

**The use of online meeting platforms for information literacy training by academic librarians: the case of a private higher education institution academic library**

by

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A minor dissertation submitted in partial fulfilment of the requirements for  
the award of the degree of

**Master of Library and Information Studies**

at the

**Faculty of Humanities**

**Department of Knowledge and Information Stewardship**

**University of Cape Town**

**2024**

**COMPULSORY DECLARATION**

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

**Signature: R. Mambo**

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## **DEDICATION**

Dedicated to my beloved parents, brothers and a sister, my husband and my sons

## **ACKNOWLEDGEMENTS**

I would like to express my sincere gratitude to the Almighty God who gave me strength, good health, wisdom and perseverance to complete this work.

I extend special gratitude to my academic supervisor, Professor Jaya Raju for your guidance, advice and unwavering support throughout this study. Sometimes the words “thank you” are not enough to express the kindness and persistence you showed in trying to help me overcome the obstacles to the goal that I wanted to achieve.

My gratitude is also extended to Institution X, for allowing me to use it as a research site and for its financial support. To all participants and respondents, I am grateful that you agreed to share your experiences, views and opinions, the research would not have been possible without your valuable information.

To my dearest parents, my brothers and sister, my loving husband Stenford, my sons - Tanatswa, Tawana and Tadiwa, thank you for your love, support and encouragement. I never dreamt that someday this was going to be over and be an achievement for the family to be proud of.

Finally, I am thankful to my wonderful friends and colleagues for their words of encouragement and support during this study journey. In so many ways you made me realise that this was a cause worth fighting for.

## ABSTRACT

The study's objective was to understand the competencies required by academic librarians in using online meeting platforms for enhancing postgraduate students' information searching, retrieval and use skills to meet their information needs. The following research questions were generated to address the objective, What competencies are required by academic librarians to deliver information literacy training using online meeting platforms?; What competencies do the academic librarians of the selected higher education institution currently possess for delivering information literacy training via online means? and What challenges (if any) are the academic librarians of the selected higher education institution facing in providing postgraduate students with online information literacy training to meet their information needs? The study was supported by Wilson's (1999) theory of information behaviour. A multi-method approach was used, and a case study employed to investigate the competencies of academic librarians using online meeting platforms for information literacy sessions at a private higher education institution. The target population included Institution X academic librarians and postgraduate students. Purposive sampling was adopted for the researcher to interview specifically librarians who provide postgraduate students' information literacy sessions to meet their information needs. A census was used to ascertain trends among postgraduate students regarding information literacy training using online platforms to meet their information needs. Data was collected via semi-structured interviews using Microsoft Teams with librarians and an online structured questionnaire for postgraduate students using Google Forms. In concluding, the study presents, *inter alia*, a blend of librarians' competencies which include knowledge, skills and attributes required to deliver online information literacy training to meet the information needs of postgraduate students in the current digital era. It recommends, *inter alia*, that institutions of higher learning could benefit from the outcomes of this study in terms of continuous upskilling of academic librarians to ensure postgraduate students are provided with relevant online information literacy training for enhanced academic performance.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

ACRL	Association of College and Research Libraries
APA	American Psychological Association
HE	Higher education
ICT	Information and Communication Technology
IEEE	Institute of Electrical and Electronics Engineers
LIS	Library and Information Science
OPAC	Online Public Access Catalog

# **CHAPTER ONE: INTRODUCTION AND BACKGROUND**

## **1.1 Introduction**

The academic library is an integral part of an institution of higher learning. The library offers one of the most important support systems for students' academic success, providing a wide range of information resources, services, and facilities. The provision of services in academic libraries has been changing rapidly due to continuous changes of library patrons' information needs within institutions of higher learning (Nakitare et al., 2020: 340). Library users need services regardless of where they are located, the nature of their programmes or their levels of study. Therefore, librarians have seen their roles evolving in the digital world to meet the information needs of students in the 21<sup>st</sup> century. In addition to their traditional print collections, academic libraries now have digital collections and utilize infrastructure that helps promote lifelong learning and scholarly communication.

## **1.2 Institutional background**

The private higher education (HE) institution whose academic library and librarians are the focus of this study, and which referred to as Institution X (as per anonymity request by the institution), is situated in Gauteng province, South Africa. Private institutions of higher education are not operated, owned, or institutionally funded by governments. The student body of this HE institution comprises of an estimated 4 000 students, of which about 500 are postgraduate students and 3 500 are undergraduate students (Anonymous, 2023). The institution offers programmes including Higher Certificates, Bachelors Degrees, Honours Degrees, Postgraduate Diplomas, and Masters Degrees. The institution has the following Schools: School of Management, School of Social Sciences, School of Engineering, School of Law, and School of Executive Education). In this study, postgraduate students (Honours and Masters only) from three of the five schools are targeted as a sub-population.

### **1.2.1 Academic library background**

The institution's library, also known as the Information Centre, has a strong emphasis on electronic resources and services, and offers students and staff the flexibility to access the

library from anywhere if they have internet access. Most materials may be located via the library catalogue. Access conditions and loan periods vary according to the item's location which is reflected in the catalogue. The Information Centre offers access to a wide range of resources, services, and facilities. Information Specialists are available to assist with information needs of students and staff.

The Information Centre offers a large collection of information resources including:

- Print books (Reserve, General and Reference collections)
- Databases (for online journal articles and E-books)
- Newspapers online – NewsBank database
- LibGuides – which is a content management and information sharing system designed specifically for libraries. The platform allows for easy navigation through and instruction on core and relevant resources for a particular subject field, class, or assignment.

The provision of service to library clientele includes the use of various tools to support interaction with users and provides opportunities to participate in library activities conducted through video conferencing platforms such as Zoom and Microsoft Teams. The integration of digital technologies in library operations and services enables transformation in service and provides innovative opportunities especially in academic libraries (Ayolugbe, Jidere & Ogwo, 2021: 3).

Online collaboration tools such as Microsoft Teams and Zoom allow librarians to work with their clients even if they are not physically present. Librarians do not need to be office bound to interact with students and staff and literacy in these communication tools increases librarians' productivity and enables them to provide enhanced services to library patrons. According to Ayolugbe, Jidere and Ogwo (2021: 3), the success of an academic library in the current digital environment, depends greatly on the quality of service delivery offered by librarians to meet rapidly changing information needs of patrons. Librarians require information-finding skills which include staying abreast with changes in database search techniques. Once the Information Specialists locate relevant sources, they may assist researchers to structure searches and obtain usable results. Digitally upskilling librarians will not only benefit these information specialists but also the academic institution where

they are employed. Librarians need to acquire knowledge and skills in using online collaborative tools to provide quality service to patrons in meeting their information needs. Librarians at Institution X arrange information literacy sessions for all students throughout the year in collaboration with academics in the different Schools. The information literacy sessions are conducted in in-person class sessions, and some are also organized via the library website where students can register and attend online sessions as offered by librarians. The skills students are taught include identifying, finding, evaluating, applying, and acknowledging information. In an age of information and communication technologies (ICTs), library users have the potential to fulfil their information needs with the help of innovative technologies, and the process of learning how to do this is part of life-long learning.

### **1.3 Problem statement**

An academic library evolves and requires librarians who can experiment with technology which allows them to learn new skills. Users' expectations from librarians include access to real-time messaging using chat options such as "Ask a librarian" that are a functionality available in the LibGuides platform (Garnar & Tonyan, 2021: 4). Once librarians are digitally literate, they can deliver services on time and meet specific user needs using collaborative tools such as Zoom and Microsoft Teams.

Institution X offers information literacy sessions to postgraduate students arranged by librarians on campus. With more postgraduate courses offered by distance and online modes at the institution, students are preferring to attend virtual and less face-to-face sessions. However, librarians continue to offer information literacy sessions in-person by booking venues available on campus. The researcher has been a librarian at Institution X for the past eight years and has observed that librarians have yet to adapt to the use of online meeting platforms available at this higher education institution. Students have expressed their dissatisfaction in the information literacy sessions indicating that they reside far from campus and are finding it difficult to travel to campus regularly for research support services provided by librarians. Postgraduate students have indicated that attending library information literacy sessions online, obtaining recordings of sessions and listening to these in their own time would be convenient and effective in the success of their studies. Herein lies the research problem that needs addressing, that is, librarians and specifically

postgraduate students at Institution X appear to be pulling in opposite directions on the matter of the medium of information literacy training. Perhaps librarians in this institutional context are challenged by competencies required for offering online information literacy sessions. Hence, the need to investigate competency requirements for online delivery of information literacy training.

#### **1.4 Research objective**

The study's objective is to understand the competencies required by academic librarians in using online meeting platforms for enhancing postgraduate students' information searching, retrieval and use skills to meet their information needs.

#### **1.5 Research questions**

The following research questions have been generated to address the study's research objective:

- 1.5.1 What competencies are required by academic librarians to deliver information literacy training using online meeting platforms?
- 1.5.2 What competencies do the academic librarians of the selected higher education institution currently possess for delivering information literacy training via online means?
- 1.5.3 What challenges (if any) are the academic librarians of the selected higher education institution facing in providing postgraduate students with online information literacy training to meet their information needs?

#### **1.6 Significance of the study**

Information literacy involves a combination of, amongst others, research skills, critical thinking skills, computer technology skills, and communication skills (Association of College Research Libraries, 2015: 25). According to Steinerová (2016: 57), information literacy is essential for academic success, effective functioning in the workplace, and participation in society as knowledgeable citizens. Hence, it is hoped that this research would build upon the existing body of knowledge on the competencies of academic librarians in the digital age. Institution X and other universities in South/Southern Africa may benefit from the outcomes of this study in terms of upskilling librarians to ensure postgraduate students are provided with relevant information literacy knowledge and skills for enhanced academic

performance. The outcomes of this research could also impact policy decisions of HE institutions regarding modalities in delivery of instruction, especially in a post-COVID 19 return to work/studies environment after two years (2020-2021) of online operation during the global pandemic which mandated social distancing.

## **1.7 Definition of relevant terms**

This section explains key terms as per their use in the study.

### **1.7.1 Academic library**

An academic library is defined as primarily serving a purpose to support the curriculum, and to support the research of the university faculty and students (Letzter, 2023: 1).

### **1.7.2 Academic librarian**

An academic librarian is an individual responsible for managing, organising, evaluating, and disseminating information to students, lecturers, and researchers at an institution of higher learning (Albro & McElfresh, 2021: 3).

### **1.7.3 Online meeting platforms**

Technological trends worldwide have shown that there has been a shift in the delivery of information from the traditional models to web-based electronic formats. Academic libraries have adopted social networking tools used for video conferencing and e-learning by using, for example, Zoom technology (Ayolugbe, Jidere & Ogwo, 2021: 7) or Teams which is the hub for collaboration in Microsoft 365. Today, online platforms which include Facebook, WhatsApp, Twitter (now called X), and YouTube are being used widely as formal means to allow users to transmit messages and access information worldwide (Malatji, 2019: 2).

### **1.7.4 Information literacy**

Wiebe (2016: 54-55) describes information literacy as a collection of critical inquiry skills. It is about individuals knowing how to manoeuvre through a variety of information environments, while evaluating, questioning, and verifying what they find. Wiebe (2016: 54-55) reiterates that information literacy is also about being mindful about appropriately and ethically synthesizing someone else's information or work into your own when creating current information. In the HE context, there is a need for detailed information literacy

sessions throughout students' academic programmes that examine students' specific need at a specific time of the academic year, and that are properly integrated into the curricula (Association of College Research Libraries, 2015: 25). These sessions can play a major role in the success of the information literacy programme.

### **1.8 Overview of theoretical support**

This study is underpinned by Wilson's model of information behaviour (1999). The researcher chose this "robust and powerful" (Ugbala et al., 2022: n.p.) theory because of its strength in providing information regarding information behaviour of users; and this is useful for the new environment of the digital age which HE librarians need to embrace.

Wilson's theory of information behaviour suggests that information behaviour follows when an information user becomes aware of their need. For one to satisfy this need, the user needs to make use of informal and formal information resources (Wilson, 1999: 253). The vital need for information results in success or failure to find relevant information which may be used by, for example, students in their assignments or research reports. This theory indicates that part of the information seeking behaviour by users may involve information sharing, especially if some users have found useful information which can be applied in their studies. A detailed description of this theoretical support is provided in Chapter Three.

### **1.9 Overview of research methodology**

This study used a case study research design, focusing on Institution X as its case. Within this single case study design, the research employed a multi-method approach in the form of an online questionnaire (for postgraduate students) and semi-structured interviews (for purposively selected librarians) to collect the data required to address research questions guiding the study.

After the data (both qualitative and quantitative) was collected, it was organized and prepared for analysis by transcribing the recorded interviews and downloading the questionnaire response spreadsheet from Google Forms. The qualitative data from the interviews was subjected to thematic content analysis and hand-coded. Descriptive statistical analysis was used to analyze the quantitative data from the structured questionnaire. Google Forms provided insight into the data and supported statistical analysis and graphical representation of the data. Tables, graphs and narratives were used

to ascertain trends and patterns resulting from the analysis of data. Based on discussion of the study's main findings, in the context of the study's objective and research questions, the theory supporting the study and the literature reviewed, conclusions are drawn and recommendations are made.

### **1.10 Delimitations of the study**

Delimitations are the characteristics that limit the scope and define the boundaries of one's study. Delimitations are a result from the specific and definite choices researchers make when they decide on the scope of a particular research study (Enslin, 2021: 314). These are often referred to as the parameters that a researcher sets. As mentioned in Section 1.3, the researcher is a librarian at the library of Institution X. This presented an opportunity for the researcher to use the library of Institution X as a research site to investigate the competencies required by academic librarians in using online meeting platforms for information literacy training. Hence the study is delimited to the library at Institution X. This study is also delimited to postgraduate students from Institution X as students at this level of study receive information literacy sessions throughout the year by the library of Institution X because of their information needs for their research reports and theses. Delimiting a study to a single HE institution (and specifically the library of this institution) and its postgraduate students only, was considered sufficient for a minor dissertation at the master's level of study.

### **1.11 Chapter summary**

This introductory chapter presented a background to the study by outlining online platforms used by librarians in the digital era as well as the use of electronic resources in libraries globally. Contextual information about Institution X was provided in terms of different programmes offered and the library of this HE institution. Against this background, the research problem was introduced, and the study's objective and research questions were presented. The significance of the study was highlighted. The chapter also provided an overview of Wilson's theory of information behaviour which informs the study as well as an overview of the study's research methodology. Delimitations of the study were discussed which included a focus on postgraduate students. The chapter concludes with a summary.

The next chapter will detail theoretical support for the study, as well as review literature relevant to the study.

## **CHAPTER TWO: THEORETICAL SUPPORT AND LITERATURE REVIEW**

### **2.1 Introduction**

This study is informed by the well-established theory of information behaviour (Wilson, 1999). The researcher wanted to understand the competencies required by academic librarians in using online meeting platforms for enhancing postgraduate students' information searching, retrieval and use skills to meet their information needs. This section will highlight the key concepts of this theory which is guiding the study.

A literature review is an attempt to present a critical review of the literature already available in a specific field of study. The main purpose of a literature review according to De Vos et al. (2014: 109), is to assure readers that the researcher understands the current issues related to one's study.

This chapter is divided into two sections. The first section discusses the supporting theory, that is, theory of information behaviour. The following section presents scholarly literature reviewed according to the themes reflected in the study's objective, research questions as well as the theory supporting the study.

### **2.2 Theoretical support**

A theoretical framework is an essential aspect of a research exercise aimed at establishing a link between the subject matter under investigation and an existing general idea of a theory that is true (Leedy & Ormrod, 2020: 66). According to Yin (2018: 44), a theory is defined as a proposition of ideas or rules that are intended to explain certain phenomenon or facts based on general principle. This study is supported by Wilson's (1999) theory of information behaviour. Information is an important part of everyday life of people in society. People use web search engines, visit libraries, read newspapers and watch television to obtain information (Eyinade & Bakare, 2022: 2). It is vital to understand the purpose for which information is required, users' skills needed to identify relevant information and sources preferred to acquire information.

Wilson's theory of information behaviour indicates that various factors influence specific information needs. Specifically in Wilson's (1999) theory of information behaviour, users are studied comprehensively from the perspective of their information needs and information

behaviour and hence the theory was considered suitable as a support for this study. Wilson (1999: 251) indicates that the user makes demands upon formal or informal information resources or services, resulting in the success or failure to find relevant information. The justification for using this theory in the study is to understand the competencies required by academic librarians in using online meeting platforms for enhancing postgraduate students' information searching, retrieval and use skills to meet their information needs. The theory was found to be applicable to postgraduate students at Institution X within the context of the information literacy sessions offered by its librarians.

### **2.2.1 Wilson's theory of information behaviour**

Wilson's original concept of information behaviour (1981) evolved into the revised model of information (1997) and the revised general model of information behaviour (1999), keeping up with the theoretical developments in the information science field. Wilson's (1981) original concept suggested that due to an inability to observe "information need," which is an internal state of mind, it was not helpful to rely heavily on information needs to study one's information behaviour. Instead, a new approach to information behaviour became necessary to observe the user behaviour. As researchers across the world began employing various versions of Wilson's theory to analyze information behaviour of users in diverse contexts, it became clear that studying information needs is not enough, and that it is the context of information needs that plays a central role in shaping overall information behaviour of the users. Another prime contribution of Wilson's theory is to illustrate the use of "information use" which had received little attention until then. While developing these models, his goal was to link interdisciplinary theories in action rather than proposing a standalone theoretical framework. As a result, all his "models" (Potnis, 2015: 102) are conceptual models for information behaviour research. The literature explains a theory to provide a clear explanation of how and why specific relationships lead to specific events (Nilsen, 2015: 2) and a model to typically involve a deliberate simplification of a phenomenon. In other words, "models can be described as theories with a more narrowly defined scope of explanation; a model is descriptive, whilst a theory is explanatory as well as descriptive" (Nilsen, 2015: 2). This study adopts the use of the term 'theory' as a theory will be explanatory and descriptive of users' information behaviour, using Wilson's (1999) model of information behaviour.

Wilson's theory of information behaviour was born out of a need to focus the field of information and library science on human use of information (Wilson, 1981). The first model published in 1981 outlined factors leading to information seeking and the barriers inhibiting this action. The first model was based on an understanding of human information seeking behaviours of the user, the information system, and the information resource (Wilson, 1981).

Wilson developed various theories that are related to information seeking behaviour between the years 1981-1999. The 1981 theory of information seeking behaviour was able to set precedent in terms of viewing feedback which is significant in the information seeking process. The theory was significantly improved in 1999 relating particularly to the field of library and information studies (Wilson, 2000). According to Wilson (1999), the theory lists three critical issues that are related to information seeking behaviour which include context of the information seeker, the channel of information used (electronic or manual) and the information resource itself. This theory regards information seeking as a problem-solving activity, and for this reason, it is suited to the group of postgraduate students in this study. The 1999 theory integrated the information need, information seeking, information exchange and information use, and hence the relevance of the 1999 theory to this study. Wilson, in information behaviour, articulated the theory in 1999 as evolving from the other previous theories. It pointed out a series of nested fields, in which information behaviour was included as the general area of investigation, with information-seeking behaviour as its sub-set, and information searching behaviour as a further sub-set (Wilson, 1999).

Wilson's theories filled a significant research gap in information science literature. They became of keen interest for scholars in information systems, consumer behaviour, health sciences, and other fields. However, they were not generalizable enough for various user groups to capture their contextual factors that affect information behaviour. Hence, Wilson proposed the revised theory of information behaviour in 1996, which integrated studies from decision-making, psychology, innovation, health communication, and consumer research. General systems theory and phenomenology influenced the construction of the revised theory (Wilson, 2005).

The strengths of the models have been brought to light by several researchers. Ingwersen and Järvelin (2005) describe the models as one of the best theoretical models on

information seeking. They reveal that the models have been established for a long time with the notions of information, information need, information seeking and utilization. Ellis (1993) submitted, during the formative years of the model building, that the models are remarkably applicable to the study of the needs underlying information behaviour of users. Furthermore, Ellis points out that the models are appropriate for uncovering the facts of everyday life of the people being investigated. Potnis (2015) put forward that the models identify gaps in information science research. Also, Potnis (2015) states that the models continue to serve as a reference framework with the same validity as at the time of inception. This supports Wilson's (1999) stance that it is a macro theory of information behaviour.

According to this theory, information behaviour is usually informed by perceived information needs of users, which then results in demand either upon formal or informal sources or channels. These demands for information may either result in success or failure in finding relevant information. If the process is successful, the users' information needs are satisfied; and if it fails, the user becomes dissatisfied and would be prompted to adopt a different information system to continue their search. In view of this, the theory therefore provides adequate guidelines for understanding the information behaviour of users, which in this case are postgraduate students at Institution X. This theory indicates that part of the information behaviour by users may involve information sharing, especially if some users have found useful information which can be applied in one's studies.

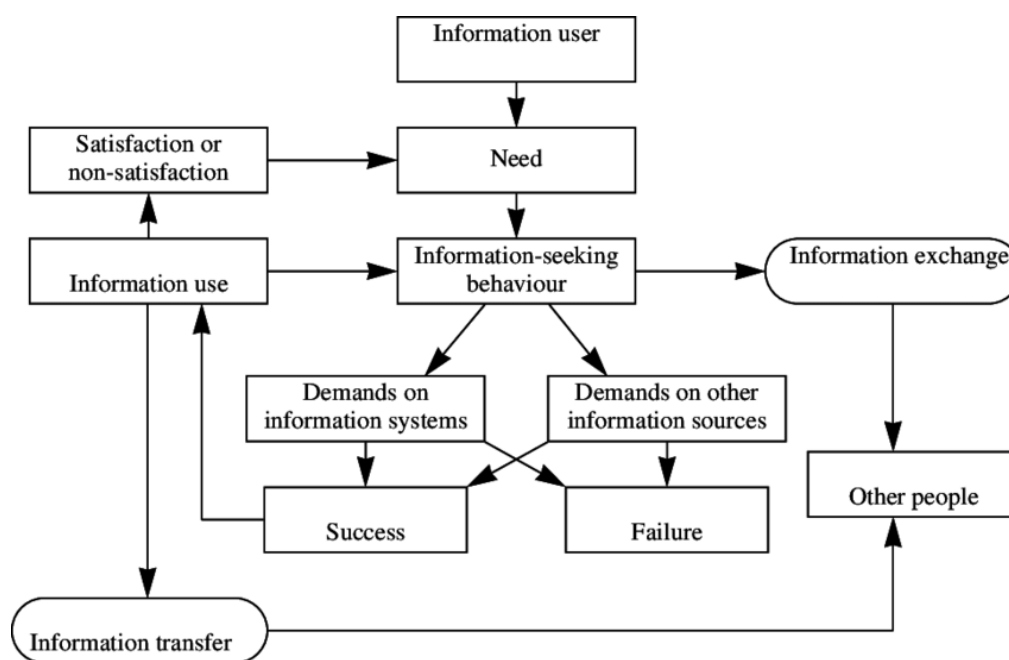
Wilson (1999: 249) defines information behaviour as follows:

It is the purposive searching of information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual information systems such as a newspaper or a library or with computer-based systems such as the World Wide Web.

The above definition by Wilson remains relevant in today's world. This involves behaviours and attitudes for sourcing and finding the information required by library patrons. These behaviours emanate at a point when, for example, postgraduate students realize that the information they have at hand is insufficient when attempting to answer certain project questions (Sheeja, 2010: 524). It has been found that research students often prefer using

basic search skills, which may cause them to become limited in their search strategies with using only keywords, authors, or titles in their academic work.

Wilson’s (1999) theory is relevant to this study as it can provide clarity on how postgraduate students may be searching and finding information, and understanding their behaviour can assist librarians to know whether their training sessions are beneficial and improving postgraduates’ students searching skills. Wilson’s (1999) theory is particularly important as it provides a clear and easy-to-understand representation of the relation between users’ (in this study postgraduate students’) information behaviour and usage of different information resources. See Figure 2.1 for a graphic representation of Wilson’s (1999) model.



**Figure 2.1: Wilson’s model of information behaviour** (Wilson, 1999: 251)

People need information to obtain answers to specific questions. Asogwa and Daniel (2021: 64), state that an information need arises among disciplines and by different programmes which is dependent on the respondent. Postgraduate students need academic information and information for research activities. Students seek information through the internet and books (Singh, Kumar & Khanchandani, 2015: 36).

Khan and Khan (2020: 2) state that information seeking behaviour occurs at a time when users realize that the information they have at a given time is not adequate for decision-making in their research and assignments. Postgraduate students are required to make use

of different information sources in libraries which include books, e-books, journal articles, newspaper articles, theses, and dissertations. Librarians would need to train research students how to identify, apply and acknowledge information appropriately for their academic success. Research students adopt diverse types of information seeking and searching behaviours. According to Chinnasamy (2016: 132), this information and searching behaviour includes identifying relevant information, evaluating, applying, and referencing the information. Postgraduate students may use various sources such as searching on Google, asking their peers, their lecturers and sometimes going to the library and consulting with the librarians. This shows the importance of adequate competencies for librarians to train postgraduate students during information literacy sessions.

Table 2.1, for the purposes of this study, maps the study's research questions to relevant constructs from Wilson's (1999) theory of information behaviour.

**Table 2.1: Mapping the study’s research questions to Wilson’s theory of information behaviour**

Research objective	Research questions	Constructs/ concepts from Wilson’s theory of information behaviour
To understand competencies required by academic librarians in using online meeting platforms for enhancing postgraduate students’ information searching, retrieval and use skills to meet their information needs	1. What competencies are required by academic librarians to deliver information literacy training using online meeting platforms	<ul style="list-style-type: none"> <li>- Information users (postgraduate students)</li> <li>- Information use (importance of information literacy training sessions)</li> <li>- Success (postgraduate students gaining access to relevant information resources for their academic studies)</li> </ul>
	2. What competencies do the academic librarians of the selected higher education institution currently possess for delivering literacy training via online means?	<ul style="list-style-type: none"> <li>- Information users (postgraduate students)</li> <li>- Information use (importance of information literacy training sessions)</li> <li>- Success (postgraduate students gaining access to relevant information resources for their academic studies)</li> </ul>
	3. What challenges (if any) are the academic librarians of the selected higher education institution facing in providing postgraduate students with online literacy training to meet their information needs?	<ul style="list-style-type: none"> <li>- Challenges faced by postgraduate students/academic librarians in using modern technology (e.g., Zoom and Microsoft Teams platforms) to access online information training sessions</li> </ul>

### 2.3 Literature review

The purpose of a literature review in any research is to develop an understanding of the range of elements that are central to the research problem. This involves reading and reviewing literature available that is related to one’s topic (Howard, 2021: 115). This section covers aspects of the literature that reflect, *inter alia*, some of the constructs from Wilson’s (1999) theory of information behaviour, for example, information needs, information resources, postgraduate students’ information literacy, information technology support in academic libraries and the challenges faced by academic librarians in using technology to support postgraduate students’ information literacy needs.

### **2.3.1 Information needs and support for postgraduate students**

Academic libraries play a vital role in supporting research at academic institutions. With the development of technology and increasing use of e-books, online journals and databases, the importance of collections for research support has grown too. As a result of digitization, academic libraries have had to acquire and develop collections that will assist in supporting users and which can be tailored to researchers' needs (Smith et al., 2019: 596).

The introduction of innovative electronic services and information resources has resulted in training being a necessity for postgraduate students. According to Garner (2006: 34), the training aims to equip students with relevant knowledge and skills for them to navigate the varied and extensive information resources available in libraries. The most beneficial postgraduate training focuses on information literacy, understanding different referencing styles and literature searching.

Scholarly communication and open access publishing have established trends in producing new forms of digital research and scholarship, engaging in new innovative forms of research and publications. Academic libraries assist research scholars with information management, its dissemination and publishing research. According to Million, Hudson-Vitale and Moulaison (2018: 377), scholarly communication facilitates the research output of researchers at academic institutions. The advent of the modern technologies that support publishing and communication have transformed the research process.

### **2.3.2 Information resources for users in an academic library**

According to Arshad and Ameen (2015: 66), the role of libraries has been changing over the years. Library users now browse through websites searching for online resources. The Online Public Access Catalog (OPAC) reflects the resources where patrons check availability of books in the library, e-journals, e-books, and other electronic-based services. Libraries need to continue improving their websites to meet users' expectations.

Information nowadays is designed, created, and developed on the library's website. Once librarians have acquired website designing skills, they should share online content with users which include documents, videos and links directing library users to current information (Ombogo & Namande, 2021: 403). An academic library website offers a variety of information resources for both library users on campus and off campus. Online resources

such as academic databases that cover different subject-specific disciplines are of importance to the students and academic staff. A website that is user-friendly will yield user satisfaction and meet the needs of the academic community (Ochoa, 2020: 2) A library website requires regular updating to allow users the opportunity to continue browsing through and familiarizing themselves with relevant and up-to-date content for their academic studies.

Library websites indicate opening hours of the library, online databases accessible, access to the OPAC, which allows users to check availability of print books in the library. Online content on the library website is convenient for patrons as they can access information in their own time if they have internet access and a device (Emezie & Nwaohiri, 2013: 33). It is evident from the literature reviewed in this section that information resources such as library websites may be an appropriate platform where librarians update and inform students and academic staff of all facilities and services available.

### **2.3.3 The importance of the concept of information literacy in understanding different information resources in an academic library**

According to Orgeron (2017: 81) understanding information literacy is a necessary skill for the effective use of library resources and for undertaking academic activities. The Association of College and Research Libraries (2015: 7) indicates that information literacy has become increasingly important in this modern-day information age environment where there are rapid technological changes and a proliferation of information resources. Due to the continuous change in this digital information age, students are faced with diverse, abundant information choices in their academic studies and in their personal lives (Association of College and Research Libraries, 2015: 7; Msoffe, Mongi & Buhomoli, 2023: 3). In South Africa, information literacy is encouraged by the transformation of the education system and the increasing adoption of ICTs in higher education. Academic librarians are moving toward accepting some of the responsibility for meeting the demands of 21<sup>st</sup> century graduates, thereby teaching technology skills in addition to traditional bibliographic skills (Baro & Keboh, 2012: 312).

Schaub et al., (2017: 283) highlight the importance of students' understanding of the information literacy concept as explained by librarians. They explain that for students to effectively access and use academic library resources and become information literate, they

must understand the language or the specific terms of information literacy. According to Schaub et al. (2017: 284) information literacy has a language or terms that “explain how information is organized, stored, retrieved, evaluated and ethically used”. Such terms include database, information sources, search terms, search strategies and peer review. Schaub et al. (2017) state that when students do not understand this language it affects their comprehension skills of how information is created, disseminated, and used in research. When such terminology is used in library sites, it creates a barrier for users who are unfamiliar with it, thus making it difficult for students to become information literate. The authors recommend that librarians collaborate with faculty to make students aware of and reinforce information literacy terms and concepts during information literacy training (Abah, Chorun & Mbatsoron, 2016; Schaub et al., 2017). An information literate person is one who identifies, evaluates, applies information in critical thinking and problem solving and understands the importance of presenting this information ethically. It would appear from the literature that information specialists/librarians, play a vital role in assisting users to develop successful search strategies for information retrieval.

The literature reviewed emphasizes how postgraduate students in different higher education contexts experience different information needs. The literature has relevance to the study as it emphasizes the need for librarians to understand the information needs of postgraduate students to provide them with necessary library research support skills using online meeting platforms. Hence, the applicability of Wilson’s (1999) theory of information behaviour to guide this study.

#### **2.3.4 Competencies of an academic librarian to support students’ information literacy**

As universities and institutions of higher learning continue to offer more online courses, libraries recognize the need to deliver information literacy sessions online to accommodate students and faculty requests (Ugwu & Ekere, 2019: 359; McTavish & Robertson, 2020: 172). LIS education must meet the needs of online education to prepare current and future-ready librarians. Further, for librarians to teach information literacy effectively, librarians in the workplace need to develop technological skills through continuing professional development. Institutional support including staff training, internet access and increased

library budgets will have to be provided to enhance the effectiveness of information literacy skills training offered to students (Kennan, 2016: 10; Eclevia, 2022: 5).

According to Johnson and Raju (2018: 341), information finding skills are important especially when looking at discipline specific skills sets. This includes “how to search databases” and staying abreast with the changes in the database search techniques. They explain that once a research librarian can find relevant sources, and help to design search terms, these librarians will be able to assist researchers to structure a search and receive usable results.

In the digital world, academic librarians are assuming the role of training and educating library users on how to use computers for information searching, navigating search engines, and finding credible information sources electronically. Students and academic staff are taught to be information literate individuals once they have received training on finding relevant and current information from LibGuides and databases (Munshi & Nagar, 2016: 2; Cherinet, 2018: 96). The literature reviewed makes clear that different sets of skills, values, attitudes, and competencies (Sreenivasulu, 2000: 16; Exner, 2019: 14) are of utmost importance for the LIS professional working in the digital information environment.

### **2.3.5 Librarians and technological advances in the digital world**

Librarians’ traditional role was to provide access to the collection in libraries. Modern library services are now linked to web technology. Academic libraries have moved in the direction of creating digital content, organizing, and preserving through metadata creation and management to make these collections available through the web (Hamad, Al-Fadel & Fakhouri, 2021: 591). There is a great need for digital competencies among information specialists to enable them to develop and manage digital content. These digital competencies require librarians to possess knowledge of digitization which will be useful to work in online information environments (Raju, 2014: 168).

Librarians need new skills to work effectively in the digital world and to meet the challenges of digital librarianship (Khan & Bhatti, 2017: 574). A digital librarian has an active role in providing digital information to library patrons by utilizing technology. In this digital era, it has become inevitable for librarians to acquire and maintain their digital skills for them to stay relevant in the digital world.

The use of digital information technology in libraries requires technical competencies to successfully navigate the online information environment. Digital librarians can be described as professionals who have a good working knowledge of ICTs that provide opportunities in applying technology in libraries (Khan & Bhatti, 2017: 573).

Technology offers tools for searching, preserving, and sharing information amongst librarians and their users. The use of electronic resources has become an essential part of academic library collections. The new era in libraries is offering online learning and digital publishing (Khan & Bhatti, 2017: 577; Izuagbe et al., 2019: 4). Digital technology has changed the way library users seek and search for information. For libraries to fulfil these changing needs, academic libraries are now offering online reference services and one-on-one consultations with clients. Users must be able to critically evaluate the relevance of different information resources prior to them relying either on print or electronic information resources. Librarians need to be knowledgeable of these latest technologies which will enhance their training in information literacy sessions for students' success in their studies (Rodrigues & Mandrekar, 2020: 4). The next two subset sections highlight online platforms and web conferencing tools as part of the technological tools required by academic librarians in providing information literacy training sessions to postgraduate students.

#### **2.3.5.1 Online platforms**

The use of ICTs, internet, and web technology have caused rapid changes in library practices and these tools are being used to support the academic studies of university students. Academic libraries need to be well equipped with latest technology and different types of online information resources to satisfy the needs of users (Dhamdere & De Smet, 2015: 175). Librarians are recognizing the importance of providing access to information using library websites, online catalogs (OPACs) and LibGuides to users to access information anytime and anywhere if they have a device and internet access.

Libraries in the digital age are dynamic in their growth and development. Academic libraries have the responsibility to make information resources available and accessible to patrons in a quick and timeous manner to satisfy the information needs of users. The provision of service delivery to patrons includes various tools to support and interact with users,

allowing them to participate in library activities such as online surveys for purposes of rating the library's services and making suggestions for improvements. The integration of digital technologies in library operations and services provides transformation, and innovative opportunities especially in academic libraries (Ayolugbe, Jidere & Ogwo, 2021: 3).

Library innovation is driven by advances in ICTs. Librarians do not only need to improve their skills in mastering new technologies, but they need to be capable of promoting their services online. Technology proficiency skills are essential for librarians in fulfilling library functions as a medium of education by providing training. Information specialists stay abreast of current trends and learn new technical skills to improve their support to patrons in the modern world (Bakti et al., 2020). Online platforms could be utilized frequently by librarians at Institution X towards satisfying information needs of its postgraduate students.

#### **2.3.5.2 Web conferencing tools**

Technological trends worldwide have shown that there has been a shift in the delivery of information from the traditional models to web-based electronic formats. Academic libraries have adopted social networking tools used for video conferencing and e-learning by using, for example, Zoom technology (Ayolugbe, Jidere & Ogwo, 2021: 7) or Teams which is the hub for collaboration in Microsoft 365.

Most organizations and institutions of higher learning today use a wide range of online channels for digital communication. According to Doyle (2019), digital communication is any type of communication that relies on the use of technology. Nandez and Borrego (2013: 784), claim that social media are amongst the greatest modern advances in the establishment of digital communication. During the 1980s and 1990s, email was developed as an original method to exchange messages from one computer to another using the internet. Today, social media which includes Facebook, WhatsApp, Twitter (or X, as it is now known), YouTube and Zoom are being used widely as formal means to allow users to transmit messages and access information worldwide (Malatji, 2019: 2; Omini & Osuolale, 2019: 3).

It is now evident that many students use emails for academic related purposes. Social media benefit students by providing platforms that foster communication, life-long learning, e-learning resources sharing, and facilitate library services (Saleh, 2020: 6). Social media has

potential to aid more rapid interactions between libraires and their users, regardless of where users are located or how they access library services and resources (Ezeani & Igwesi, 2012: 7).

Academic activities carried out on platforms such as Zoom, LinkedIn and Twitter (X) are quick and easy to use for downloading, reviewing, and updating learning materials and this can be done anywhere if one has internet. These sites allow for options for students' access to assignments and examination preparation in their own time and at their own pace (Boholano, 2017: 22).

In recent years, a study by Poston, Apostel and Richardson (2020: 2) has shown that students are developing a positive impression of using these technologies in online learning. It has several advantages such as students' motivation to be more disciplined and easily interact with their peers and facilitators who can be lecturers or librarians. They are efficient and effective and improve students' enthusiasm in learning. Some disadvantages of these technologies include unclear voices, invisible image display and lack of the technological knowledge to users (Poston, Apostel & Richardson, 2020: 4). There is a whole diversity of web conferencing tools available. Access to these tools is dependent on the budgets of academic institutions such as Institution X.

### **2.3.6 Challenges of the academic librarian in using technology**

In the current digital age, there is a fast-growing knowledge economy prompted by the expansion of the global digital information era. Matthews (2011) observed that librarians were bound to encounter challenges which include having to become computer literate, becoming knowledgeable on how content is shifting from print to digital, and meeting users' expectations in real time. The behaviour of library clients (users) is that they no longer want to wait for long to be provided with assistance with their information needs. They want immediate responses when they have presented their information queries (Arumuru, 2021: 11).

It may be thought that librarians are no longer needed due to the availability of these electronic sources. For library users to select, evaluate and transform information into knowledge, this requires experts, that is librarians, who will efficiently and effectively

provide this service to assist in students' academic success. Therefore, the librarian's role continues to be essential in the digital era (Somvir, 2010: 82; Aslam, 2021: 55).

Librarians are vital as a professional group and their role continues to broaden in the digital age. Postgraduates may not be aware of their exact information needs. The librarian should be available to mitigate anxiety levels of students by supporting them to overcome their fears of information overload. Information professionals, such as librarians, need to adopt individual approaches with their different clients. Postgraduate students in some instances struggle with utilizing modern technologies as they may have been out of school for years (an example of user behaviour). As they register for further studies in postgraduate courses, refresher training on how to search and find relevant information to answer their assignment questions and conduct research is required (Aslam, 2021: 57). Once students know how to use modern technologies, it should promote higher academic success among students in the institution. It is evident from the literature that librarians are required to provide support and train students to meet their information needs, in an academic institution.

#### **2.4 Chapter summary**

The ability of Wilson's theory of information behaviour to continue serving as a framework for developing and testing new combinations of information behaviour constructs and theories with a wide range of user groups from various parts of the world illustrate the rigor, relevance, and utility of his models in the rapidly changing landscape of information environments. This chapter went on to review literature relevant to the study and which highlighted information needs of postgraduate students, information resources required by users in an academic library and the competencies required of LIS professional practitioners in offering information literacy training sessions using web referencing tools such as Zoom and Teams. In the next chapter, the researcher discusses the research methodology followed in the study.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter discusses the research approach and design selected to address the study's objective and research questions. It includes a discussion of the research methods that were employed, the research instruments for data collection, the sampling techniques, and the data analysis.

Leedy and Ormrod (2020: 32) see research methodology as the general approach the researcher takes in carrying out a research project and explain that this approach informs the methods and tools the researcher selects. In the sections that follow the various components of the study's approach, design, and methods are discussed.

### **3.2 Research approach**

This study employs multi-method research. Multi-method research involves combining data-gathering and analyzing techniques from two or more methodological traditions (Seawright, 2016: 2). This involves collecting and analyzing both quantitative and/or qualitative data, which are collected concurrently or sequentially, given a priority and involves the integration of data at one or more stages in the process of research. Multi-method research may be broadly defined as the practice of employing two or more different methods or styles of research within the same study (Hunter & Brewer, 2015; Silverman, 2020) as opposed to mixed methods research which mixes quantitative and qualitative research methods across all aspects of the research process (Creswell & Creswell, 2023).

According to Hunter and Brewer (2015: 187) social science researchers study a myriad of research problems using diverse types of research methods. The diversity of methods brings about "rich opportunities for cross-validating and cross-fertilizing research procedures, findings and theories." However, for researchers to take advantage of these opportunities they must develop more "cosmopolitan strategies" or research approaches that explore diverse methodologies (Hunter & Brewer, 2015: 187). The multi-method research approach affords us such an opportunity.

The study made use of a structured questionnaire and semi-structured interviews as its multiple data collection instruments. The triangulation consisted of comparing the interview results with the questionnaire survey results for purposes of “cross-validating” (Hunter & Brewer, 2015: 187). The diversity in multi-method is that it allows a combination of qualitative methods, a combination of quantitative methods or a combination of qualitative and quantitative methods in addressing a particular research problem (Hunter & Brewer, 2015: 187). In this research, a combination of qualitative and quantitative methods was used.

Triangulation is a “precautionary measure” adopted by researchers to make sure data collection, analysis and interpretation in research is objective and credible (Creswell & Creswell, 2023: 246). The researcher in this study used multiple data collection methods (interviews for the librarians and an online questionnaire for postgraduate students) in a single study to reach its findings. By using triangulation, the researcher hoped to validate the research findings whereby all implications are studied from different angles. Triangulation deepens and widens one’s understanding and sheds light on unexpected findings derived from another set of options (Connaway & Powell, 2010: 80). Hence the selection of a multi-method research approach for this study.

### **3.3 Research design**

According to Babbie (2021: 88) research design as a concept refers to the plan of how the researcher intends to conduct the research. Trochim and Donnelly (2008) highlight that the plan provides the glue which holds the research project together. A research design is the blueprint for the collection, measurement and analysis of data that is followed in addressing the study’s research questions.

Case study research is described as an empirical method that investigates a phenomenon where a researcher gathers extensive data and studies a particular individual(s), event(s), or programme(s) on which the study focuses (Yin, 2018: 45; Leedy & Ormrod, 2020: 266). According to Yin (2018: 61) case study research is more appropriate to study questions that relate to “how” and “why”. A case study design was used to structure the research plan for this study, with the selected case being Institution X, a higher education institution.

The research made use of a case study of Institution X to investigate the competencies of librarians in using online meeting platforms for information literacy sessions to meet the information needs of postgraduate students. Leedy and Ormrod (2020: 266) view a case study as a particular individual programme or event studied in-depth for a specific period, in this instance that case being a particular higher education institution, its librarians and the postgraduate students who are users of the library of Institution X.

### **3.4 Research methods**

Research methods refer to research techniques such as sampling, data collection and analysis (Creswell & Creswell, 2023: 17). In a multi-method research study, data collection involves using two or more either qualitative or quantitative methods to gather data about a particular research problem (Roller & Lavrakas, 2015: 34). This section describes the methods and tools that were used to collect data for this study.

#### **3.4.1 Population**

Gravetter, Forzano and Rakow (2021: 111) define a population as the complete set of objects or people of interest to a researcher. The target population in this study was the 20 librarians from Institution X and its 300 postgraduate students (Anonymous, 2023) who have modules that require them to write essay assignments and write reports requiring intense reading and searching for information resources in the library. In this study, the librarians were purposively sampled while a census was carried out for the 300 postgraduate students, for data collection purposes (explained further in the next section).

#### **3.4.2 Sampling**

A sample is a subset of the target population, consisting of several elements which the researcher intends to measure, question, or observe, instead of measuring, questioning, or observing all the elements in the population. A sample is usually intended to represent the population in a research study (Gravetter, Forzano & Rakow, 2021: 112). Sampling is conducted in a logical and systematic manner.

Non-probability sampling (Babbie, 2021: 193) was most applicable for the librarian sub-population as the researcher intended to specifically interview certain librarians only. Purposive sampling (an example of non-probability sampling) was the selected sampling

technique for this study. Purposive sampling (also known as judgmental sampling) is a sampling method whereby the researcher uses their own judgment or purpose in selecting the elements of the sample (Babbie, 2021: 193). For this study, purposive sampling was appropriate as the researcher wanted to interview specifically librarians who provide training in postgraduate students' information literacy sessions to meet their information needs. The researcher purposively identified eight such librarians for participation in the study (see Table 3.1).

**Table 3.1: Librarians: population and sample**

Library	Population (librarians)	Purposive sample (librarians involved in information literacy training)
Institution X Library	20	8

A census was conducted of the sub-population of 300 postgraduate students from the three Institution X Schools (School of Social Sciences, School of Management and School of Executive Education). According to Bless, Higson-Smith and Sithole (2013: 174), a census enumerates all members of a population and data is collected in relation to all units. In this research, a census was useful in ascertaining trends among postgraduate students regarding information literacy training using online platforms to meet their information needs as informed by Wilson's (1999) model of information behaviour. More importantly, a census increases the chances of a higher return rate of questionnaires, especially in view of reports in the literature (Babbie, 2021: 265; Creswell & Creswell, 2023: 168) of low return rate from questionnaire surveys. See Table 3.2 for population and census of postgraduate students.

**Table 3.2: Postgraduate students: population and census**

School in Institution X	Postgraduate students		Census
	Honours	Masters	
School of Social Sciences	112	40	152
School of Management	100	-	100
School of Executive Education	-	48	48
<b>Total</b>	<b>212</b>	<b>88</b>	<b>300</b>

### **3.4.3 Data collection methods**

According to Wilson and Fox (2017: 104), data collection involves deciding what data a researcher needs to collect to help answer the research question. The data collection process is critical in the research process; the research process is never complete without the collection of data to respond to the research problem (Hegde, 2015: 146; Mavodza, 2020: 11). In this study, multi-method research combined quantitative and qualitative methods. Quantitative research uses questionnaires, surveys and systematic measurements involving numbers (Bezuidenhout & Strydom, 2021: 199). Quantitative researchers use mathematical models and statistics to analyze the data and report their findings in impersonal, third-person prose and by using numbers (for example, inferential statistics). In contrast, qualitative research uses participants' observation, in-depth interviews, document analysis and focus groups discussions to reach findings which may be reported in narrative format and, where required, using descriptive statistics. In its multi-method approach, this study used aspects of both quantitative and qualitative methods outlined above. Data collection began on 5 November 2023 and ended on 5 December 2023.

#### **3.4.3.1 Structured questionnaire**

A structured questionnaire was suitable for a large population of 300 postgraduate students (Bless, Higson-Smith & Sithole, 2013: 212). The structured questionnaire (see Appendix B) consisted mainly of fixed-response questions. Fixed-response questions may easily be understood by respondents and provide precise responses (Connaway & Powell, 2010: 145; Du Plooy-Cilliers & Cronje, 2021: 172). The questionnaire sought to understand postgraduate students' information behaviour (as per Wilson's (1999) model of information behaviour) and how they view the relevance of information literacy sessions offered by librarians to meet their information needs.

The web-based questionnaire was created in Google Forms and distributed to 300 postgraduate students in the private institution of higher learning (Institution X). The questionnaires were administered using emails. The researcher requested the Postgraduate Administrator to send the Google Forms link to relevant postgraduate students once ethical clearance had been granted to proceed with data collection. Three reminder emails were sent to students kindly requesting them to fill in the structured questionnaire. Consent to

participate in the questionnaire survey was built into the preamble to the questionnaire instrument (see Appendix B). The researcher requested 10 minutes of respondents' time to complete the questionnaire to encourage completion.

#### **3.4.3.2 Semi-structured interviews**

An interview is a verbal exchange in which one person, the interviewer, attempts to acquire information from and gain an understanding of another person, the interviewee (Gray, 2014: 382). A semi-structured interview schedule (see Appendix A) was designed based on the research questions guiding the study and informed by Wilson's (1999) model of information behaviour. Gravetter, Forzano and Rakow (2021: 346) point out that the personal interview method allows the interviewer to collect information by asking a set of questions in a face-to-face setting to an individual or a group of people. The semi-structured questions provided leeway for the interviewer to ask follow-up questions and even probe the interviewees for further clarity.

The researcher interviewed the purposively selected librarians using Microsoft Teams. The semi-structured format of interviews was intended to assist in gaining insight regarding their usage of online platforms to train postgraduate students with information literacy skills for purposes of meeting their information needs in higher education learning. The researcher recorded (with permission) and transcribed the interviews for accurate capture of data. This allowed the interviewer to thoroughly examine responses as narrated by the participants (Creswell & Creswell, 2023: 203). Informed consent (see Appendix C) was sought from the purposively selected librarians before proceeding with the interviews.

#### **3.4.3.3 Pre-testing**

Babbie (2021: 260) observed that no matter how carefully designed a data collection instrument is, there is always a possibility of error. To minimise these errors, reviewing and pre-testing of instruments are vital to identify potential problems and correct them before the actual data collection commences.

Poor instructions, inappropriate terminology, structure and order of questions, spelling mistakes, ambiguous and unclear questions and difficult questions are some of the problems identified after pre-tests in previous studies (Saunders, Lewis & Thornhill, 2000:

306). Pre-testing data collection instruments was conducted within one week (31 October until 3 November 2023). In this study, the questionnaire was pre-tested using two honours and two master's students from the 300 postgraduate sub-population of Institution X, with the researcher making it clear to these pre-test respondents that they should not participate in the main questionnaire survey. Similarly, a pre-test of the interview schedule for the librarians was conducted with two academic librarians outside of the eight purposively selected for the study. The pre-test interview participants were chosen because they had similar characteristics to the interview participants in study. Findings of pre-tests could reveal possible adjustments necessary for effective data collection (Creswell & Creswell, 2023: 166), however, in the case of the current study no necessary adjustments were necessary or made before proceeding with the main data collection.

#### **3.4.4 Validity and reliability**

Validity and reliability are some of the important criteria used to evaluate and assess the quality of research studies (Babbie, 2021: 151). Validity relates to the integrity of the findings and conclusions made from the undertaken research (Bryman & Cramer, 2012: 47). It seeks to check if the researcher is indeed observing, measuring, or identifying what their study is based on. To ensure validity, the researcher used multiple data collection methods (semi-structured interview and structured questionnaire) as well as triangulating the data collected to establish validity. According to Babbie (2021: 148) reliability can be attained by ensuring research instruments are clear, concise, and simple to complete. This term is used to question whether measures developed for certain concepts are consistent. To ensure reliability, the researcher pre-tested data collection instruments and considered feedback but in this study no changes were made to the questionnaire and interview schedule – the feedback revealed that no changes were necessary. The researcher sought permission to record interviews with participants to ensure data was captured accurately for reliability purposes.

#### **3.4.5 Limitations of the study**

Limitations refer to constraints in one's research study that are out one's control, such as financial resources, access to information and time (Enslin, 2021: 315). If one were to identify a limitation in this study, it would be the anonymity requirement from the

institution which served as a data collection site. This challenged the researcher in the reporting of findings where absolute care had to be taken to respect the wishes of this institution. While the researcher met this ethical requirement, the researcher at the same time had to consistently ensure that data collection, analysis, reporting and discussion of findings were not compromised. Measures were used to ensure anonymity of the institution but at the same time not compromising any aspects of the research process.

### **3.4.6 Ethical considerations**

Mertens (2012: 19) suggests that all academic studies should follow the ethical guidelines and principles established by institutions concerned. As a researcher affiliated with University of Cape Town (UCT), data collection instruments were subjected to the Humanities Faculty ethics review process as the study involved human subjects. Based on an ethics clearance letter from the University of Cape Town, the researcher applied for research ethics clearance from Institution X to use it as a research site.

Informed consent was sought and obtained from participants in the study. In the case of the librarian participants, their informed consent was sought prior to the interview (see Appendix C). Participants had the right to know what the research was about, how it would affect them, what the benefits of participation may be, and the fact that they had the right to decline to participate if they chose to. As a researcher, one made the effort to explain to the identified librarians in the informed consent form (see Appendix C) and to postgraduate students in the preamble to the questionnaire (see Appendix B), what the study entailed and what was required of them in terms of participation. Anonymity of all participants and confidentiality of information collected, were assured.

Anonymity means the participant should not be individually identifiable in the research reporting or in data that is shared. The data collected may not be traced back to the individual. The institution where the study was conducted, expressly indicated that they would want to remain anonymous and therefore the researcher refers to the Institution as Institution X throughout the study and has made every effort to anonymize any aspect that may trace back to the identity of the institution.

Confidentiality implies that the information that the participant shared with the researcher may not be shared with anyone else without permission (Louw, 2021: 306). It is reported as

being difficult to fully guarantee confidentiality in social sciences research which involve interviews (Bryman & Cramer, 2012: 640). Anonymization becomes the only way of helping to keep the information confidential whilst the researcher is still able to report on the relevant content within their research, but without identifying any individual participants during reporting of findings (Leedy & Ormrod, 2020: 269).

### **3.4.7 Data analysis and presentation**

After data collection, the next step was data analysis and presentation of findings. The purpose of the analysis was to reduce data to an intelligible and interpretable form so that relations of research problem can be studied and evaluated. In qualitative research, data analysis is essentially examining data closely to find out subjective meanings located within them (Leedy & Ormrod, 2020: 114). Qualitative data analysis is the range of processes and procedures whereby one moves the qualitative data that has been collected, into some form of explanation, interpretation of the people and situations being investigated (Braun & Clarke, 2013: 202). Interviews were first transcribed and presented in Microsoft Word using thematic content analysis. Thematic content analysis is about examining the data to extract key themes in the transcripts (Bryman & Cramer, 2012: 13). Themes are built up from a group of codes, which relates to the research focus. According to Braun and Clarke (2013) and Bezuidenhout and Cronje (2021), the thematic method is about identifying, organising, and providing insight into patterns of meanings across a data set. They state that it is a way to identify what is common in a topic based on how participants have written or talked about it. For qualitative data, which comprised of recordings, the researcher looked at data from different angles, identified concepts and organized data under common themes based on the sections of the semi-structured interview (see Appendix A).

With the collected quantitative data, the researcher used descriptive statistics. Descriptive statistics, for example, indicate number of people for each of the units measured (Connaway & Powell, 2010: 269). The numerical data collected was analyzed using the statistical analysis tool inbuilt into the Excel spreadsheet program. Graphs and charts were created to represent the responses. Interpreting data involves summarising the findings, discussing the researcher's views and opinions in the context of reviewed literature and the theory informing the study. A side-by-side triangulation was used to present the qualitative and quantitative aspects of the study.

### **3.5 Evaluation of methodology**

A multi-method approach was suitable for this study to understand the competencies required by academic librarians in using online meeting platforms for enhancing postgraduate students' information searching, retrieval and use skills to meet their information needs, using a private higher education institution as a case study. The case study design worked well in responding to the three research questions generated to address the study's objective. Institution X proved to be a fertile research site from which to generate data required to respond to the study's research questions. Non-probability purposive sampling was relevant for qualitative data collection from librarians whilst a census was appropriate for quantitative data collection from postgraduate students. Data collection instruments (a semi-structured interview and a structured questionnaire) were effective in collecting the required data. The design of the instruments was well informed by the research questions guiding the study, literature reviewed and Wilson's theory of information behaviour supporting the study. Pre-testing the research instruments enhanced their reliability and validity for data collection purposes. For data analysis, thematic content analysis (qualitative data) and descriptive statistics (quantitative data) were useful in showing patterns and trends in the data collected. These patterns and trends were usefully visualised using tables and graphs for purposes of discussion and interpretation of findings.

### **3.6 Chapter summary**

Chapter Three discussed the methodology that was used to investigate Institution X's librarians' knowledge and skills and find out if the training they offer students does benefit postgraduate students and improve their information searching skills for purposes of meeting their information needs. After declaring the study's multi-method approach and case study design, the research population and justification of the choice of participants were discussed. Purposive sampling for librarians and a census for the postgraduate students from different Schools at Institution X were highlighted. This chapter also explained the study's research methods, discussing the techniques that were used to collect data. The chapter outlined the study's research instruments (semi-structured interview and structured questionnaire), as well as provided an explanation of how they were developed and pre-tested. Validity and reliability issues were engaged, with ethical issues relating to

this study discussed. The data analysis, presentation, and interpretation methods were discussed. The next chapter presents the findings of the study.

## **CHAPTER FOUR: PRESENTATION OF FINDINGS**

### **4.1 Introduction**

Chapter Three presented the research methodology adopted for the study and included discussion of the research approach, design and data collection methods used to address the objective of the study. The objective of the study was to understand the competencies required by academic librarians in using online meeting platforms for enhancing postgraduate students' information searching, retrieval and use skills to meet their information needs. Three research questions were generated to address the objective of the study:

- What competencies are required by academic librarians to deliver information literacy training using online meeting platforms?
- What competencies do the academic librarians of the selected higher education institution currently possess for delivering information literacy training via online means?
- What challenges (if any) are the academic librarians of the selected higher education institution facing in providing postgraduate students with online information literacy training to meet their information needs?

This chapter presents findings from the semi-structured interviews (see Appendix A) with purposively selected academic librarians and a structured questionnaire (see Appendix B) administered to postgraduate students from three schools (School of Social Sciences, School of Management and School of Executive Education) at Institution X.

### **4.2 Return rates**

An online questionnaire (see Appendix B) was administered to a census of 300 postgraduate students. A total of 236 questionnaires (79%) were returned, and there were no spoilt questionnaires. The yielded questionnaire return rate was regarded as acceptable for reporting of findings. Where necessary, in the reporting of findings, percentages have been rounded off to the nearest whole figure. In instances where it is useful to show percentages to the first decimal point, the latter has been retained. For the interviews, the eight

purposively selected librarians were all interviewed and recorded (with permission) online via MS Teams.

### **4.3 Presentation of findings**

The presentation of findings in this chapter is according to the research questions which guided the study (see Section 4.1 for the three research questions). However, the section begins with presentation of biographical information of librarians interviewed and postgraduate students surveyed.

#### **4.3.1 Biographical information of librarians**

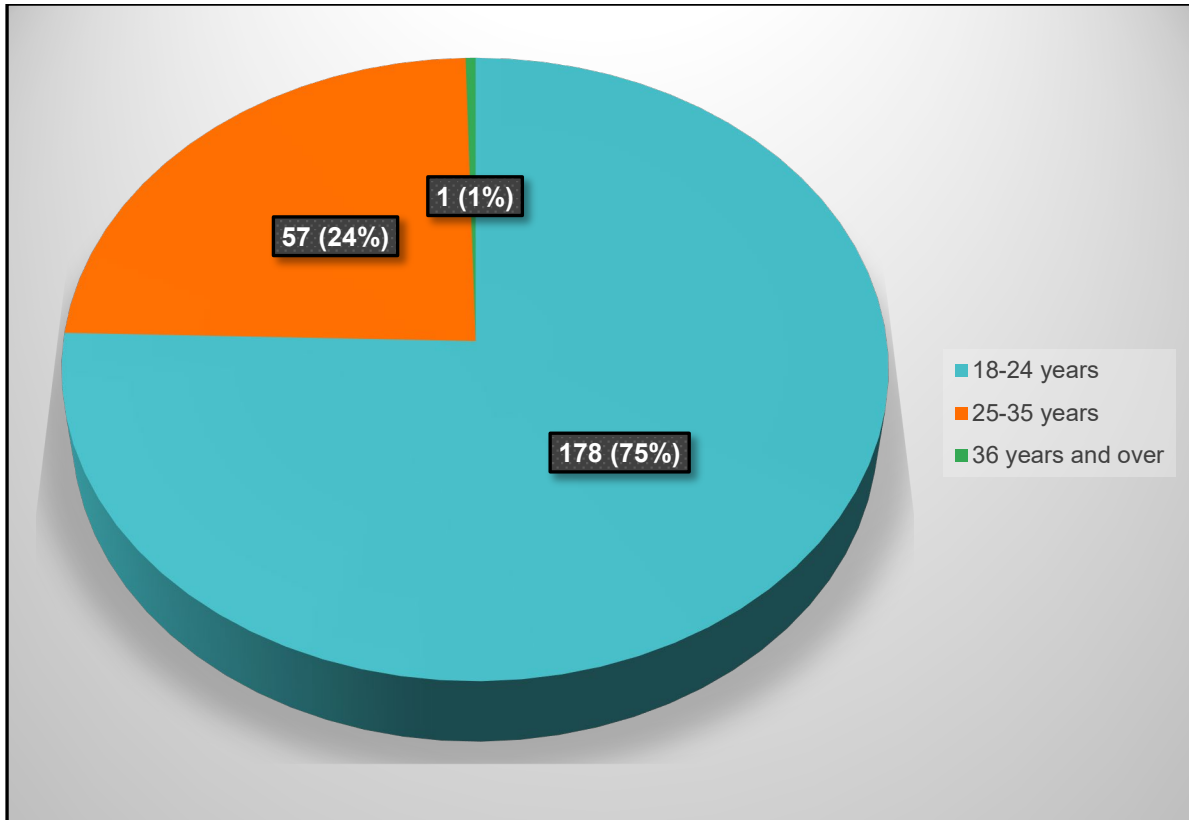
The librarians' biographical information focused on five aspects (see Appendix A) and responses are captured in Table 4.1.

**Table 4.1: Biographical information of librarians interviewed (N=8)**

Librarian	No. of years worked as academic librarian at current institution	No. of years worked as academic librarian in higher education	Highest academic qualification	Highest Library and Information Science (LIS) qualification	Current job title
Librarian 1	2	6	Master in Library and Information Science	Master in Library and Information Science	Postgraduate Information Specialist
Librarian 2	8	8	Postgraduate Diploma in Library and Information Science	Postgraduate Diploma in Library and Information Science	Postgraduate Information Specialist
Librarian 3	4	6	Honours in Information Science	Honours in Information Science	Information Specialist
Librarian 4	4	7	Honours in Information Science	Honours in Information Science	Postgraduate Information Specialist
Librarian 5	5	5	Honours in Information Science	Honours in Information Science	Information Specialist
Librarian 6	7	7	Honours in Information Science	Honours in Information Science	Information Specialist
Librarian 7	2	4	Honours in Information Science	Honours in Information Science	Information Specialist
Librarian 8	2	4	Bachelor of Library and Information Science	Bachelor of Library and Information Science	Information Specialist

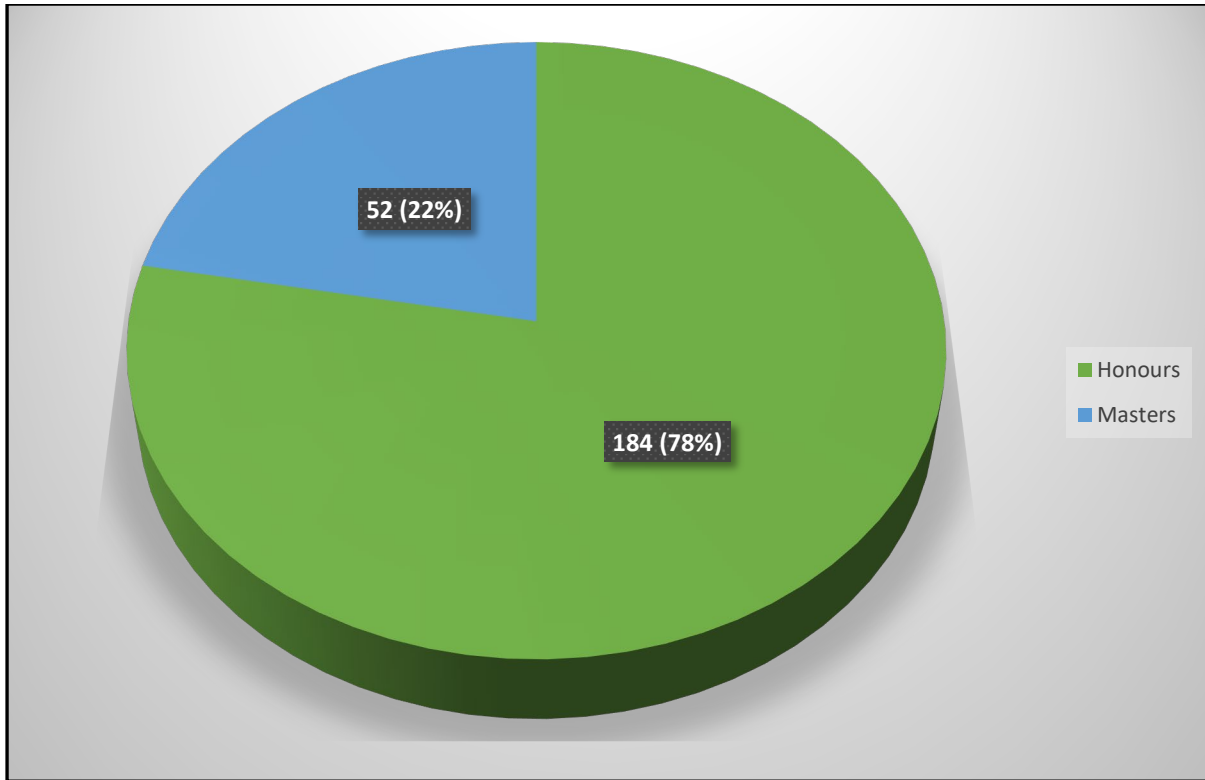
#### **4.3.2 Biographical information of postgraduate students**

The structured questionnaire (see Appendix B) required postgraduate students' biographical details which included the age, level of study and the School they were registered in. The groups were divided into three age ranges as shown in Figure 4.1. The findings show that most of the postgraduate students (178 or 75%) are young adults who fall in the 18-24 age group.



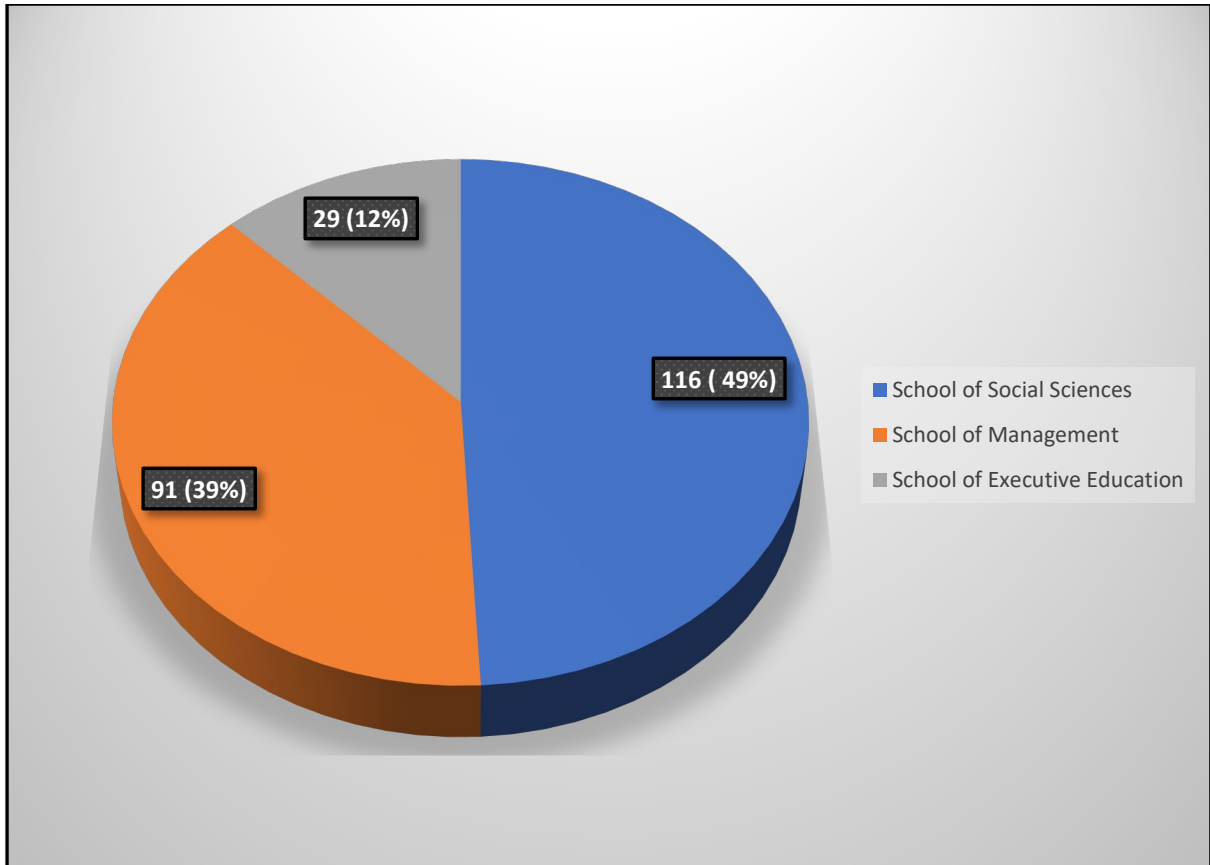
**Figure 4.1: Age of postgraduate students surveyed (N=236)**

Respondents were asked to indicate their level of study, either Honours or Masters. Responses are captured in Figure 4.2 which shows a dominance of Honours students (184 or 78%).



**Figure 4.2: Postgraduate students' level of study (N=236)**

Questionnaire respondents were required to indicate the School (at Institution X) in which they were registered (see Figure 4.3). Most postgraduate student respondents appear to have come from the School of Social Sciences, which is not surprising as this is Institution X's largest school.



**Figure 4.3: School in which postgraduate student respondents were registered (N=236)**

### **4.3.3 Competencies required by academic librarians to deliver information literacy sessions using online meeting platforms**

This section reports findings responding to Research Question 1 (see Section 4.1).

#### **4.3.3.1 Knowledge**

Interviewed academic librarians were asked what knowledge (that is, understanding/theoretical knowledge) they thought is required to deliver information literacy sessions to postgraduate students using online meeting platforms. Table 4.2 captures interviewed librarians' responses.

**Table 4.2: Interviewed librarians' views on knowledge required by academic librarians to deliver information literacy sessions to postgraduate students using online meeting platforms (N=8)**

Knowledge	Examples	Frequency
Knowledge of online meeting platforms	MS Teams, Zoom	8
Understanding how to search and retrieve online information	Navigating databases, OPAC	8
Knowledge on referencing management tools	Harvard, American Psychological Association (APA), Institute of Electrical and Electronics Engineers (IEEE)	8
Understanding research content to support and provide guidance to students	Researcher profiling, intellectual integrity	5
Information management	Acquisition of information resources, evaluation and reporting of information activities	4
Knowledge about the courses and subject disciplines offered on campus	Social Sciences, Business Management, Effective communication	3

Postgraduate student respondents, who were asked a similar question (see Appendix B) were provided with several options as reflected in Figure 4.4. They could select more than one option. None of the respondents selected the 'other' option. Two of the nine options, which were the least popular options selected by postgraduate students, were knowledge of social media and referencing management tools.



**Figure 4.4: Surveyed postgraduate students' views on knowledge required by librarians to deliver information literacy sessions using online meeting platforms (N=236)**

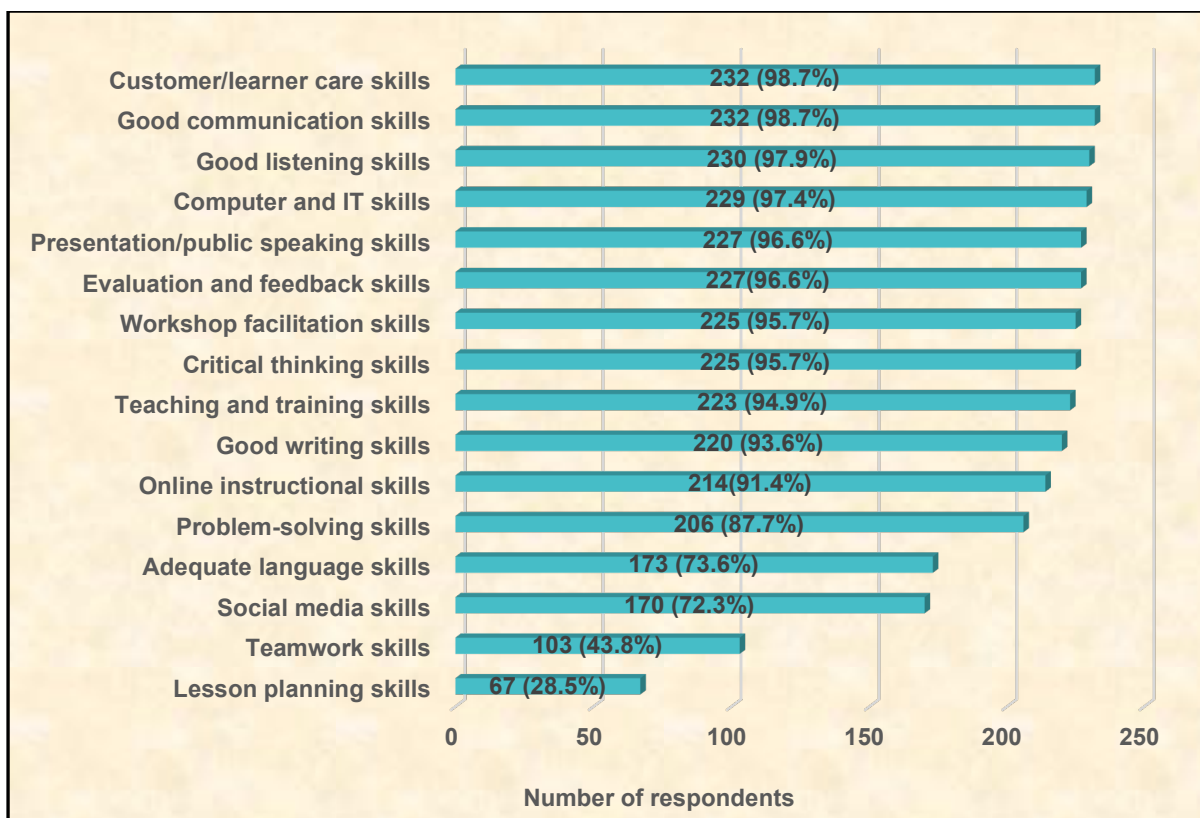
#### **4.3.3.2 Skills**

The librarians interviewed were asked what skills (that is, what one is able to do) they thought are required to deliver information literacy sessions to postgraduate students using online meeting platforms. Skills that were mentioned by all participants include technological, communication and customer care skills (see Table 4.3).

**Table 4.3: Interviewed librarians’ views on skills required by academic librarians to deliver information literacy sessions to postgraduate students using online meeting platforms (N=8)**

Skills	Frequency
Technological skills	8
Communication skills	8
Customer care skills	8
Research skills	5
Time management skills	4
Presentation/public speaking skills	4
Collaboration skills	3
Listening skills	3
Organizational and planning skills	2
Writing skills	2
Teaching and instructional skills	2
Facilitating and engaging skills	1

Postgraduate student respondents were asked to indicate (from a list of options provided) what skills they would expect Institution X librarians to possess to deliver information literacy sessions using online meeting platforms. Figure 4.5 captures their responses, and they could select multiple options (see Appendix B, Question 5). None of the respondents selected the ‘other’ option. Teamwork and lesson planning skills were the least popular selected options by postgraduate students surveyed.



**Figure 4.5: Surveyed postgraduate students' views on skills required by academic librarians to deliver information literacy sessions using online meeting platforms (N=236)**

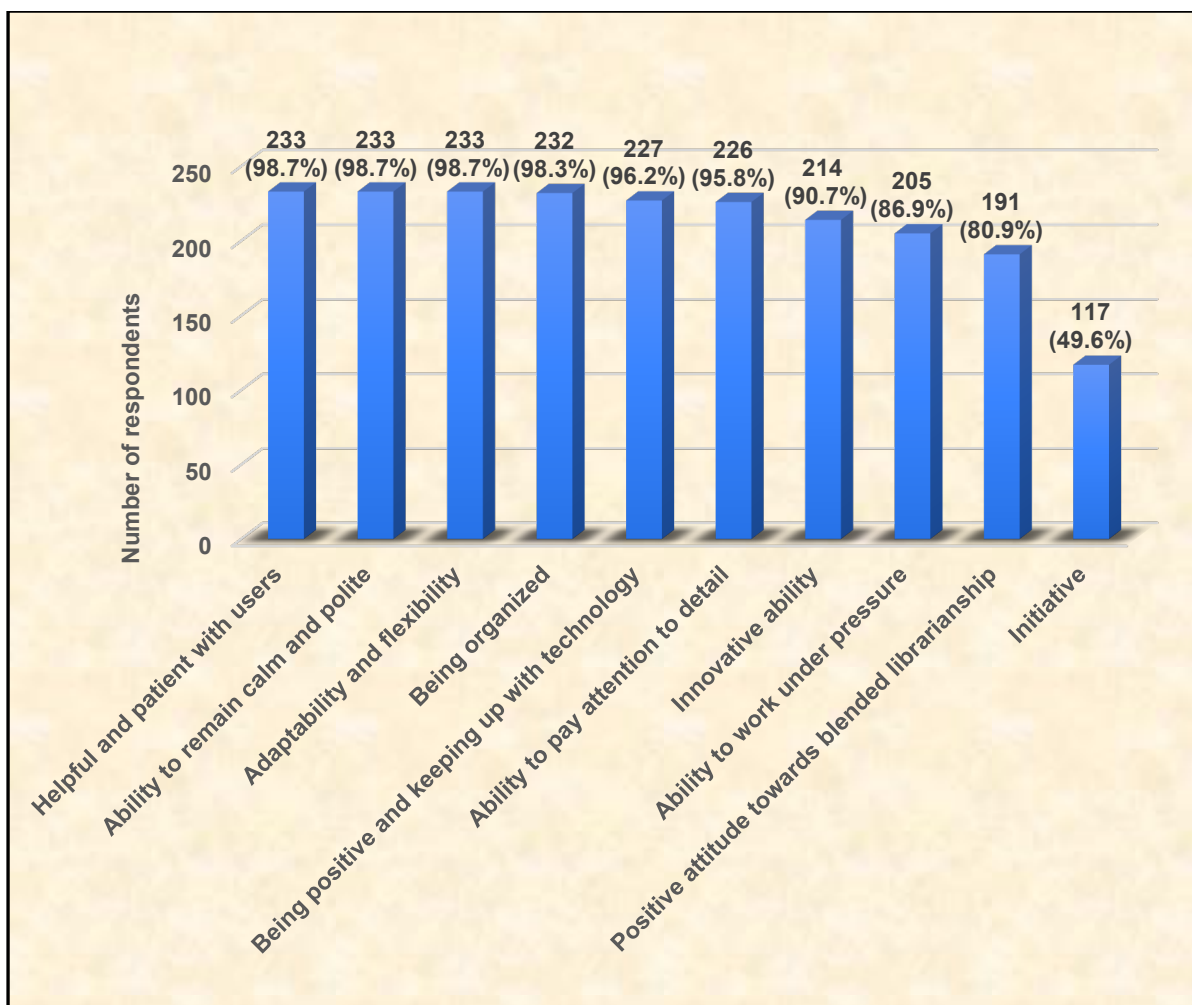
#### **4.3.3.3 Personal attributes**

Interviewed librarians were asked what personal attributes (attitudes, values, and character traits) they thought are required by academic librarians to deliver information literacy sessions to postgraduate students using online meeting platforms. Table 4.4 presents their responses. Being inquisitive and emotional intelligence were the least selected personal attributes.

**Table 4.4: Interviewed librarians’ views on personal attributes required by academic librarians to deliver information literacy sessions to postgraduate students using online meeting platforms (N=8)**

Personal attributes	Frequency
Approachable	8
Patient	8
Adaptable	6
Flexible	5
Passionate	5
Critical thinking	4
Emotional intelligence	3
Inquisitive	2

Postgraduate student respondents were asked to indicate (again from a list of options provided) what personal attributes (that is, attitude, values, and character traits) they would expect Institution X librarians to possess for them to deliver information literacy sessions using online meeting platforms. They could select multiple options (see Appendix B, Question 6). None of the respondents selected the ‘other’ option – see Figure 4.6 where initiative seems to be the least popular option selected at below 50%.



**Figure 4.6: Surveyed postgraduate students' views on personal attributes required by academic librarians to deliver information literacy sessions using online meeting platforms (N=236)**

#### **4.3.4 Competencies that academic librarians currently possess for delivering information literacy training via online means**

This section presents the findings that address the study's Research Question 2 (see Section 4.1).

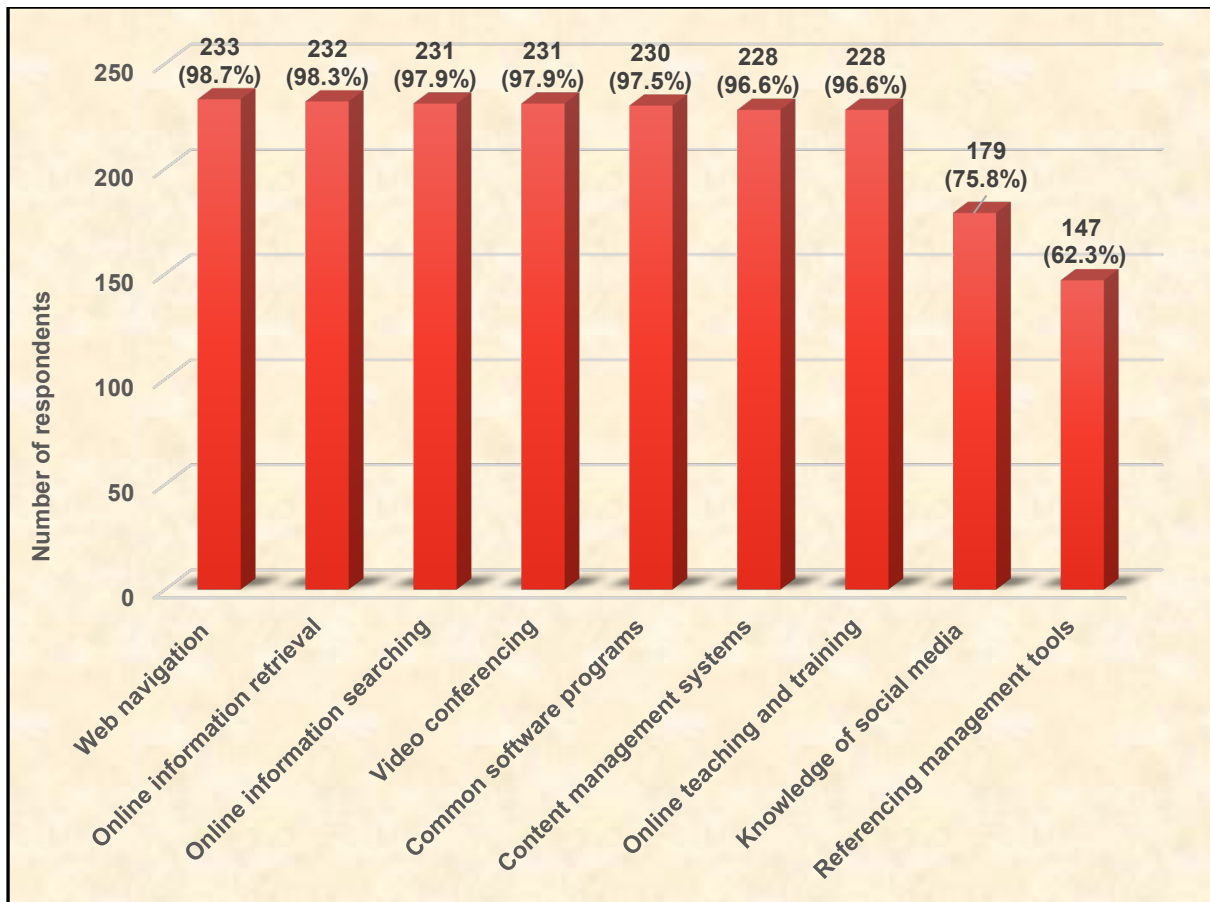
##### **4.3.4.1 Knowledge**

Interviewed academic librarians were asked what knowledge (that is, understanding/theoretical knowledge) they currently possess to deliver information literacy sessions to postgraduate students using online meeting platforms. Table 4.5 captures interviewed librarians' responses.

**Table 4.5: Knowledge interviewed librarians currently possess for delivering information literacy sessions to postgraduate students using online meeting platforms (N=8)**

Knowledge	Frequency
Knowledge of online meeting platforms (e.g., MS Teams, Zoom)	8
In-depth knowledge of electronic resources available at Institution X	8
Knowledge to search and retrieve information through resources on the internet and various webpages	8
Understand intellectual integrity and research techniques	3
Researcher profiling	2
<b>Verbatim responses from the librarians interviewed</b>	
"I have in-depth knowledge of electronic resources and databases which assists me to provide guidance and understanding to postgraduate students in their research skills."	
"I am aware of MS Teams, Zoom and Blackboard and their functionalities and am able to arrange online sessions with the postgraduate students confidently."	
"Searching and retrieval of information online is what an information specialist is taught in the first few months at Institution X. It helps the information specialist therefore impart this knowledge to the students."	
"As an information specialist, I have gained more knowledge and understanding of the different online platforms from my self-interest in technology and ensuring that I motivate myself to remain relevant in my profession."	
"Upskilling of librarians in this 4 <sup>th</sup> industrial revolution is vital even for our profession and therefore one has to continue finding new trends in librarianship and stay abreast with what's happening in Africa and across the borders."	

Postgraduate student respondents were presented with a list of options (as reflected in Figure 4.7) and were asked what knowledge their academic librarians at Institution X currently possess for delivering information literacy sessions using online meeting platforms. They could select more than one option (see Appendix B, Question 7). Web navigation, online information retrieval, online information searching, video conferencing, common software programs, content management systems and online teaching and training each received more than 95% responses from surveyed postgraduate students. None of the respondents selected the 'other' option.



**Figure 4.7: Surveyed postgraduate students' views on knowledge librarians currently possess for delivering information literacy sessions using online meeting platforms (N=236)**

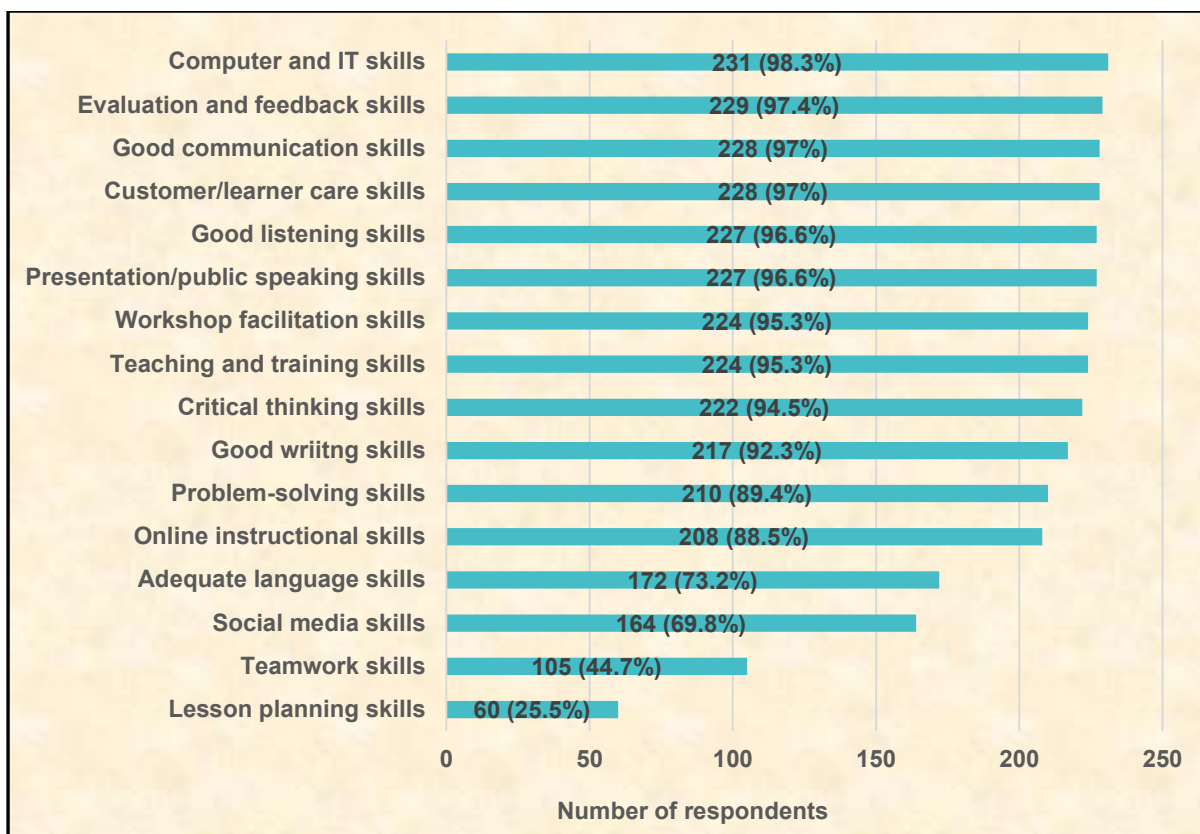
#### 4.3.4.2 Skills

Academic librarians interviewed were asked what skills (that is, what one is able to do) they possess to deliver information literacy sessions to postgraduate students using online meeting platforms. Skills that were mentioned by all participants include technological, communication and presentation skills. Responses are captured in Table 4. 6.

**Table 4.6: Skills interviewed librarians currently possess for delivering information literacy sessions to postgraduate students using online meeting platforms (N=8)**

Skills	Frequency
Technological skills	8
Communication skills	8
Presentation skills	8
Customer care skills	6
Research skills	5
Time management skills	4
Organization and planning skills	2
Networking skills	2

Postgraduate student respondents were also asked about the skills currently possessed by their academic librarians at Institution X for delivering information literacy sessions using online meeting platforms. Figure 4.8 captures the responses of surveyed postgraduate students, and they could select more than one option (see Appendix B, Question 8). The skills that received the most responses were good computer and IT skills, evaluating online instructional experiences and providing feedback to students, good communication skills, good customer/learner care skills, good listening skills, presentation/public speaking skills, workshop facilitation skills and teaching and training skills. None of the respondents selected the 'other' option.



**Figure 4.8: Surveyed postgraduate students' views on skills academic librarians currently possess for delivering information literacy sessions using online meeting platforms (N=235)**

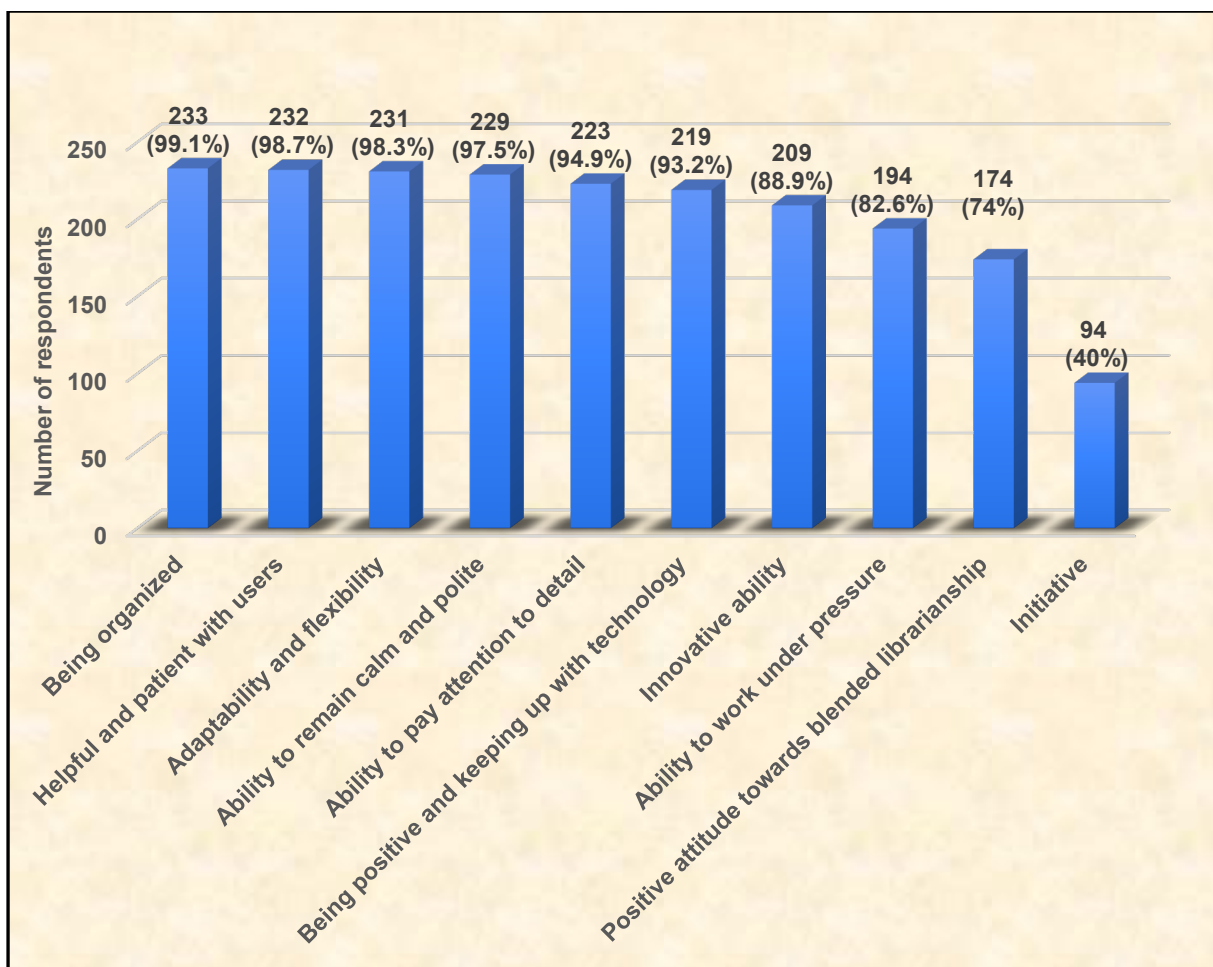
#### 4.3.4.3 Personal attributes

Interviewed librarians' responses to personal attributes (attitudes, values, and character traits) they currently possess to deliver information literacy sessions to postgraduate students using online meeting platforms are captured in Table 4.7. It is interesting to observe that the personal attribute 'approachable', seems to have been presented once again by all academic librarians interviewed and the least mentioned personal attributes were critical thinking and being proactive.

**Table 4.7: Personal attributes interviewed librarians currently possess for delivering information literacy sessions to postgraduate students using online meeting platforms (N=8)**

Personal attributes	Frequency
Approachable	8
Respectful	6
Adaptable	6
Flexible	5
Critical thinking	4
Proactive	4

Postgraduate student respondents were asked to indicate personal attributes which are currently possessed by their academic librarians at Institution X for delivering information literacy sessions using online meeting platforms. More than one option could be selected (see Appendix B, Question 9). The 'other' option was not selected by any of the respondents. Figure 4.9 captures the results. Once again, initiative was the least selected option by postgraduate students.



**Figure 4.9: Surveyed postgraduate students' views on personal attributes academic librarians currently possess for delivering information literacy sessions using online meeting platforms (N=235)**

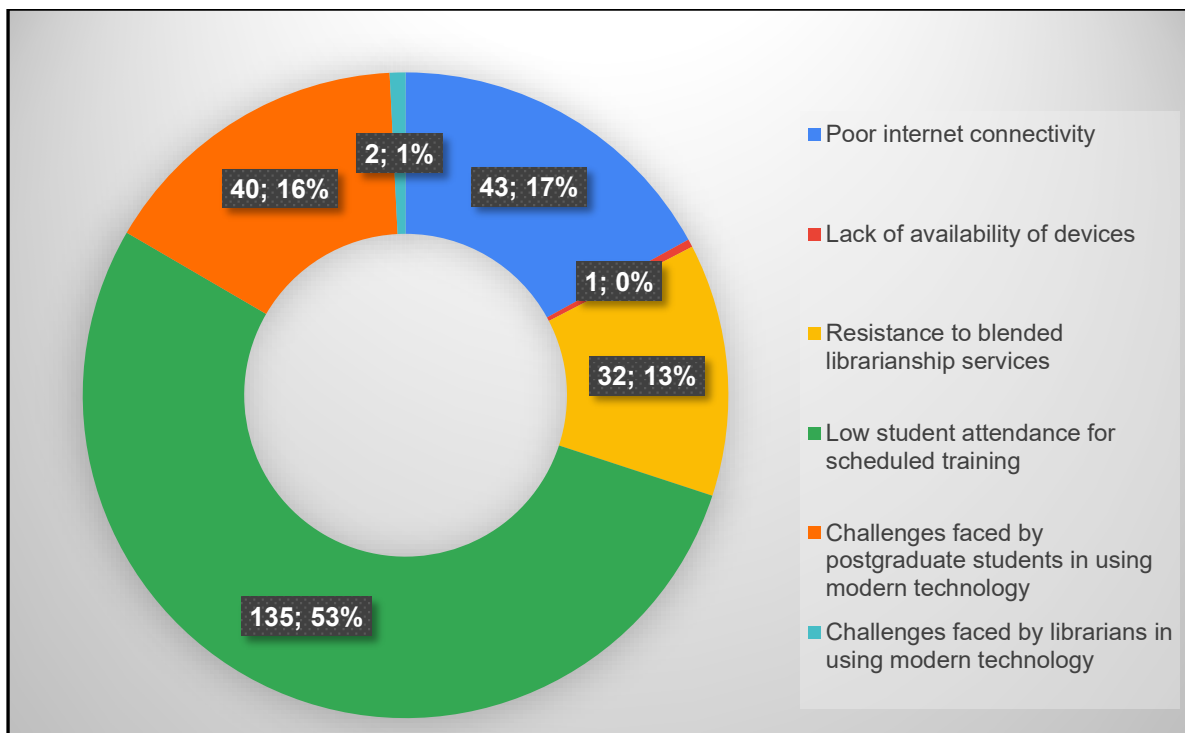
#### **4.3.5 Challenges faced by academic librarians in providing postgraduate students with online information literacy training to meet their information needs**

Interviewed academic librarians were asked about challenges faced at their institution in providing postgraduate students with online information literacy training to meet their information needs. Six of the eight participants indicated that power loadshedding and poor attendance in scheduled online training sessions remain the two biggest challenges faced, as students joining online generally do not have back-up at their homes to continue participating in the scheduled online information training sessions; in addition, some students do not show interest in joining online information literacy training sessions. One librarian remarked, "loadshedding disrupts connectivity on the students, side as Institution X has back-up power". Table 4.8 summarizes the librarians' responses.

**Table 4.8: Interviewed librarians' views on challenges they face in providing postgraduate students with online information literacy training to meet their information needs (N=8)**

Challenges	Frequency
Power loadshedding disruptions	6
Poor attendance in scheduled online training sessions	6
Lack of participation and engagement in online training sessions	5
Limited information resources for postgraduate students	4
Time allocation for scheduled online training sessions is limited	4
Over-reliance on librarians by students to help with their research studies	3
Librarianship is 'undermined' therefore services provided are not valued, including the online training sessions	2

Postgraduate student respondents were presented, in the questionnaire (see Appendix B, Question 10) with a list of options (as shown in Figure 4.10) from which to select challenges they think are faced by academic librarians at their institution, in providing postgraduate students with online information literacy training to meet their information needs. They could select multiple options. This question had the least number of responses (184) from postgraduate students and could perhaps be an indication that the students were not in a position to identify these challenges, that is, they did not have enough knowledge to be able to do so. No selection was made of the 'other' option. It is interesting to observe that, like the interviewed librarians, postgraduate student respondents too cite 'low attendance' at scheduled training sessions as a major challenge.



**Figure 4.10: Surveyed postgraduate students' views on challenges faced by academic librarians in providing postgraduate students with online information literacy training to meet their information needs (N=184)**

#### 4.3.6 General

The researcher ended the two data collections instruments (interviews and structured questionnaire) by asking if interview participants and questionnaire respondents had any additional comments relating to the subject of the research (see Appendices A and B). Seven of the eight interviewed librarians did not have any additional comments to make. One librarian commented that, “librarians need to continue being provided with opportunities to upskill themselves in this digital era”.

Postgraduate student respondents had no comments to make under general.

#### 4.4 Chapter summary

Chapter Four presented the findings of the study organized according to the research questions guiding the study. The findings emanated from analysis of data collected at Institution X by means of semi-structured interviews with librarians and an online structured questionnaire administered to postgraduate students. Findings were presented according to the three categories of competencies (that is, knowledge, skills and personal attributes) as

the core competencies required by LIS professionals in the digital age academic library to meet users' evolving information needs. The next chapter discusses the main findings in terms of the study's objective and its research questions, Wilson's theory of information behaviour informing the study and the literature reviewed for the study.

## **CHAPTER FIVE: DISCUSSIONS OF MAIN FINDINGS, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

In this final chapter, the researcher discusses the main findings in the context of the research objective which was to understand the competencies required by academic librarians in using online meeting platforms for enhancing postgraduate students' information searching, retrieval and use skills to meet their information needs. To address the study's objective the following research questions were generated: What competencies are required by academic librarians to deliver information literacy training using online meeting platforms?; What competencies do the academic librarians of the selected higher education institution currently possess for delivering information literacy training via online means? and What challenges (if any) are the academic librarians of the selected higher education institution facing in providing postgraduate students with online information literacy training to meet their information needs?

This chapter discusses the main findings in terms of the study's research questions mentioned above, Wilson's (1999) theory of information behaviour informing the study and the literature reviewed. Based on this discussion, conclusions are drawn and recommendations are made.

### **5.2 Discussion of main findings**

Main findings as per each of the three research questions guiding the study, are covered in this section.

#### **5.2.1 What competencies are required by academic librarians to deliver information literacy training using online meeting platforms?**

This section discusses the findings that addressed the study's first research question.

##### **5.2.1.1 Knowledge (that is, understanding/theoretical knowledge)**

Interviewed librarians and surveyed postgraduate students identified knowledge of online meeting platforms and understanding how to search and retrieve online information (see Table 4.2 and Figure 4.4), as the topmost required knowledge for academic librarians to deliver information literacy sessions to postgraduate students using online meeting

platforms. Wilson's (1999) theory of information behaviour has significant relevance to these findings as it provides a clear representation of the relation between users' (in this study, postgraduate students) information behaviour and usage of different information resources though the knowledge shared by academic librarians in the scheduled information literacy sessions. Postgraduate students start searching for information when they realize that the information they have is not adequate for their research and assignments.

Interviewed librarians and surveyed postgraduate students selected use of video conferencing tools such as Microsoft Teams and Zoom and online teaching and training as well as web navigation as vital knowledge sets required to deliver information literacy sessions using online meeting platforms. This finding aligns with the literature (Boholano, 2017: 22) which indicates web conferencing tools aid interactions between libraries and their users, regardless of where users are located and how they access library services and information resources.

Social media and referencing management tools were least selected by surveyed postgraduate students as knowledge sets required by academic librarians. It is interesting to observe that, compared to other academic librarian knowledge sets, postgraduate students do not seem to view librarians as requiring to utilize social media platforms such as WhatsApp and Instagram. However, a study by Omini and Osuolale (2019: 3) highlighted that social media platforms have indeed become the new avenue for academic librarians to interact with students and researchers. It is a pity that, for triangulation purposes, the interviewed librarians were silent on the matter of social media. Higher education institutions in countries in the global north generally provide free or inexpensive internet access to students, whereas the situation could be different in developing countries, such as South Africa, as they are characterized by high-cost internet connectivity as well as constant power supply outages, as highlighted in a study by Bakti et al. (2020: 3). The latter presents a hindrance to librarians for them to stay abreast of current trends (including social media) in improving support to library users in the modern digital age, and this could very well apply to the academic librarians at Institution X. With regards to reference management, most interviewed librarians pointed out the importance of referencing techniques (for example, Harvard, American Psychological Association (APA) and Institute of Electrical and

Electronics Engineers (IEEE) as knowledge that needs to be imparted to postgraduate students. They also emphasized the importance of referencing especially at postgraduate level where acknowledging sources is vital for academic integrity. Such acknowledgement would include the use of referencing management tools, for example Mendeley and Zotero, in the information literacy sessions for postgraduate students to assist them in reference management in their studies. This deviates somewhat from postgraduate students' responses (see Figure 4.4) reflecting referencing management tools as the least selected option for knowledge they think is required by academic librarians. However, a score of 63.1% is still significant, albeit the least selected option, and thus still conveying the relative importance of this knowledge set for academic librarians.

#### **5.2.1.2 Skills (that is, what one is able to do)**

Information literacy is regarded as indispensable to use and search for information in a sophisticated era (Munshi & Nagar, 2016: 2). Skills which all interviewed librarians believe are required to deliver information literacy sessions to postgraduate students using online meeting platforms, include technological, communication and customer/learner care skills. It is useful to note that these skills mentioned by all eight interviewed librarians were also among the most selected by surveyed postgraduate students. This common finding among both interviewed librarians and surveyed postgraduate students is also reiterated in literature (Hamad, Al-Fadel & Fakhouri, 2021: 594; Eclevia, 2022: 8) which indicates that technological and communication skills are commonly sought skills among librarians. And indeed, given the current digital academic environment, academic librarians are required to be tech savvy for the provision of electronic reference services required especially for postgraduate students who are enrolled for distance learning. As stated by Izuagbe et al. (2019: 4), the extent to which technology deployment permeates a sector or an economy (in the case of this study, Institution X) is a direct reflection of its ICT model and the extent to which citizens (for example, academic librarians and postgraduate students) are equipped technologically.

About half of the interviewed librarians mentioned research skills, time management and presentation/public speaking skills as being important in delivering information literacy sessions to postgraduate students using online meeting platforms (see Table 4.3). While

surveyed postgraduate students also prioritized the selection of presentation/public speaking skills for academic librarians, they also emphasized the importance of evaluation and feedback skills; good writing skills; workshop facilitation skills; critical thinking skills; teaching and training skills; online instructional skills; problem-solving skills, adequate language skills; and social media skills as vital for academic librarians (see Figure 4.5). Wilson's (1999) theory of information behaviour has relevance here in that postgraduate students' behavioural skills in terms of their ways of searching for relevant content and time for adequate decision-making for their research assignments, is crucial for their academic success.

Skills that were the least selected (below 50%) by both interviewed librarians and surveyed postgraduate students are organizational and planning skills, teaching and instructional skills, facilitating and engaging skills, as well as teamwork and lesson planning skills. However, the literature (McTavish & Robertson, 2020: 172) strongly emphasizes the need for librarians to be able to organize, plan and work as a team in an institution of higher learning to sufficiently teach information literacy skills effectively in a workplace. Hence these skill sets, although not prioritized by both interviewed librarians and surveyed postgraduate students, may still be regarded as being important for academic librarians working in the digital information environment.

### **5.2.1.3 Personal attributes (attitudes, values and character traits)**

In Exner's (2019: 14) study, flexibility and adaptability were identified as some of the crucial personal attributes required for academic librarians in the digital age. In this study, personal attributes that were among the top selected options by postgraduate students and mentioned by most of the interviewed librarians included (see Table 4.4 and Figure 4.6): being helpful and patient with users; ability to remain calm and polite; adaptability and flexibility; innovative ability; and ability to work under pressure. Other important personal attributes significantly selected by the surveyed postgraduate students, although not mentioned by the interviewed librarians, include being organized, being positive and keeping up with technology, ability to pay attention to detail and positive attitude towards blended librarianship. It is the view of the researcher that these personal attributes that emerged in the study are indeed important as postgraduate students need librarians who

pay attention to user related queries at an individual level and librarians that can accommodate different users' needs. These information needs may range from postgraduate students who have been out of school for years and may struggle to grasp academic writing skills and referencing concepts, to students who are unable to navigate through academic databases to find and evaluate relevant information for their studies.

Findings from the interviewed librarians and surveyed postgraduate students tend to align in that in both sets of findings being inquisitive, taking initiative and emotional intelligence were the least selected personal attributes, yet these attributes are highlighted in the literature (Eclevia, 2022: 5) where thinking proactively, taking on tasks before being asked to do so, as well as an active desire to research and seek more information, are regarded as important attributes required by librarians to effectively work in online information environments.

To sum up the discussion in Section 5.2.1, a blend of competency sets (knowledge, skills and personal attributes) emerged as required for academic librarians to effectively deliver information literacy training using online meeting platforms. The knowledge sets required include: knowledge of online meeting platforms; understanding how to search and retrieve online information; web navigation; video conferencing tools such as Microsoft Teams and Zoom; online teaching and training; social media; and referencing management tools (for example Mendeley and Zotero). Skill sets for academic librarians that emerged from the study include: technological skills; customer/learner care skills; good communication skills; presentation/public speaking skills; research skills; time management skills; evaluation and feedback skills; workshop facilitation skills; critical thinking skills; teaching and training skills; problem-solving skills; good writing skills; lesson planning skills; adequate language; and online instructional skills. Important personal attributes required for academic librarians to deliver information literacy training using online meeting platforms that emerged from the study include: being helpful and patient with users; ability to remain calm and polite; adaptability and flexibility; being organized; being positive and keeping up with technology; ability to pay attention to detail; ability to work under pressure; being inquisitive; taking initiative; emotional intelligence; and innovative ability. Academic librarians may not have all the mentioned competencies but these may be continually learnt and adopted in the digital information environment.

## **5.2.2 What competencies do the academic librarians of the selected higher education institution currently possess for delivering information literacy training via online means?**

This section discusses the findings that addressed the study's second research question.

### **5.2.2.1 Knowledge (that is, understanding/theoretical knowledge)**

In African countries, many institutions of higher learning are providing information literacy training sessions aimed at imparting knowledge to postgraduate students to assist them in passing their degree programmes successfully (Msoffe, Mongi & Buhomoli, 2023: 3). The literature does correlate with the findings from surveyed postgraduate students that academic librarians at Institution X do possess vital knowledge competencies for their scheduled information literacy training sessions.

Postgraduate student respondents indicated web navigation, online information retrieval, online information searching, video conferencing, common software programs, content management systems and online teaching and training as the topmost selected LIS knowledge competencies possessed by Institution X academic librarians to meet their library related information needs (see Figure 4.7). These knowledge competencies each received more than 95% responses from surveyed postgraduate students indicating the librarians' ability to navigate through search engines and use of technology to deliver effective library services. Thus, the ability of librarians to impart knowledge through training students on how new technology is used to access information (Izuagbe et al. 2019: 4) is an indication of the extent to which Institution X librarians are engaging in upskilling themselves to adapt to technology changes in meeting postgraduate students' library related information needs. All interviewed librarians highlighted that they are knowledgeable with the use of online meeting platforms such as Microsoft Teams and Zoom, have in-depth knowledge of electronic resources available at Institution X and the ability to search and retrieve information through resources on the internet and various webpages.

Wilson's theory (1999) indicates that information behaviour is about users being able to identify when relevant information is required, evaluating and applying this information. Postgraduate students may use various information resources such as searching on Google, asking their peers, their lecturers and sometimes consulting with the librarians. This shows

the importance of knowledge competencies for librarians to train postgraduate students during information literacy sessions as highlighted in this study by interviewed librarians and acknowledged by the surveyed postgraduate students in their responses.

Knowledge of social media and referencing management tools were the least selected options by surveyed postgraduate students, albeit with significant percentage scores 75.8% and 62.3%, respectively (see Figure 4.7) and ironically interviewed academic librarians did not mention these as essential knowledge competencies they possess. However, a study by Omini and Osuolale (2019: 3) highlighted social media platforms as a new trend for academic librarians to interact with library users in the digital era. Perhaps the lack of mention of knowledge of social media and referencing management tools was an oversight on the part of interviewed academic librarians.

#### **5.2.2.2 Skills (that is, what one is able to do)**

The findings of the study have shown that surveyed postgraduate students have strongly acknowledged that academic librarians at Institution X currently possess diverse skills competencies necessary in providing information literacy training using online meeting platforms. Skills that were selected by majority of surveyed postgraduate students (above 90% - see Figure 4.8) include: computer and IT skills; evaluation and feedback skills; good communication skills; customer/learner care skills; good listening skills; presentation/public speaking skills; workshop facilitation skills; teaching and training skills; critical thinking skills; and good writing skills. It is interesting to note that popular skills mentioned by interviewed librarians were similar to the options selected by surveyed postgraduate students. This common finding among both interviewed librarians and surveyed postgraduate students is also reiterated in the literature (Ugwu & Ekere, 2019: 359) which highlights that technological, communication and critical thinking skills are commonly sought skills among librarians in offering services to their users. Given the current digital academic environment we find ourselves in, librarians are required to be tech savvy for the provision of online services required especially for postgraduate students who are enrolled for distance learning and require utilizing databases available in an institution for their research and assignments. In this study postgraduate student respondents shared the same sentiments as interviewed librarians regarding the positive impact of technology on the roles and functions of academic librarians at Institution X.

The least selected skills by both surveyed postgraduate students and interviewed librarians (below 50%) include teamwork skills, lesson planning skills, networking skills and organization and planning skills (see Figure 4.8 and Table 4.6). On the contrary, the literature (McTavish & Robertson, 2020: 172) emphasizes the need for librarians to be able to organize, plan and network for them to adequately impart information literacy skills to users. Hence these skill sets, although not prioritized by both surveyed postgraduate students and interviewed librarians, may still be regarded as being required for academic librarians working in the current digital age. Wilson's (1999) theory of information behaviour has relevance here in that postgraduate students' behavioural skills in terms of the ways of planning and organizing their search strategies for relevant content for their assignments and research reports, is vital for their academic success – such skills are imparted to postgraduate students by their academic librarians.

### **5.2.2.3 Personal attributes (attitudes, values and character traits)**

In a study by Exner (2019: 22) adaptability was identified as one of the crucial personal attributes required for LIS professionals in the digital age academic library environment. Similarly, postgraduate student respondents and interviewed librarians in this study also identified personal attributes such as being organized; being helpful and patient with users; adaptability and flexibility; ability to remain calm and polite; ability to pay attention to detail; being positive and keeping up with technology; innovative ability; and ability to work under pressure, as personal attributes possessed by academic librarians at Institution X. These personal attributes are also highlighted in the literature, for example Kennan (2016: 10), where adaptability and flexibility are noted as being some of the most important attributes required in the librarianship field. It is interesting to observe that the personal attribute 'approachable', seems to have been presented once again by all interviewed academic librarians, clearly reflecting a vital behavioral user aspect in the librarian's role (Wilson, 1999).

The least mentioned personal attribute was 'initiative' which was only mentioned by the surveyed postgraduate students (40% - see Figure 4.9) and not by the interviewed academic librarians. However, this attribute is emphasized in literature (Eclevia, 2022: 5) where initiating things independently as well as an active desire to research and seek more

information, is regarded as an important attribute required by librarians to effectively work in online information environments.

In summary of Section 5.2.2, a blend of competencies (knowledge, skills and personal attributes) currently possessed by Institution X academic librarians for delivering information literacy training via online means include: knowledge sets such as web navigation; online information retrieval; online information searching; video conferencing; common software programs; content management systems; online teaching and training; knowledge of social media; and referencing management tools. Skill sets highlighted include: computer and IT skills; evaluation and feedback skills; good communication skills; customer/learner care skills; good listening skills; presentation/public speaking skills; workshop facilitation skills; teaching and training skills; critical thinking skills; good writing skills; teamwork skills; lesson planning skills; and organizational and planning skills. Lastly, personal attributes emphasized include: being organized; being helpful and patient with users; adaptability and flexibility; ability to remain calm and polite; ability to pay attention to detail; being positive and keeping up with technology; innovative ability; taking initiative; and ability to work under pressure.

### **5.2.3 What challenges (if any) are the academic librarians of the selected higher education institution facing in providing postgraduate students with online information literacy training to meet their information needs?**

Findings of the study unveiled various challenges faced by interviewed academic librarians at their institution, in providing postgraduate students with online information literacy training to meet their information needs. Most of the interviewed librarians and a majority of the surveyed postgraduate students (see Table 4.8 and Figure 4.10, respectively) indicated that power loadshedding disruptions; poor attendance in scheduled online training sessions; lack of participation and engagement in online training sessions; limited time allocation for scheduled online training sessions; poor internet connectivity; challenges faced by postgraduate students in using modern technology; over-reliance on librarians by postgraduate students to help with their research studies and student resistance to blended librarianship services, remain the biggest challenges faced by Institution X academic librarians. It would appear that students joining online generally do not have back-up power supply at their homes to continue (during power loadshedding) participating in scheduled

online information training sessions. One librarian remarked, “loadshedding disrupts connectivity on the student’s side as Institution X has back-up power”. In addition, some students do not show interest in joining online information literacy training sessions.

Librarians are vital as a professional group and their role continues to broaden in the digital age. Postgraduates may not be aware of their exact information needs. Additionally, the librarian should be available to mitigate anxiety levels of students by supporting them to overcome their fears of information overload. Hence, librarians need to adopt individual approaches with their different users, a librarian competency supported by Wilson’s (1999) theory of information behaviour. Postgraduate students in some instances struggle with utilizing modern technologies as they may have been out of school for many years (an example of user behaviour). As they register for further studies in postgraduate programmes, refresher training on how to search and find relevant information to answer their assignment questions and conduct research is required (Aslam, 2021: 57). Students’ use of modern technologies can contribute to higher education academic success. Hence librarians providing support through online information literacy training to students to meet their information needs is necessary.

In summary, challenges encountered by academic librarians at Institution X in providing postgraduate students with online information training include: power loadshedding disruptions; poor attendance in scheduled online training sessions; lack of participation and engagement in online training sessions; limited time allocation for scheduled online training sessions; poor internet connectivity; challenges faced by postgraduate students in using modern technology; over-reliance on librarians by postgraduate students to help with their research studies and resistance to blended librarianship services; during power loadshedding students joining online generally do not have back-up at their homes to continue participating in schedule online information literacy training sessions; and some students do not show interest in joining these online training sessions.

### **5.3 Conclusions**

Based on the discussion of the main findings in response to each of the three research questions generated to address the study’s objective, the following conclusions may be drawn:

**5.3.1** A blend of competency sets (knowledge, skills and personal attributes) are required for academic librarians to effectively deliver information literacy training using online meeting platforms. Knowledge sets required include: knowledge of online meeting platforms; understanding how to search and retrieve online information; web navigation; video conferencing tools such as Microsoft Teams and Zoom; online teaching and training; social media; and referencing management tools (for example Mendeley and Zotero). Skill sets include: technological skills; customer/learner care skills; good communication skills; presentation/public speaking skills; research skills; time management skills; evaluation and feedback skills; workshop facilitation skills; critical thinking skills; teaching and training skills; problem-solving skills; good writing skills; lesson planning skills; adequate language; and online instructional skills. Important personal attributes required for academic librarians to deliver information literacy training using online meeting platforms include: being helpful and patient with users; ability to remain calm and polite; adaptability and flexibility; being organized; being positive and keeping up with technology; ability to pay attention to detail; ability to work under pressure; being inquisitive; taking initiative; emotional intelligence; and innovative ability.

**5.3.2** A blend of competencies (knowledge, skills and personal attributes) are currently possessed by Institution X academic librarians for delivering information literacy training via online means and these include knowledge sets such as web navigation; online information retrieval; online information searching; video conferencing; common software programs; content management systems; online teaching and training; knowledge of social media; and referencing management tools. Skill sets include: computer and IT skills; evaluation and feedback skills; good communication skills; customer/learner care skills; good listening skills; presentation/public speaking skills; workshop facilitation skills; teaching and training skills; critical thinking skills; good writing skills; teamwork skills; lesson planning skills; and organizational and planning skills. Personal attributes include: being organized; being helpful and patient with users; adaptability and flexibility; ability to remain calm and polite; ability to pay attention to detail; being positive and keeping up with technology; innovative ability; taking initiative; and ability to work under pressure.

**5.3.3** Challenges encountered by academic librarians at Institution X in providing postgraduate students with online information training include: power loadshedding

disruptions; poor attendance in scheduled online training sessions; lack of participation and engagement in online training sessions; limited time allocation for scheduled online training sessions; poor internet connectivity; challenges faced by postgraduate students in using modern technology; over-reliance on librarians by postgraduate students to help with their research studies and resistance to blended librarianship services; during power loadshedding students joining online generally do not have back-up at their homes to continue participating in scheduled online information literacy training sessions; and some students do not show interest in joining these online training sessions.

#### **5.4 Recommendations**

Based on the conclusions presented in Section 5.3, the study makes the following recommendations:

**5.4.1** Provision of institution sponsored and/or via librarian self-development training opportunities to improve the blend of competencies (knowledge, skills and attributes) required, should be put in place by the institution and/or be self-initiated by academic librarians for them to upskill as well as close gaps between current competency possession and required competencies, for effective provision of information literacy training using online meeting platforms to respond to the information needs of postgraduate students.

**5.4.2** It would serve the library of Institution X as well as other similar academic libraries in private or public higher education institutions to be cognizant of the challenges encountered by academic librarians, that emerged in the study, in providing postgraduate students with online information literacy training to meet their information needs. Such awareness should be used in academic library strategic planning to mitigate these challenges for purposes of enhancing postgraduate students' information searching, retrieval and use skills to meet their information needs for better academic success.

**5.4.3** Further study needs to be undertaken, perhaps on a wider scale involving more private higher education academic libraries in South Africa (and possibly even from across the African continent) for purposes of comparison, benchmarking and, importantly, more comprehensive findings on the subject of the use of online meeting platforms for

information literacy training by academic librarians in the private higher education sector. Similarly, further study would also be useful for the public higher education sector.

## **5.5 Chapter summary and general conclusion**

This chapter discussed the main findings of the study in terms of the research questions guiding the study and in the context of the literature reviewed and Wilson's theory of information behaviour supporting the study. Based on the discussion, conclusions were drawn and recommendations were made. The chapter concludes with a summary and general comments about how effectively the study was undertaken as well as the value of the study to current knowledge and professional practice.

The study's multi-method approach allowed for triangulation of quantitative and qualitative data collected from Institution X postgraduate students and academic librarians, respectively. The researcher is satisfied that this data was adequate to respond to the three research questions generated to address the study's main objective. Wilson's theory of information behaviour, used to support the study, was helpful in guiding the generation of the three research questions, the design of the data collection instruments, the analysis of data collected and the discussion of the main findings. The researcher is satisfied that the three research questions generated as well as the data collection instruments informed by these research questions, elicited adequate data to address the study's objective.

The findings from this case study could contribute to the existing body of knowledge on the competencies of academic librarians in the digital age. While the literature shows that there is an abundance of studies in this knowledge domain from the global north, there appears to be limited coverage of this knowledge area particularly in Africa. The outcomes of this study adds to the body of African scholarship in the area of competencies of academic librarians in the digital higher education environment.

In terms of contribution to professional practice, Institution X and other universities in South/Southern Africa could benefit from the outcomes of this study through upskilling academic librarians to ensure postgraduate students are provided with relevant information literacy competencies for enhanced academic performance. It is also hoped that this study would inspire the library of Institution X and other similar academic libraries in South Africa

and elsewhere to provide the necessary support to their academic librarians so that they may adapt to and embrace technological change to address the challenges of rapidly evolving ICTs.

## REFERENCES

- Abah, A.T., Chorun, M.T. & Mbatsoron, V.M. 2016. Factors affecting the effectiveness of user education programme for fresh students in selected colleges in Nasarawa State, Nigeria. *International Journal of Academic Library and Information Science*. 4(9): 249-263.
- Albro, M. & McElfresh, J.M. 2021. Job engagement and employee-organization relationship among academic librarians in a modified work environment. *The Journal of Academic Librarianship*. 47(5): 1-8.
- Anonymous. 2023. Personal communication. 21 April. Institution X, Johannesburg.
- Arshad, A. & Ameen, K. 2015. Usage patterns of Punjab University library website: a transactional log analysis study. *The Electronic Library*. 33(1): 65-74.
- Arumuru, L. 2021. Information needs and seeking behaviour of library and information science undergraduates during COVID-19 pandemic in Niger Delta region of Nigeria. *Library Philosophy and Practice*. 1-15. Available: [https://digitalcommons.unl.edu/libphilprac/6604?utm\\_source=digitalcommons.unl.edu%2Flibphilprac%2F6604&utm\\_medium=PDF&utm\\_campaign=PDFCoverPages](https://digitalcommons.unl.edu/libphilprac/6604?utm_source=digitalcommons.unl.edu%2Flibphilprac%2F6604&utm_medium=PDF&utm_campaign=PDFCoverPages) [2022, April 28].
- Aslam, M. 2021. Changing behavior of academic libraries and role of library professionals. *Information Discovery and Delivery*. 50(1): 54-63.
- Asogwa, C. & Daniel, T.M. 2021. Information needs and information seeking behaviour of the postgraduate students at the national institute for legislative and democratic studies, Abuja. *Information Impact: Journal of Information and Knowledge Management*. 12(2): 62-72.
- Association of College and Research Libraries. 2015. *Framework for information literacy for higher education*. <https://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/infolit/framework1.pdf> [2023, August 12].
- Ayolugbe, C.J., Jidere, A.J. & Ogwo, U. 2021. Utilization of Zoom as an interactive platform in repositioning library administration/management for effective service delivery in academic libraries in Nigeria. *Library Philosophy and Practice*. 1-15. Available: <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=12415&context=libphilprac> [2022, April 29].
- Babbie, E. 2021. *The practice of social research*. 15<sup>th</sup> ed. Boston: Cengage.
- Bakti, L.A., Prasetyadi, A., Nugroho, D.W.A., Trianggoro, C., Rosiyan, N.R. & Subagyo, H. 2020. Innovation in Library Services Post COVID-19 Pandemic. *Proceedings of the 3<sup>rd</sup> International Conference on Documentation and Information*. December 2020. DOI: [10.14203/icdi.v3i.20](https://doi.org/10.14203/icdi.v3i.20).
- Baro, E.E. & Keboh, T. 2012. Teaching and fostering information literacy programmes: a survey of five university libraries in Africa. *Journal of Academic Librarianship*. 38(5): 311-315. DOI: [10.1016/j.acalib.2012.07.001](https://doi.org/10.1016/j.acalib.2012.07.001).

- Bezuidenhout, R. & Cronje, F. 2021. Qualitative data analysis and interpretation. In *Research matters*. F. Du Plooy-Cilliers, C. Davis & R. Bezuidenhout, Eds. Cape Town: Juta. 262-286.
- Bezuidenhout, R. & Strydom, A. 2021. Qualitative research designs and data collection. In *Research matters*. F. Du Plooy-Cilliers, C. Davis & R. Bezuidenhout, Eds. Cape Town: Juta. 199-224.
- Bless, C., Higson-Smith, C. & Sithole, S.L. 2013. *Fundamentals of social research methods: an African perspective*. 5<sup>th</sup> ed. Cape Town: Juta.
- Boholano, H. 2017. Smart social networking: 21st century teaching and learning skills. *Research in Pedagogy*. 7(1): 21-29.
- Braun, V. & Clarke, V. 2013. *Successful qualitative research – a practical guide for beginners*. London: Sage.
- Bryman, A. & Cramer, D. 2012. *Quantitative data analysis with IBM SPSS 17, 18 & 19: a guide for social scientists*. London: Routledge.
- Cherinet, Y.M. 2018. Blended skills and future roles of librarians. *Library Management*. 39 (1/2): 93-105.
- Chinnasamy, K. 2016. Information needs and information seeking behaviour of engineering college students in Madurai - a case study. *Qualitative and Quantitative Methods in Libraries*. 5(1): 131-140.
- Connaway, L.S. & Powell, R.R. 2010. *Basic research methods for librarians*. 5<sup>th</sup> ed. California: ABC-CLIO.
- Creswell, J.W. & Creswell, J.D. 2023. *Research design: qualitative, quantitative, and mixed methods approach*. 6<sup>th</sup> ed. Los Angeles: Sage.
- De Vos, A.D., Strydom, H., Fouche, C. & Delpport, C. 2014. *Research at grassroots: for the social sciences and human services professions*. Pretoria: Van Schaik.
- Dhamdhere, S. & De Smet, E. 2015. The use of web services for patron education and information by selected top university libraries in USA and India. *Journal of Teaching and Education*. 4(2): 175-196.
- Doyle, L. 2019. *What is Digital Communication and why is it Important* [Blog, 25 January]. Available: <https://bachelors-completion.northeastern.edu/news/what-is-digital-communication/> [2022, October 12].
- Du Plooy-Cilliers, F. & Cronje, J. 2021. Quantitative data collection. In *Research matters*. F. Du Plooy-Cilliers, C. Davis & R. Bezuidenhout, Eds. Cape Town: Juta. 166-198.
- Eclevia, M.R. 2022. Librarians' competencies in teaching information literacy in the online environment. *Journal of Library & Information Services in Distance Learning*. 16(1): 2-19. DOI: [10.1080/1533290X.2022.2072046](https://doi.org/10.1080/1533290X.2022.2072046).
- Ellis, D. 1993. Modeling the information-seeking patterns of academic researchers: a grounded theory approach. *The Library Quarterly*. 63(4): 469-486.

- Emezie, N.A. & Nwaohiri, N.M. 2013. 21st century librarians and effective information service delivery. *Journal of Information and Knowledge Management*. 4(1): 30-43.
- Enslin, C. 2021. Limitations, delimitations and recommendations. In *Research matters*. F. Du Plooy-Cilliers, C. Davis & R. Bezuidenhout, Eds. Cape Town: Juta. 313-321.
- Exner, N. 2019. Development of research competencies among academic librarians. Ph.D. Thesis. University of North Carolina.
- Eyinade, T.M. & Bakare, O. 2022. Assessing information-seeking behaviour of visually impaired students using Wilson's theory of information behaviour in Federal College of Education. *Library Philosophy and Practice*: 1-19. Available: <https://digitalcommons.unl.edu/libphilprac/7202> [2022, September 22].
- Ezeani, C.N. & Igwesi, U. 2012. Using social media for dynamic library service delivery: the Nigeria experience. *Library Philosophy and Practice*. 814: 1-9.
- Garnar, M. & Tonyan, J. 2021. Library as place: understanding contradicting user expectations. *The Journal of Academic Librarianship*. 47(5): 1-9.
- Garner, I. 2006. Library support for research in a university context. *Proceedings of the IATUL Conferences*. Available: <https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1768&context=iatul> [2022, May 28].
- Gravetter, F.J., Forzano, L. & Rakow, T. 2021. *Research methods for the behavioral sciences*. Hampshire: Cengage.
- Gray, D.E. 2014. *Doing research in the real world*. 3<sup>rd</sup> ed. Thousand Oaks, California: Sage.
- Hamad, F., Al-Fadel, M. & Fakhouri, H. 2021. The effect of librarians' digital skills on technology acceptance in academic libraries in Jordan. *Journal of Librarianship and Information Science*. 53(4): 589-600.
- Hegde, D.S. Ed. 2015. *Essays on research methodology*. New Delhi: Springer.
- Howard, G.M. 2021. The literature review. In *Research matters*. F. Du Plooy-Cilliers, C. Davis & R. Bezuidenhout, Eds. Cape Town: Juta. 113-120.
- Hunter, A. & Brewer, J. 2015. Designing multimethod research. In *The Oxford handbook of multimethod and mixed methods research inquiry*. S.N. Hesse-Biber & R.B. Johnson, Eds. Oxford: Oxford University Press. 185-205.
- Ingwersen, P. & Järvelin, K. 2005. *The turn: integration of information seeking and retrieval in context*. Dordrecht: Springer.
- Izuagbe, R., Ibrahim, N.A., Ogiamien, L.O., Olawoyin, O.R., Nwokeoma, N.M., Ilo, P.I. & Osayande, O. 2019. Effect of perceived ease of use on librarians' e-skills: Basis for library technology acceptance intention. *Library & Information Science Research*. 41(3): 1-9.
- Johnson, G. & Raju, J. 2018. Knowledge and skills competencies for humanities librarians supporting postgraduate students. *Libri*. 68(4): 331-344.

Kennan, M.A. 2016. Data management: knowledge and skills required in research, scientific and technical organisations. Proceedings of the World Library and Information Congress: IFLA General Conference and Assembly: IFLA WLIC 2016. 18 August 2016. Columbus. International Federation of Library Associations and Institutions.1- 10. Available: <http://library.ifla.org/id/eprint/1466/1/221-kennan-en.pdf> [2023, May 06].

Khan, S.A. & Bhatti, R. 2017. Digital competencies for developing and managing digital libraries: an investigation from university librarians in Pakistan. *The Electronic Library*. 35(3): 573-597.

Khan, A. & Khan, A. 2020. Information seeking behavior of postgraduate students in the University of Peshawar, Pakistan. *Library Philosophy and Practice*. 1-17. Available: <https://digitalcommons.unl.edu/libphilprac/4380/>.

Leedy, P.D. & Ormrod, J.E. 2020. *Practical research: planning and design*. 12<sup>th</sup> ed. Harlow: Pearson.

Letzter, J. 2023. The architecture of academic libraries in Israel: Knowledge and prestige. *The Journal of Academic Librarianship*. 49(2): 1-17.

Louw, M. 2021. Ethics in research. In *Research matters*. F. Du Plooy-Cilliers, C. Davis & R. Bezuidenhout, Eds. Cape Town: Juta. 300-311.

Malatji, E.J. 2019. *The impact of social media in conserving African languages amongst youth in Limpopo Province*. Ph.D. Thesis. University of Limpopo. Available:

<http://hdl.handle.net/10386/2921> [2022, September 18].

Matthews, S. 2011. Five challenges every librarian must face. 21st century library blog. Available: <https://21stcenturylibrary.wordpress.com/2011/10/12/five-challenges-every-librarian-must-face/> [2022, May 30].

Mavodza, J. 2020. The evolving landscape of research methods in library and information science. In *Handbook of research on connecting research methods for Information Science research*. P. Ngulube, Ed. Hershey: IGI Global. 1-17.

McTavish, H. & Robertson, L. 2020. Canadian academic librarians as online teachers. *Learning*. 4(10): 171-174.

Mertens, D.M. 2012. Ethics in qualitative research in education and the social sciences. In *Qualitative research: an introduction to methods and designs*. S.D. Lapan, M.T. Quartaroli & F.J. Riemer, Eds. London: Sage. 19-39.

Million, A.J., Hudson-Vitale, C. & Moulaison S.H. 2018. Restructuring and formalizing: scholarly communication as a sustainable growth opportunity in information agencies? *Proceedings of the Association for Information Science and Technology*. 55(1): 377-386. DOI: [10.1002/pr2.2018.14505501041](https://doi.org/10.1002/pr2.2018.14505501041).

Mouton, J. 2005. *How to succeed in your master's and doctoral studies: a South African guide and resource book*. Pretoria: Van Schaik.

- Msoffe, G.E., Mongi, H.J. & Buhomoli, O.S. 2023. Assessing information literacy training of postgraduate students from input-process-output perspectives: A case of the University of Dodoma. *Journal of Librarianship and Information Science*. 1-14. DOI: [10.1177/09610006231200896](https://doi.org/10.1177/09610006231200896).
- Munshi, S.A. 2016. Information literacy skills among the postgraduate students at Aligarh Muslim University, India. *Library Philosophy and Practice*. Available: <https://digitalcommons.unl.edu/libphilprac/1419/> [2023, May 30].
- Nakitare, J., Sawe, E., Nyambala, J. & Kwanya, T. 2020. The emerging roles of academic librarians in Kenya: apomediaries or infomediaries? *Library Management*. 41(6/7): 339-353.
- Nández, G. & Borrego, A. 2013. Use of social networks for academic purposes: a case study. *The Electronic Library*. 31(6): 781-791.
- Nilsen, P. 2015. Making sense of implementation theories, models, and frameworks. *Implementation Science*. 1-13. DOI: [10.1186/s13012-015-0242-0](https://doi.org/10.1186/s13012-015-0242-0).
- Ochoa, I.V. 2020. Navigation design and library terminology: Findings from a user-centered usability study on a library website. *Information Technology and Libraries (Online)*. 39(4): 1-15.
- Ombogo, T.M. & Namande, B.W. 2021. Contemporary academic library users in Kenya: their needs and preferences in access and use of information resources. *Global Knowledge, Memory and Communication*. 70(4/5): 399-417.
- Omini, E.U. & Osulale, K.A. 2019. Utilization of social media platforms by librarians for promoting library resources and services in Nigerians' tertiary institutions in Cross River State. *Global journal of educational research*. 18(1): 1-8.
- Orgeron, J.P. 2017. Understanding the language of information literacy. *The Journal of Academic Librarianship*. 44(2018): 81-87. DOI: [10.1016/j.acalib.2017.10.004](https://doi.org/10.1016/j.acalib.2017.10.004).
- Poston, J., Apostel, S. & Richardson, K. 2020. Using Microsoft Teams to enhance engagement and learning with any class: it's fun and easy. *Transparency in Teaching and Learning: Proceedings of the 2019 Pedagogion*: 1-5. Available: <https://encompass.eku.edu/pedagogicon/2019/guidinggrading/6/> [2022, May 18].
- Potnis, D. 2015. Wilson's information-seeking behavior models (1981, 1996, 1999). In *Information seeking behavior and technology adoption: theories and trends*. M.N. Al-Suqri, Ed. Hershey: IGI Global: 94-112.
- Raju, J. 2014. Knowledge and skills for the digital era academic library. *The Journal of Academic Librarianship*. 40(2): 163-170.
- Rodrigues, M.C. & Mandrekar, B. 2020. Impact of academic library services on students' success and performance. *Library Philosophy and Practice*: 1-19. Available: [https://www.researchgate.net/publication/344170619\\_IMPACT\\_OF\\_ACADEMIC\\_LIBRARY\\_SERVICES\\_ON\\_STUDENTS\\_SUCCESS\\_AND\\_PERFORMANCE](https://www.researchgate.net/publication/344170619_IMPACT_OF_ACADEMIC_LIBRARY_SERVICES_ON_STUDENTS_SUCCESS_AND_PERFORMANCE) [2022, October 22].
- Roller, M.R. & Lavrakas, P.J. 2015. *Applied qualitative research design: a total quality framework approach*. New York: Guilford Publications.

Saleh, E. 2020. Using e-Learning Platform for Enhancing Teaching and Learning in the Field of Social Work at Sultan Qaboos University, Oman. In *E-Learning and Digital Education in the Twenty-First Century-Challenges and Prospects*. IntechOpen. 1-15. DOI: [10.5772/intechopen.94301](https://doi.org/10.5772/intechopen.94301).

Saunders, M., Lewis, P. & Thornhill, A. 2000. *Research methods for business studies*. 2<sup>nd</sup> ed. Harlow: Prentice Hall.

Schaub, G., Cadena, C., Bravender, P. & Kierkus, C. 2017. The language of information literacy: do students understand? *College & Research Libraries*. 78(3): 283-296. DOI: [10.5860/crl.78.3.283](https://doi.org/10.5860/crl.78.3.283).

Seawright, J. 2016. *Multi-method social science: combining qualitative and quantitative tools*. Cambridge: Cambridge University Press.

Sheeja, N.K. 2010. Science vs social science: a study of information-seeking behaviour and user perceptions of academic researchers. *Library Review*. 59(7): 522-531.

Silverman, D. 2020. *Interpreting qualitative data*. 5<sup>th</sup> ed. London: Sage.

Singh K.P., Kumar M., & Khanchandan, V. 2015. Information needs and information seeking behavior of foreign students in University of Delhi. *International Journal of Knowledge Content Development and Technology*. 5(2): 25-43.

Smith, S.A., Lubcke, A., Alexander, D., Thompson, K., Ballard, C. & Glasgow, F. 2019. Listening and learning: myths and misperceptions about postgraduate students and library support. *Reference Services Review*. 47(4): 594-608.

Somvir, R. 2010. Role of librarian in the 21<sup>st</sup> century. *Proceedings of the Fifty Fifth ILA National Conference on Library and Information Science in the Digital Era*. 21-24 January 2010. Available: [https://www.researchgate.net/publication/327859508\\_Role\\_of\\_Librarian\\_in\\_21st\\_Century](https://www.researchgate.net/publication/327859508_Role_of_Librarian_in_21st_Century) [2022, June 5].

Sreenivasulu, V. 2000. The role of a digital librarian in the management of digital information systems (DIS). *The Electronic Library*. 18(1): 12-20. DOI: 10.1108/02640470010320380.

Steinerová, J. 2016. Information literacy studies and human information behaviour. *ProInflow*. 8(2): 53-69.

Trochim, W.M. & Donnelly, J.P. 2008. *Research methods knowledge base*. 3<sup>rd</sup> ed. Cincinnati, OH: Atomic Dog Publication.

Ugbala, C.P., Lawal, O.W., Olawale, G.S. & Oloniruha, E.A. 2022. Application of Wilson's theory of information seeking behaviour to public library as a source of business information for SMEs in Nigeria. Available: <https://digitalcommons.unl.edu/libphilprac/6834/> [2022, September 8].

Ugwu, C.I. & Ekere, J.N. 2019. Knowledge management for improving services in federal university libraries in Nigeria. *Journal of Librarianship and Information Science*. 51(2): 356-369.

- Wiebe, T.J. 2016. The information literacy imperative in higher education. *Liberal Education*. 102(1): 52.
- Wilson, E. & Fox, A. E. 2017. *School-based research: a guide for education students*. Thousand Oaks: Sage.
- Wilson, T.D. 1981. On user studies and information needs. *Journal of Documentation*. 37(1): 3–15. DOI: 10.1108/eb026702.
- Wilson, T.D. 1997. Information behaviour: an interdisciplinary perspective. *Information processing & management*. 33(4): 551-572.
- Wilson, T.D. 1999. Models in information behaviour research. *Journal of Documentation*. 55 (3): 249-270.
- Wilson, T.D. 2000. Human information behavior. *Informing Science*. 3(2): 49-55.
- Wilson, T.D. 2005. Evolution in information behavior modeling Wilson's mode. In *Theories of Information Behavior*. K. Fisher, S. Erdelez & L. McKechnie, Eds. Medford, NJ: ASIS&T .31-36.
- Yin, R.K. 2018. *Case study research and applications: design and methods*. 6<sup>th</sup> ed. Thousand Oaks, CA: Sage.

## APPENDICES

## **Appendix A: Semi-structured interview schedule for academic librarians**

### **The use of online meeting platforms for information literacy training by academic librarians: the case of a private higher education institution academic library**

#### **Preamble**

You have consented to participate in this study. My name is Rumbidzai Mambo, and I am a Master of Library and Information Studies student in the Department of Knowledge and Information Stewardship at the University of Cape Town. My study is being supervised by Professor Jaya Raju. I am conducting this study as part of the academic requirements for the award of a Masters degree. The objective of this study is to understand the competencies required by academic librarians in using online meeting platforms for enhancing postgraduate students' information searching, retrieval and use skills to meet their information needs. The study makes use of a private higher education institution academic library as a case study.

To reiterate, your participation is voluntary. Your anonymity and the confidentiality of the information you provide in this interview are assured during the reporting of findings. I would like to confirm your decision for the interview to be recorded/not recorded. This interview should take no longer than an hour. Your contribution to the study will be greatly appreciated.

#### **Section A: Biographical information**

1. For how many years have you been working as an academic librarian in your current institution?
2. For how many years have you been working as an academic librarian in higher education generally?
3. What is your highest level of academic qualification (e.g., Masters degree)?
4. What is your highest Library and Information Science (LIS) qualification (e.g., B. BIBL, Information Science (Honours))?
5. What is your current job title?

**Section B: Competencies required by academic librarians to deliver information literacy sessions using online meeting platforms**

6. What competencies do you think are required by academic librarians to deliver information literacy sessions to postgraduate students using online meeting platforms? [Prompt: What knowledge (that is, understanding) do they require? What skills (that is, what one is able to do) do they require? What personal attributes (attitudes, values, and character traits) do they require?]

**Section C: Competencies that academic librarians currently possess for delivering information literacy training via online means**

7. What competencies do you currently possess as an academic librarian to deliver information literacy sessions to postgraduate students using online meeting platforms? [Prompt: What knowledge (that is, understanding) do you possess? What skills (that is, what you are able to do) do you possess? What personal attributes (attitudes, values, and character traits) do you possess?]

**Section D: Challenges faced by academic librarians in providing postgraduate students with online information literacy training to meet their information needs**

8. What challenges do you face as an academic librarian at your institution, in providing postgraduate students with online information literacy training to meet their information needs?

**Section E: General**

9. Please provide any further comments relating to the subject of this interview which have not already been covered.

**Thank you for your participation.**

**[Duration of interview: \_\_\_\_\_ minutes]**

## **Appendix B: Structured questionnaire for postgraduate students**

### **The use of online meeting platforms for information literacy training by academic librarians: the case of a private higher education institution academic library**

#### **Preamble**

My name is Rumbidzai Mambo, and I am a Master of Library and Information Studies student in the Department of Knowledge and Information Stewardship at the University of Cape Town. My study is being supervised by Professor Jaya Raju. I am conducting this study as part of the academic requirements for the award of a Masters degree. The objective of this study is to understand the competencies required by academic librarians in using online meeting platforms for enhancing postgraduate students' information searching, retrieval and use skills to meet their information needs. The study makes use of a private higher education institution academic library as a case study. I therefore request your participation in this study. The study has received ethics clearance from the University of Cape Town as well as from the institution being used as the research site.

To address the study's objective, I am required to survey postgraduate students. Please note that your anonymity and confidentiality of information provided, are assured during the reporting of findings. While participation is completely voluntary, your contribution to the survey will be greatly appreciated. Data collected would be used for research purposes only. Completing this questionnaire should take you no more than 15 minutes.

#### Contact information

If you have any questions or concerns about this study, please contact:

Rumbidzai Mambo (Researcher)

**Email:** mmbrum001@myuct.ac.za

**Contact number:** +27781119842

#### Consent

If you consent to participate in this study, please click [here](#), and proceed to respond to the questionnaire.

### **Questionnaire instructions**

Please respond to items by selecting the relevant or most applicable option. Where applicable, please provide your responses in the space indicated.

#### **Section A: Biographical information**

1. Please indicate your age

18-24 years

25-35 years

36 years and over

2. Which level of study are you enrolled for?

Honours

Masters

3. At your higher education institution, with which of the following schools are you registered?

School of Social Sciences

School of Management

School of Executive Education

#### **Section B: Competencies required by academic librarians to deliver information literacy sessions using online meeting platforms**

4. What knowledge (that is, understanding/theoretical knowledge) do you think academic librarians should have to deliver information literacy sessions using online meeting platforms? You may select more than one option.

Online information searching

Online information retrieval

Web navigation (that is, looking through resources on the internet, using various pages of websites to arrive at relevant information)

- Video conferencing (e.g., Zoom, Microsoft Teams, etc.)
- Content management systems (e.g., Online Public Access Catalogues, LibGuides, etc.)
- Common software programs (e.g., Word processing, Excel spreadsheet, PowerPoint presentation, etc.)
- Referencing management tools (e.g., Mendeley, Zotero, etc.)
- Knowledge of social media (e.g., WhatsApp, Instagram, etc.)
- Online teaching and training approaches
- Other. Please specify \_\_\_\_\_

5. What skills (that is, what one is able to do) do you think academic librarians should have to deliver information literacy sessions using online meeting platforms? You may select more than one option.

- Teaching and training skills
- Online instructional skills
- Lesson planning skills
- Evaluating online instructional experiences and providing feedback to students
- Problem-solving skills
- Good communication skills
- Adequate language skills
- Good writing skills
- Good listening skills
- Presentation/public speaking skills
- Workshop facilitation skills
- Computer and IT skills
- Social media skills

- Teamwork skills
- Critical thinking skills
- Customer/learner care skills
- Other. Please specify \_\_\_\_\_

6. What personal attributes (attitudes, values, and character traits) do you think academic librarians should have to deliver information literacy sessions using online meeting platforms? You may select more than one option.

- Ability to pay attention to detail
- Ability to remain calm and polite under pressure
- Ability to work under pressure
- Initiative
- Innovative ability
- Helpful and patient when dealing with a diversity of users
- Adaptability and being flexible to different information needs of users
- Being organized
- Being positive about keeping up with technological trends
- Positive attitude towards blended librarianship services (that is, online as well as in-person services)
- Other. Please specify \_\_\_\_\_

**Section C: Competencies that academic librarians currently possess for delivering information literacy training via online platforms**

7. What knowledge (that is, understanding/ theoretical knowledge) do academic librarians at your institution currently possess for delivering information literacy sessions using online meeting platforms? You may select more than one option.

- Online information searching
- Online information retrieval
- Web navigation (that is, looking through resources on the internet, using various pages of websites to arrive at relevant information)
- Video conferencing (e.g., Zoom, Microsoft Teams, etc.)
- Content management systems (e.g., Online Public Access Catalogues, LibGuides, etc.)
- Common software programs (e.g., Word processing, Excel spreadsheet, PowerPoint presentation, etc.)
- Referencing management tools (e.g., Mendeley, Zotero, etc.)
- Knowledge of social media (e.g., WhatsApp, Instagram, etc.)
- Online teaching and training approaches
- Other. Please specify \_\_\_\_\_

8. What skills (that is, what one is able to do) do academic librarians at your institution currently possess in delivering information literacy sessions using online meeting platforms? You may select more than one option.

- Teaching and training skills
- Online instructional skills
- Lesson planning skills
- Evaluating online instructional experiences and providing feedback to students
- Problem-solving skills
- Good communication skills
- Adequate language skills
- Good writing skills
- Good listening skills

Presentation/public speaking skills

Workshop facilitation skills

Computer and IT skills

Social media skills

Teamwork skills

Critical thinking skills

Customer/learner care skills

Other. Please specify \_\_\_\_\_

9. What personal attributes (attitudes, values, and character traits) do academic librarians at your institution currently possess in delivering information literacy sessions using online meeting platforms? You may select more than one option.

Ability to pay attention to detail

Ability to remain calm and polite under pressure

Ability to work under pressure

Initiative

Innovative ability

Helpful and patient when dealing with a range of users

Adaptability and flexible to different information needs of users

Being organized

Being positive about keeping up with technological trends

Positive attitude towards blended librarianship services (that is, online as well as in-person services)

Other. Please specify \_\_\_\_\_

**Section D: Challenges faced by academic librarians in providing postgraduate students with online information literacy training to meet their information needs**

10. What challenges do you think are faced by academic librarians at your institution in providing postgraduate students with online information literacy training to meet their information needs? You may select more than one option.

- Poor internet connectivity
- Lack of availability of devices (e.g., laptops, tablets, smartphones) to facilitate online information literacy sessions
- Resistance to blended librarianship services (that is, online as well as in-person services)
- Low student attendance at scheduled online information literacy training sessions
- Challenges faced by postgraduate students in using modern technology (e.g., Zoom and Microsoft Teams platforms) to access online information literacy training sessions
- Challenges faced by librarians in using modern technology (e.g., Zoom and Microsoft Teams platforms) to deliver online information literacy training sessions
- Other. Please specify \_\_\_\_\_

**Section E: General**

11. Please provide any further comments relating to the subject of this questionnaire which have not already been covered.

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**Thank you for your time and contribution.**

## **Appendix C: Informed consent for academic librarians**

### **The use of online meeting platforms for information literacy training by academic librarians: the case of a private higher education institution academic library**

#### **Description of research and participation**

My name is Rumbidzai Mambo, and I am a Master of Library and Information Studies student in the Department of Knowledge and Information Stewardship at the University of Cape Town. My study is being supervised by Professor Jaya Raju. I am conducting this study as part of the academic requirements for the award of a Masters degree. The objective of this study is to understand the competencies required by academic librarians in using online meeting platforms for enhancing postgraduate students' information searching, retrieval and use skills to meet their information needs. The study makes use of a private higher education institution academic library as a case study. I therefore request your participation in this study. The study has received ethics clearance from the University of Cape Town as well as from the institution being used as the research site.

#### **Anonymity and confidentiality**

Participation in this study will remain anonymous and all personal identifying information will be excluded during the reporting of research findings. Responses will be treated with strict confidentiality, be subjected to secure storage, and will be used for research purposes only.

#### **Voluntary participation**

Participation in this study is completely voluntary and individuals will not be advantaged or disadvantaged in any way by choosing to participate or not to participate in the study. You are free to withdraw from the study at any point without any penalty. The interview will only be recorded with your permission. Your participation will be appreciated.

#### **Benefits**

There are no direct personal benefits for participating in this study. However, academic libraries and librarians may benefit from the outcomes of this study.

### Contact information

If you have any questions or concerns about this study, please contact:

Rumbidzai Mambo (Researcher) mmbrum001@myuct.ac.za +27781119842

### Informed consent

Please tick (✓) in the appropriate box in the table below.

<u>Consent statement</u>	YES	NO
The nature and objective of the study have been explained to me and I have been given an opportunity to ask questions about the study.		
I voluntarily agree to participate in the study.		
I understand that I may withdraw from the study at any point, there will be no questions asked and no penalties imposed.		
My participation in the study will remain anonymous during the reporting of findings, and the information that I share will be treated with confidentiality.		
I agree/disagree (delete as applicable) to this interview being recorded.		

Signed by participant: \_\_\_\_\_ Date: \_\_\_\_\_

Signed by researcher: \_\_\_\_\_ Date: \_\_\_\_\_

Upon signing of this consent form, the participant will be provided with a copy.

## Appendix D: Ethics approval - UCT



**Department of Knowledge & Information Stewardship**  
University of Cape Town  
Upper Campus

Private Bag X1, RONDEBOSCH, 7701 South Africa  
Level 5 Hlanganani, Chancellor Oppenheimer Library  
Tel: +27 (0) 21 650 4546  
E-mail: [dkis@uct.ac.za](mailto:dkis@uct.ac.za)  
Website: [www.dkis.uct.ac.za](http://www.dkis.uct.ac.za)

30 October 2023  
Ref: UCT  
DKIS2023-10-03

Rumbidzai Mambo (MMBRUM001)  
Department of Knowledge and Information  
Stewardship Chancellor Oppenheimer Library  
University of Cape Town

### **Ethics approval for Master's research**

Dear Ms Mambo

I am pleased to inform you that ethical clearance has been granted by the Ethics Review Committee of the Department of Knowledge and Information Stewardship (DKIS), on behalf of the Humanities Faculty of the University of Cape Town, for you to proceed with collecting data for your Master's study entitled: *The use of online meeting platforms for information literacy training by academic librarians: the case of a private higher education institution academic library.*

As a next step, please ensure that you obtain ethics approval from the relevant ethics committee to collect data at your data collection site, as necessary.

We wish you well with your data collection and the completion of your research.

Yours faithfully,

Ms Theresa de Young  
Chair: Department (DKIS) Research Ethics Committee

## Appendix E: Ethics approval - Institution X

Reference: R. 15750

24 October 2023

Permission to conduct research on, staff, students, sites or artefacts with standard conditions

Initials and surname:	R Mambo
Student number:	n/a
Institution:	
Qualification/output:	Master of Library and Information Studies
Title of study/paper:	The use of online meeting platforms for information literacy training by academic librarians: the case of a private higher education institution academic library

Dear Rumbidzai Mambo,

The committee considered your request and have granted permission to conduct research on staff, students, sites or artefacts in accordance with your request – on condition that you strictly adhere to the conditions stipulated below. This approval is based on the assumptions that (1) the information you have provided is true and factually correct and that (2) the study will be conducted in an ethical manner.

Permission is granted to proceed with the above study subject to meeting the conditions listed below. Permission may be withdrawn should any of these conditions not be met.

**Please note:** The panel has not considered the merits, accuracy or ethical soundness of the research. The only merits examined are the use of The as a sample.

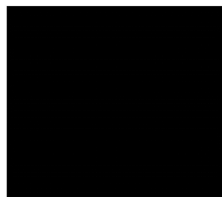
Conditions to be met	
1.	A copy of the final paper must be submitted electronically to The Dean for Research and Postgraduate Studies at no later than 30 days post finalisation.
2.	The researcher(s) is neither permitted to refer to The or any of its educational brands nor to name, logo, brand or any other identifiers of The or any of its educational brands in any way, including, but not limited to, in questionnaires, surveys, interviews, proposal or research reports. The or educational brand in question must be referred to in a generic manner, for example 'A private provider'.
3.	The researcher(s) will need to obtain informed consent in writing from all of the participants in his/ her sample if the study is not anonymous.



4. If the Learning Management System (LMS) of The [redacted] is used, the researcher(s) is not permitted to refer to it by name. Learn needs to be referred to in a generic manner, for example "the Learning Management System of a Higher Education provider."
5. A copy of this letter must be forwarded to the relevant person(s) at the brand or The [redacted] that would be involved in the study.
6. Research must be conducted in such a way that the normal programme and operations of the site/ offices is not interrupted.
7. The principal/ manager of a site must be consulted about an appropriate time when the researcher(s) may carry out the research at the site.
8. The researcher(s) may only use this data for these research purposes and in no other way.
9. Should the researcher(s) wish to publish this research or in any way make the results public, for example by publishing the results on a social media platform, this committee will need to approve a request to this end first.
10. No names or identifying information of participants may be used within the research and the research must be voluntary.
11. Photographs of human subjects may only be taken if relevant to the research and informed consent from the participants or respondents was obtained, and, even with informed consent, the photographs may not be published.
12. The researcher is responsible for supplying and utilising his/ her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions or the offices visited for supplying such resources.
13. If any of The [redacted] reports or policies are used as part of the research, all identifying information needs to be removed.
14. Please make it clear that the information will not be used punitively in any way and participants may in no way be counselled or advised based on this.
15. The reference number for this letter must appear, in one format or another, on all research documentation distributed amongst [redacted] staff or students.

All the best with your research.

Yours sincerely,



Dean: Research and Postgraduate Studies

