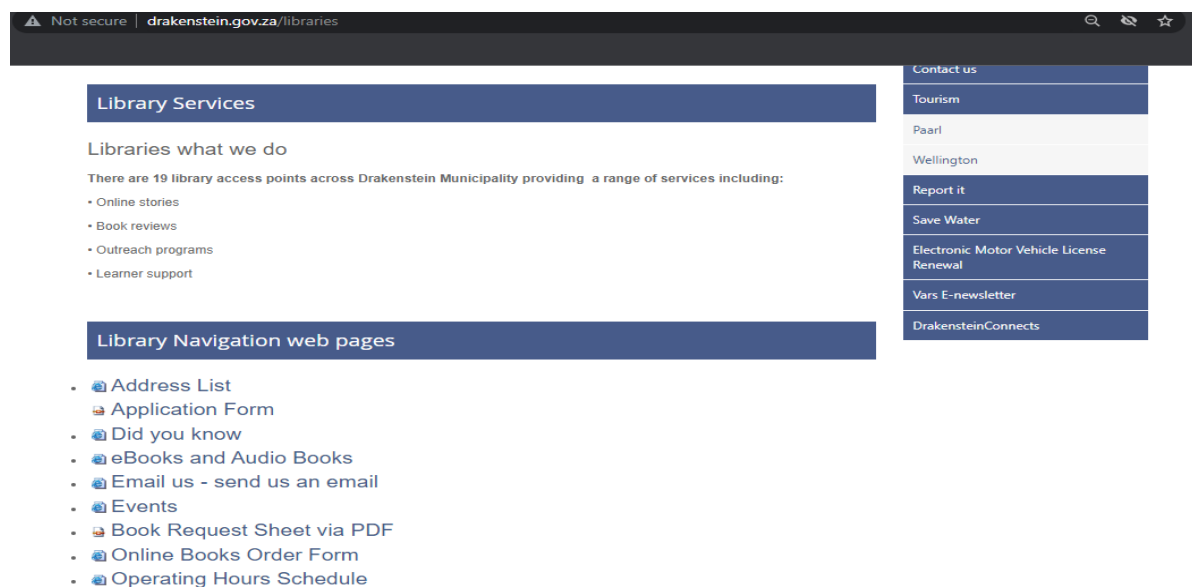


Figure 4.11: A picture of the public libraries' webpage on municipality website

The municipality's website also lacks information about the SALB mini library project. The online links to the SALB resources are also missing from the website. The researcher also discovered that users of Western Cape public libraries, including Groenheuwel, Drakenstein, and Paarl, can access the Overdrive digital platform to download the free eBook and audio book. However, the libraries' website did not include a navigation link to the eBook and audio book services provided by the Western Cape library services. Figure 4.11 shows that the link to access the eBooks and audio on the libraries is empty without the resource content.

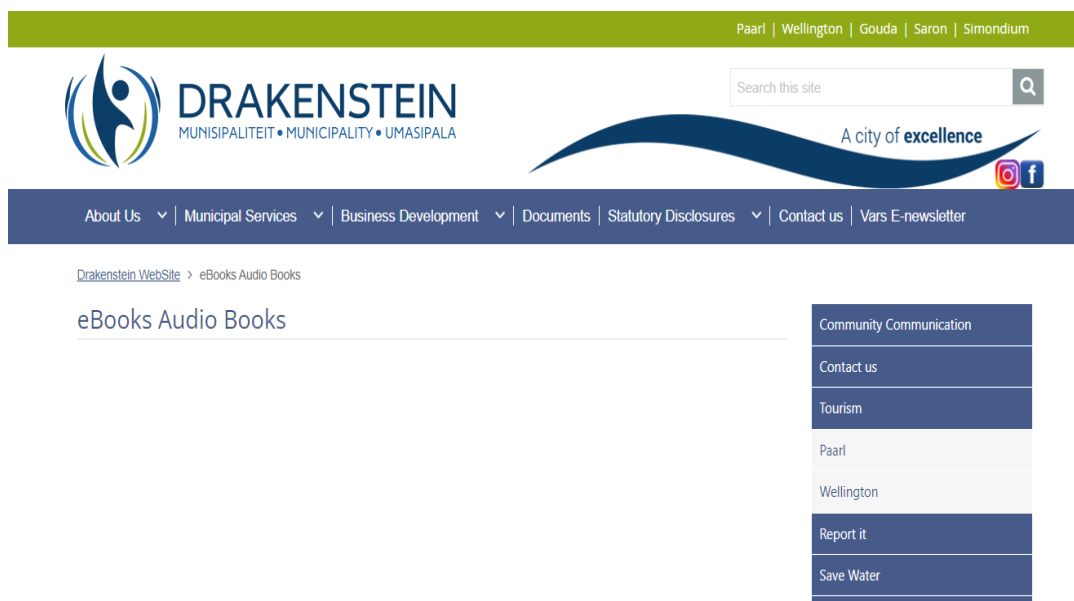


Figure 4.12 A picture of Drakenstein public libraries blank eBooks Audio page

#### 4.2.3.5 Availability of Braille facilities and sign language resources

According to Khassseh et al. (2020), libraries should provide training for visually impaired people, interlibrary lending of special resources, and access to audio books, braille catalogues, and maps for all sections of the library. According to the researcher's observations, there are no braille machines or printers. The interviews also revealed that library officials are unaware of braille facilities. According to participant (LCG), some visually impaired patrons come with their own braille resources to write the stories. Participant (VIP3) stated that public libraries do not have enough audiobooks and braille. Patrons should request the audiobook from the SALB and receive a book after one to two weeks. The requested audiobook is to be delivered to the home address, and the lender return it to the nearest public library.

There are numerous books and a substantial print collection. All libraries inadequately provide physical braille collections. The participant (LCD) confirmed that a large print book is available for various impaired patrons, including the elderly. The notices and signage in the library are written in a medium-sized font and in bright colours. However, there is no instruction information and no signage in braille format. However, the researcher noticed a poster written in large text and braille text in the library (A). Figure 4.12 depicts a poster written in text and Braille format.

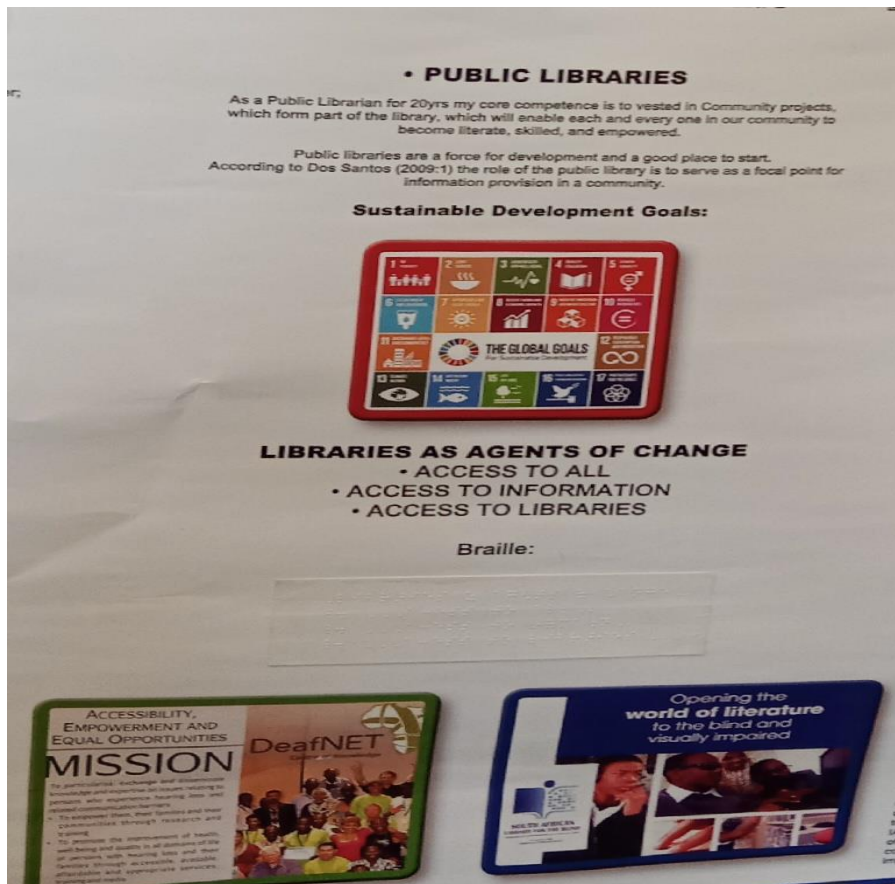


Figure 4.13: A picture of the library poster with the braille text

#### 4.2.4 The convenience of information service

The objective of this study is to assess the accessibility of library services to visually and hearing-impaired patrons in the public libraries of Groenheuwel, Drakenstein, and Paarl. Attitudinal factors can influence library service conveniences for visually impaired patrons. The researcher queried about the convenience of the information service provided to visually and hearing-impaired patrons in the public libraries of Groenheuwel, Drakenstein, and Paarl. According to the participant (SLI), the information service is inconvenient. It is just too simple. Participant (SLI) suggest that librarians schedule time to do read aloud activities for visually impaired patrons, even if it interferes with their daily duties and operating hours.

All the participants stated that visually and hearing-impaired patrons have a positive attitude toward librarians; however, other participants stated that it depends on the day and that sometimes they are short tempered, especially when they are frustrated with issues, they are encountering during their information seeking experience. Participant (SLI) note, however, that the visually and hearing-impaired people.

*“They are resilient individuals. Even if they are disadvantaged at a certain level, they do work with what they have.”*

Various participants expressed the following views about the convenience of library services when providing access to information services to visually and hearing-impaired patrons during interviews and observations. The results of the researcher's observation and interview reveal that visually impaired patrons visit public library facilities on occasion. According to the IFLA Checklist for Libraries for Persons with Disabilities, it is critical to make all patrons feel welcome so that they will return to use the library's services (Irvall & Nielsen 2005).

During the interviews about the usefulness of information services, one participant expressed concern about the privacy of visually impaired patrons. According to the participants (LCD and LCP), some regular visually impaired patrons use the library services for business purposes. They use the library computers to check their business emails. The patrons request that the librarians read the email for them. The participant (LCP) stated that in this manner, the secondary person who is assisting the patron will always be aware of the patron's privacy and confidential information. For example, they spell out their username and password and ask the librarian to enter it into the computer. Furthermore, participants (LCD) stated that the computer section is not very private, and anyone standing close to the unit can see what the patron is retrieving from the computer.

The researcher also solicited whether libraries face additional challenges when serving visually and hearing-impaired patrons. Communication should be clear and understandable, according to the IFLA Checklist for Libraries for People with Disabilities (Irvall & Nielsen 2005). The participants (LCG, LCD, LCP, LAP, and LAG) states that they encountered a communication barrier while assisting hearing-impaired patrons, and they wrote the reference information on a piece of paper. Due to

communication barriers, the participant (LCD and LCP) also stated that it takes a long time to assist visually and hearing-impaired patrons. Participant (LCD) stated that elderly visually impaired patrons do not want to be responsible for assistive devices and machines. They would rather visit and lend the large print book than use technology devices. Participant (LCP) went on to indicate that “some patrons are not comfortable using the technology.”

Participants (VIP1 and VIP2) confirmed that they do not interact with other librarians because they hardly use the library facilities. Whereas participants (HIP) stated that librarians make communication easy, and they often take time to listen to their inquiries and are always willing to help.

The interview with participant (LCP) confirmed that the libraries experiences challenges of using computers that are installed with the screen reader and lack of the skilled library official who can use the assistive devices, which inconvenience the resources for visually and hearing-impaired patrons. The participant highlighted that there is a lack of ICT funding to acquire the more resources for the visually and hearing patrons. In addressing these challenges, the participant (LCG) suggested that the public libraries should have a specific budget that is dedicated to the information services of the hearing and impaired patrons. The participants (LCG and LAG) suggested that they should create the opportunities for the visually and hearing-impaired patrons and employ them so that other impaired patrons can feel welcome and accommodated in the library project. The participant (SLI) emphasizes that the libraries are experiencing communication barrier due to inadequate facilities, sign language basic skills and low public library membership for the hearing impaired patrons. The participant (PCW) suggested that public library should have a budget to do outreach for the visually and hearing impairment which will help to bring the patrons in the community libraries. Participants (LCP and LAG) proposed that libraries assess the needs of hearing and visually impaired patrons to determine how best to provide services to them.

Participant (HIP) expressed that sometimes the librarians do not help address their information needs. Participant (HIP) further expressed that hearing and visually impaired patrons often struggle to seek information independently. Participant (VIP3)

added that the advertisement and pop-up windows links often cause distraction when searching for information online. For that reason, participants (VIP1 and VIP3) expressed that they can access information on some websites with the help of librarians and personal helpers. Participant (VIP3) elucidated that the audiobooks are user-friendly compared to braille resources since the patron eluded not braille is a challenge to use, and it takes time to learn it when one is old aged.

### **4.3 Summary**

This chapter addressed data analysis, presentation, interpretation, and discussion. This chapter also provided demographic information about the participants. This study included a sample of the project coordinator, librarian in charge, and library assistants. The findings are presented in accordance with the study's specific objectives. The summary, conclusion, and recommendation are covered in the following chapter. This chapter addressed data analysis and results presentation. This chapter also provided demographic information about the participants. This study included a sample of the project coordinator, librarian in charge, and library assistants. The findings are presented in accordance with the study's specific objectives. The discussion, conclusion, and recommendation are covered in the following chapter.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

The previous chapter analysed, presented, and discussed the data collected in this project. This study's recommendations and conclusion are presented in this chapter. The purpose of this study was to explore access to information by visually and hearing-impaired patrons in three Drakenstein municipality libraries, namely Groenheuwel, Drakenstein, and Paarl libraries. This study addressed the following research questions:

- What is the information service offered to cater to visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality?
- How is the collaboration between the selected public libraries in the Drakenstein Municipality and the organisations representing of the visually and hearing-impaired patron?
- How are the compliance of the library infrastructure for visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality?
- How convenient is the information service that is offered to the visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality.

The study focused on three of the 19 Drakenstein libraries. The findings provided an overview of patron access to information in the selected public libraries, and the recommendations may be implemented by the study site or any library in the Municipality.

In developing countries such as South Africa, access to information for visually and hearing-impaired patrons is a challenge. The purpose of this chapter is to provide recommendations that provides libraries, municipalities, governments, and organisations for visually and hearing-impaired patrons with a framework for developing library and information services for visually and hearing community members. This study provided the summary and recommendations based on the IFLA



Checklist for Disabled Persons Libraries, the Social Model of Disability, and the reviewed literature.

## **5.2 Summary**

This section provided a discussion of the summary of the finding of this study according to the following key themes of the objectives of this study:

### **5.2.1 Information services for the impaired patron**

The first objective of this study was aimed to identify the information services provided in the selected public libraries in Drakenstein Municipality. The researcher asked the participants to identify the information service provided to library patrons with impairments in their public libraries. The interviews, observations, and document review confirmed that all the public libraries provided these services, namely, storytelling, reading programmers, audiobooks, copy and printing services, computer lab, junior information service, community outreach, learner and student support, board games, circulation service, renting the library hall and skill training workshops, and recreational literature in braille or tactile. This study also sought to determine how well visually and hearing-impaired patrons in public libraries had access to information. The impaired patrons hardly go to the libraries, but they prefer to use audiobooks and digital resources.

On the other hand, other participants confirmed that the information service was helpful in accessing books, newspapers, internet connection and free Wi-fi and finding information about job opportunities, bursary applications and reading materials. The finding discloses that the resources for the impaired are inadequate, and there is no dedicated funding for the services for the impaired patrons. The findings noted that libraries were not proactive in promoting special services to the designated group of impaired patrons. It was also necessary for the researcher to inquire about the skills development workshop held in public libraries and how it benefited visually and hearing-impaired patrons. The finding confirmed that the library did not offer skill-development workshops for visually and hearing-impaired patrons.

As noted in the literature, public libraries' operations should have written guidelines or standard policies that are designed to show their commitment to equal access to

information services by all patrons, including impaired people. It was necessary to determine the policies and legislative framework affecting the information services for the impaired people in the libraries. The finding confirmed that the patrons have no ideas about the information policies that facilitate the information services for visually and hearing-impaired patrons. They also confirmed that the libraries do not have a specific policy designed to cater for the needs of the visually and hearing-impaired patrons. The finding also on issues of the legislative framework confirmed that the patrons and other library employees have limited knowledge about the copyright regulations issues that affect the information accessibility in the libraries.

### **5.2.2 Collaboration between selected public libraries and organisations representing the impaired persons**

The second objective focused on collaboration between the chosen public libraries and organisations that represent visually and hearing-impaired patrons. The researcher asked participants about the collaboration between the public libraries of Groenheuwel, Drakenstein, and Paarl, as well as the organisation of visually and hearing-impaired patrons, in this study. The findings confirmed that public libraries do not collaborate actively with organisations that represent visually and hearing-impaired patrons. According to the findings, SALB mini libraries intend to initiate the community outreach and establish an association and collaboration with such organisations to improve access to information.

### **5.2.3 Compliance of library infrastructure with relevant guidelines**

The third objective of this study was to assess compliance of library infrastructure with relevant guidelines for patrons with visually and hearing-impaired in the selected public libraries in Drakenstein Municipality. The researcher observed the parking close to the library, building structure and layout, special rooms designed for the impaired patrons, library resources and equipment, availability of braille facilities and sign language resources.

#### **5.2.3.1 The parking close to the library**

Concerning the parking closer to the libraries, the findings revealed that the parking lot of one the library is close to the main library entrance and has enough space for

visually impaired patrons walking with sticks and wheelchairs. In contrast, the parking lot of the other two libraries is a little further away from the main entrance and located at the back of the library. There are no reserved parking signs for disabled parking spaces in any of the three libraries' parking lots.

### **5.2.3.2 Building structure and layout**

Regarding the library building structure and layout, the observation findings indicate the impaired patron's facilities on the ground floor of all the library buildings, and it is convenient for the impaired people to access the facilities. All libraries have non-impaired patrons' doorsteps and a wheelchair ramp for patrons with mobility impairments. The library setting, entrances, and passages are all accessible to visually impaired patrons. All library entrances were wide enough to accommodate patrons with mobility impairments, including those walking with a stick. The libraries were all spotless and well-ventilated. The two libraries have multiple floors. There is no lift in every library, but there is a chair lift that patrons with various impairments can use to climb the library stairs.

### **5.2.3.3 Special rooms designed for the impaired patrons.**

The library's buildings have carrels or special rooms for visually and hearing-impaired patrons. Still, one computer station is equipped with assistive devices and resources for impaired patrons. They sit in the same area as non-impaired customers. Only one computer with assistive technology is set aside for visually impaired users. The findings disclose that the advanced age or any interested patrons are welcome to use the computer station equipped with assistive devices.

### **5.2.3.4 Library resources and equipment**

The finding indicated that selected public libraries provided access to assistive resources and equipment; through the SALB mini library project, which collaborates with Paarl public libraries. The SALB resources are available in all libraries. However, only one computer per library is installed with JAWS (Screen reading) and ZoomText (Screen magnifying) programmes. Audio, braille, and tactile book catalogues are available on library computers with and without the JAWS screen reading and Zoom Text programmes. The catalogue is available on the South African National Library for

the Blind website. The three catalogues are available to patrons via the SALB Website, VIOPAC, Overdrive, and Press Reader. The findings confirmed that registered members who use the SALB resources have free access to the resources on their website. However, the links to access these resources are unavailable on the Drakenstein Municipality library web page. However, the libraries' website did not include a navigation link to the eBook and audiobook services provided by the Western Cape library services.

#### **5.2.3.5 Availability of braille facilities and sign language resources**

The finding revealed no braille machines or printers; however, some visually impaired patrons come with their braille resources to write the stories. The public libraries do not have enough audiobooks and braille books, and patrons request the audiobook from the SALB. The requested audiobooks are delivered to the home address, and the lender have to return them to the nearest public library. All the libraries do not have sign language interpreters.

#### **5.2.4 Information service convenience**

The last objective of this study was to assess the convenience of library services to visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality. The finding indicated that the impaired patrons are resilient despite being disadvantaged; they always use the available facilities. The visually impaired patrons use the library resources for business services and often experience the issues of lack of privacy since the computer sections of some libraries are not very private, and anyone standing close to the unit can see what the patron is retrieving from the computer. They often rely on the librarians to help them to retrieve information on the internet, and they also help them to log in to the email with their password. The finding also indicated that the librarians and patrons encountered communication barriers in assisting the hearing-impaired patrons. Such issues make the librarians take a long time when assisting impaired patrons. However, the finding from other patrons noted that some librarians were making communication easy and were always willing to help with the library services.

## **5.3 Conclusions**

The study explored the access to information by visually and hearing-impaired patrons in the selected public libraries of Drakenstein Municipality. The preceding section discussed a summary of the study's findings.

### **5.3.1 Information service**

The visually and hearing-impaired patrons hardly use the information service facilities, lack resources, and libraries are not proactive in creating awareness of exceptional services to the designated group of impaired patrons and organisations dealing with impaired patrons. The librarians and assistants were not trained to serve visually and hearing-impaired patrons. The finding suggests that some librarians should take the initiative to privately enrol in LIASA membership to receive the regular general workshops and training programmes for developing librarian skills. This finding also proposes that SALB mini libraries should introduce training programmes to assist libraries in serving visually and hearing-impaired patrons.

The selected libraries provided information services for visually and hearing-impaired patrons without a written policy on how the services should be served. The conclusions of this study suggest that libraries should have a policy covering general information services, training, funding, integration, and collaboration. The findings of this study also propose that the government should also plan with the libraries to implement the sign language since it has been added as the official twelfth South African language government has introduced.

### **5.3.2 Collaboration**

The selected libraries were not actively collaborating with the visually and hearing-impaired patrons; their association with the organisation is not well established. This study proposes that the selected libraries, in collaboration with the SALB mini libraries, are looking forward to doing community outreach and establishing the association and collaboration with the organisation of the visually and hearing-impaired patrons.

### **5.3.3 Infrastructure**

The finding indicated that the visually and hearing-impaired patrons are resilient and always work with available resources. There are no braille machines or printers; however, some visually impaired patrons come with their braille resources to write the stories. The selected libraries do not have sign language resources, including language interpreters. The finding of this study suggests that libraries should increase resources for impaired people and introduce skills development programmes for sign language patrons to address barriers to communication.

The library infrastructure is suitable for both impaired and non-impaired patrons. The library infrastructure, setting, entrances, and passages are all accessible to impaired patrons. The library entrances were wide enough to accommodate patrons with mobility impairments, including those walking with a stick. Regarding the online resources, the link to access the SALB catalogue, such as VIOPAC, Overdrive, and Press Reader, should be available on the public library website since the SALB established mini libraries in the selected libraries. This will help promote the available resources for the visually and hearing impaired and increase the access and usage of the resources.

### **5.3.4 Information service conveniences**

The finding revealed that the privacy of the visually impaired was a challenge since they often rely on the librarians to assist with their person logging in details and reading their confidential emails. The interview with the participants revealed that the librarians and the impaired often experience communication barriers. The librarians should be trained to serve impaired patrons and receive training in sign language basics. The librarian should use the resources provided by SALB and online catalogues and audiobooks available on the SALB. This will help the librarians upskill the visually and hearing-impaired patrons who might need to use resources available in the public libraries and the SALB website.

## **5.4 Recommendations**

The recommendations in this study are based on the IFLA Checklist for Disabled Persons Libraries, the Social Model of Disability, and the reviewed literature. The

recommendations in this study were discussed in relation to the key themes and construct of the study's objectives. Information service (Irvall & Nielsen 2005), collaboration, library infrastructure, and library service convenience are among the key themes and constructs (Phukubje & Ngoepe 2017).

#### **5.4.1 Information service**

The findings showed that information service for visually and hearing-impaired patrons is inadequate because librarians are not adequately trained in using the resources and equipment for the impaired patrons. The librarians and library assistants should receive training on using ZoomText, JAWS, Envoy Connect, Daisy Reader as an Eye Pal Solo device, Eye Pal Solo, and three SALB catalogues VIOPAC, Overdrive, and Press Reade. Librarians should advertise and promote these resources to visually and hearing-impaired clients. The library's official website should be incorporated and linked to some of the SALB catalogues.

To improve access to information service, this study suggests that the selected libraries should establish a standalone policy that covers the general information services including training, marketing, collection development, budget, skills development, and collaboration of the libraries with the organisation that supports the visually and hearing-impaired patrons. The South African Copyright Amendment Bill (2018) should be passed to help make information more accessible to disabled people. The following services should be made accessible to the visually and hearing impaired without access barriers:

- Access to audio books,
  - Community outreach,
  - SALB interlibrary loaning of recreational literature in braille and tactile reading materials
  - Library general circulation of reading materials
  - Orientation and skill training workshops
  - Access to the computer connected to the JAWS and Zoom text programmes.
  - AWS (Screen reading) and ZoomText (Screen magnifying) programmes.
- Access to Audio, braille, and tactile book catalogues are available on library

computers with and without the JAWS screen reading and Zoom Text programmes.

- Access to Eye Pal Solo device and three SALB catalogues VIOPAC, Overdrive, and Press Reader.

#### **5.4.2 Collaboration**

As stated in the literature, no public library can meet all the needs of its patrons on its own; however, collaboration with other libraries and networking with related organisations allow libraries to meet the needs of their patrons (IFLA/UNESCO 2001). To raise funds, it is critical to work with social charities, disability organisations, local Kleinmans & Fourie entrepreneurs, community members, and individuals (Zhao, Lin & Zhang, 2019). Donations from these organisations and community stakeholders can be used to obtain resources for the visually impaired patrons. Libraries may also collaborate with these organisations of visually and hearing-impaired patrons to market and raise awareness of the availability of information services for visually and hearing-impaired patrons. Libraries can also promote resource sharing with other libraries and educational institutions that serve visually and hearing-impaired patrons. This can improve service delivery and library usage for the visually impaired. Libraries should engage in visually and hearing-impaired outreach to bring patrons to community libraries.

#### **5.4.3 Infrastructure**

Libraries should have a specially designed web page for visually impaired patrons on their website where specialised information about their services, videos, and instructions on how to use braille facilities, audio books, and other assistive and device technology can be posted. Based about the libraries, it is suggested that the libraries acquire more braille facilities and printers to meet the needs of the visually impaired patrons. They should also have a notice board in braille and large print, a library map, and signage for visually impaired patrons. The three catalogues available to patrons via the SALB Website, VIOPAC, Overdrive, and Press Reader, should be linked to the public library website and promoted to visually and hearing-impaired patrons. The finding disclosed that librarians and library assistants have a positive attitude towards visually and hearing-impaired patrons.



#### **5.4.4 Information Service convenience**

The interviews with the librarians and library assistants confirmed that the participants have a positive attitude toward the librarians, but they are short tempered, especially when dealing with information seeking experience issues. The librarians should also be knowledgeable about the issues and difficulties that visually and hearing-impaired patrons encounter in the library. In this case, it is the libraries that assess and evaluate the needs of hearing and visually impaired patrons to determine how best to provide services to them.

The results of the researcher's observation and interview show that visually impaired patrons rarely visit public library facilities. Libraries should be proactive in marketing the services of visually impaired patrons in organisations for the impaired, and they should also collaborate closely with educational institutions for visually and hearing-impaired learners.

Libraries should arrange their sitting areas and computers so that all patrons' privacy is protected. Librarians should also teach visually and hearing-impaired patrons how to use the following resources independently: On the PC, use the JAWS (Screen Reading) and ZoomText (Screen Magnifying) programmes. Daisy Reader was the Eye Pal Solo device, and Envoy Connect was the Envoy Connect device (Audiobook Readers). Because they cannot see the screen texts properly, they will be able to rely on librarians to read aloud their personal and business emails.

During the interview, the librarians mentioned a communication barrier as an issue when providing information services to hearing-impaired patrons. Libraries should also implement skill development programmes to teach and equip librarians with the necessary skills to provide good customer service to visually and hearing-impaired patrons. Libraries should also create employment for visually and hearing-impaired people, for other impaired patrons feel welcome and accommodated in the mini library project.

#### **5.5 Practical and theoretical implications**

The finding of this study discloses that there is a need for the libraries to establish policies for guiding the operation of the public libraries in the selected Drakenstein

municipality. The finding further reveals that the libraries can do away with poor information service if they establish policies to guide the information services for visually impaired and hearing-impaired patrons. The IFLA Checklist for Libraries for Persons with Disabilities and the Social Model of Disability should be the guideline stipulated in the proposed library policies for visually and hearing-impaired patrons. Furthermore, the services can be improved if the libraries adhere to the legislative frameworks that guide the needs of the impaired people in South Africa. The selected libraries should also consider using national policies and legislative frameworks such as the National Disability strategy (1997), Employment Equity Act (1998), Skills Developments Act (1998) and Copyright Act (1978) and Marrakesh Treaty. The enactment of such legislative frameworks, legal treaty agreement and policies may go a long way in providing improved access to information to marginalized South African citizens like visually and hearing-impaired patrons.

#### **5.6 Limitation of the study**

This study had some limitations, which the researcher encountered while carrying out the research procedures and conducting this study. The researcher encountered flaws during the data collection procedure, which made it difficult because the sample size was so small while some library assistants stated that they had no answers to the research. The researcher interviewed only two library assistants, and the other participants requested that the researcher interview the librarian in charge because they are not able to represent the libraries because they are not in management. However, all the librarians in charge and project coordinators were eager to participate and see this research as a means to address issues with information access in libraries. The researcher also had difficulty utilising snowball sampling to select the visually and hearing-impaired from each library. Due to the POPI Act and the library's policies on sharing personal information, the libraries refused to provide contact information for prospective participants. However, the research obtained the contact information of the impaired patrons from Paarl community members. As a result, only four impaired Drakenstein community residents participated in this study.

## **5.7 Suggestions for future studies**

This study could not cover all 355 public libraries in the Western Cape due to the limited research budget and travel logistics. The study covered only visually and hearing-impaired patrons, librarians, and other library employees who could provide information that could help to achieve the objectives of this study. Therefore, future quantitative studies should cover provision of all disabilities in all libraries in the area, as well as remote access to library services.

## **5.8 Final conclusion**

This study explores access to information by the visually and hearing-impaired patron in the selected public libraries in Drakenstein, focusing on policies and legislative framework, information service, collaboration, infrastructure, and library service conveniences. This qualitative study used the IFLA checklist for libraries for Persons with Disability and the Social Model of Disability and literature to design the conceptual framework to determine what causes information access challenges and to address the convenience of information services for visually and hearing-impaired patrons. The main purpose of this study is to explore access to information services for the visually and hearing-impaired library patrons in selected public libraries in Drakenstein Municipality, South Africa. The main research question was addressed by the participants, and the main purpose of this study was accomplished because this study confirmed that a small number of patrons visit public libraries to use the facilities and seek information. Although patrons acknowledge the importance and utility of public library access to information services. This study also established that selected libraries provided information services without a written policy and legislative frameworks that guides the librarians dedicated to serve the visually impaired patrons. This study concludes that the public library building, and layout are well structured for the impaired patrons, and there is a lack of library resources since only one computer per library is installed with JAWS (Screen reading) and ZoomText (Screen magnifying) programmes, Daisy Reader and Envoy Connect. The Audio, braille, and tactile book catalogues are available on library computers with and without the JAWS screen reading and Zoom Text programmes. This study concludes that in collaboration with the SALB mini-library project, public libraries have significant work to do in marketing the SALB mini-library services to the target patrons, introducing skills development

programmes for visually impaired and hearing-impaired patrons. Moreover, the policies and legislative framework need to be drafted, reviewed, and debated to ensure that visually and hearing-impaired receive all support and their information needs are prioritised like other South African.

This study has contributed to existing knowledge in the LIS field by revealing the experiences, viewpoints, circumstances, and situations of visually and hearing-impaired patrons and library officials regarding access to information services in selected public libraries. During structured interviews, the participants were able to have an open discussion with the researcher and express their beliefs and opinions about personal and sensitive issues related to the research topic. There are no studies that are comparable or related to the current study in Paarl. It also filled the gaps of literature that other studies in Paarl - Western Cape Province, South Africa, have not addressed and provided the recommendation to ensure access to information for all patrons, including the visually and hearing-impaired patron.

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## **APPENDICES**

### **APPENDIX A: PARTICIPANT INFORMATION SHEET**

**22/03/2022**

Title: Access to information by visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality, South Africa.

**Dear prospective participant,**

My name is Molepo Raesetja Lydia (student number 69971323). I am doing research with Prof Mpho Ngoepe, a Professor and Dr Makutla Mojapelo, a Lecturer in the Department of Information Science, towards a Master of Information Science at the University of South Africa (UNISA). We have funding from UNISA Masters and Doctoral Bursary. We are inviting you to participate in a study entitled "Access to information by visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality, South Africa".

#### **WHAT IS THE PURPOSE OF THE STUDY?**

The purpose of this study is to explore the access to information by visually and hearing-impaired library patrons in public libraries in the Groenheuwel, Drakenstein and Paarl, South Africa. This study will collect the necessary information that could generate new knowledge in addition to the existing one in Library and Information Service (LIS). The study may also aid in decision-making regarding the services for the visually and hearing-impaired patrons in the libraries and suggest recommendations that can trigger policy reforms and development of LIS for all South African citizens, including the impaired patrons.

#### **WHY BEING AM I INVITED TO PARTICIPATE?**

We are inviting you to participate in this study because your library has been selected as one of data collection sites for the selected public libraries in Drakenstein

Municipality in this study. The researcher will explain the purpose of this study to the management and the so that prospective participants who are suitable to participate in this study can be identified. In this study, three libraries will be involved as data collection sites. The three public libraries Groenheuwel library, Drakenstein Library and Paarl Library. The librarian in charge, librarians, IT representative and the Project Coordinator will be interviewed. The researcher will ask the participant permission to record the interview before participating in the research project. Furthermore, the Protection of Personal Information Act, No. 4 of 2013, will be put in place. The research will seek permission from the participants before inviting them to participate in the study. The researcher entails the details of what the study is about and the procedures relevant to the participant. The participants were provided with a participant information sheet before the interview. Participant information sheet contains all the study's pertinent information, allowing participants to fully comprehend what the study entails. Participants would be given time to read and understand the contents of the information sheet. If they agree with the contents of the information sheet, they will be given informed consent to confirm on email interviews, telephones, and contact interviews.

### **WHY WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?**

The study involves observation, document analysis, semi-structured email, and telephonic interviews. The researcher in the public libraries will do the observation data collection technique. The researcher will also review library documents such as library policy and legislative framework and strategic plan documents. The study participants will respond to a set of interview questions through a semi structure interviewing technique, which will be based on "Access to information by visually and hearing-impaired patrons in the Drakenstein public libraries". The researcher will initiate the discussion with the participants by asking the background information questions. The research questions of this study will follow the background information. The research question will be based on the access to information by visually and hearing-impaired patrons. The interview duration will be between 30 to 45 minutes. All the interviews will be conducted at a convenient time for the participants. With the consent of the participants, the interviews discussions will be recorded to capture the information accurately.

## **CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?**

Participating in this study is voluntary, and you are under no obligation to consent to participation. If you decide to participate, you will be provided with this information sheet. You are free to withdraw at any time and without providing a reason.

## **WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?**

The main purpose of the study is to explore the access to information services to the visually and hearing-impaired patrons in public libraries in the Groenheuwel, Drakenstein and Paarl, South Africa. The research generates new knowledge that contributes to the body of knowledge in Library and Information Science (LIS). The study benefits the public because the results will motivate the public libraries to apply best practices for equal access to information services for the visually and hearing-impaired patrons. The study also suggests recommendations that can trigger policy reforms and development for LIS for all South African citizens, including the impaired patrons. This study's knowledge will be shared with the participants in the form of findings and recommendations.

## **ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?**

The potential negative consequence for the research is the possible risk of being infected by COVID 19 during data collection observation in various libraries. However, to deal with this matter, the COVID 19 health and safety measures will be implemented. The researcher will keep social distancing during interview and observation, the sanitizer will be used, and face mask will be worn. The interview will be contact, telephonic via MS Teams or phone.

## **WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?**

As participants, you have the right to object to the use and recording of your name. Furthermore, no one will know regarding your participation in this study excluding the researcher and supervisors. The researcher will ensure that the personal information and details learnt from the participants remain secured and kept private. Your name will not be recorded anywhere, and no one will be able to connect you to the answers that you will give during the interviews. Your answers will be given a code number or a pseudonym. The data will be transcribed solely by the researcher.

### **HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?**

The researcher will keep hard copies of the participants' information safely in a locked cupboard/filing cabinet. The electronic data will be archived on a password-protected computer. The data will also be kept for future research ethics evaluations. The hard copies will be destroyed, and the digital copies will be permanently deleted from the computer's hard drive using the appropriate software.

### **WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?**

Participants will receive no compensation or incentives for taking part in this study. Because the researcher will contact the participants via phone and email interviews, the participant will not be expected to receive any incentives during data collection. The researcher will also personally visit public libraries to collect observation data.

## **HAS THE STUDY RECEIVED ETHICS APPROVAL?**

The University of South Africa's Research Ethics Review Committee has provided official consent to this study. If you require a copy of the approval letter, please contact the researcher.

## **HOW WILL I BE INFORMED OF THE FINDINGS OF THIS STUDY?**

If you would like to be informed of the final research findings, please contact Molepo Raesetja Lydia at molepolydia95@gmail.com. The findings are obtainable five years after the study was conducted. Should you have concerns about the way in which the research has been conducted, you may contact Prof M Ngoepe, ngoepms@unisa.ac.za, 021 429 6792 or Mr M Mojapelo, mojapmg@unisa.ac.za, 021 429 2306. Thank your time and participation in this study.

**Yours sincerely,**



**Molepo Raesetja Lydia**

**Masters Student**

**69971323**



## **APPENDIX B: LETTER REQUESTING ACCESS TO THE STUDY LOCATION**

**08/03 /2022**

**Title: Access to information by visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality, South Africa**

I, Molepo Raesetja Lydia, am pursuing a Master of Information Science at the University of South Africa while undertaking research with Prof Mpho Ngoepe, a professor and Dr Makutla Mojapelo, a Lecturer in the Department of Information Science (UNISA). We have received funding from the UNISA Masters and Doctoral Bursary. We are requesting permission to conduct a study titled "Access to information by visually and hearing-impaired patrons in the selected public libraries in Drakenstein."

The study explores access to information services by the visually and hearing-impaired patrons in public libraries in the Groenheuwel, Drakenstein and Paarl. The study will entail interviewing the library employee, librarian in charge, librarian and library project Coordinator that represent Groenheuwel, Drakenstein and Paarl Public Libraries. The visually and hearing-impaired patrons will be interviewed directly from the public libraries. The research will also approach the organisations of the visually impaired to help to identify the visually and hearing-impaired patrons. This study specifically involves the selected public libraries that fall within the Groenheuwel, Drakenstein and Paarl municipality. The three public libraries include Groenheuwel Library, Drakenstein Library and Paarl Library.

The researcher will also collect observation data and analyse documents such as policy and legislative frameworks to answer the research questions in this study. The data collection process will be carried out with the participants' consent, and the information gathered will be kept confidential. Furthermore, the Protection of Personal Information Act (POPI Act) No. 4 of 2013, will be put in place. The researcher will also ensure that the personal information of participants used for research purposes is adequately protected to prevent unauthorized access as required by the POPI Act,

No. 4 of 2013. The researcher will never expose such participants and public libraries to procedures or risks not directly attached to the research project. The researcher will ask the participant permission to record the interview before participating in this study. They will be requested to sign informed consent before participating in this study. The student explains the study's purpose and the procedures that will be followed by the participants. The participants will provide with a participant information sheet before the interview. Participant information sheet contains all the study's pertinent information, allowing participants to fully comprehend what the study entails. Participants would be given time to read and understand the contents of the information sheet. If they agree with the contents of the information sheet, they will be given informed consent for their signatures and verbal agreement. The participants are expected to participate voluntarily, and they can withdraw at any stage during the research. The study will generate new knowledge that adds to the existing knowledge in Library and Information Service (LIS).

The study will benefit the public because the results will motivate public libraries to apply best practices for equal access to information services to the community members, including the visually and hearing-impaired patrons. The study also suggests recommendations that can trigger policy reforms and development for LIS for all South African citizens, including the impaired patrons. There will be no reimbursement or any incentives for participation in the research. The feedback procedure will necessarily involve sharing the findings with all participants. A report of the significant findings and recommendations will be given to the library management, librarians, visually and hearing-impaired participant, and interest group.

**Yours sincerely**



**Molepo Raesetja Lydia**

**Masters Student**

**69971323**

**APPENDIX C: DATA COLLECTION TOOL: OBSERVATION GUIDE**

**Observation dates:**

Observation activities	Observed infrastructure
<b>Parking space close to the library</b>	
<b>Building structures and layout</b>	
<b>Special rooms designed for the impaired patrons.</b>	
<b>Shelve and sitting arrangement</b>	
<b>Library resources and equipment</b>	
<b>Availability of Braille and Sign language resources</b>	

## **APPENDIX D: DATA COLLECTION TOOL: LIBRARY OFFICIALS INTERVIEW QUESTIONS**

- Briefly explain how good is access to information service by the visually and hearing-impaired patrons in your library?
- What are policy and legislative framework affecting the information accessibility of the visually and hearing-impaired patrons in your library?
- What is the information service offered to cater to visually and hearing-impaired patrons in your library?
- What kind of a skills development workshop have you hosted in your, and how has the workshop benefited the visually and hearing-impaired patrons?
- How is the collaboration between your libraries and the organisation of the visually and hearing-impaired?
- How is the compliance of library with relevant guideline for visually and hearing-impaired patrons in your library? Infrastructure includes the packing, building structure, entrances, lifts, pathways, passages, stairs, bookshelves, library resources and equipment.
- What challenges have you experienced working with Information Technologies (IT) for visually and hearing-impaired patrons in your library?
- How convenient is the information service that is offered to the visually and hearing-impaired patrons in the selected public libraries in Drakenstein Municipality?
- How do you describe the attitudes of the visually and hearing-impaired patrons towards the library employees in your libraries?

- Do you have any additional information concerning information access for visually and hearing-impaired patrons based on your experience and knowledge?
- Do you have any question you would like to ask the researcher?

## **APPENDIX E: DATA COLLECTION TOOL: PROJECT COODINATORS AND SIGN LANGUAGE INTERPRETER INTERVIEW QUESTIONS**

- Briefly explain how good is access to information service by the visually and hearing-impaired patrons in your library?
- What are the information resources offered to cater to visually and hearing-impaired patrons in your library?
- What are policy and legislative framework affecting the information accessibility of the visually and hearing-impaired patrons in your library?
- How does Copyright Act affect the information needs of the visually and hearing-impaired patron in your library?
- Briefly explain how your library adheres to the policy and legislative framework that facilitate information services for visually and hearing-impaired patrons?
- What kind of a skills development workshop have your library hosted, and how has the workshop benefited the visually and hearing-impaired patrons?
- How is the collaboration between your public libraries and the organisation representing the visually and hearing impaired impaired?
- How convenient is the information service that is offered to the visually and hearing-impaired patrons in your library?
- Do you have any additional information concerning information access for visually and hearing-impaired patrons based on your experience and knowledge?
- Do you have any question you would like to ask the researcher?

## APPENDIX F: INTERVIEWS

The following table presents the participants codes, Interview methods and date of the interview:

<b>Codes</b>	<b>Interview methods</b>	<b>Dates</b>
PCW	Email interview	12 April 2022
LCG	Face to Face interview	12 April 2022
LCD	Face to Face interview	12 April 2022
LCP	Face to Face interview	12 April 2022
LAG	Telephone interview	20 April 2022
LAP	Email interview	21 April 2022
VIP1	Telephone interview	30 March 2022
VIP2	Telephone interview	25 April 2022
VIP3	Telephone interview	25 April 2022
HIP	Email interview	10 May 2022
SLI	Email interview	12 August 2022

## APPENDIX G: REVIEWED DOCUMENTS

The following table presents documents were reviewed during data analysis:

Document type	Document name and website URL
Photographs	A picture of library wheelchair ramp and main entrance steps
	A picture of library wheelchair ramp and main entrance steps
	A picture of library computer installed JAWS (Screen reading) and ZoomText (Screen magnifying) programmes
	A picture of a chair lift in one of the public libraries
	<i>A picture of chair lift instructions</i>
	A picture of off-street parking lot
	A picture of Daisy Reader and Envoy Connect
	A picture of VIOPAC Catalogue on the SALB website <a href="https://rb.gy/4iehoe">https://rb.gy/4iehoe</a>
	A picture of Overdrive catalogues on the SALB website <a href="https://salb.overdrive.com/">https://salb.overdrive.com/</a>
	<i>A picture of Press Reader on the SALB website</i> <a href="https://www.pressreader.com/">https://www.pressreader.com/</a>
	A picture of the public libraries' webpage on municipality website <a href="http://www.drakenstein.gov.za/sites/dw/SitePages/Libraries.aspx">http://www.drakenstein.gov.za/sites/dw/SitePages/Libraries.aspx</a>
	<i>A picture of Drakenstein public libraries blank eBooks Audio page</i> <a href="http://www.drakenstein.gov.za/sites/dw/SitePages/eBooks-Audio-Books.aspx">http://www.drakenstein.gov.za/sites/dw/SitePages/eBooks-Audio-Books.aspx</a>
	A picture of the library poster with the braille text



Strategic plan	The Western Cape government provincial strategic plan 2019/24 <a href="https://rb.gy/kpuvs0">https://rb.gy/kpuvs0</a>
Annual review report	Western Cape Library Service Annual Review 2019/20 <a href="https://rb.gy/ruiylw">https://rb.gy/ruiylw</a>
	Western Cape Library Service Annual Review 2020/21 <a href="https://rb.gy/2vcctl">https://rb.gy/2vcctl</a>
Legislations, guidelines, procedures, and policies	Employment Equity Act No. 55 of 1998 <a href="https://rb.gy/gbyjqx">https://rb.gy/gbyjqx</a>
	Integrated National Disability Strategy (1997) <a href="https://www.gov.za/sites/default/files/gcis_document/201409/disability2.pdf">https://www.gov.za/sites/default/files/gcis_document/201409/disability2.pdf</a>
	<a href="https://www.gov.za/sites/default/files/gcis_document/201409/disability2.pdf">https://www.gov.za/sites/default/files/gcis_document/201409/disability2.pdf</a>
	Skills Development Act 97 of 1998 <a href="https://www.gov.za/sites/default/files/gcis_document/201409/a97-98.pdf">https://www.gov.za/sites/default/files/gcis_document/201409/a97-98.pdf</a>
	IFLA guidelines for the library services to the deaf people <a href="https://rb.gy/opu1wf">https://rb.gy/opu1wf</a>
	According to the IFLA Checklist for Libraries for Persons with Disabilities <a href="https://archive.ifla.org/VII/s9/nd1/iflapr-89e.pdf">https://archive.ifla.org/VII/s9/nd1/iflapr-89e.pdf</a>
	Public Library Service: IFLA/ UNESCO guideline for development <a href="https://rb.gy/nsory0">https://rb.gy/nsory0</a>
Journal articles and theses	Library employee views of disability and accessibility. <a href="https://www.ila.org/content/documents/library_employee_views_of_disability_and_accessibility.pdf">https://www.ila.org/content/documents/library_employee_views_of_disability_and_accessibility.pdf</a>
	Library Services to the Disabled in the Public Libraries of Iran (A Case of East Azerbaijan Province). <a href="https://rb.gy/jvdmh7">https://rb.gy/jvdmh7</a>
	Access to library services and facilities by persons with disability: Insights from academic libraries in Ghana <a href="https://rb.gy/ukgbaa">https://rb.gy/ukgbaa</a>

	<p>Library and Information Services to the Visually Impaired Persons.  <a href="https://rb.gy/q4wuzz">https://rb.gy/q4wuzz</a></p>
	<p>Information provision to the visually impaired in alternative formats in Nigeria: are public libraries up to the task?  <a href="https://rb.gy/cchpgv">https://rb.gy/cchpgv</a></p>
	<p>Implications of legislation on the provision of national and public library services in Zambia.  <a href="https://rb.gy/epbyye">https://rb.gy/epbyye</a></p>
	<p>Models of Disability and Human Rights: Informing the Improvement of Built Environment Accessibility for People with Disability at Neighborhood Scale?  <a href="https://rb.gy/talb7z">https://rb.gy/talb7z</a></p>
	<p>Sharing the Same Agenda: The public library and the deaf community.  <a href="https://rb.gy/anbsnr">https://rb.gy/anbsnr</a></p>
	<p>Status of libraries 2.0 model in Cape Town public libraries.  <a href="https://rb.gy/igbdkf">https://rb.gy/igbdkf</a></p>
	<p>Promoting employee's pro environmental behavior through green human resource management practices.  <a href="https://rb.gy/vqxcac">https://rb.gy/vqxcac</a></p>
	<p>Library services provision for people with visual impairments and in wheelchairs in academic libraries in Tanzania.  <a href="http://sajlis.journals.ac.za">http://sajlis.journals.ac.za</a></p>
	<p>Barriers and enablers to inclusion of university students with disabilities in India and Australia.  <a href="https://rb.gy/4or3vn">https://rb.gy/4or3vn</a></p>
	<p>My carrel, my second home: inclusion and the sense of belonging among visually impaired students in academic libraries.  <a href="https://rb.gy/gwh9er">https://rb.gy/gwh9er</a></p>
	<p>Providing access to the student with print disabilities: the case of North-West University in South Africa.</p>

	<a href="https://rb.gy/ft4ouy">https://rb.gy/ft4ouy</a>
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## ANNEXURE

### ANNEXURE A: RESEARCH ETHICS CERTIFICATE

CGTH



#### COLLEGE OF HUMAN SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

28 September 2021

Dear Raesetja Lydia Molepo

**Decision:**  
Ethics Approval from 28 September  
2021 to 28 September 2024

NHREC Registration # :  
Rec-240816-052  
CREC Reference # :  
69971323\_CREC\_CHS\_2021

Researcher(s): Name: Raesetja Lydia Molepo  
Contact details: [69971323@mylife.unisa.ac.za](mailto:69971323@mylife.unisa.ac.za)  
Supervisor(s): Name: Prof M Ngoepe  
Contact details: [ngoepps@unisa.ac.za](mailto:ngoepps@unisa.ac.za)  
Name: Mr M Mojapelo  
Contact details: [mojapmg@unisa.ac.za](mailto:mojapmg@unisa.ac.za)

**Title: Access to information by visually and hearing impaired patrons in the City of Cape Town public libraries, South Africa.**

**Degree Purpose: Masters**

Thank you for the application for research ethics clearance by the Unisa College of Human Science Ethics Committee. Ethics approval is granted for three years.

The *low risk application* was reviewed by College of Human Sciences Research Ethics Committee, in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the College Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the



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