INFORMATION SEEKING BEHAVIOUR OF USERS OF A SPECIAL COLLECTION AND THE ROLE OF SOCIAL MEDIA IN THE PROVISION OF ACADEMIC LIBRARY SERVICES

Mini-dissertation by

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DECLARATION

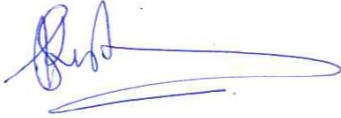**Full names of student**: Lisa Kistain

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Topic of work: Information seeking behaviour of users of a special collection and the role of social media in the provision of academic library services

Declaration

I declare that this mini-dissertation, which I submit for the degree Master of Information Technology at the University of Pretoria, is my own original work and has not been submitted by me for a degree at this or any other tertiary institution.

The author, whose name appears on the title page of this mini-dissertation, obtained the applicable research ethics approval to conduct the research described in this work. The author declares that she has observed the ethical standards required in terms of the University of Pretoria's and the Institution A's (Institution at which the study was conducted. The name of the institution will not be mentioned in adherence to ethical requirements, hence herein referred to as the Institution A) Code of Ethics for researchers and the policy guidelines for responsible research.

Lisa Kistain

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ABSTRACT

The purpose of this study was to investigate how users of a special collection library of an academic institution in South Africa sought information and how social media could play a role in library service provision. Data for the empirical component was collected in September 2015. The study used a mixed methods approach to collect quantitative data which was analysed using Excel spreadsheets and qualitative data which was analysed using thematic analysis. A total of 36 self-administered printed questionnaires were used to solicit information on how users of the special collection library sought information for academic purposes using social media. Information was collected on the concerns, barriers and motivations that influence or deter users from using social media for academic purposes. Semi-structured interviews involving 11 participants were used to collect information on the views, experiences, thoughts and opinions of participants as regards the role that social media can play in providing library services. The study used purposive sampling in selecting participants for both the quantitative and qualitative study. Participants were users visiting the Special Collection Library at Institution A (a tertiary institution in South Africa), as well as users recommended by librarians of the Special Collection Library at Institution A. The participants included researchers, academics, undergraduate and postgraduate students at the academic institution as well as outside users (users not enrolled at Institution A or not staff members). The key findings include: (a) The most preferred social media tool used for academic purposes was Twitter, used mainly for sharing information and notification purposes. (b) Most preferred features of social media were those that provided for more engaging communication. (c) Users preferred more subject specific information on social media. (d) The concern listed as very significant by the largest number of participants was breach of privacy. Based on the findings of this study, recommendations were made for the library to give greater support to diversity of expression of knowledge and foster participation with the user as content creator and not just a consumer of knowledge. Also, the library should consider using strategies that promote the discoverability of the special collections. Such strategies include: using the social media tool of the users' preference (for example Twitter in this case) to raise awareness of the collections (such as, maps and artefacts) that are unique to the library; using social media such as WhatsApp to post reference lists related to particular topics that refer users to the special collection resources such as

manuscripts and artefacts. Using WhatsApp also provides opportunity to start conversations/chats around special collection resources. Training should be developed and provided to librarians and users that focus on those features that promote the display of special collections resources such as the uploading of photographs. Recommendations were made for further research.

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ABBREVIATIONS AND ACRONYMS

AToM - Access to Memory

ESKOM - Electricity Supply Commission

IM - Instant Messaging

JSTOR - Journal Storage

PLOS - Public Library of Science

QR - Quick Response

RSS - Real Simple Syndication

SCL - Special Collection Library

UK - United Kingdom

UP - University of Pretoria

USA - United States of America

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CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

The traditional model of libraries in the current environment seems to be changing (Boateng & Liu, 2014; Kumar & Balaji, 2011). This could be attributed to the advancement of technologies, such as the initiation of mobile technologies using quick response (QR) codes to facilitate information retrieval (Mohamed, 2014) and social media (also referred to as Web 2.0 technologies) that are affecting libraries (Ayiah & Kumah, 2011; Chu & Meulemans, 2008). Traditionally, libraries served as warehouses that stored shelves of print media. The information therein was only made accessible and visible via card catalogues, print indexes and bibliographies, which required specialised information retrieval skills. With the appearance of the World Wide Web, especially social media technologies, libraries are increasingly finding that they are serving a community that is becoming competent in retrieving information from the internet (Boateng & Liu, 2014; Garaba, 2012; Kumar & Balaji, 2011). The term Web 2.0 technologies, was coined by Tim O'Reilly and Dale Dougherty in 2004 to refer to social media technologies that are designed to facilitate communication and sharing of information (Garaba, 2012:24). This study will use the term social media technologies or social media for short.

Social media allows people to communicate and share information and includes Facebook, YouTube, Twitter, blogs and Wikis (Garaba, 2012; Kumar & Balaji, 2011). Social media can also be accessed using mobile devices such as smartphones and tablets (Lippincott, 2010), thus increasing the opportunities for access. Libraries have reported the use of social media to actively engage with their users, for example Facebook, blogs and Twitter are used to inform users of news events and new acquisitions (Boateng & Liu, 2014; Click & Petit, 2010; Kumar & Balaji, 2011). Libraries have also reported on the use of social media in literacy training (Click & Petit, 2010), in providing information services (Kumar & Balaji, 2011), and in providing a collaborative platform to engage with users (Boateng & Liu, 2014).

Although the websites of South African university libraries, such as the University of Pretoria, the University of Cape Town and the University of South Africa show links to Facebook pages and Twitter accounts, very little is known about the use of social media in the provision of library services in a South African context, especially in a special collection

context. A few studies are noted in section 2.2.2 and 2.4 of Chapter 2. Academic libraries share a common vision of wanting to organise and make their collections more visible and accessible to their students and faculty members (Harris & Weller, 2012). Special Collection departments in academic libraries seek to fulfil the same vision, however, their users expand to research communities outside the student and faculty community (Harris & Weller, 2012). Some of the core functions of special collection libraries are to collect, organise, preserve and ensure access to rare and unique materials (Harris & Weller, 2012). These materials can include maps and handwritten notebooks. This sometimes places special collection libraries in a dual role of wanting to preserve the collections on the one hand and of wanting to make them accessible to their users on the other hand (Harris & Weller, 2012). Making collections available online would mean less handling of the materials.

1.2 BACKGROUND TO THE STUDY

The special collection library that was selected for this study belongs to a university in South Africa. The name of the library or university for this study, will not be disclosed falling within the ethical clearance requirements that were obtained from the University of Pretoria, Department of Information Science Research Committee, on behalf of the Faculty Committee for Research Ethics and Integrity of the Faculty of Engineering, Built Environment and Information Technology, and the institution where the study was conducted. For the purposes of this study, this university will be referred to as Institution A and the university library as the Institution A Library. The special collection library is a branch of the library at Institution A and houses the African studies section and the government publications section. The government publications section of the library houses materials published by the government departments of predominantly sub-Saharan African countries. These include annual reports, special reports, statistics and so forth. It collects materials from government departments as well as government entities. The African studies section of the library houses resources that pertain to Africa, with the larger proportion of the collection focused on sub-Saharan Africa. Some of the collections are of an archival nature and constitute donations that are rare and of a significant value, such as, the C. Louis Leipoldt Collection and the Bleek & Lloyd Collection of Bushman Materials. The combination of these collections under the auspices of the special collection library will be the focus of this study. [1]Since 2013, the Special Collection Library has planned strategically to develop and exploit technological innovations

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[1] In instances where the library chosen for the study is referred to, upper case will be used, for example Special Collection Library. In all other instances, lower case will be used.

to create a dynamic and interactive web-based environment. Social media is known to provide such an environment (Anwyll & Chawner, 2013). This would require the implementation of social media such as blogs and Wikis that foster collaboration in an effort to engage staff and users with one another. In the light of the strategic plans of the Institution A Library and global trends in how libraries use social media (Boateng & Liu, 2014; Click & Petit, 2010; Kumar & Balaji, 2011), further study into information seeking behaviour related to social media is warranted at this Institution A, Special Collection Library. This would provide insight into how best to organise information so as to make it easily discoverable to users (Kumar & Balaji, 2011) and how to train users and keep them informed of new information (Boateng & Liu, 2014; Click & Petit, 2010).

1.3 RESEARCH QUESTION AND SUB-QUESTIONS

This study was guided by the following question:

> *Based on the information seeking behaviour of the users of a special collection library of an academic institution, what role can social media play in the provision of information services to users?*

Sub-questions to be answered from the literature:

- What has been reported on the use of social media in academic libraries?
- What has been reported on the use of social media in special collection libraries and related institutions (for example archives, museums)?

Sub-questions to be answered from the empirical component regarding the users of a special collection library of an academic institution:

- What is the information seeking behaviour of the users regarding social media?
- What are the needs for library/information services that can be met by social media?

1.4 PURPOSE AND VALUE OF THE STUDY

The purpose of this study was to investigate how users of a special collection library of an academic institution seek information and how social media can play a role in service provision. A survey of the literature revealed that very little is known about the role that social media can play in the provision of library services in a special collection context in South Africa. The empirical evidence that will be collected can be used to improve the provision of effective library and information services, especially in a special collection context, using social media that the users are comfortable with. This study could also serve to

inform other similar libraries/institutions on the role that social media can play in the provision of library and information services. According to Seadle (2004) the digitisation of rare and unique materials would ensure preservation for the long run and increase the visibility and discoverability, while Beaudoin (2012) argues that one would have to take into consideration the issue of context and whether these materials would lose value if taken out of the context of the whole collection. Hence, it would prove valuable to investigate the needs of users of special collections to determine the issues that would need to be included so as to make the collection valuable in digitised formats.

1.5 IMPORTANCE OF THIS STUDY

A survey of the literature, regarding the topic of this study revealed articles written in a South African university context, of which two will be mentioned here. One was written by Tania Bosch, a lecturer in the Department of Film and Photography at the University of Cape Town, who wrote from the perspective of the usefulness of social media in the teaching and learning environment; not from the perspective of the provision of library services (Bosch, 2009). The other was written by Shehaamah Mohammed, at the time a librarian at the Law Library at the University of Cape Town. Mohamed's article focused on the use of QR codes using mobile technologies to access the collections of that library (Mohamed, 2014). It cannot be assumed that the latter study will inform the Institution A Library as regards the use of social media technologies, as the collections within the Brand Van Zyl Law Library at University of Cape Town is different and the focus of that study was on mobile technologies and access to collections. The focus of the present study is on the role that social media can play in providing library services in a special collection context. A survey of the literature shows that very little is known on the role that social media can play in a special collection context in South Africa. This study would thus contribute empirical evidence for decision-making regarding the inclusion of social media in providing services based on information behaviour, in a special collection context.

1.6 CLARIFICATION OF CONCEPTS

The clarification of the concepts below do not serve as definitions, but merely to provide an understanding of the concepts.

1.6.1 Information seeking behaviour

Information seeking behaviour include those behaviours that a user would employ to find information, for example to answer a question, for personal use or work related issues or to complete an assignment or tasks (Ajiboye & Tella, 2007; Baro, Onyenania & Osaheni, 2010). Case (2012:5) does provide some insight into the concepts of information needs, information seeking and information.

According to Case (2012:5):

- "An information need is a recognition that your knowledge is inadequate to satisfy a goal that you have."
- "Information seeking is a conscious effort to acquire information in response to a need or gap in your knowledge base."
- "Information behavior encompasses information seeking as well as the totality of other unintentional or passive behaviors (such as glimpsing or encountering information), as well as actively avoiding information."

A general model for information behaviour was devised and revised by Wilson (1996), whereby he located the concepts of information need, information seeking, information exchange and information use in a flowchart that could provide a framework for studying how a person faced with a need to find information, would behave. Further discussion on this model will follow in Section 2.5 of Chapter 2.

1.6.2 Social media

Social media can be defined as a group of internet based applications that facilitate collaboration between users by providing for the exchange of user generated content (Anwyll & Chawner, 2013). It can also be described as web based applications that allow for users to create communities where they share information of a personal or other nature with each other (Kyung-Sun, Sei-Ching & Yuqi, 2013). Examples of social media include Facebook, Twitter and blogging (Anwyll & Chawner, 2013; Kyung-Sun, Sei-Ching & Yuqi, 2013).

1.6.3 Library services

Library services refer to the set of functions that must be performed to ensure the efficient operation of a library. Such functions include attending to reference queries, collection development and marketing the library (Kern, 2014).

1.7 LITERATURE OVERVIEW

A literature overview provides a foundation for advancing knowledge and it also provides a platform for determining and for developing theory. It also provides a platform to discover what has already been researched and what needs further research (Webster & Watson, 2002). Literature reviews and analysis are important for gaining an understanding of the thinking regarding a particular subject (Pickard, 2013:26). They further help the researcher to clarify the research aims and to form a theoretical framework for empirical investigation and the research design (Pickard, 2013).

1.7.1 Information seeking behaviour among users of academic libraries

Majid and Fai (2012) carried out studies that investigated the perceptions, preferences and usage of social networking sites by university students for academic and non-academic purposes. They found that students were concerned about the privacy of the information that they posted on social networking sites and that they mostly used these sites for non-academic purposes and that students preferred using search engines. A study by Connaway, Dickey and Radford (2011) indicates that convenience does play a role in a user's choices regarding information seeking for academic as well as non-academic purposes. Kumar and Balaji (2011) investigated the use of social media technologies as displayed on academic library websites in providing library services in South India and found that web information services are relatively low, while Boateng and Liu (2014) explored the use and trends of social media technologies in academic libraries in America by examining their websites and found that there is a 100% presence on Facebook and Twitter offering web information services.

1.7.2 Use of social media among the users of academic libraries

Zohoorian-Fooladi and Abrizah (2014) investigated the use of social media in university libraries in Malaysia, including the need for it, as well as the obstacles faced in using it in academic libraries. Their study found that librarians were not fully exploiting social media tools, but were however, using it to promote library services and to obtain instant feedback from users. It provided experiential evidence into librarian attitudes towards using social media to provide information services, and it highlighted the different deterrents in the adoption of social media related services. Malaysia although outside the African context is a developing country and evidence from this study will help frame the empirical component for the proposed study.

Chu and Meulemans (2008) investigated the problems and potential of Myspace and Facebook usage in academic libraries in 2008 and found that they were used mainly as collaborative tools. Although outdated it provides a good framework for studies involving student's use of social media. Another study that explored the use of Facebook for teaching and learning purposes at the University of Cape Town is Bosch (2009). This study explored the student use of social media as well as lecturer engagement with students using social media. The findings reveal that while it is beneficial to use Facebook for teaching and learning purposes and while students engage with social media outside of socialising, challenges such as information and communication technology (ICT) literacy and uneven access remain pertinent (Bosch, 2009).

A study by Mohamed (2014) reported on the use of QR codes that are easily read by mobile phones as an effective means for library users to access library resources at the Brand Van Zyl Library at the University of Cape Town. She is optimistic that the use of QR codes will be included in the strategic plans of academic libraries in South Africa in the future (Mohamed, 2014). For now, she recommends helping users overcome barriers to using new technologies such as the use of QR codes (Mohamed, 2014). According to Mohamed (2014:152), QR codes are used internationally with success in educational institutions for accessing resources.

1.7.3 Use of social media among the users of special collection libraries

One of the strategic goals of special collection libraries is to make their collections accessible and visible to their users. Harris and Weller (2012) used the University of Illinois at Chicago, Special Collection Department as a case study to examine the use of special collections and the activities that librarians undertake to make their collections visible and discoverable to their users and concludes that social media should also be used effectively to market the library. Garaba (2012) investigated the extent to which social media can make the liberation struggle heritage visible to the public and found that in order for social media technology to have a transformative influence it has to be the right technology for the right place and people. A study by Griffin and Taylor (2013) explored the use of social media tools in special collection departments in the United States of America (USA) and found that use of these tools provides benefits to these departments in terms of advertising news and events, but was not very effective in engaging with external constituents such as other departments.

1.8 DEMARCATION

- Topic demarcation: This study investigated information seeking as regards the collection of materials found in a specific special collection library. It further sought to investigate the role that social media can play in the provision of library services at this library. This study explored the use of social media in advancing library services into a dynamic, interactive, collaborative interaction between the library and the user.

- Geographic demarcation: This study was conducted in South Africa.

- Context demarcation: special collection library.

- Target group demarcation: This study involved the users of the special collection library that was selected for this study. These users included researchers, academics, undergraduate and postgraduate students, and staff at Academic Institution A, as well as outside users not enrolled or employed at Academic Institution A.

1.9 LIMITATION OF THE STUDY

This study was a single case study. It did not investigate information seeking behaviour and the role of providing library services using social media in the other branches of the selected university. The findings might thus not be fully generalizable to the institution. This study used purposive sampling which also has the potential to introduce biases into the study, such as lack of variety of experience and viewpoints (Case, 2007:196). This study does not seek to generalize to the entire population of special collection libraries. It does, however seek to include participants who can provide rich data in terms of providing an in-depth understanding of the phenomenon studied, namely the role of social media in providing library services in a special collection library context. Further to this, data was collected during a three week period in the month of September 2015. Only participants that were present in the library during these three weeks, were included in the sample.

1.10 RESEARCH METHODOLOGY

There are three types of research designs; namely qualitative, quantitative and mixed methods designs. These can also be referred to as research approaches.

1.10.1 Research approaches

Padilla-Meléndez and Rosa del Águila-Obra (2013) used a mixed methods approach in providing an understanding of the strategies that museums adopt in using the web and social media. A mixed methods approach was used for this study.

1.10.1.1 Mixed methods approach

A mixed methods approach refers to the combination of both qualitative and quantitative methods for data collection and data analysis. Both quantitative and qualitative methods have weaknesses; however, the mixing of these methods could neutralise the limitations inherent in any single method, hence allowing for the triangulation of the data collected (Creswell, 2003).

1.10.1.2 Quantitative research approach

A quantitative study would usually begin with a literature review which would provide a conceptual framework to guide the study (Pickard, 2013). A quantitative research approach is more restrictive in nature, meaning that the answers to the questions are closed, forcing the respondent to choose from predetermined alternatives (Pickard, 2013). A quantitative study was useful for this study to collect demographic data and for gathering information on actual use and preferences of social media tools.

1.10.1.3 Qualitative research approach

A qualitative research approach is characteristic of an emergent design and uses data collection techniques in an interactive way with the purpose of deriving meaning from the data and using that meaning to develop theory (Pickard, 2013). An emergent design allows for the design to emerge as the study progresses, in other words it does not limit the use of individual techniques to promote emerging themes as the study progresses (Leedy & Ormrod, 2014:51; Pickard, 2013:14). The qualitative study was useful for collecting information on the views, experiences and thoughts or opinions of participants as regards the role that social media can play in providing library services.

1.10.2 Research method - case study

Different research methods, such as case studies and methods for data collection such as observations, questionnaires and focus groups have been noted in the subject literature (Lewis-Beck, Bryman & Liao, 2004; Pickard, 2013). For the purposes of this study, a case

study was used. According to Lewis-Beck, Bryman and Liao (2004:92) a case study refers to research that studies a single or multiple cases in-depth. A case study can involve two components, namely the process of being engaged in the investigation of a particular phenomenon, and the writing up of the output (Pickard, 2013). For this study a single case study was used.

1.10.3 Methods for data collection

For data collection, semi-structured interviews and printed self-administered questionnaires were used. Thinyane (2010) designed a questionnaire for her study to elicit demographic information on the participants, determine the different types of technology that students had access to, how skilled they were in using these technologies and finally how they would use technology for their studies. A similar questionnaire design was used for this study.

Garaba (2012) used structured interviews as a follow up to self-administered questionnaires in his study to determine the extent to which social media technologies were used by archival institutions to make known the liberation struggle archives. Semi-structured interviews were used in the present study as a follow up to self-administered questionnaires to determine the role that social media can play in providing library services by examining user opinions, attitudes, preferences and concerns in using social media for academic purposes.

1.10.4 Target group

The target group for this study involved postgraduate and undergraduate students as well as academic staff and visiting researchers of the Special Collection Library at Institution A. A purposive sample of 36 participants was approached to participate in the data collection (questionnaires). A purposive sample of 11 participants were approached to participate in the individual semi-structured interviews. From the 11 participants, 10 participants provided rich data for this study. One participant was an experienced researcher at the Special Collection Library, but was not able to discuss his experiences with social media for academic purposes since he was not familiar with it and was not using it. He, however, discussed the print collections that he predominantly uses that are not in digital format.

1.10.5 Summary of research methodology

Research approach	Mixed methods approach
Research strategy	Case study (single)
Target population	Users of a special collection library
Sampling method	Purposive sampling
Data collection tools	A self-administered questionnaire was used to determine the information seeking behaviour of users and the role that social media can play in providing library services to users. Semi-structured interviews were used to gauge user perceptions and thoughts on using social media for academic and research purposes. A brief questionnaire was used to collect profile data from the participants in the semi-structured interviews.

Table 1 1: Summary of research methodology

1.11 RELIABILITY AND VALIDITY

Validity refers to the extent to which the instrument measures what it was designed to measure (Kothari, 2004:73). Reliability refers to the accuracy of the data collection method and whether if conducted under similar settings, it would produce the same result (Denscombe, 2010:143). The questions and statements included in the interview schedule for the semi-structured interviews and the questionnaires were directly related to the topic under investigation and were influenced by findings from the subject literature, and the design of related studies. Both instruments were pretested on a pilot group of participants.

1.12 ETHICAL CLEARANCE

Permission to conduct this study was granted by the Department of Information Science Research Committee, on behalf of the Faculty Committee for Research Ethics and Integrity of the Faculty of Engineering, Built Environment and Information Technology at the University of Pretoria and from the Humanities Research Ethics Committee at Institution A. Permission from the Director of Human Resources and the Director of Student Affairs were also granted to access the student and staff population for research. The protection of the confidentiality is explained in more detail in section 3.6, Chapter 3.

1.13 DIVISION OF CHAPTERS

Chapter 1 - Introduction

This chapter introduced the topic of study. It also discussed the background to the study, the importance and value of the study and dealt with issues of ethics. It presented the research question and sub-questions that needed to be answered by this study.

Chapter 2 - Literature analysis

An in-depth search and analysis of the literature was done to determine how social media played a role in providing library services; first, broadly in academic libraries and then specifically in special collection libraries, museums and institutions that house archival materials. This chapter also looked at the use of social media by the users of academic libraries.

Chapter 3 - Methodology

In this chapter the research design, research approach, research method and data collection methods that were used for this study were discussed, as well as issues related to the research design. Factors that also came under discussion included ethics, sample population, theoretical frameworks and reliability and validity.

Chapter 4 - Results and findings

This chapter discussed the results of the data collection and presented the findings that indicated how, taking into consideration the information seeking behaviour of the users of the special collection library and, whether social media had a role to play in providing library services.

Chapter 5 - Summary of findings, recommendations and conclusions

This chapter discussed the findings of the study and based on the users' information behaviour and needs for library services presented, made recommendations on whether and how social media can play a role in the provision of library services.

1.14 CONCLUSION

This chapter introduced the research question that guided this study, as well as the sub-questions to be answered from the literature and from the empirical component of the study. It also briefly discussed the background to the study, importance and value of the study, as well as its limitations. Relevant definitions, the scope and a broad overview of the methodology used were also presented in this chapter. Reliability and validity as well as ethical clearance were also briefly discussed. The next chapter reviews the literature available on the topic.

CHAPTER 2: LITERATURE ANALYSIS

2.1 INTRODUCTION

In this chapter, the following will be discussed: use of social media by academic libraries in relation to library services; firstly, in an international context and then in an African context. The discussions will also include social media in special collection libraries, museums and archives and the use of social media by the users of academic libraries. The discussions will progress from the libraries' use of social media to the user's use of social media.

The focus of this literature analysis is geared towards investigating the use of social media by academic libraries in rendering a service. The discussions will include the use of social media, more specifically in special collection libraries, museums and archives. Museums and archives will be included, as these institutions also house archival collections of different formats such as artefacts that are similar to that of special collection libraries (Liebetrau, 2005). Literature on the information behaviour of the users of academic libraries with regard to social media is also addressed.

2.2 USE OF SOCIAL MEDIA BY ACADEMIC LIBRARIES IN RELATION TO LIBRARY SERVICES

2.2.1 International libraries

Earlier research either focused on describing the potential use of social media in libraries or on a particular tool or tools and their application in libraries (Farkas, 2007). In 2008, Linh carried out research aimed to provide an overall picture of the application of Web 2.0 technologies in Australian university libraries with a specific focus on the types, purposes and features of the technologies that were applied in these libraries. Linh (2008) found that the most popular types of social media tools that were employed by Australian university libraries were real simple syndication (RSS), blogs, instant messaging (IM) and podcasts. RSS was the most frequently used social media tool and IM, the least frequently used tool (Linh, 2008). As regards the purposes, RSS feeds were used mainly for advertising new acquisitions, and blogs were used mainly for news events and library services, such as opening hours, borrowing services and question and answer services. The purposes of podcasts were for "advice on library skills", "guidance with resources" and "library

orientation tours." (Linh, 2008:643-645). Instant Messaging was used for chat functions for giving advice on library skills, and with guidance to resources in the library (Linh, 2008:643-645). As regards the features; RSS provided links to websites, whereas blogs provided for categorisation and archiving of posts; IM had chat features. Podcasts were the least popular tool due to large audio files (feature) and accompanying transcripts (Linh, 2008). Users would rather download the accompanying transcripts than the large audio files.

A similar study was carried out by Han and Quan Liu (2010) whereby, they explored the use of social media tools by 38 selected Chinese university libraries and further investigated the functionalities and features of social networking tools. They found that 31 of the 38, thus a majority, of the Chinese university libraries were making use of social media tools, with RSS feeds again featuring as the most popular tool used (Han & Quan Liu, 2010). These findings agree with that of Linh (2008), who also found RSS feeds to be the most popular social media tool used in academic libraries in Australia. The RSS feeds were mainly used for notification purposes (Han & Quan Liu, 2010; Linh, 2008).

In New York State, (USA), Xu, Ouyang and Chu (2009) investigated 81 academic library websites to determine the extent to which these libraries were using social media tools to render their services. Xu, Ouyang and Chu (2009) found that less than half (42%) of the 81 libraries were using social media technologies; they used it for various applications, such as, instant messaging as a chat platform for librarians to communicate with their users and blogs for news events. The remaining 58% of the 81 libraries included in the survey, did not use any social media applications, with many still using traditional methods such as email to provide library services (Xu, Ouyang & Chu, 2009). In terms of popularity, the findings by Xu, Ouyang and Chu (2009) differed from that of Linh (2008). While Linh (2008) found IM to be the least frequently used tool; Xu, Ouyang and Chu (2009) found that IM was most widely adopted, mainly due to the fact that IM offered synchronous chats which facilitated reference services as compared to traditional methods such as email. Second to IM, were blogs, which were usually used together with RSS to provide updates and news events (Xu, Ouyang & Chu, 2009).

While Xu, Ouyang and Chu (2009) focused on different social media tools that libraries would have used, Graham, Faix, Hartman and McNicol (2009) focused on one particular tool and surveyed 100 academic librarians to investigate whether Facebook facilitated

engagement with their users. Graham *et al.* (2009) found that Facebook was not only useful for engaging with the users, but also for building professional relationships. A noteworthy feature of Facebook is that with certain applications, the library online catalogue can be searched directly from Facebook and databases such as JSTOR and WorldCat can be linked to Facebook profiles (Aharony, 2012; Graham *et al.*, 2009).

Click and Petit's (2010) research differed from the research by Xu, Ouyang and Chu (2009) as well as the research by Graham *et al.* (2009) in that her research zoomed in on a particular library service, namely, literacy instruction and how social media tools can be used to support such a library service. Click and Petit (2010) agrees with Graham *et al.* (2009) that the social media tool, Facebook, can offer effective means to engage and communicate with users. Some of these communications include asynchronous discussions around library issues, for example, the library posted information on a newly acquired database on its Facebook page and users asked questions about the database; librarians provided answers (Click & Petit, 2010). Twitter provides active engagement for services such as question and answer on training schedules and YouTube is effective for uploading library instruction tutorials (Click & Petit, 2010).

Dickson and Holley (2010) also examined the use of social media tools in academic libraries with a particular focus on outreach possibilities. She explored firstly, the possibility of reaching students who do not come to the physical library and secondly, the concerns that students and academic libraries have regarding the use of social media tools (Dickson & Holley, 2010). She found that social media tools provide an effective method for outreach possibilities provided that student privacy and coverage of all subject areas are taken into consideration (Dickson & Holley, 2010).

Similar to the other researchers noted here, Click and Petit, 2010; Dickson and Holley, 2010; Graham *et al.*, 2009, all looked at how social media can be exploited to support students and users. O'Dell (2010) examined the possibility of the library using social media tools to support faculty: libraries are not just an archive of old information but rather a part of the ongoing discovery process. According to O'Dell (2010), the Public Library of Science (PLOS) has upgraded its metrics to include blog coverage, social bookmarks, comments and ratings. This means that article rankings are not necessarily determined by the journals in which they are published, but also by the impact and interest that they create on their own

merits. O'Dell (2010) view libraries as having a role to play in the whole research process and advocates innovative ideas on how libraries, enabled by social media technologies can extend their services to include collaborative functions across disciplines and the establishment of virtual research environments. Such innovative ideas include scientists using blogs and Facebook to collaborate and discuss research issues across disciplines (O'Dell, 2010).

Kumar and Balaji's (2011) research which used the same framework as the researchers mentioned before (Han & Quan Liu, 2010; Linh, 2008), namely using content analysis to examine the library websites, focused on the use of social media in Indian university libraries. While social media tools were widely adopted in Australian and Chinese university libraries (Han & Quan Liu, 2010; Linh, 2008) mentioned earlier, Kumar and Balaji (2011) found that social media tools were not widely adopted in Indian university libraries. He listed the challenges to such adoption as being funding, training and development skills for librarians and library users, and lack of facilities, such as computers, and the lack of infrastructure, such as poor internet connection (Kumar & Balaji, 2011).

While before-mentioned researchers may seem rather optimistic towards social media driven library services (i.e. Han & Quan Liu, 2010; Linh, 2008; Xu, Ouyang & Chu, 2009), Nicholas, Watkinson, Rowlands and Jubb (2011) found that social media are unlikely to impact library services in any major way except maybe for marketing purposes. His study included focus groups involving academics and how they would expect social media to facilitate library services (Nicholas *et al.*, 2011). The questions posed to the focus group members were more directed towards social media replacing library e-resources such as e-journals rather than facilitating discovery and access of resources. Hence, a rather negative attitude towards social media driven library services was displayed (Nicholas *et al.*, 2011).

A study by Aharony (2012) used statistical descriptive analysis and content analysis to understand the patterns of Facebook use in public and academic libraries in America. Findings show that public and academic libraries mostly use Facebook to deliver information to users rather than as a venue for discussion. The information section of Facebook is used for basic information, for example contact details, and the Facebook wall is used for basic communication with other users (Aharony, 2012). The photos section is used by 40% of academic libraries to present photos to their users and 30% of academic libraries provide

links to databases, for example JSTOR, on their profiles (Aharony, 2012). This study also highlighted some challenges in using Facebook for academic purposes such as: the content uploaded on Facebook could be embarrassing, informal and not respectable; the tone of the communication is less formal and less professional; librarians perceive the library as a place of learning and Facebook as a space for student networking; privacy of information and lack of professional staff to maintain the site (Aharony, 2012).

A study by Ponelis (2013) outlined the ethical risks that should be taken into consideration when engaging with social media as an institution, specifically academic libraries. The study uses Mason's PAPA (privacy, accuracy, property, accessibility) model as a framework to discuss information and technology related ethical risks (Ponelis, 2013:235). Privacy refers to the information about oneself or one's institution that is made available to others (Ponelis, 2013). When libraries use social media as a communication platform it can increase the perception in users that their private space is being intruded upon (Ponelis, 2013). With regard to accuracy, libraries should always ensure that information posted on its sites is verified and accurate; even with this there is a fine line between curation and censorship (restrictions in terms of freedom of speech) (Ponelis, 2013). Intellectual property carries major implications, as the social media organisations own the user usage data that libraries respect and actively protect (Ponelis, 2013). Ethical issues around accessibility include: language barriers, exclusion, for example users that do not have access to the internet and technologies that fall outside the control of the library (decreased accessibility during downtime) (Ponelis, 2013).

Mahmood and Richardson's (2013) study, showed an increase in the adoption of social media technologies in delivering library services in American university libraries as compared to a previous study (Xu, Ouyang & Chu, 2009) which found that the majority of American university libraries have not adopted social media technologies in carrying out library services, but were still using traditional means. These services included marketing of resources, soliciting user feedback, communication with the user community and enhancing library image (Mahmood & Richardson, 2013). Further findings, on a Likert-type scale, show that there is a positive correlation between the adoption of social media technologies in the libraries and the librarian's opinions about their advantages (Mahmood & Richardson, 2013).

A study by Palmer (2014) sought to identify the Twitter and Facebook activities that engage an Australian university library and its users in social media conversations. The findings show that it is not enough to have a social media account, purposeful, intentional engagement with users such as a directed tweet to a user, is more likely to develop active online social media communities (Palmer, 2014). With regard to Twitter, three types of engagement between library and users are identified: strong engagement is characteristic of multiple tweets going to and from library and user; weak engagement is characteristic of perhaps one tweet and indirect engagement is characteristic of tweets between users where the library is mentioned (Palmer, 2014). With regard to Facebook, posts such as competitions, evokes a strong engagement whereas posts such as photo uploads evokes weak engagement (Palmer, 2014).

Research was also carried out in Malaysian academic libraries which aimed at identifying the prevalence of social media in these libraries as well as the reasons for establishing a social media presence and the obstacles encountered in establishing such a presence (Zohoorian-Fooladi & Abrizah, 2014). Three focus groups comprising 22 librarians from research intensive universities were used in this study (Zohoorian-Fooladi & Abrizah, 2014). The results showed that social media tools such as Facebook and Twitter were used, but mainly for the promotion of library services (Zohoorian-Fooladi & Abrizah, 2014). The study highlighted different types of obstacles that deterred librarians from applying social media technologies, such as workflow obstacles (level of authority), personal obstacles (language barriers & commitment), technology obstacles (familiarity with new technologies) and organisational obstacles (lack of policies or policies that prohibit or restrict use) (Zohoorian-Fooladi & Abrizah, 2014). The study also revealed a casual attitude amongst librarians in exploiting social media tools for library services (Zohoorian-Fooladi & Abrizah, 2014). Reasons that deter librarians from using social media were: lack of participation from users; and only senior librarians could decide on what messages to post on websites (Zohoorian-Fooladi & Abrizah, 2014).

Boateng and Liu's (2014) study took a similar approach to the studies mentioned earlier (Kumar & Balaji, 2011; Linh, 2008), in that he used content analysis in terms of a quantitative approach in surveying university websites in America, with checklists and questionnaires as the research instruments. The study entailed exploring the implementation and usage of social media which included RSS, Facebook, Twitter, blogs and IM (Boateng &

Liu, 2014). In terms of surveying the university websites to determine the use of social media tools, Facebook and Twitter were found to be the most popular social media tools used (Boateng & Liu, 2014). These findings differed from the earlier findings of Linh, (2008) and Han and Quan Liu (2010) who also surveyed university websites in Australia and China and found RSS feeds to be the most popular tools used in academic libraries. Boateng and Liu's (2014) findings also revealed that blogs were used to promote user participation, IM was used for quick online reference services, Facebook and Twitter were used for personalised engagement with users, and other uses of social networking sites included uploading photos, sharing links, videos, marketing library services and reference services.

2.2.2 African libraries

At the University of Education, Winneba, Ghana, descriptive survey research was carried out to establish the possibility of linking the library webpage to a social networking site (Ayiah & Kumah, 2011). A questionnaire was used to gather information from 541 students on accessing library services on social networking sites (Ayiah & Kumah, 2011). Findings indicated that students endorsed the linking of social networking sites to the library's web pages and that social networking sites could be used to facilitate collaborations between the library and the university community. The users' main purposes of visiting the social networking sites were to connect with friends, to chat with friends and to visit pages of interest.

Anyaoku, Orakpor and Ezejiofor (2014) carried out research in Anambra State, south east of Nigeria, which aimed to determine the knowledge and use of social media by librarians (academic and public librarians). Using surveys, they collected data from 78% of the sample group and found that there was low knowledge and use of social media technologies in libraries (Anyaoku, Orakpor & Ezejiofor, 2014). This was attributed to low awareness of social media technologies by librarians and low internet connectivity; therefore, Anyaoku, Orakpor and Ezejiofor (2014) advocates that librarians should lobby and spearhead efforts for better internet connectivity. In terms of barriers to the adoption of social media technology, namely, low internet connectivity. Therefore, Anyaoku, Orakpor and Ezejiofor's (2014) findings are in agreement with a study mentioned earlier (Kumar & Balaji, 2011) which also found internet connectivity to be a barrier to the adoption of social media technology in Indian university libraries.

Baro, Ebiagbe and Godfrey (2013) carried out a comparative study aimed at investigating the use of social media tools by librarians in university libraries in Nigeria and South Africa. Questionnaires were used to collect data from librarians in 11 universities that were selected in the two countries (Baro, Ebiagbe & Godfrey, 2013). Facebook was found to be the most frequently used social media tool by librarians in both countries (Baro, Ebiagbe & Godfrey, 2013). In terms of most frequently used social media tools, the findings according to Baro, Ebiagbe and Godfrey (2013) agreed with that of Kwanya, Stillwell and Underwood (2012) in that Facebook was the most frequently used social media tool by librarians in Kenya, also an African country. This study also showed that South African librarians make more frequent use of social media tools than their Nigerian counterparts (Baro, Ebiagbe & Godfrey, 2013).

Reasons for Nigerian librarians' lower usage of social media tools can be attributed to lack of knowledge, interest and awareness of these tools (Baro, Ebiagbe & Godfrey, 2013). This study also showed that purposes for which social media tools were used included the rendering of library services, for example literacy training, image and video sharing, social tagging and bookmarking, announcements of library news and new resources, and collaborating with colleagues (Baro, Ebiagbe & Godfrey, 2013). The challenges that these librarians faced in using these tools included lack of time, which implies that communicating on social media was not part of core librarian functions (Baro, Ebiagbe & Godfrey, 2013). Other challenges included power failure, lack of facilities and lack of skills (Baro, Ebiagbe & Godfrey, 2013). This agrees with the study, by Kumar and Balaji (2011), who also found lack of both facilities and skills to be challenges faced by academic libraries in India, also a developing country, and with Anyaoku, Orakpor and Ezejiofor (2014), mentioned earlier, who also found that low awareness of social media technologies by librarians and low internet connectivity were challenges to the adoption of social media technologies in Nigerian libraries.

Mohammed (2014) carried out research at the University of Cape Town, South Africa and she discusses the promotion of a barrier free library that serves its community at the point of need using quick response codes, accessed through mobile technologies, to access library services. Social media can also be accessed via mobile technologies and what is interesting to note is that, this study showed that 74% of the participants owned smartphones with access to the internet, thus minimising the barriers to the adoption of social media technologies, mentioned by other studies (Anyoaka, Orakpor & Ezejiofor, 2014; Baro, Ebiagbe &

Godfrey, 2013; Kumar & Balaji, 2011). A further point of interest is that 60% of the participants did not use mobile technologies for research purposes, due to lack of awareness of how to use mobile technologies in this way (Mohamed, 2014).

Lwoga's (2013) research took a different focus in that it leaned more towards evaluating social media technologies in an African context. His findings revealed determinants, namely, information quality, system quality, service quality, perceived net benefits, user satisfaction and intention to reuse, as important factors in evaluating social media technologies (Lwoga, 2013). Perceived net benefits had the strongest direct influence on a users' intention to reuse social media technologies, while service quality had the strongest direct effect on perceived benefits (Lwoga, 2013). Information quality had a stronger effect on user satisfaction as compared to systems quality (Lwoga, 2013). This study implies that librarians should strive towards enhancing social media applications in their libraries to influence user's behavioural intentions to use and reuse services (Lwoga, 2013). The same researcher in 2014 reported on the implementation of social media technologies in the Muhimbili University of Health and Allied Sciences (MUHAS) Library in Tanzania and found that, despite challenges related to infrastructure, awareness and so forth, social media technologies can be successfully implemented to effectively meet user needs and library goals (Lwoga, 2014).

2.3 SOCIAL MEDIA IN SPECIAL COLLECTION INSTITUTIONS

There are not many studies that have been done on the use of social media in special collection libraries, museums and archives in a South African context. Liebetrau (2005) shared her ideas in an opinion paper on the challenges faced by special collection libraries, museums and archives in South Africa. She reports that information users are increasingly seeking information online and the challenges that South African special collection libraries, museums and archives face in providing online information to their users in an ever changing digital environment are: funding, digital skills for staff and users and protection of rights and identities of individuals (Liebetrau, 2005). She suggests that by adopting international standards, developing a framework for collaborating with other institutions and developing a best practice model, solid foundations can be established for getting the physical collection into the digital domain for greater accessibility (Liebetrau, 2005).

Mason (2014) agrees with Liebetrau (2005) that user expectations in terms of accessing information has changed and special collection libraries have faced increased pressure to

make their collections more visible online. Mason (2014) focused her research on case studies of initiatives by special collection institutions in America, whereby institutions have used social media tools to promote their collections. Mason (2014) highlights the opportunities that social media technologies create for user engagement and networking with minimal effort. This study highlights different ways of exploiting social media tools for resource sharing. For example, instead of special collection libraries digitising their collections and keeping it locked in their spaces, there are opportunities afforded by Flickr (a platform on which images can be uploaded, described and tagged) whereby all special collection libraries can integrate their collections into a larger social space that users already engage in (Mason, 2014). As much as these opportunities appear attractive, they do present challenges in terms of user perceptions regarding reliability and authenticity of the information if it is shifted to social media environments (Mason, 2014).

Green (2012) from the University of St Andrews in Scotland presented information from personal experience and from interviews with special collection specialists on the social media tools that are available specifically for special collection libraries. With many special collection libraries and archives converting their physical collections to digital formats, and with increasing transformation in the way users of special collection libraries communicate, it has become necessary to use innovative ways to exploit social media technologies (Green, 2012; Liebetrau, 2005). Some of the special features that social media tools have are platforms for providing metrics on usage, such as Facebook which provides statistics on the number of people that visit the page, number of likes and number of people that shared the post (Green, 2012). These statistics provide a strong case in justifying the use of these technologies (Green, 2012). Also highlighted by Green (2012) are some innovative ways of using social media technologies other than for promotional reasons. For example, custom designing the statistics or metrics function, to determine which posts receive the most attention and which social media platforms are best suited for particular types of posts.

Green (2012) reports that Flickr, is very popular amongst museums and special collection libraries with over 2 500 Flickr museum pages and over 800 special collection department pages created. Other findings by Green (2012) include the fact that smaller special collection departments have collaborated with special interest museums and have started group Flickr accounts that provide a greater variety of images to a wider community of users. A special feature of blogs is that it allows the creator of the blog to apply rich metadata to images in the

blog which can be picked up by major search engines (Green, 2012). Another example of the innovative and developing ways of using social media, as reported by Green (2012), is that of Oxford University, which started a successful project that used crowd sourcing to help identify unknown collections (Green, 2012). This university hosted surrogates online, of uncatalogued or unknown collections and invited volunteers from around the globe to help catalogue the collections (Green, 2012).

Gresham and Higgins's (2012) study was different from the other studies noted in this section (Green, 2012; Liebetrau, 2005) in that their study focused more on the effect that social media tools have on the user's ability to browse online archival catalogues. Gresham and Higgins's methods included a review of the literature using content analysis. The data collection methods used were semi-structured interviews of a purposive sample which consisted of the United Kingdom (UK) archives and other archives in the UK that had online catalogues (Gresham & Higgins, 2012). Findings in this study identified the social media tools used that were likely to improve browsability, which included social bookmarking, RSS feeds, collaborative filtering, user contributions, mashups and tagging/folksonomies (Gresham & Higgins, 2012). It was found that the use of social media tools in accessing the online archival catalogues was low and that more detailed metadata may improve better usage experience (Gresham & Higgins, 2012). Findings by Gresham and Higgins, (2012) do show that social media tools encourage communication with users by posting comments on catalogues, through folksonomies and submission of enquiries, not only for staff attention but for other users' attention as well.

Research conducted by Russo, Watkins and Groundwater-Smith (2009) was similar to Mason (2014) and Green's (2012) in that it provided convincing arguments for implementing social media technologies in special collection libraries, museums and archives. However, it differed in that it focused more on the transformation of users' digital literacy and the central role of social media in creating new and authentic learning experiences in informal learning environments. They made convincing arguments for museums and libraries as informal learning environments as learning is more user-centred and directed (Russo, Watkins & Groundwater-Smith, 2009). They also noted innovative ways that social media can be exploited to create meaningful value to the users, such as recordings of users' experiences when touring the museum, these recordings being made available on podcasts, forming unofficial guides to the museum content (Russo, Watkins & Groundwater-Smith, 2009). They

also provided insight into new ways that social media platforms provide for content creation and knowledge sharing in creating communities of interest that work towards making special collections and archives more dynamic and current rather than the age old static collections that did not provide for user interaction. One such example is the Museum of Modern Art, New York, which offers a "Talk back" forum for its users to share their experiences regarding their content (Russo, Watkins & Groundwater-Smith, 2009). Curators can benefit from these forums as they provide insight into the meaning that users attach to their collections (Russo Watkins & Groundwater-Smith, 2009). Also noted by Russo, Watkins and Groundwater-Smith (2009) is that this kind of public participation and knowledge sharing can influence and attract new users which are valuable for strengthening impact and importance of archival collections. Besides content sharing, social media technologies also provide opportunities for content creation. For example, an institution can upload images onto its website and encourage users to provide other information related to these images (Russo, Watkins & Groundwater-Smith, 2009).

Garaba (2012) maintains that diminishing budgets and the fundamental need for archives to ensure usage of their collections, lend weight to the relevance of social media technologies in user engagement. Social media technologies should be employed to complement digitisation efforts to promote access (Garaba, 2012). In his paper, Garaba (2012) addresses the extent to which social media technologies can be employed to make the archival collections more public. He addresses the use of different types of social media technologies such as Facebook and Twitter, maintaining that innovative strategies need to be employed to exploit the right technologies for the right collection according to the affordability of both the institution and the user (Garaba, 2012). The ways in which social media technologies are being used by archival institutions, as noted by Garaba (2012), are: Facebook groups and Facebook pages are used to promote their current collections; Twitter is used to inform users of events or new collections; and Wikis can fall into two categories, one for staff content sharing and the other for user content sharing, both of which would be open for public view and contribution.

Similar to Garaba's (2012) study, Samouelian (2009) investigated the extent to which social media technologies have been included in digitisation of archival collection projects by examining institutional websites. This study found that despite lack of evidence on the benefit derived by using social media tools, there is an enthusiasm and a perception of derived benefit from archival professionals (Samouelian, 2009). This perception could be the result of

increased requests for scanned objects by users, increase in donations of materials for collection development and an increase in requests for usage of collections (Samouelian, 2009). Harris and Weller (2012) used the University of Illinois, Special Collection Department as a case study to examine how special collection departments and the outreach librarians, increase access and knowledge to their collections, including the use of social media technologies in achieving the library's mission and goals. The study showed that there was an increase in viewing statistics of images placed on Flickr. What was not clear was whether viewing the images relates to direct research or the use of the collections (Harris & Weller, 2012).

Studies by Padilla-Meléndez and Rosa del Águila-Obra (2013) complemented the studies by Harris and Weller (2012) and Samouelian (2009) in that, where these studies could not provide evidence of usefulness in terms of research value, Padilla-Meléndez and Rosa del Águila-Obra (2013) were able to provide a framework for understanding the strategies employed by archival institutions in using social media and the internet to add value for the user. The archival institutions that were represented in this study were from mostly English speaking countries such as American countries and England. The group of institutions that went the extra mile in creating value online, such as allowing users to create their own webpages of the institution using information that is relevant to them, had the biggest number of followers on Twitter, indicating value for the user (Padilla-Meléndez & Rosa del Águila-Obra, 2013). The findings in this study help archival professionals appreciate the impact of social media technologies in an archival institutional context and promote better decision making and resource allocation (Padilla-Meléndez & Rosa del Águila-Obra, 2013).

A study by Wong (2011) is similar to Ponelis (2013) in discussing the ethics behind employing social media technologies in archival institutional practice but different to Ponelis (2013) in that Ponelis (2013) focused on academic library context whereas Wong (2011) focused on archival institutional context. Wong (2011) maintains that ethical culture is derived by continuous repeated engagement by users with the online archival content. Archival institutions hold an ethical responsibility to their users and communities to enable the flow of knowledge that could enrich them (Wong, 2011). From an ethical stance, social media technologies provide a platform to museums and special collection libraries to make available their collections online (Wong, 2011). Special collections that are placed online, offer expanded access and inclusion, as well as opportunities for users to dynamically engage

with content and collaborate with each other (Wong, 2011). This expanded access and inclusion applies to those users that have access to the internet; Ponelis (2013) alerts us to the fact that those users who do not have access to the internet, could feel excluded. Bearing in mind this openness of sharing information, the absence of a code of conduct in terms of how users interact and engage with the online content and with each other opens up opportunities for users to create their own code of conduct (Wong, 2011). Given the fact, that digital information is widely dispersed and can be manipulated online, archival institutions are concerned about meeting the ethical concerns around authenticity and authorship (Wong, 2011). There seems to be a compromise as regards ethics between authenticity and making collections publicly available.

Griffin and Taylor (2013) maintain that there is a cultural shift in the communication behaviour of special collection libraries and their users. In order to determine the return on investment that special collection libraries derive from employing social media technologies, Griffin and Taylor (2013), analysed data regarding social media usage from the profiles of special collection departments of 125 libraries that are members of the Association for Research Libraries. Griffin and Taylor (2013) found that special collection libraries achieve moderate success when employing social media technologies for promotional and marketing purposes and little success when using it as a tool to engage users.

Jensen's (2013) study was different in that it explored the possibility of using social media for digital curation, outreach and communication. This study showed that social media does provide opportunities for user engagement and involvement in cultural institutions even though the institutions remain in control of the engagement (Jensen, 2013). Regarding user engagement and communication, Jensen's study which found that social media can be used as an engagement tool for the institution and the user, disagreed with Griffin and Taylor's (2013) study which found that social media is ineffective as an engagement tool.

2.4 THE USE OF SOCIAL MEDIA BY THE USERS OF ACADEMIC LIBRARIES

Using a descriptive survey design and questionnaires to collect data, Ajiboye and Tella (2007) surveyed undergraduate students at the University of Botswana. The purpose of this study was to examine the information seeking behaviour of the students, specifically looking at sources consulted and how information was gathered, the impact of the students' gender, level of study (first, second or third year level of the degree/qualification) and modules of

study. The findings show that academic information is the type of information most required by the students (Ajiboye & Tella, 2007). It also showed that students predominantly sought information for academic purposes using the internet as the most important source (Ajiboye & Tella, 2007). The students' level of study, that being second or third year levels, contributed the most towards determining the information seeking patterns of behaviour, followed by modules of study and gender (Ajiboye & Tella, 2007). Ajiboye and Tella (2007) postulate that the higher the student climbs the academic ladder, the more projects and assignments he is given that require academic information.

Franklin and Plum (2002) used surveys to investigate user use of networked electronic services of four Health Sciences Libraries in the USA and aimed to examine the usage pattern of users both in the physical library space and those accessing the library remotely. The relevance of this study lies in the fact that electronic services can be linked to social media platforms. This study was similar to Ajiboye and Tella's (2007) in that it looked at the purposes for which users accessed online library services, which can also be accessed using social media technologies. It went further to examine the differences in purpose between the user in the library space accessing online library services and the user accessing the services remotely (Franklin & Plum, 2002). The results of this study showed that there seemed to be a greater dependence on online resources when compared to their physical counterparts (Franklin & Plum, 2002). The funded researchers were more frequent users of online resources remotely (Franklin & Plum, 2002).These studies also showed that libraries that have implemented gateways for online library services access, such as EZProxy, are better equipped to conduct research into web services usage (Franklin & Plum, 2002). Findings of this study show that researchers are frequent users of online resources accessed remotely and that there are opportunities for social media technologies to be fully exploited to make visible and accessible these online resources, such as the online catalogues.

Chu and Meulemans (2008) used surveys and focus groups with undergraduate students, at the California State University, San Marcos to explore how students were using Facebook and Myspace. The findings show that students use these platforms to communicate with friends, find old friends and to network (Chu & Meulemans, 2008). The discussions on these platforms included matters referring to coursework and sometimes, conversations that they would not want to share with their professors (Chu & Meulemans, 2008). Perhaps this would explain why students prefer to communicate with their professors on email rather than on

Facebook or Myspace (Chu & Meulemans, 2008). It also looked at the practical feasibility of integrating Myspace and Facebook for just-in-time reference services by indicating to the user when the librarian is online and available to help them. In a way, this strengthens the engagement between librarian and user (Chu & Meulemans, 2008).

As much as Bosch's (2009) study did not look at a library setting but focused more on a teaching and learning setting, the study is still relevant for the present study as it investigated the student use of Facebook and student engagement with lecturers at the University of Cape Town, a South African university. Using virtual ethnography and qualitative interviews, the study showed that despite challenges such as internet literacy and access, Facebook does hold potential for student engagement, particularly for creating educational micro-communities (Bosch, 2009).

Similar to Bosch's (2009) study, Jones, Ramanau, Cross and Healing's (2009) study did not focus on a library setting, but is relevant as it explored the age related differences in first year university users at five universities in England, as they encountered new technologies. Jones *et al*. (2009) reported that respondents aged 20 years and younger were more frequent users of social media technologies (Jones *et al*., 2009). This study further reported that accessing study and course related material as well as communication was reported as most important by the largest number of respondents (Jones *et al*., 2009). Jones *et al*. (2009) did, however, conclude that it is too simplistic a description to define user behaviour with new technologies in terms of age groups. Age of users in relation to the use of social media was not explored in the present study as it was not the intention of the study to draw comparisons between different age groups.

Thinyane (2010) carried out studies at two universities in South Africa and her research, reports on students' access to, and use of, technology. Findings in this study showed that students appeared not to be interested in using social media technologies for their studies (Thinyane, 2010). These findings were different from Chu and Meulemans's (2008) findings in the USA, where students were found to discuss coursework on Facebook and Myspace. However, it provided confirmation for Mohamed's (2014) study in terms of students' access to technology; students have the highest levels of access to mobile phones and what's more is that the most popular applications used for study purposes relied on mobile phones for access (Mohamed, 2014; Thinyane, 2010). It should also be noted in the light of this study that

social media tools such as Facebook and Twitter are presently widely accessed using mobile technologies.

Baro, Onyenania and Osaheni (2010) used questionnaires, interviews and observations to examine the information seeking behaviours of 259 undergraduate students in a Nigerian university and found that students used different strategies, such as browsing, monitoring and extracting, in their information searches and that, although they used both print resources and the internet, they mostly relied on librarians for information. Baro, Onyenania and Osaheni (2010) cautioned that librarians should focus on educating users on the information environment, rather than on the use of any particular tool.

Grosseck, Bran and Tiru (2011) carried out studies in Romania amongst first year students. This study confirmed findings from Thinyane's (2010) study that students appeared not to use social media technologies for academic purposes. Grosseck *et al.* (2011) mentioned further that, even when social media technologies are used for study groups and completion of assignments, they remained less popular for academic purposes.

Kyung-Sun, EunYoung and Sei-Ching's (2011) findings disagreed with that of Thinyane (2010) and Grosseck *et al.* (2011) as regards use of social media for academic purposes. Kyung-Sun, EunYoung and Sei-Ching (2011) used questionnaires to survey 446 undergraduate students in a public university and found that social media tools such as Facebook and Wikipedia were frequently used to find information. Findings in the study by Kyung-Sun, EunYoung and Sei-Ching, (2011) showed that Wikis were used for background or introductory information or for a quick overview of a topic, Facebook was used mostly for communications with others and keeping abreast of updates and opinions on matters of interest whereas YouTube was used for finding solutions to problems and how-to-guides (Kyung-Sun, EunYoung & Sei-Ching, 2011). This study also revealed various strategies that students used for evaluating the quality of the information that they found on these social media sites; for example, for information found on Wikipedia, students would check to see the number of references listed, for Facebook and other networking sites, students would check the opinions of others or look at the profiles of the author to determine credibility, and for YouTube, students would look at the quality of images or videos hosted there (Kyung-Sun, EunYoung & Sei-Ching, 2011).

A study by Connaway, Dickey and Radford (2011) looked at convenience as a critical factor in influencing information seeking behaviour. This study was done in phases and used online surveys and telephone interviews and focus groups to survey graduates, undergraduates and faculty of 44 universities and colleges in the USA. This study showed that convenience was a factor that influenced users' choices in academic information seeking and in everyday information seeking (Connaway, Dickey & Radford, 2011). The concept of convenience included the choice of the information sources, their satisfaction with the sources and ease of use, as well as the time frame within which the information is needed (Connaway, Dickey & Radford, 2011). Social media tools provide access to information sources and are widely accessed using mobile technology, providing convenience for users.

A study by Din, Yahya and Haron (2012) used questionnaires to investigate the use of Facebook for information retrieval and its contributions towards academic performance. This study was done in a university in Malaysia and surveyed 59 final year students of a diploma in public administration (Din, Yahya & Haron, 2012). The findings showed that Facebook did support information retrieval if students are aware of how to use it for this purpose and that there is a relation between information retrieval and good academic performance (Din, Yahya & Haron, 2012). This study also confirmed Franklin and Plum's (2002) study as regards the fact that users preferred online library services.

A study by Ivala and Gachago (2012) investigated the potential of Facebook and blogs in enhancing student engagement in an academic context. The researchers used in-depth interviews with lecturers and focus groups with students to establish Facebook and blogs usage, context of usage, challenges encountered in usage and whether there was an enhancement of student engagement (Ivala & Gachago, 2012). The findings support Din's (2012) findings that users need to be aware of, and know how to use the social media tools (Ivala & Gachago, 2012). A significant finding of the study was that Facebook and blogs if used appropriately do enhance learning in an academic context, both on site and remotely (Ivala & Gachago, 2012). Other findings in the study showed that Facebook groups and classroom blogs can serve as teaching tools that supplement face-to-face teaching and learning (Ivala & Gachago, 2012). These tools can also be used for formal learning; for example, a lecturer used blogs as a course management tool and posted study guides and course content on the blogs (Ivala & Gachago, 2012). The students in this class requested the lecturer to duplicate all the content from the blogs onto Facebook groups as they found it

more interactive and engaging (Ivala & Gachago, 2012). Other examples include instances where a Facebook group was employed as a discussion forum whereby students would write chapters to a story that the lecturer started (Ivala & Gachago, 2012). Then the lecturer would post updates on blogs (Ivala & Gachago, 2012). This study showed that Facebook groups could be used as a discussion forum.

Anunobi and Ogbonna (2012), similar to the study by Anyaoku, Orakpor & Ezejiofor (2014), used surveys to determine the awareness and use of social media tools by 100 professional librarians in Anambra State, Nigeria. The introduction of technology in the library environment did not change the central role of librarians to acquire, process and make available resources to present and future users (Anunobi & Ogbonna, 2012). Since technology has influenced the way users seek information, librarians have had to upskill themselves in terms of the new and advancing technologies so as to provide the same level of services to their users (Anunobi & Ogbonna, 2012). The findings in this study revealed that librarian awareness of social media technologies remain low and that those librarians who are aware of it, use it for promotional purposes (Anunobi & Ogbonna, 2012). Lack of expertise, facilities and access to the internet are listed as challenges to the use of social media technologies (Anunobi & Ogbonna, 2012; Anyaoku, Orakpor & Ezejiofor, 2014).

Another study using a mix methods approach examined the interactions between the libraries and the users of libraries' Facebook, Twitter and Wiebo accounts (Chen, Chu & Xu, 2012). Four types of interactions were examined; namely, knowledge sharing, information dissemination, communication and knowledge gathering (Chen, Chu & Xu, 2012). Quantitative data was analysed from 1 700 posts of 40 libraries and qualitative data was gathered from interviews with 10 librarians (Chen, Chu & Xu, 2012). This study found that of the four types of interactions, knowledge sharing attracted the largest number of users on the social networking sites of libraries (Chen, Chu & Xu, 2012). This study also suggests that in order to enhance user engagement on the social networking sites, libraries need to properly coordinate the sites, taking into consideration the properties of their communities and the features of the social networking sites (Chen, Chu & Xu, 2012). This means that to avoid information overload and over exploitation of one tool, libraries would have to consider the features of, for example, Facebook as being more supportive in connecting communities and Twitter as being more of a news feed tool, whereby users do not need to be friends when engaging with other users (Chen, Chu & Xu, 2012). In this way, libraries would need to

designate different interactions to the different tools in terms of their features (Chen, Chu & Xu, 2012).

Online questionnaires were used in another study to survey university students of three public universities in Singapore (Majid & Fai, 2012). The study set out to investigate the preferences, perceptions and usage by university students of social media technologies for academic and non-academic purposes (Majid & Fai, 2012). Issues of trust and privacy were also investigated in this study (Majid & Fai, 2012). The key findings of this study agreed with those of Thinyane (2010) and Grosseck *et al.* (2011): social media technologies were not the preferred means for information searching. The findings by Majid and Fai (2012) showed further, that students were concerned about the trust and privacy of the information that is on the social media sites.

Kyung-Sun, Sei-Ching and Yuqi (2013) used web surveys to carry out studies on the impact of user characteristics on social media usage for information seeking purposes. Students from a public university, 1 286 in number, responded (Kyung-Sun, Sei-Ching & Yuqi, 2013). It was found that there were differences in the relation between gender of the users and their preferences in using social media tools. Male students tended to use Wikis and internet forums more than female students (Kyung-Sun, Sei-Ching & Yuqi, 2013). Other differences noted were among disciplines; users from different disciplines have particular preferences (Kyung-Sun, Sei-Ching & Yuqi, 2013). Students from the science and engineering faculties preferred Wikis for quick overviews or fact finding, whereas students from the humanities and social sciences faculties preferred microblogs for exploring new information on specialised topics (Kyung-Sun, Sei-Ching & Yuqi, 2013). The level of education of the user, whether graduate or undergraduate, also showed differences in choice of social media tools for information seeking (Kyung-Sun, Sei-Ching & Yuqi, 2013). Wikis were more popular with the undergraduate students and blogs were more popular with the graduate students (Kyung-Sun, Sei-Ching & Yuqi, 2013).

Deodato's (2014) findings reveal that libraries can give greater support to diversity of expression of knowledge and foster participation with the user as content creator and not just a consumer by adopting social media technologies and redesigning library services.

Kwon, Park and Kim's (2014) study was different in that the motivational factors in users that help them decide between using Facebook or Twitter were identified. Kwon, Park and

Kim (2014) used online surveys posted on 10 different social networking sites in eight different nations and found the common motivational factors to be perceived mobility, perceived security, perceived system quality, perceived connectedness, perceived usefulness, and flow experience (Kwon, Park & Kim, 2014). Perceived usefulness refers to the degree to which the user believes that the technology will improve performance (Kwon, Park & Kim, 2014). Perceived connectedness refers to the degree to which users feel connected to communities of similar interest; here libraries can play a role in contributing to the perceived connectedness of the user (Kwon, Park & Kim, 2014). Perceived system quality is the degree to which the user perceives that the technology meets their expectation (Kwon, Park & Kim, 2014). Perceived security refers to the degree to which users believe in the reliability of the security measures of the technology (Kwon, Park & Kim, 2014). Perceived mobility refers to the users' awareness of the value of the mobility of the technology (Kwon, Park & Kim, 2014). Flow experience refers to the degree to which users become immersed in the technology and derive enjoyment in engaging with it (Kwon, Park & Kim, 2014).

2.5 FRAMEWORK FOR THE STUDY

Conceptual frameworks refer to overarching values, beliefs or guidelines or theories that shape the design of the study (Given, 2015). This is often determined by the existing literature and the new study is meant to contribute towards the prior knowledge (Given, 2015). This literature review provided an understanding of how users and academic libraries and institutions that housed special collections were using social media for library services. There were recurrent issues that emerged from the existing knowledge such as concerns, barriers or challenges as well as motivations that users of social media encounter when engaging with the technology that needed to be considered for the current study. A table (Appendix 1) was drawn up to analyse the literature according to findings, methodology, purpose, preferred tools, barriers/challenges and motivations. This table provided a framework for identifying current trends and key issues and practices. These trends, issues and practices were to some extent, where appropriate, incorporated into the adapted model (Figure 2.3) that served as a framework for this study. It further provided a benchmark against which the results of this study could be compared.

Decisions on what data to collect were also informed by the chosen theoretical framework. After consideration of the different models, such as Leckie, Pettigrew and Sylvain (1996) and Wilson's 1996 model of information seeking behaviour noted by Case (2012), Wilson's

1996 model (Figure 2.1) was chosen for the current study because it included the components that needed to be investigated such as intervening mechanisms (concerns, barriers), activating mechanisms (motivators) and context. In researching the behaviour of distance learners, Tury, Robinson and Bawden (2015:314) chose this model because it is well established and is applicable to different contexts, roles and disciplines. It also takes into account intervening variables, in other words, challenges or barriers experienced by the user. The Wilson 1996 model invokes specific theories that address issues of information seeking, such as the reasons behind why some people pursue searching for information more than others, and why some information sources are more popular than others (Case, 2007:137). The activating mechanisms could serve as motivators that motivate a person to search for information to some or other extent (Case, 2007). The intervening variables could serve as challenges/barriers, such as lack of skills and access to resources (Case, 2007). Social media technologies can be seen as a means to mitigate intervening variables by making resources readily available to researchers by the inclusion of links to resources or by offering recommendations.

The Wilson (1996) model is portrayed in Figure 2.1
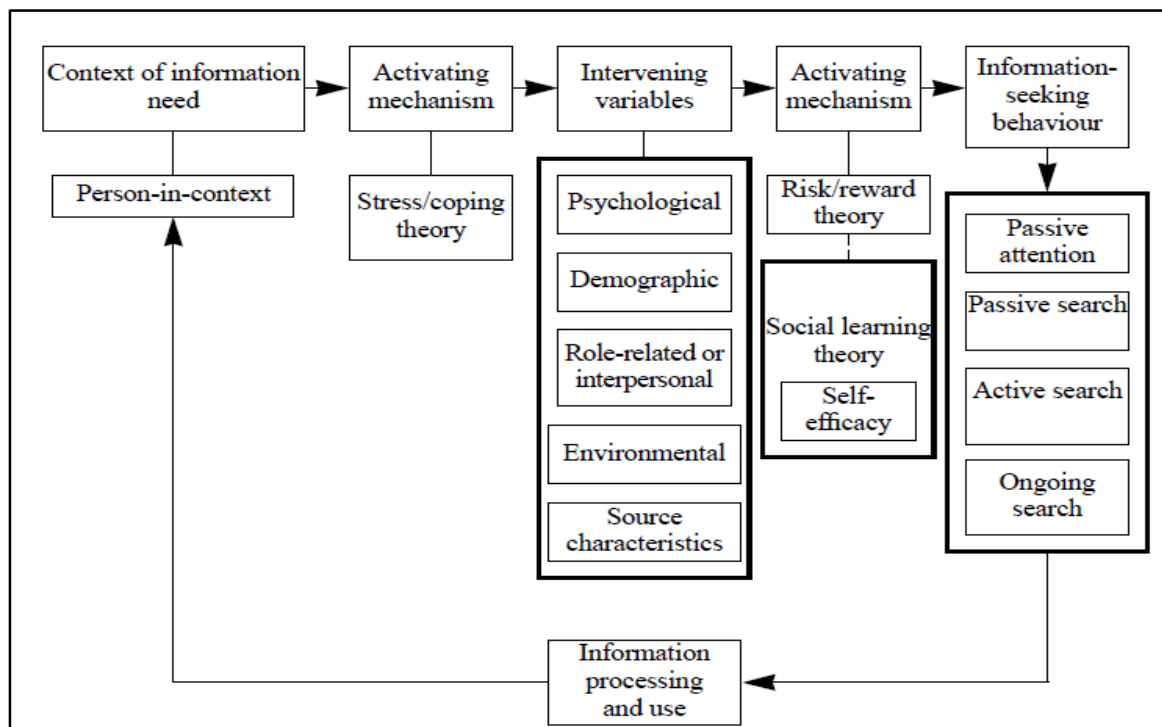
Figure 2. 1: Wilson's 1996 model of information behaviour (Case, 2007:137)

Van Wyk (2015) used two of the Wilson models to guide a study on mobile devices, information behaviour and academic studies. Based on his findings he suggested an adapted version of the two Wilson models combined. This model is reflected in Figure 2.2. In preparation of the current study the models in Figure 2.1 and Figure 2.2 where considered, in addition to the models suggested by Tury, Robinson and Bawden (2015) and the Leckie, Pettigrew and Sylvain (1996) model to suggest the model in Figure 2.3 as a framework for the current study.

The Wilson (1999) model adapted by Van Wyk (2015) is portrayed in Figure 2.2.

| Context of Information need
E.g. academic, general, social | → | Activating Mechanism
E.g. Motivation: Satisfy need,
Quick Access to information | → | Intervening Variables
E.g. Barriers: technical limitations, cost, etc. | → | Activating Mechanism
E.g. assignments, re-
search projects, etc. | → | Information Seeking
Behaviour |

Person in Context
E.g. undergraduate , postgrad-
uate students

Stress/Coping theory
There might be other theories to consider for this purpose.

Psychological

Demographic
E.g. age groups: 18 – 41+

E.g. academic levels: doctorate, masters
(coursework and research), honours, third year,
second year, first year

Role-related interpersonal

Environmental
E.g. University of Pretoria
Department of Information Science

Source characteristics

E.g. mobile devices used: E.g. device manufacturers:
    smartphones, tablets   Apple, Samsung, Nokia,
                                                    Blackberry, HTC, Sony,
                                                    Depeng, Asus, Huawaei

Risk reward theory
There might be other theories to consider for this purpose.

Social learning theory

Self efficacy
E.g. ease of device use,
level of satisfaction

Passive attention

Passive search

Active search

Ongoing search

Information Processing and Use

Figure 2. 2: Adapted Wilson 1999 model (Van Wyk, 2015:40)

Based on the literature review, there were intervening variables, activating mechanisms; active searching, passive searching and other issues that emerged that are reflected in the adapted model (Figure 2.3). For this study, only some of the components that were based on the literature review that seemed most important for an investigation on the role that social media can play in a special collection library were considered. For instance, the stress/coping activating mechanisms (which can be addressed from Stress/Coping Theories) were not addressed in this study. Also, passive attention and risk/reward theories were not included in the data collection as it fell outside the parameters of this study. Some of these, such as the need for ongoing searches and being passively updated with information, did however feature in the data collected. Due to the limitations of time and this study being a mini-dissertation, these issues could not be included for investigation. Once empirical data has been collected the model in Figure 2.3 will be reconsidered for its applicability to collect data on the use of social media in academic contexts

The adapted model used as a framework for the current study is portrayed in Figure 2.3.
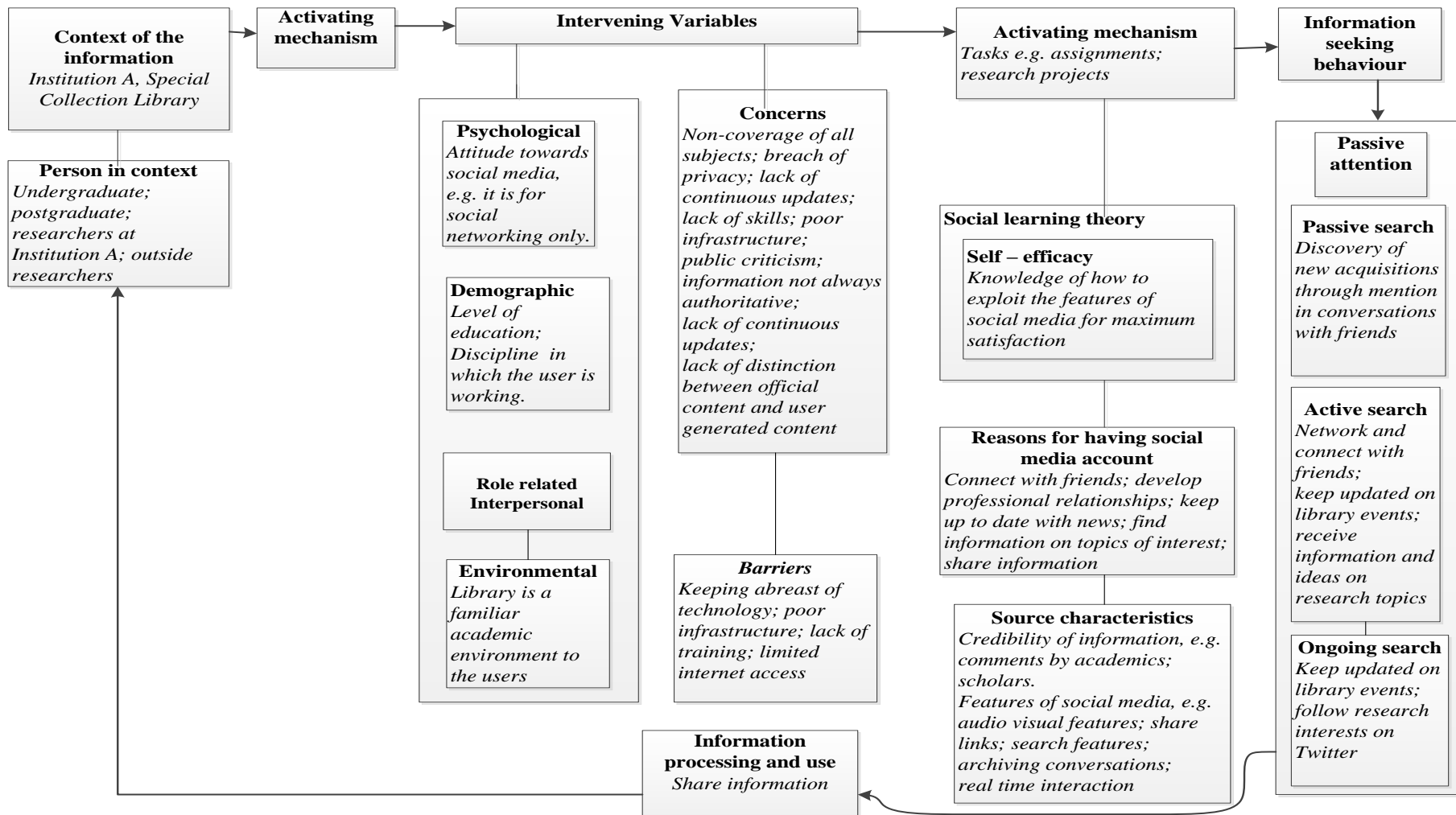
Figure 2. 3: Wilson 1996 model of information behaviour - adapted for this study based on the literature study

2.6 CONCLUSION

In this chapter, the use of social media by academic libraries in relation to library services was discussed from the perspectives of both international and African libraries. Discussions also included how archival institutions such as, special collection libraries, museums and archives use social media and how users of academic libraries use social media. The findings discussed in this chapter will now inform the choices and decisions for the empirical component and the instruments for data collection which will be discussed in Chapter 3.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

The purpose of Chapter 3 is to describe the research methodology and design used to determine how social media can play a role in providing library services, based on the user behaviour of the users of the special collection library. The chapter begins with the research focus of the study, followed by a discussion of the research design and approach chosen for the study. This chapter also discusses the data collection methods and sampling techniques used. It concludes with a brief explanation of the data analysis and interpretation methods.

3.2 RESEARCH FOCUS

The focus of this study was to investigate the information seeking behaviour of the users of the special collection library and to determine, how social media technologies can play a role in providing library services to library users. To do this, the study aimed to answer the following questions:

Research question:

> *Based on the information seeking behaviour of the users of a special collection library of an academic institution, what role can social media play in the provision of information services to users?*

Sub-questions to be answered from the empirical component regarding the users of a special collection library of an academic institution:

- *What is the information seeking behaviour of the users regarding social media?*
- *What are the needs for library/information services that can be met by social media?*

3.3 RESEARCH DESIGN

Research designs represent different models for doing research (Creswell & Plano Clark, 2011). There are specific procedures for collecting, analysing, interpreting and reporting data that are prescribed by each of the models (Creswell & Plano Clark, 2011). In other words, the research design can serve as a plan that provides guidelines to the researcher when faced with decisions regarding methodology (Creswell & Plano Clark, 2011). The design that is most appropriate for this study is the mixed methods design (Baro, Onyenania & Osaheni, 2010; Chen, Chu & Xu, 2012; Samouelian, 2009). It was similar to the study by Baro, Onyenania

and Osaheni (2010) using a questionnaire, interviews and observations in a descriptive survey study to investigate information seeking behaviour.

3.3.1 Mixed methods design

A mixed methods approach can be seen as a combination of both qualitative and quantitative approaches for data collection and data analysis (Alasuutari, Bickman & Brannen, 2008). According to Creswell (2003), researchers recognised that while all methodologies have their limitations, the combination of methodologies could neutralise the biases of any single methodology. Pickard (2013:10) disagrees with this, by saying that the combination of methodologies does not ensure neutralisation of biases. The focus of the combination should rather be on establishing rigour and trustworthiness of the research (Pickard, 2013). A mixed methods approach applies a pragmatic view to knowledge claims, in that the concern is more on the research problem and its solution rather than on methods (Creswell, 2003; Pickard, 2013). There are different mixed methods approaches. Three possibilities were considered for this study.

The first was the exploratory sequential design. This design takes place in two phases: first, the qualitative data is collected and analysed and then the quantitative study is designed from the results of the first phase (Creswell & Plano Clark, 2011).

Figure 3. 1: Exploratory sequential design (Creswell & Plano Clark, 2011:69)

The second possibility was the explanatory sequential design. This design takes place in two phases: first, the quantitative data is collected and analysed and then the qualitative study is designed from the results of the first phase. The analysis is such that the qualitative results help explain the quantitative results (Creswell & Plano Clark, 2011).

Figure 3. 2: Explanatory sequential design (Creswell & Plano Clark, 2011:69)

The third possibility was the convergent parallel design. Equal priority is given to quantitative and qualitative strands; the data is analysed independently and mixing takes place at the results stage during the overall interpretation of results (Creswell & Plano Clark, 2011).
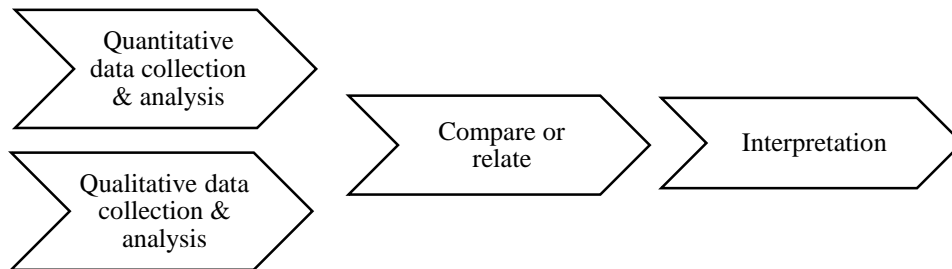
Figure 3.3: Convergent parallel design (Creswell & Plano Clark, 2011:69)

This study applied a mixed methods approach with a convergent parallel design (Creswell & Plano Clark, 2011). The reason for this choice is that the quantitative results and qualitative results complemented each other in providing an understanding on how users of the special collection library sought information for academic purposes using social media. The quantitative results provided an understanding of how users are currently using social media, including concerns, barriers and motivations that they encounter with such use. The qualitative results provided an understanding of user opinions and thoughts, as well as behaviours as regards using social media for academic purposes. The qualitative instruments could be adapted, depending on what emerged from the quantitative results (Baro, Onyenania & Osaheni, 2010; Garaba, 2012; Samouelian, 2009). Quantitative and qualitative approaches are discussed in Sections 3.3.2.1 and 3.3.2.2 respectively, and also how they would apply to the study.

3.3.2 Research methodology

There are different research approaches, also referred to as research methodology and these include quantitative or qualitative approaches (Creswell & Plano Clark, 2011; Leedy & Ormrod, 2005; Pickard, 2013). If both are used as in this study for the collection and analysis of data, it is referred to as a mixed methods approach. This section describes and discusses the two research approaches that were used in this study.

3.3.2.1 Quantitative approach

Quantitative research begins with a literature review. The literature review provides a conceptual framework to guide the study (Pickard, 2013:18). In quantitative research, instruments are often designed in a manner that does not allow for the participants to volunteer additional information that is not included in the instrument; for example questionnaires consist of closed questions from which participants are required to make choices from predetermined alternatives (Henning, Van Rensburg & Smit, 2004). A quantitative approach is suitable for the present study for gathering data on the actual use and preferences for social media in relation to library services, for determining the barriers and motivators experienced by the participants, and to establish whether they currently use social media to access any library services. However, it does fall short of capturing the user's opinions and thoughts on the role of social media in providing library services where participants will be required to freely express themselves in how they use social media for seeking information. These can be collected through a qualitative approach.

(1) Advantages of a quantitative approach

A quantitative study allows for a greater measure of objectivity, in that it uses predetermined statistical procedures that promote objective evaluation of the outcomes; in other words, the responses are predetermined (Leedy & Ormrod, 2014; Leedy & Ormrod, 2005:96). The data analysis methods can be determined before the data is collected (Leedy & Ormrod, 2014). The intent behind quantitative research is to confirm relationships and to develop generalizations to the larger group (Leedy & Ormrod, 2005:95).

(2) Disadvantages of a quantitative approach

The quantitative approach is very structured and inflexible and does not consider the creative or emergent themes that may arise from the study (Creswell, 2003). Quantitative research, in most cases, does not take into consideration the context of the phenomenon being investigated (Leedy & Ormrod, 2005:96). Sometimes investigations take place in controlled environments that do not necessarily equate to naturalistic environments (Leedy & Ormrod, 2005:97).

3.3.2.2 Qualitative approach

A qualitative approach includes an emergent design that allows for the iterative nature of the study (Pickard, 2013). This means that the emergent design of the study allows for the study

to take the form of a plan that maintains the focus of the study, without restricting the individual techniques that may become apparent during the study (Pickard, 2013). The important components to a qualitative research design includes a literature review from which a conceptual framework is established that can guide the study, purposive sampling and appropriate data collection techniques such as semi-structured interviews (Pickard, 2013). This approach was suitable for the present study to collect information on the views, experiences and thoughts or opinions of participants as regards the role that social media can play in providing library services.

(1) Advantages of a qualitative approach

The participants could volunteer information in their own words and were not restricted by the choices in the questionnaire. The user opinions and thoughts on the role of social media in providing library services could enable the researcher to gain new insights, while also discovering the barriers and concerns that people experienced in using social media to search for information (Leedy & Ormrod, 2005). In other words, a qualitative approach allows for the capture of complex issues such as opinions and thoughts of users.

(2) Disadvantages of a qualitative approach

Due to the flexibility of this type of approach to emerging themes and creativity, there is an element of bias that can be introduced into the study in the analysis of the data (Creswell, 2003). Some qualitative researchers use inductive reasoning, in that they make specific observations and then generalize to the larger phenomena (Leedy & Ormrod, 2005:96). Much of the analysis of the observations involve scrutiny of the data, in search of patterns that are subjectively identified, which can amount to bias of the researcher (Leedy & Ormrod, 2005:96).

3.3.3 Research methods – case study

There are different methods that have been used in studies of information behaviour. These include ethnography, phenomenological study, grounded theory, surveys and case study (Case, 2012; Pickard, 2013).

Case study can be a single case study which involves an in-depth study of a single case or a multiple case study which involves the study of different cases that are treated as individual cases, contributing collectively to the whole (Pickard, 2013:102).

Yin (2003:13) defines a case study as:

> "… an empirical inquiry that investigates a contemporary phenomenon within its real life context; when the boundaries between phenomenon and context are not clearly evident."

The investigation behind a case study involves an in-depth study of a phenomenon (usually poorly understood) in its context with a view to promoting a better understanding of the phenomenon (Leedy & Ormrod, 2014). From the literature, it is apparent that little is known about the role that social media can play in the provision of library services in a special collection context in South Africa. Single case studies are chosen because they provide unique and exceptional qualities that can promote understanding (Leedy & Ormrod, 2005). The present study will use an instrumental single case study design to study this particular phenomenon in-depth. An instrumental single case design means that the focus of the investigation will be on the phenomenon, with the case (Special Collection Library) being of lesser importance other than providing a vehicle for the investigation (Pickard, 2013). In selecting a single case study, the researcher is not looking to generalize the findings, but rather looking for an understanding of the phenomenon studied.

(1) Advantages of a case study

Case studies allows for the emergent design of the study (Pickard, 2013:103). They also allow for the in-depth study of a particular phenomenon, namely the role that social media can play in the provision of library services (Leedy & Ormrod, 2005:135; Case, 2007:197). Case studies also takes into consideration the context of the phenomenon, which is relevant for the present study as only a special collection context is examined (Leedy & Ormrod, 2014:143). Case studies can reinforce validity when the right participants, who have been sufficiently exposed to the phenomenon of interest to the study, are chosen (Case, 2007:196).

(2) Disadvantages of a case study

The findings of a case study cannot easily be generalizable to other situations (Leedy & Ormrod, 2014:143). If further cases are investigated regarding a phenomenon, then findings can be compared and can lead to generalization (Case, 2007:197). According to Case (2007:194), case studies tend to focus on a particular phenomenon and de-emphasize other factors that might explain resulting changes, such as macro factors; for example for the present study, poor infrastructure. These factors were included in this study and participants

were given opportunity to present other factors that were not included in the options in the instrument.

3.3.4 Selection of the case

A special collection library at Institution A in South Africa was selected for this study. This library carries a rich collection of rare and Africana materials that are in different formats, which include audio visuals, manuscripts, books, digital collections, artefacts and photographs. The users that visit this library include staff and students of Institution A, as well as visiting researchers. The researcher would also have easy access to users who visit this library to do research.

3.3.5 Data collection methods

Data collection entails choosing the most appropriate method to collect data to answer the research questions (Creswell & Plano Clark, 2011). Typical types of data collection methods used in information behaviour studies, as mentioned by Case (2007), include questionnaires, interviews and focus groups.

The data collection methods chosen for the present study were a literature review, questionnaires (a detailed questionnaire and a profiling questionnaire accompanying the interview) and semi-structured interviews. The questionnaires and the interview schedule for the semi-structured interviews were designed to answer the research questions in the empirical component of the study, mentioned in 3.2. (See Appendix 2 [Long questionnaire], Appendix 6 [Profile questionnaire for demographic details for interview participants] and Appendix 5 [Interview schedule]). The questionnaires and semi-structured interviews are discussed in Sections 3.3.5.1 and 3.3.5.2

3.3.5.1 Questionnaires

Questionnaires can be used to harvest data from a large sample, without having to impose too much on the participant's time, depending on the design of the questionnaire (Pickard, 2013:207). Even though questionnaires tend to generate a low response rate, self-administered questionnaires tend to generate a higher response rate because the participants are approached by the researcher (Pickard, 2013). For the present study, the researcher decided that printed self-administered questionnaires would be suitable as a large enough sample would have to participate in order to gain a more holistic view. The questionnaire was

based on the research questions in 3.2 and focused on gathering data on the actual use and preferences for social media in relation to library services, barriers and motivators experienced by the participants and to establish whether users currently use social media to access any library services.

For this study, the participants' time was an important factor to be considered in determining an appropriate response rate to the questionnaire (Pickard, 2013). Most of the users of the special collection library have limited time within which they do their research. Data collection instruments that would consume participants' time would result in low response rates and not enough meaningful data being gathered. Bearing these issues in mind, the questionnaire was developed with mostly predetermined options (based on the literature review), using scales and ratings that the participant would need to tick. Most of the questions that have predetermined choices, also carried an option for "other" thus allowing for emerging themes to be uncovered that were not included in the predetermined choices.

(1) Advantages of questionnaires

With questionnaires one can harvest data from a large sample, sometimes a geographically dispersed sample, at a relatively low cost, while also providing anonymity and confidentiality (Pickard, 2013:207). The data analysis methods can be determined even before the questionnaires are distributed (Pickard, 2013:205). Questionnaires are completed by the participants, without having the researcher in close proximity as in the case of interviews; this would promote more truthful responses, especially if anonymity is assured (Leedy & Ormrod, 2014).

(2) Disadvantages of questionnaires

Unless well designed, questionnaires can produce a very low response rate (Pickard, 2013:207; Leedy & Ormrod, 2014). Also, the participants are required to choose from predetermined options. For this study, the questionnaire was developed such that it included an option for "other" in the case of the predetermined options not being appropriate. Participants may want to quickly tick the predetermined options rather than having to explain further.

3.3.5.2 Semi-structured interviews

Interviews are usually used to collect data that are complicated and too in-depth to be collected in a simple quantifiable way (Pickard, 2013). Using this instrument, the researcher asks questions related to past and present behaviours, motives, feelings and experiences (Leedy & Ormrod, 2005). The semi-structured interview schedule consisted of a few central questions that were developed from the research questions (Leedy & Ormrod, 2005). This type of interview is conducive to the emergent design as it affords the researcher the opportunity to explore new issues emerging from the responses from participants (Pickard, 2013). For these reasons, the researcher decided to use semi-structured interviews to investigate the user opinions and thoughts on the role of social media in providing library services. Each participant in the interviews was first given a short questionnaire to complete to extract profile data, and thereafter participated in the interview. The other option that was considered for this study was focus groups. Focus groups entail gathering sample groups together at one time, either virtually or physically, for approximately an hour (Pickard, 2013). This would have been difficult in this situation, as users visit the special collection library at different times and to gather them together at one time would have been inconvenient to the users. Furthermore, they are usually very busy with limited time to spend in the library.

(1) Advantages of semi-structured interviews

Semi-structured interviews allow for optimal communication with both verbal and non-verbal cues (Alasuutari, Bickman & Brannen, 2008). This means that the researcher could clarify misunderstanding with regard to the questions and qualify unclear answers from the participants. Interviews also allow for issues to emerge that the researcher would not have otherwise considered as useful to the study (Pickard, 2013). Interviews facilitate the collection of rich data in a relatively short space of time, as one can speak faster than one writes (Gorman & Clayton, 2005:126). Participants can also feel more comfortable to share information in a familiar setting or context (Gorman & Clayton, 2005:126). For this study, only users of the special collection library were selected for the study.Interviews were conducted on the library premises, so it was a fairly familiar environment.

(2) Disadvantages of semi-structured interviews

The participants might experience the presence of the interviewer as being intimidating and might opt to provide answers that he/she perceived the interviewer would want to hear (Alasuutari, Bickman & Brannen, 2008). For this study the participants to the interviews also

completed self-administered questionnaires. Alasuutari, Bickman and Brannen (2008:318), maintain that during interviews, more conventional, desirable answers can be given as compared to a self-administered questionnaire and he further recommends that a good strategy is to combine semi-structured interviews with self-administered questionnaires.

3.3.6 Sampling

Sampling entails selecting a few participants to represent the whole population of participants to carry out empirical research (Pickard, 2013:59). This is done when it is not practical to include the entire research population in the study (Pickard, 2013:59). For the present study, it was not possible to study the whole group, as the user population was diverse and expanded across geographical boundaries.

The present study involved a case, namely a special collection library. The sample consisted of users of the special collection library. The objectives of the research were to gather rich in-depth data on the user behaviour of users of a special collection library and the role that social media can play in providing library services in this context. To meet the objectives of the research, purposive sampling was done. The target group involved postgraduate and undergraduate students as well as academic staff and researchers that use the special collection library. A purposive sample of 36 participants visiting the special collection library was approached to participate in the data collection (questionnaires). Recommendations from staff of the special collection library regarding users who could provide rich data to the study were taken into account when selecting the participants to both the questionnaire and the semi-structured interviews. Of participants to the questionnaires, key informants were asked whether they wanted to participate in the semi-structured interviews. In addition, other key informants were selected to participate in the semi-structured interviews, based on recommendations and availability. A purposive sample of 11 participants was approached to participate in the individual semi-structured interviews. They all agreed to participate.

3.4 PILOT STUDY

A pilot study entails the testing of the instruments (Welman, Kruger & Mitchell, 2005). It involves administering the instruments to a test sample that is similar to the target sample (Welman, Kruger & Mitchell, 2005). The reason for this is to ensure that the questions in the instrument are clear and are able to solicit the information that is required to answer the research questions (Leedy & Ormrod, 2014). Other purposes for pilot studies include the

detection of ambiguous instructions or to determine the time it takes to complete the questionnaire (Welman, Kruger & Mitchell, 2005). In the case of a pilot test for an interview; the researcher has the opportunity to notice non-verbal cues that could signify discomfort or embarrassment as regards the questions (Welman, Kruger & Mitchell, 2005).

As regards the present study, the questionnaire was tested on two librarians and a student at Institution A. The questionnaire was completed within the stipulated time frames and there appeared to be no misunderstanding or ambiguous instructions. The test participants understood the instructions and filled out the questionnaire as expected. There appeared to be no misunderstanding in the communication and the responses were in line with questions asked. The interview schedule was also tested on two librarians at Institution A who had not participated in the pilot test for the questionnaires, and again there was no misunderstanding as to what was expected in terms of the questions.

3.5 RELIABILITY AND VALIDITY

The validity of the instrument refers to the degree to which the instrument is able to measure what it was supposed to measure (Leedy & Ormrod, 2005:28). The questionnaires were based on the research questions and after careful consideration of the subject literature and reports on related studies, were formulated in close collaboration with the supervisor of the study. Validity errors reflect biases in the instrument design; in other words, the options provided in the questionnaires could reflect biases (Leedy & Ormrod, 2005:29). To minimize this type of error, an option for "other" was included in every question.

Reliability refers to the consistency with which the instrument yields the same result (Leedy & Ormrod, 2005:29). Sometimes the questions in the questionnaire could be open to different interpretation by different participants, thus yielding different results from participant to participant (Leedy & Ormrod, 2005:29). For this study, all the instruments were sent to a professional editor to be edited and were then tested on a pilot group of participants (discussed in 3.4) before being used for data collection.

3.6 ETHICAL CONSIDERATIONS

With regard to protecting the confidentiality and rights of participants and honouring their trust, no information that could identify participants were requested, for example names, student numbers, addresses. The consent forms that each of the participants to the printed

self-administered questionnaires and the semi-structured interviews had to sign before participating in the study, did however, include a name and signature. These forms were locked in a locker and known only to the researcher. All results were reported in aggregate format and not according to individuals. Where direct quotations were given from participant feedback, it was done anonymously. No names of individuals were mentioned when reporting the results. Data was also locked away safely, in a locker. Reference to the institution being studied was done anonymously as Special Collection Library in a South African University or Institution A. The study adopted an instrumental single case study design; hence, the case was not the focus of the study, but rather the phenomenon (the role of social media in providing library services in a special collection). The contextual information that could provide direct inference to the institution was not included. Permission to conduct this study was granted by the Department of Information Science Research Committee, on behalf of the Faculty Committee for Research Ethics and Integrity of the Faculty of Engineering, Built Environment and Information Technology at the University of Pretoria. Permission to conduct this study was also granted by Humanities Research Ethics Committee at Institution A. After ethical clearance was granted from the Humanities Research Ethics Committee at Institution A, an application for permission was made to the Director of Human Resources and Student Affairs to use staff and students as participants to the questionnaires and interviews, for this study.

3.7 DATA ANALYSIS AND INTERPRETATION

Data analysis refers to how the data were collected, organised and analysed with a view to interpreting and bringing meaning to the data when presenting and reporting on the data (Rubin & Rubin, 2005:201). For the questionnaires, simple Excel spreadsheets were used to tabulate, edit and encode the data. As regards the interviews, thematic analysis was used, discussed in 4.5 of the next chapter. The interviews were recorded and transcribed, after which they were analysed and coded according to themes.

3.8 CONCLUSION

This chapter described the research methods, namely the quantitative and qualitative methods that were employed to conduct the study with a view to answering the research questions mentioned in 3.2. Also included in the discussion was the sample population selected for the study, data collection techniques, pilot study, and ethical considerations. Finally, a brief

description of the data analysis and interpretation was given in this chapter but will be fully discussed in the next chapter.

CHAPTER 4: ANALYSIS AND DISCUSSION OF FINDINGS

4.1 INTRODUCTION

This chapter will report on findings of the data that was collected, by applying the methods (case study), methodology (mixed methods) and data collection techniques (semi-structured interviews and questionnaires) described in Chapter 3.

4.2 RESEARCH PROBLEM

This study was guided by the following question:

Based on the information seeking behaviour of the users of a special collection library of an academic institution, what role can social media play in the provision of information services to users?

Sub-questions to be answered from the empirical component regarding the users of a special collection library of an academic institution:

- What is the information seeking behaviour of the users regarding social media?
- What are the needs for library/information services that can be met by social media?

4.3 RESEARCH PROFILE AND METHODS OF DATA COLLECTION

The users of the Special Collection Library of Institute A were invited to participate in this study. The data was collected in September 2015. The participants' profile is presented in Table 4.1.

Quantitative study	
Total number of potential participants for questionnaires	36
Total number of returned completed questionnaires	36 (100%)
Total number of spoiled questionnaires	0
Profile of sample – quantitative study (N=36)	
Faculty members	1 (3%)
Staff members other than faculty	5 (14%)
Doctoral students	1 (3%)
Masters students	10 (28%)
Honours students	8 (22%)
Undergraduate students	5 (14%)
Other	6 (16%)
Qualitative study	
Total number of potential participants approached for interviews	11
Total number of participants who participated in the interviews	11 (100%)
Profile of sample – qualitative study (N=11)	
Faculty members	0
Staff member other than faculty	1 (9%)
Doctoral students	0
Masters students	6 (55%)
Honours students	2 (18%)
Undergraduate students	0
Visiting researchers	2 (18%)

Table 4.1: Profile of sample - quantitative and qualitative study

4.4 PRESENTATION OF FINDINGS FROM THE QUESTIONNAIRE FOR QUANTITATIVE DATA

In the following paragraphs, the findings of the questionnaire (Appendix 2) will be reported on. Each question will be reported on individually. For every option in the question, the number N may differ, as only the number of participants that provided a response to the question or the specific option in the question will be counted. The response count and the response rate are provided in all the tables.

4.4.1 Profile details of the participants

The first question (Appendix 2) asked for profile details of the participants. The findings are presented in Table 4.1 of this chapter.

4.4.2 Study fields

For question 2 (Appendix 2), participants were asked into what discipline their work/research/studies fall. Most of the participants' (21/36, 58%) research fell into humanities. Five/36 (13%) of the participants' research fell into history, 3/36 (8%) of the participants' research fell into engineering, 2/36 (6%) of the participants' research fell into social anthropology, 2/36 (6%) of the participants' research fell into law, 1/36 (3%) of the participants' research fell into architecture and 1/36 (3%) of the participants' research fell into commerce. One/36 (3%) researcher did not fall into any discipline. His research was for personal reasons.

The disciplines in which the participants did research are represented graphically in Figure 4.1. The researcher (1/36 [3%]) whose research did not fall into any discipline was not included here. Please note: Figure 4.1 is not compatible on Microsoft 2010. Please use Microsoft 2013.
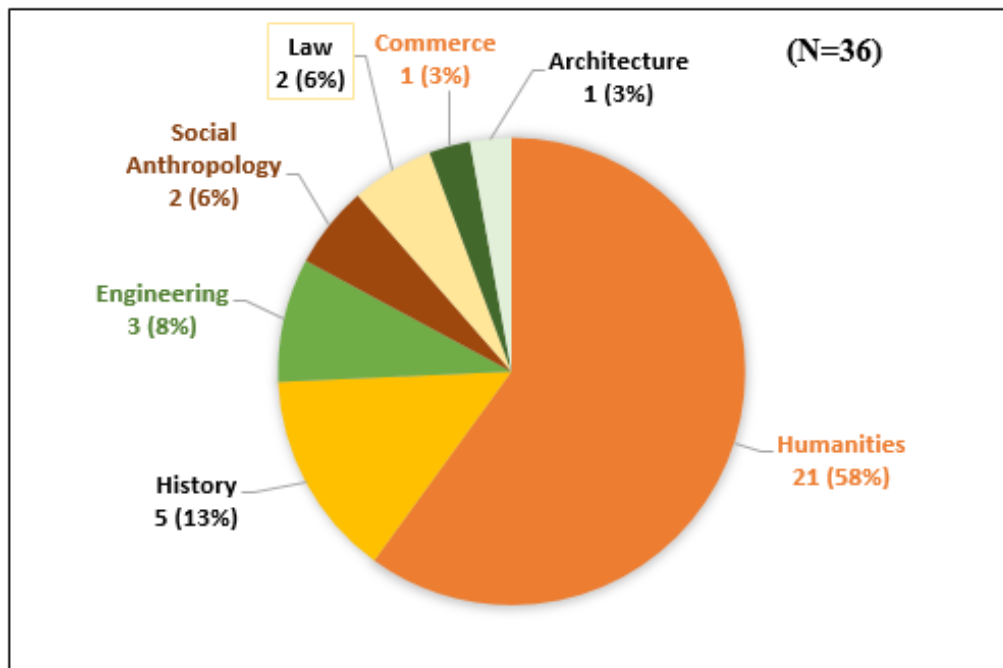
Figure 4.1: Disciplines in which participants did research

4.4.3 Reasons for visiting the library

For question 3, relating to their reason/s for visiting the library (Appendix 2), participants were asked to choose from a list of alternatives. The participants could choose more than one alternative, resulting in 39 responses from 35 participants who answered the question (% thus

do not add up to 100%). This question was meant to provide an understanding of the factors that motivated their visiting the library.

The reasons for which participants visited the library are represented graphically in Figure 4.2.
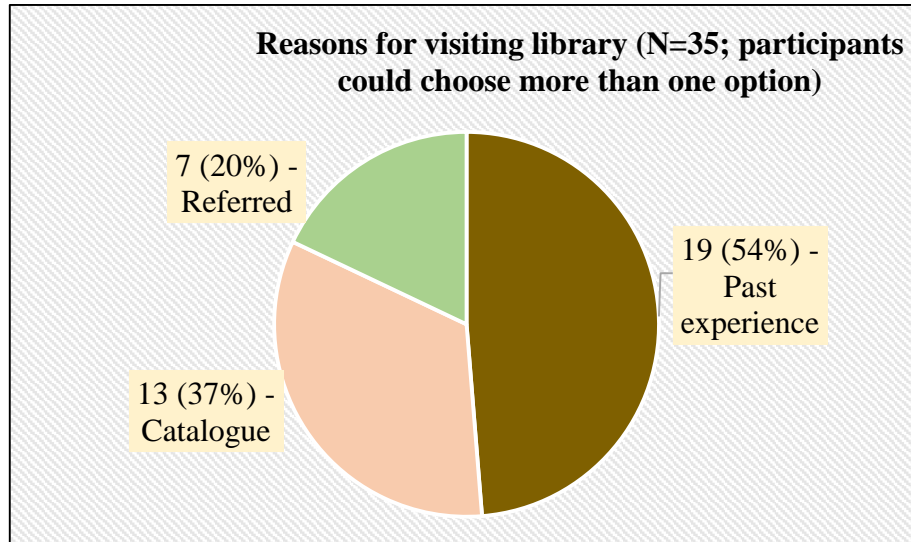
Figure 4.2: Reasons for visiting library

The findings show that the majority of participants, 19/35 (54%), reported that they were motivated to visit the library by past experience. It seems that they knew from past experience that they could find the information they needed in the Special Collection Library. This could indicate a sense of satisfaction with the collection. Five/35 (14%) participants specified in the comments section of the question, that they liked the quiet peaceful atmosphere with minimal distractions. Some participants (13/35, 37%) indicated that they found what they were looking for in the library catalogue which referred them to the library and 7/35 (20%) participants reported being referred to the library by friends or colleagues.

4.4.4 Types of materials used

In question 4 (Appendix 2), participants were asked to indicate their use of the special collection materials. The question provided a list of the different types of materials available in the library and the participants were asked to rate the options on a four point Likert-type scale ranging from "Never" to "Very often". At the end of the list there was also an option for "Other", which gave participants an opportunity to include options that were not covered in the list. Participants were asked to choose one option, (Never, Sometimes, Frequently or Very often) for each alternative. This question was meant to provide an understanding of the types

and formats of the materials used. All participants did not indicate their use of the materials, thus N (ranging from 25-31) differs for the responses to the various materials. The responses are reflected in Table 4.2, as well as Figure 4.3.

Table 4.2 reflects the responses of participants as regards their choice of materials that were used at the Special Collection Library.

Answer Options (Participants could select one option for each of the following alternatives)	Never	Sometimes	Frequently	Very often
Artefacts (N=27)	22 (81%)	5 (19%)	0	0
Audio visual materials e.g. film (N=29)	13 (45%)	14 (49%)	1 (3%)	1 (3%)
Books (N=31)	0	4 (13%)	8 (26%)	19 (61%)
Digital collections (N=28)	8 (29%)	11 (39%)	7 (25%)	2 (7%)
Manuscripts (N=29)	11 (38%)	10 (35%)	5 (17%)	3 (10%)
Maps (N=27)	17 (62%)	5 (19%)	5 (19%)	0
Memorabilia (N=25)	17 (68%)	7 (28%)	1 (4%)	0
Photographs (N=28)	13 (46%)	8 (29%)	3 (11%)	4 (14%)

Table 4.2: Types of material used

Figure 4.3 presents a graphical representation of the participant responses as regards the choice of materials that they used at the Special Collection Library.

	Artefacts (N=27)	Audio visual (N=29)	Books (N=31)	Digital collections (N=28)	Manuscripts (N=29)	Maps (N=27)	Memos (N=25)	Photos (N=28)
Never	22	13	0	8	11	17	17	13
Sometimes	5	14	4	11	10	5	7	8
Frequently	0	1	8	7	5	5	1	3
Very often	0	1	19	2	3	0	0	4
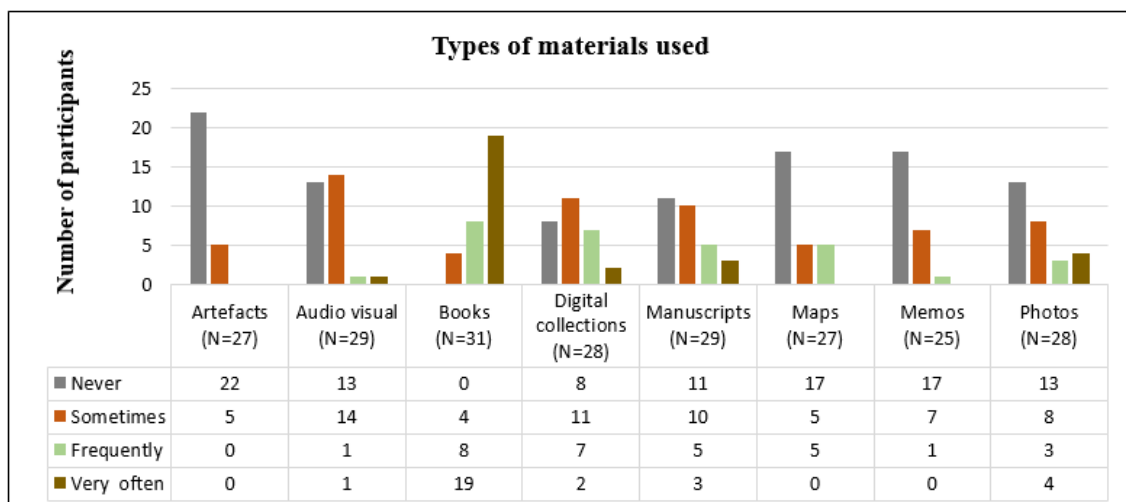
Figure 4.3: Types of materials used

The responses indicated that books were the most heavily used resource in the library, reported by 19/31 (61%) participants as a resource that are very often used, and by 8/31 (26%) participants as a resource that is frequently used. Artefacts were reported by 22/27 (81%) participants as a resource that is never used, with only 5/27 (19%) participants indicating that they sometimes use it. Two/28 participants (7%) specified digital collections as a resource that is very often used, while 8/28 (29%) indicated that the digital collections are never used. Four/28 (14%) participants listed photos as resources that is often used while 13/28 (46%) participants reported photos as a resource that is never used. Only 1/29 participant (13%) reported audio visual resources as very often used and 1/29 participant (13%) specified audio visual resources as frequently used while 13/29 (45%) participants specified that they never use audio visual resources. Maps were reported by 17/27 (63%) participants as a resource that they would never use, with only 5/27 (19%) participants specifying that they would sometimes use it and 5/27 (19%) participants specifying that they would frequently use it. Memorabilia were reported by 17/25 (68%) participants as a resource that they would never use, with only 7/25 (28%) participants specifying that they would sometimes use it and 1/25 (4%) specifying frequent use. The findings show that usage of special collection resources such as the artefacts and memorabilia is low. A possible reason for this could be that some of these resources are not catalogued and can only be discovered through finding aids (AToM [Access to Memory Consideration should be given to catalogue these resources. Social media provides opportunity for the promotion of these resources.

4.4.5 Importance of search tools when searching for information

In question 5 (Appendix 2), participants were asked to indicate the importance of using the listed tools when searching for information by rating them on a four point Likert-type scale ranging from "Will never use" to "Very important". At the end of the list there was also an option for "Other", where participants were given an opportunity to include options that were not covered in the list. Participants were asked to choose one option, (Will never use, Somewhat important, Important or Very important) for each of the alternatives. Not all participants responded to all the listed alternatives, hence N (ranging from 32-34) differs for the various alternatives. This question provided insight into the preferred search tools which could inform librarians as to the links to tools that could be included on social media platforms.

Figure 4.4 presents the responses of participants as regards types of search tools used.
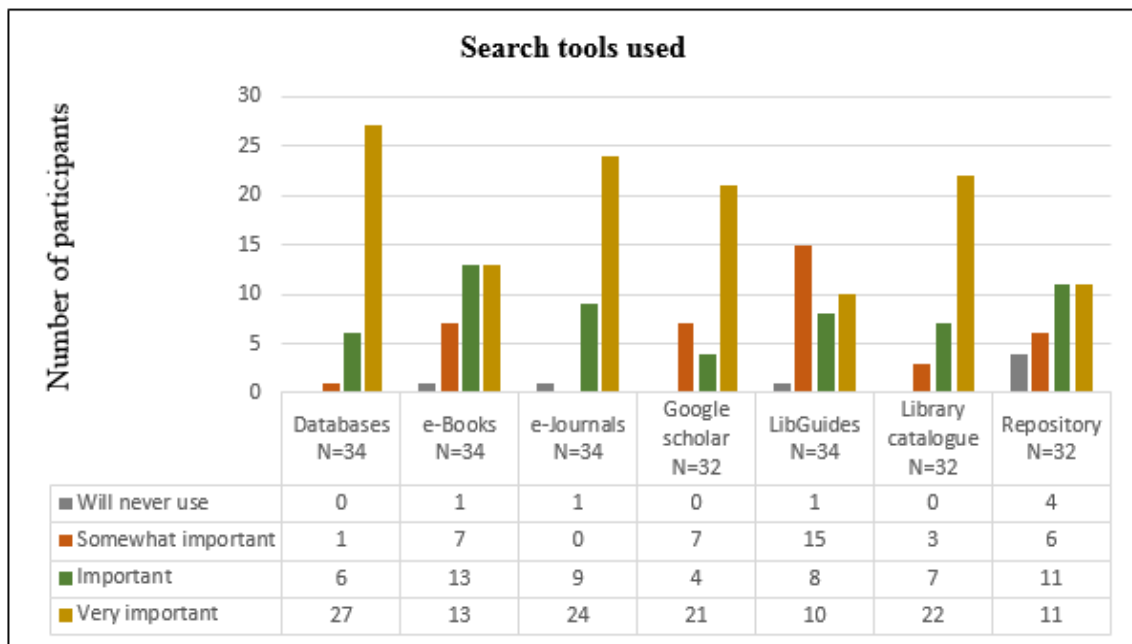
Figure 4.4: Types of search tools used

From the participant responses it seemed that databases were the most important search tools, reported by 27/34 (79%) participants as being very important. The other tools that were reported as very important included e-Journals which were selected by 24/34 (71%) participants, Library catalogue was reported by 22/32 (69%) participants and Google Scholar reported by 21/32 (66%) participants as very important. Library guides were selected by the least number of participants 10/34 (29%) as being very important. The tools with the largest number of responses reporting as important included e-books with 13/34 (38%) responses and the repository with 11/32 (34%) responses. Social media has platforms that provide for links to the most important search tools such as databases.

4.4.6 Use of social media for academic or personal purposes

In question 6 (Appendix 2), participants were asked whether they use social media for academic and/or personal purposes and to indicate which social media tools they use for which purpose. This question provided an understanding of the preferred tools used for academic and personal purposes. Table 4.3 and Figure 4.5 will be presented first, followed by the discussion of findings.

Table 4.3 indicates the number of participants who use social media for academic and for personal purposes.

Purpose	Yes	No
(Participants could select both purposes) (N=36)		
Academic	20 (56%)	16 (44%)
Personal	33 (92%)	3 (8%)

Table 4.3: Use of social media for academic and personal purposes

Figure 4.5 indicates the social media tools that participants use for academic and for personal purposes in graphic format. The participants could choose more than one tool, resulting in 25 responses from 20 participants who used social media for academic purposes and 70 responses from 33 participants who used social media for personal purposes. Colours were used to present a clearer picture of the comparison of the different social media tools used for academic and personal purposes. Yellow was used for Twitter, light blue for Facebook, dark blue for LinkedIn, peach for Flickr, red for blogs, brown for WhatsApp and green for RSS feeds. Grey was used to indicate the social media tools that were used for personal purposes only.
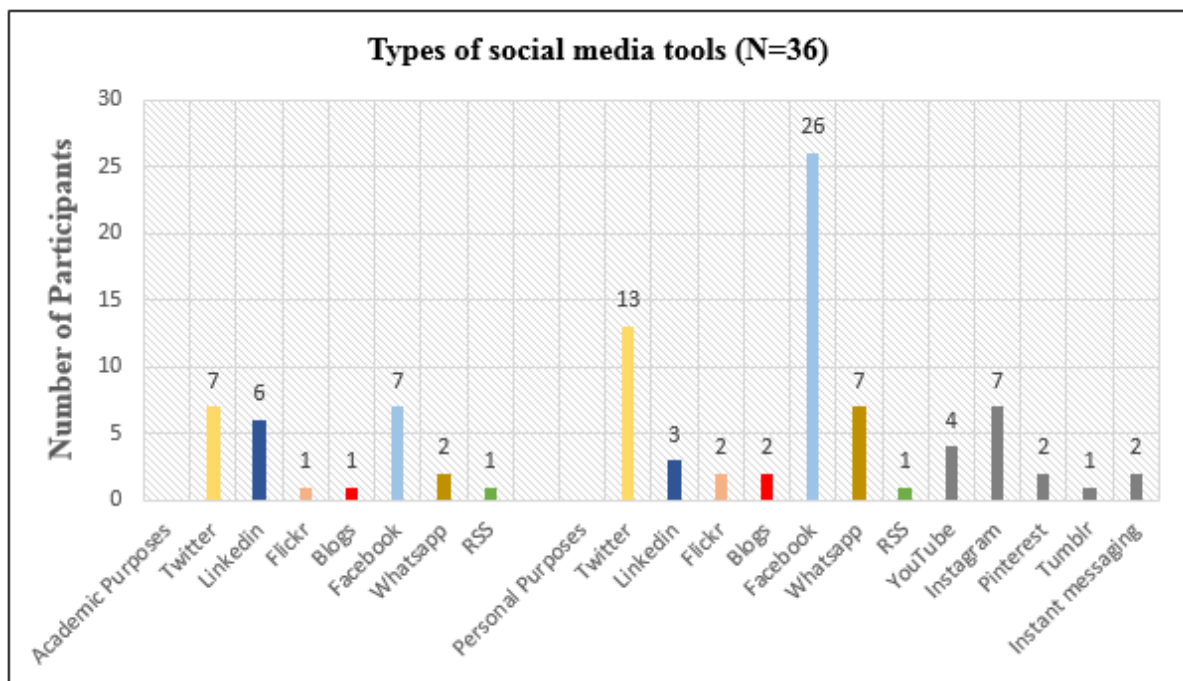
Figure 4.5: Types of social media tools used for personal and academic purposes

The responses indicated that 20/36 (56%) participants used social media for academic purposes and 33/36 (92%) used it for personal purposes. The most popular social media tool used for academic purposes emerged as Twitter, reported by 7/36 (19%) participants and Facebook, also reported by 7/36 (19%) participants. Facebook emerged as the most popular social media tool used for personal purposes, reported by 26/36 (72%) participants, followed by Twitter reported by 13/36 (36%) of the participants. From the responses, it is clear that social media is used more for personal than academic purposes. Other tools that participants reported as using only for personal purposes included WhatsApp, reported by 7/36 (19%) participants, Instagram, reported by 7/36 (19%) participants, and YouTube, reported by 4/36 (11%) participants. These tools that are used only for personal purposes can be looked at as an opportunity for the library to explore expanding their use to academic purposes.

4.4.7 Reasons for having a social media account

In question 7 (Appendix 2), participants were given a list of reasons to have a social media account and were asked to rate the importance of the reasons to them. This question provided an understanding of why users have social media accounts. A four point Likert-type scale was used to rate the options, ranging from "Not important" to "Very important". At the end of the list there was also an option for "Other", which gave participants an opportunity to include options that were not covered in the list. Participants were asked to choose one option, (Not important, Somewhat important, Important or Very important) for each of the alternatives. Not all participants responded to all the listed alternatives, hence N (ranging from 33-35) differs for the various alternatives.

The very important reasons for participants to have social media accounts include: to keep up to date (18/34, 53% responses), to find information on topics of interest (18/34, 53% responses), and to share and receive information (18/35, 51% responses). Other reasons that were considered very important by the participants were communication for personal purposes (16/35, 46% responses), communication for academic purposes (1/35, 3% response), to develop professional relationships (7/34, 21% responses) and to communicate with librarians (3/33, 9% responses). Reasons that were considered important to the participants in terms of keeping a social media account included: communication for personal purposes (15/35, 43% responses), share and receive information, (13/35, 37% responses), keep up to date (12/34, 35% responses), communication for academic purposes (12/35, 34%

responses), find information on topics of interest, to develop professional relationships (11/34, 32% responses) and to communicate with librarians (5/33, 15% responses).

The reasons for which participants use social media are presented in Figure 4.6.

Reasons for using social media

	Communicate for personal reasons (N=35)	communicate for academic purposes (N=29)	Develop professional relationships (N=34)	Communicate with librarians (N=33)	Keep up to date (N=34)	Find information on topics of interest (N=34)	Share and receive information (N=35)
Not important	2	5	10	20	2	1	1
Somewhat important	2	11	6	5	2	4	3
Important	15	12	11	5	12	11	13
Very important	16	1	7	3	18	18	18

Figure 4.6: Reasons for using social media

4.4.8 Hours spent on using social media

In question 8 (Appendix 2), participants were asked how much time they spend per week on social media for academic purposes and how much for personal purposes. This question provided information on how much time users spent on social media for the different purposes. The options ranged from "Not using" to "Greater than 20 hours per week". All participants answered this question, hence N=36.

Table 4.4 presents participant responses with regards to the number of hours spent on social media for academic and personal purposes.

Purposes (N=36)	Not using	< 1 hour per week	2-5 hours per week	6-10 hours per week	11-15 hours per week	16-20 hours per week	>20 hours per week
Personal purposes	3 (8%)	3 (8%)	12 (33%)	10 (28%)	3 (8%)	4 (12%)	1 (3%)
Academic purposes	13 (36%)	5 (13%)	13 (36%)	2 (6%)	2 (6%)	1 (3%)	0

Table 4.4: Hours spent on using social media

More participants (33/36, 92%) are using social media for personal purposes than academic purposes (23/36, 64%). Most of the participants (12/36, 33%) indicated that they spend between 2-5 hours per week using social media for personal purposes. Ten/36 (28%) participants indicated that they spend between 6-10 hours per week using social media for personal purposes. Significantly, 13/36 (36%) of the participants spend between 2-5 hours per week using social media for academic purposes. One/36 (3%) participant uses social media between 16-20 hours per week for academic purposes.

4.4.9 Importance of social media features

In question 9 (Appendix 2), participants were asked to rate the importance of the social media features included in a list. A four point Likert-type scale was used to rate the options, ranging from "Not important" to "Very important". At the end of the list there was also an option for "Other", which gave participants an opportunity to include options that were not covered in the list. Participants were asked to choose one option, (Not important, Somewhat important, Important or Very important) for each of the alternatives. This question provided insight into which features of social media were important to users. Libraries can take into consideration these features when deciding which social media tools to employ for library services. Not all participants responded to all the listed alternatives, hence N (ranging from 32-34) differs for the various alternatives.

Social media features that were considered very important included: communication features (this refers to features such as chat features), reported by 12/34 (35%) participants; sharing (refers to features that promote sharing of information, such as the "Like" and "Share" features on Facebook or retweeting feature on Twitter), reported by 11/34 (32%) participants;

networking (refers to features that promote collaboration, such as study groups or work groups on WhatsApp) reported by 10/34 (29%) participants. Social media features that were considered important included: contributions (for example, comments or opinions by scholars or academics), reported by 21/34 (62%) participants; reviews (for example reviews of books, resources), reported by 16/33 (48%) participants; sharing reported by 15/34 (44%) participants; and recommendations (for example, librarians recommending resources) reported by 15/33 (45%) participants.

Figure 4.7 presents graphically, the participant responses with regards to the importance of social media features

Importance of social media features

	Audio (N=33)	Audio visual (N=33)	Contributions (N=34)	Communications (N=34)	Networking (N=34)	Sharing (N=34)	Archive conversations (N=33)	Linking to resources (N=33)	Reviews (N=33)	Recommendations (N=33)	Search functions (N=33)	Library catalogue (N=33)	Synchronous (N=32)
Not important	7	2	2	5	3	2	11	10	4	4	6	11	5
Somewhat important	14	10	4	7	11	6	11	8	10	7	10	5	12
Important	11	14	21	10	10	15	9	8	16	15	8	9	10
Very Important	1	7	7	12	10	11	2	7	3	7	9	8	5

Figure 4.7: Importance of social media features

4.4.10 Value of input from institutional sources

In question 10 (Appendix 2), participants were given a list of institutional sources and asked to rate the value of the source's input (such as comments, recommendations & reviews) to them using a four point Likert-type scale with options ranging from "Not valued" to "Highly valued". At the end of the list there was also an option for "Other", which gave participants an opportunity to include options that were not covered in the list. Participants were asked to choose one option, (Highly valued, Valued, Somewhat valued or Not valued) for each of the alternatives. Not all participants responded to all the listed alternatives, hence N (ranging from 33-35) differs for the various alternatives. This question provided information on which institutional source's input (comments, recommendations & reviews, etc.) to include on social media.

Input by academics was considered highly valued by the largest number of participants 27/35 (77%); followed by scholars reported by 23/35 (66%) participants; librarians, reported by 15/34 (44%) participants; colleagues reported by 12/35 (34%) participants; doctoral students, reported by 10/33 (30%) participants; master's students, reported by 9/33 (27%) participants; honours students reported by 4/34 (12%) participants; and only 1/33 (3%) participant reporting undergraduate students. Input that was considered valued by the largest number of participants included colleagues (19/35, 54% responses), doctoral students (18/33, 56% responses) and librarians (17/34, 50% responses).

Figure 4.8 presents graphically, the participant responses with regards to the value of input from institutional sources.
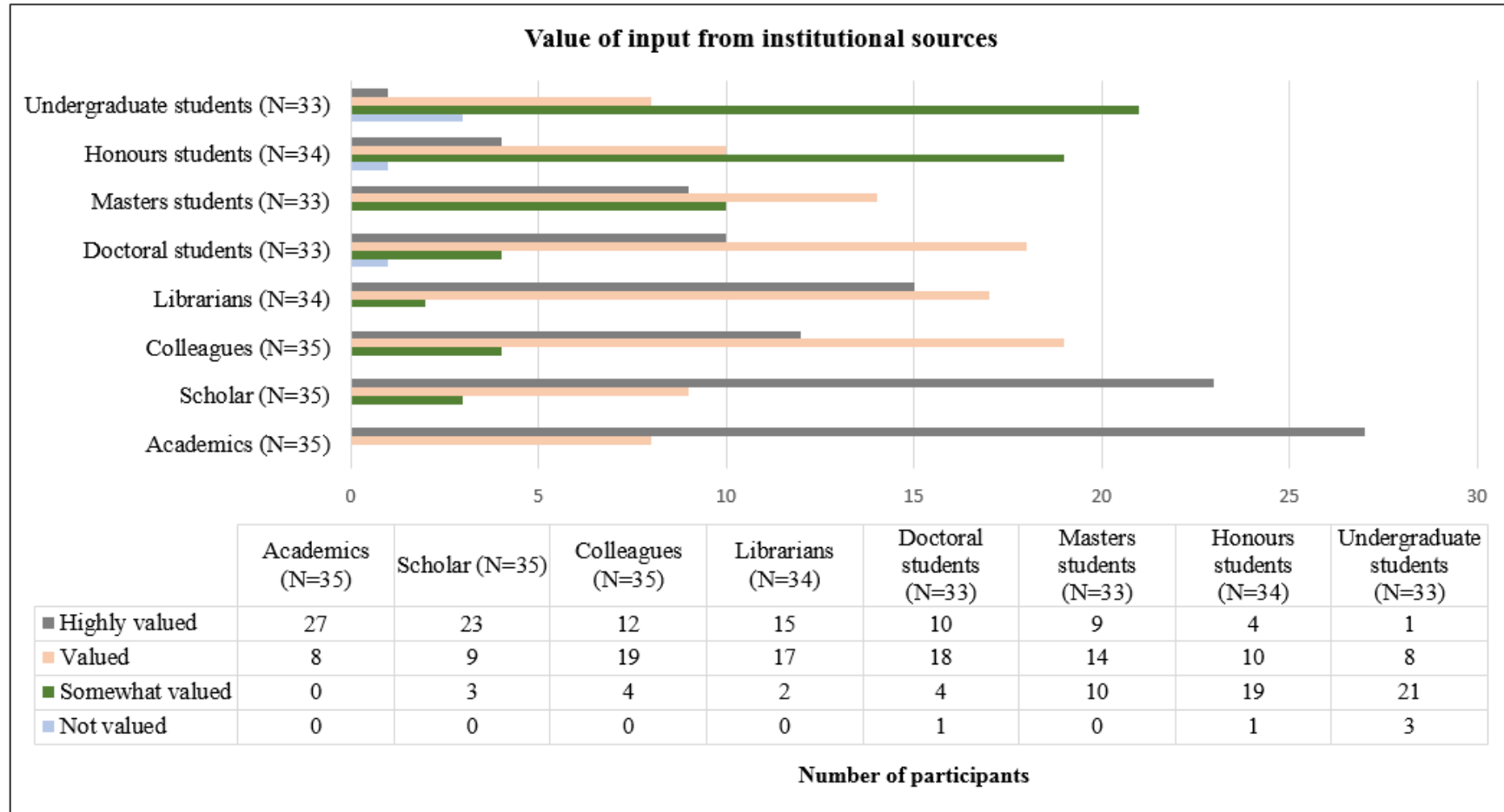
Figure 4.8: Value of input from institutional sources

	Academics (N=35)	Scholar (N=35)	Colleagues (N=35)	Librarians (N=34)	Doctoral students (N=33)	Masters students (N=33)	Honours students (N=34)	Undergraduate students (N=33)
▪ Highly valued	27	23	12	15	10	9	4	1
▪ Valued	8	9	19	17	18	14	10	8
▪ Somewhat valued	0	3	4	2	4	10	19	21
▪ Not valued	0	0	0	0	1	0	1	3

Number of participants

4.4.11 Concerns about using social media

In question 11 (Appendix 2), participants were asked to rate the significance of the listed concerns for them when using social media for academic reasons. A four point Likert-type scale was used with options ranging from not significant to very significant. At the end of the list there was also an option for "Other", where participants were given opportunity to include options that were not covered in the list. Participants were asked to choose one option, (not significant, somewhat significant, significant and very significant) for each of the alternatives. Not all participants responded to all the listed alternatives, hence N (ranging from 33-35) differs for the various alternatives. This question provided information on concerns that users face that would need to be given consideration if social media was to play a role in providing library services in an academic library context.

The concern that emerged as being very significant to the largest number of participants 15/33 (45%) was breach of privacy (for example personal information, such as email address, made public). The other concerns that emerged as being very significant included: the lack of distinction between user generated content and professional content, reported by 14/33 (42%) participants; information on social media is not an authoritative source, reported by 9/34 (26%) participants and the information posted on social media, such as comments and opinions, are open to public criticism, reported by 8/34 (24%) participants.

Figure 4.9 presents graphically, the participant responses with regards to the concerns that participants have about using social media.
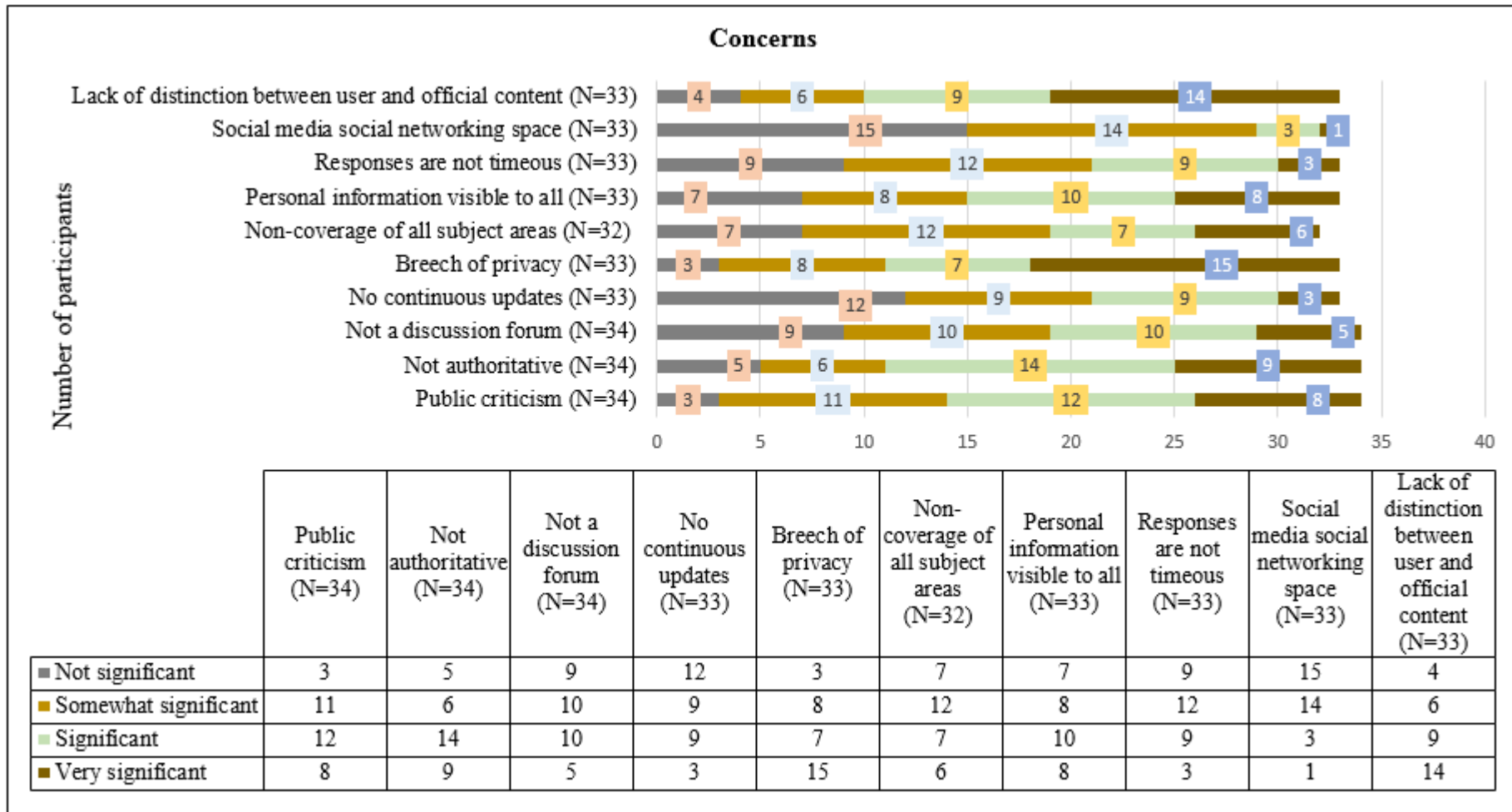
Figure 4.9: Concerns about using social media

	Public criticism (N=34)	Not authoritative (N=34)	Not a discussion forum (N=34)	No continuous updates (N=33)	Breech of privacy (N=33)	Non-coverage of all subject areas (N=32)	Personal information visible to all (N=33)	Responses are not timeous (N=33)	Social media social networking space (N=33)	Lack of distinction between user and official content (N=33)
Not significant	3	5	9	12	3	7	7	9	15	4
Somewhat significant	11	6	10	9	8	12	8	12	14	6
Significant	12	14	10	9	7	7	10	9	3	9
Very significant	8	9	5	3	15	6	8	3	1	14

4.4.12 Barriers to using social media

In question 12 (Appendix 2), participants were asked to rate the significance of the listed barriers to using social media for academic reasons. A four point Likert-type scale was used with options ranging from "Not significant" to "Very significant". At the end of the list there was also an option for "Other", which gave participants an opportunity to include options that were not covered in the list. Participants were asked to choose one option, (Not significant, Somewhat significant, Significant or Very significant) for each of the alternatives. Not all participants responded to all of the listed alternatives, hence N (ranging from 33-34) differs for the various alternatives. This question provided information on barriers that deter or prevent users from using social media.

Figure 4.10 presents graphically, the participant responses with regards to the barriers that participants experience when using social media.

Barriers	Keeping abreast of technologies (N=36)	Lack of infrastructure (N=34)	Limited internet access (N=34)	Lack of training (N=34)
Not significant	14	27	21	21
Somewhat significant	9	3	6	7
Significant	9	2	3	2
Very significant	4	2	4	4
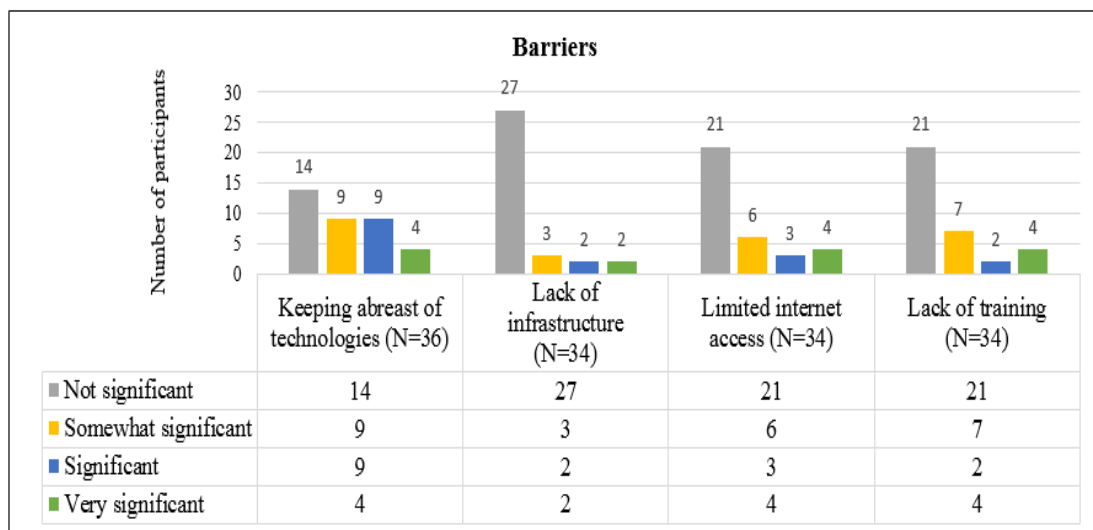
Figure 4.10: Barriers to using social media

The barriers that participants reported as very significant included: keeping abreast of technologies (4/36, 11% responses); limited internet access (4/34, 12% responses); and lack of training (4/34, 12% responses). From the responses, the barrier that seemed to present some concern to participants was keeping abreast of technologies, reported by 9/36 (25%) participants as being significant and by 9/63 (25%) participants, as somewhat significant.

4.4.13 Preferred social media tool to access library services

In question 12 (Appendix 2), participants were given a list of social media tools and a list of library services. They were asked to indicate which library services would be preferred on which social media tools. They could select more than one option for each library service. At the end of the list there was also an option for "Other", where participants could indicate library services and social media tools that were not indicated in the list. This question provided information on what services users preferred on which tools. Thirty three participants responded to the question, hence N=33; however, participants were given the option to select more than one option, therefore the percentages do not add up to 100%.

Table 4.5 presents the participants preferences in terms of which library service they would prefer on which social media tool. (N=33)

Library services *(Participants could select more than one option)*	Blogs	Face Book	IM	Twitter	You Tube	Flickr	Whats App	RSS
Access to journal articles	14 (42%)	8 (24%)	3 (9%)	9 (27%)	5 (15%)	0	0	6 (18%)
Access to LibGuides	14 (42%)	8 (24%)	3 (9%)	5 (15%)	3 (9%)	1 (3%)	0	2 (6%)
Guidance on using library resources for example information literacy training videos	11 (33%)	9 (27%)	2 (6%)	4 (12%)	20 (61%)	0	0	1 (3%)
Library contact details	12 (36%)	19 (56%)	4 (12%)	11 (33%)	1 (3%)	3 (9%)	0	3 (9%)
Library hours	11 (33%)	22 (66%)	6 (18%)	13 (39%)	1 (3%)	2 (6%)	1 (3%)	3 (9%)
New acquisitions	15 (46%)	17 (52%)	4 (12%)	13 (39%)	1 (3%)	3 (9%)	1 (3%)	3 (9%)
Posting reference queries	8 (24%)	13 (39%)	7 (21%)	10 (30%)	1 (3%)	0	1 (3%)	3 (9%)
Discussions with librarians	12 (36%)	10 (30%)	11 (33%)	10 (30%)	4 (12%)	0	2 (6%)	1 (3%)
Discussions with other users	10 (30%)	13 (39%)	9 (27%)	8 (24%)	2 (6%)	0	2 (6%)	1 (3%)
Research and study tips	17 (52%)	12 (36%)	2 (6%)	11 (33%)	13 (39%)	0	0	1 (3%)
Viewing digital collections	14 (42%)	24 (73%)	3 (9%)	7 (21%)	11 (33%)	4 (12%)	0	3 (9%)

Table 4.5: Preferred social media tools to access library services

In the discussion below, "most preferred" refers to the largest number of participants that chose the particular social media tool for the particular library service.

- Access to journal articles is most preferred on blogs, with 14/33 (42%) responses, followed by Twitter with, 9/33 (27%) responses.

- Access to LibGuides is most preferred on blogs, with 14/33 (42%) responses, followed by Facebook, with 8/33 (24%) responses.

- Guidance on resources is most preferred on YouTube, with 20/33 (61%) responses, followed by blogs, with 11/33 (33%) responses.

- Library contact details are most preferred on Facebook, with 19/33 (56%) responses, followed by blogs, with 12/33 (36%) responses.

- Library hours is most preferred on Facebook, with 22/33 (66%) responses, followed by blogs, with 11/33 (33%) responses.

- New acquisitions are most preferred on Facebook, with 17/33 (52%) responses, followed by blogs, with 15/33 (46%) responses.

- Posting reference queries are most preferred on Facebook, with 13/33 (39%) responses, followed by Twitter, with 10/33 (30%) responses.

- Discussions with librarians are most preferred on blogs, with 12/33 (36%) responses, followed by instant messaging, with 11/33 (33%) responses.

- Discussions with other users are most preferred on Facebook, with 13/33 (39%) responses, followed by blogs, with 10/33 (30%) responses.

- Research and study tips are most preferred on blogs, with 17/33 (52%) responses, followed by YouTube, with 11/33 (33%) responses.

- Viewing digital collections are most preferred on Facebook, with 24/33 (73%) responses, followed by blogs, with 14/33 (42%) responses.

The findings from the quantitative study show that social media is being used for academic purposes, mainly for discovery and sharing of information. However, the findings also show very low usage for special collection resources such as artefacts. A possible explanation is that these resources cannot be discovered on the most important search tools (databases and e-journals) listed by the participants.

4.5 PRESENTATION OF FINDINGS FROM SEMI-STRUCTURED INTERVIEWS

The analysis of the data from the semi-structured interviews will follow the same structure as that of the interview schedule, namely, the sequence of the nine questions (Appendix 5). The interview candidates for this study were selected purposively. Recommendations from librarians employed by the library under study were taken into consideration in the selection process. Some of the librarians have been with the library a long time and know their users well. All the interview candidates also participated in the questionnaire survey, discussed in Section 4.4 of this chapter. Depending on the responses from the questionnaires, key informants were asked if they would like to participate in an interview. Eleven participants agreed to participate in the interviews.

One participant was not a key informant but appeared eager to participate in the interview, hence the researcher did interview him because he was an experienced researcher. This particular participant reported that he does not use social media for library related services. This participant is a professor who hires a researcher (retired librarian) to do research for him. The researcher had opportunity later on, to speak to the retired librarian, hired by the professor, and she said that she does not use social media for any kind of library related services; however she does use the electronic resources of the library. The retired librarian was not included in the total number interviewed. They all signed an informed consent form that permitted the researcher to record the interviews. All the interviewees were also given a brief questionnaire (Appendix 6) to complete, that extracted profile details (listed in Table 4.1 of this chapter). The interviews lasted between 10 and 15 minutes each and were recorded using a Samsung handheld device. In compliance with ethical considerations, where direct quotations were given in this mini-dissertation, participants were named anonymously, for example Participant 1 (P1) (Creswell, 2011:293).

The interviews were transcribed and thematic analysis was used to identify the recurrent themes discussed in this chapter. In the analysis of the interview discussions, the researcher identified similarities in concepts that could be assigned with the same label or name, creating themes (Pickard, 2013:271). There were many themes that emerged from the discussions that were not directly related to the study; only the relevant themes are presented here. Due to the constraints of this study (being a mini-dissertation), for some questions, all the themes are presented, and for others, where too many themes emerged, only the recurrent themes (themes mentioned by 2 or more participants) are presented.

4.5.1 Use of social media for library services

In question 1 of the interview schedule (Appendix 5), the participants were asked whether they used social media for library related services. Ten/11 (91%) participants (P1-P5; P7-P11) reported that they did use social media for library related services. One/11 (9%) participant (P6) reported that he does not use social media for any library related services. This is the only finding for which N=11, as all participants answered this question. For the rest of the findings presented in this chapter, participant (P6) did not provide any responses, hence N=10.

4.5.1.1 Tools that are used

In question 1a of the interview schedule (Appendix 5), the participants were asked, what social media tools they used for library related issues. The 10/10 (100%) participants, who said that they did use social media for some type of library service, indicated the tools that they used.

Table 4.6 presents the participants' responses with regards to the tools used, in order of preference. Please note: participants could indicate more than one tool, hence percentages do not add up to 100.

Tools used *(Participants could indicate more than one tool)*	Response count for participants using social tools *(N=10)*	Response rate
Twitter (P2-P5; P8-P11)	8	80%
Facebook (P1; P2; P7)	3	30%
WhatsApp (P7; P9; P10)	3	30%
YouTube (P1; P9; P10)	3	30%
RSS (P3)	1	10%

Table 4.6: Tools used by participants for library related issues

Twitter emerged as the most preferred tool used by the participants. One participant (P8) mentioned, *"...I use Twitter mostly for following a lot of academics."* The findings also showed that a low percentage (3/10, 30%) of the participants used Facebook and YouTube. WhatsApp was specified by (3/10, 30%) participants who said that they used it to form chat groups for study purposes. One participant (P3) specified using RSS feeds, but later in the interview explained that she has replaced RSS with Twitter feeds.

4.5.1.2 Library services for which the tools were used

In question 1b of the interview schedule (Appendix 5), participants were asked what library services they used the tools for. Some participants were not clear as to what the term, library services, meant and they were given examples which included: notices, promotion of collections, reference queries. From the analysis of the discussions, recurrent themes (themes mentioned by 2 or more participants) that emerged are presented in Table 4.7, in order of most popular library service. Participant (P6) did not provide a response to this question, hence N=10. Please note: participants could list more than one service, hence percentages do not add up to 100%.

Services *(Participants could list more than one service)*	Response count of participants using tools for library services *(N=10)*	Response rate
Notifications (keep informed) (P2; P3; P4; P7; P8; P9; P10; P11)	8	80%
Sharing information (P2; P3; P4; P5; P7; P9; P10)	7	70%
Discovering information (P2; P3; P4; P5; P8; P11)	6	60%
Informative videos (P1; P9, P10)	3	30%
Study chat groups (P7; P9, P10)	3	30%
Posting queries (P2; P7)	2	20%

Table 4.7: Library services for which the tools were used

(1) Notifications

Most of the participants (8/10, 80%) appeared to be using social media for keeping informed about updates and news items. One participant (P9) mentioned, *"...is just to keep up to date for like the library news, what's happening in the library"*. Further discussions follow in 4.5.3 of this chapter as notifications, in other words the library posting fresh content and updates on its sites emerged as a theme that motivates participants to use social media for library services.

(2) Sharing information

Sharing information was reported by 7/10 (70%) of the participants, with many referring to sharing as retweeting or forwarding interesting information to friends and colleagues. One

participant (P3) mentioned, *"…well I use it to pass [information] onto colleagues and to academics that I know…"*

(3) Discovering information

The third most used library service is discovering information, 6/10 (60%) participants specified that they follow people or institutions of subject interest and in this way discover information or links to sources of information. One participant (P5) said *"Let's take something like Twitter; it could be used as a great big MOOC. If you follow the right sources it can be like a big MOOC."* Another participant (P8) says, *"I follow people who are tweeting a lot in my field and in that way I would be able to find sources to information."*

(4) Informative videos

Three/10 (30%) participants reported accessing videos that serve as how-to-guides on YouTube. One participant (P1) mentioned that *"Refworks has some really informative videos on YouTube."*

(5) Study chat groups

A WhatsApp group is similar to a Facebook group and 3/10 (30%) participants spoke of forming WhatsApp study groups with class mates and using it to work collaboratively on assignments. The researcher asked the participants how they would feel about having a librarian join their WhatsApp study group and the idea was well received by the participants. One participant (P10) said, *"… but if the subject librarian were to get involved that would be very beneficial 'cos now the subject librarian would know the specific areas and the latest info available."*

(6) Posting queries

Posting queries was specified by 2/10 (20%) participants and referred to clarifying issues like library hours or reporting an operational issue such as, light above certain desk is not working. One participant (P2) said*, "… someone posted – why don't all desks have plugs?"*

4.5.2 Issues that the library should take note of in terms of social media usage

In question 2 of the interview schedule (Appendix 5), the participants were asked if there were any other reasons for which they use social media, which they think the library should take note of.

From the analysis of the discussions, recurrent themes (themes mentioned by 2 or more participants) that emerged are presented in Table 4.8 in order of most popular theme. Participant (P6) did not provide a response to this question, hence N=10.

Themes	Response count of participants in terms of social media usage *(N=10)*	Response rate
Engaging communication (P2;P3;P5;P7;P8;P11)	6	60%
Promotion of collection (P1;P4;P7;P11)	4	40%

Table 4.8: Issues to be noted by the library

From the participant responses, it appeared that the participants prefer for libraries to provide more engaging communication (6/10, 60%), and to also promote their collections (4/10, 40%). Engaging communication is discussed in section 4.5.3 of this chapter, as it also emerged as a motivating factor for using social media for library services. The participants want the library to promote its collection more, so that it can be discovered by the users. Participant (P1) mentioned, "… *few, know of them, so I think maybe if they [librarians] use social media to promote that they have this specific collections, then maybe more people will be aware of it and use it more often.*" Perhaps consideration can be given to promote the better used resources in the collections.

4.5.3 Motivation for using library services provided on social media

In question 3 of the interview schedule (Appendix 5), the themes following in Table 4.9 emerged when participants were asked what would motivate them to use library services provided on social media.

From the analysis of the discussions, all themes that emerged are presented in Table 4.9 in order of most popular theme. Participant (P6) did not provide a response to this question, hence N=10. Please note: participants could express more than one theme, hence percentages do not add up to 100%.

Theme *(Participants expressed more than 1 theme)*	Response count in terms of motivation *(N=10)*	Response rate
Fresh content/notification (P1-P5; P8; P10;P11)	8	80%
Engagement (P1; P5; P7-P11)	7	70%
Keeping abreast of advancing technology (P2; P3; P8; P10)	4	40%
Easy access to information (P4)	1	10%

Table 4.9: Motivation for using library services provided on social media

(1) Fresh content - notification

From the examples provided by participants to this study, fresh content refers to information that keeps them informed and up to date, such as notices of new resources, promotional information, updates on projects, notices of training sessions hosted by the library and also operational information such as the plug points at desk number 5 are not working.

The participants felt that fresh content or regular notification would be a key motivating factor in using library services provided on social media. One participant (P3) said, *"...but for some things I actually like to go and look at the site every day or every week."* Another participant (P2) went further to qualify the fresh content as being sharable interesting content that can be forwarded, retweeted and shared with others.

(2) Engagement

Engagement refers to the interaction between the library and its users and the trend seems to be moving more towards active engagement as opposed to passive engagement, real time dual discussions as opposed to traditional one way direction. It seems that the user wants to become more involved in discovering the information rather than being given the discovered information. Seven/10 (70%) participants said that the library should provide more opportunity for engagement, such as starting a chatroom around current topics. One participant (P11) spoke of displaying the diversity of the library collections in non-traditional ways, such as *"...find fun ways of getting people to see your collections, like look what this researcher did with the leaf he found in this book, people would look at that and go, Ok I didn't even know you had that ... people will remember that if you have something fun attached to it."*

Two participants (P1 and P9) said that, if the library were to respond in real time to queries posted on social media, then they would feel motivated to post queries using social media. In clarifying real time, participant P9 said, *"Like real time online chats with a librarian. I know that librarians maybe busy but maybe they can allocate maybe a certain time of the day where you can have online queries or you can actually chat to a librarian."* Two participants (P7 and P10) spoke of the importance to them of scholarly engagement such as the library starting chats on research topics or providing links to research projects or resources.

(3) Keeping abreast of advancing technology

Four/10 (40%) participants spoke of the importance of libraries to stay abreast of advancing technology. New features and tools are being launched regularly and the library users are learning to use these features as explained by the participant (P8) who said, *"I started experimenting with Pinterest a while ago… by experimenting I can discover tools that might become useful for my research. I think somebody in the library should be researching what new tools are available and how they might be useful for people."*

Another participant (P3) said, *"… that you [librarian] are not this dragon and that you are interested. You are following things as they change, not just with the subject but that you are up to date with the technology and everything."*

(4) Ease of access to information

One participant (P9) mentioned ease of access as a motivating factor, having to access services in his own time and space. He said, *"… it would be nice if you could actually find information in one place that summarises everything instead of going to different hundreds of websites, ease of access to get that information, it would be less frustrating as well."*

4.5.4 Concerns as regards using social media

In question 4a of the interview schedule (Appendix 5), the participants were asked if they have any concerns as regards using social media for library services. Four/10 (40%) of the participants (P1; P2; P5; P8) said that they have no concerns. Six/10 (60%) (P3; P4; P7; P9; P10; P11) indicated that they do have some concerns (listed in Table 4.10 in order of most prominent concern.). One/10 (10%) participant (P6) did not answer this question.

From the analysis of the discussions, all themes that emerged are presented in Table 4.10 in order of most prominent concern. Participant (P6) did not provide a response to this question, hence N=10. Please note: participants could express more than one concern, hence percentages do not add up to 100%.

Concerns *(Participants expressed more than 1 concern)*	Response count in terms of concerns *(N=10)*	Response rate
Misuse (P10; P3; P11)	3	30%
Breach of privacy (P4; P3; P9)	3	30%
Social media is not an academic space (P4; P7)	2	20%
Authority of information (P7)	1	10%
Coverage of all subject fields (P10)	1	10%

Table 4.10: Concerns as regards using social media

(1) Misuse

Misuse refers to, information shared by users on social media that can be embarrassing, informal, less professional, defamatory, remarks that can be construed as sexist, racist, or open to criticism. From participant responses, 3/10 (30 %) of the respondents mentioned misuse of information as a concern. Participant (P3) said, *"… similar sort of thing where people use it for personal attacks… might be open to all sorts of polemical activity."*

(2) Breach of privacy

Breach of privacy refers to personal information, for example email addresses made public. It also includes instances of private conversations between librarian and user, for example discussing a possible topic for thesis, being made public. From participant responses, 3/10 (30%) of the respondents mentioned breach of privacy as a concern. Participant (P8) said, *"...and they [librarians] made our conversation public, especially if it is of a sensitive nature, like they ask for my email address. I think that would be a concern for me."*

(3) Social media is not an academic space

Two/10 participants (20%) in this study mentioned having the perception that one cannot mix library and personal issues. They felt that social media is more a social space than an academic space and the information therein is less professional. One participant, (P7) said,

"You know social media ... people just look at it as, you know, a place for social networking ... yeah it is not a serious thing."

(4) Authority of information

Since social media sites are dynamic and interactive, much of the information is user generated and opens the door for concerns about the trustworthiness of the information. From this study, 1/10 (10%) participant mentioned the authority of the information as a possible concern. The reason for the low percentage (1/10, 10%, [P7]) of participants who do have a concern with the authority of the information could be that most (9/10, 90%, [P1-P5; P8-P11, P6 did not provide a response]) of participants to this study are experienced researchers and are able to discern the authoritative voice in information, regardless of the platform.

(5) Coverage of all subject fields

This theme refers to the coverage of all subject specific information on social media and is discussed under subject specific information in 4.5.6 of this chapter, as it emerged as a theme when participants were asked what type of information they would like to discover on social media.

(6) Suggestions to overcoming concerns

Further to discussing their concerns about using social media for library services, the participants were asked what suggestions they could offer the library to overcome these concerns. Six/10 (60%) participants (P1; P2; P3; P4; P7; P9) suggested that the library should have staff with dedicated time to monitor, manage and control the library's social media sites.

4.5.5 Barriers to using social media

In question 5 of the interview schedule (Appendix 5), the participants were asked if they experience any barriers when using social media and if they could provide any suggestions on how the library could overcome them.

From the analysis of the discussions, recurrent themes (themes mentioned by 2 or more participants) that emerged are presented in Table 4.11 in order of most prominent barrier. Participant (P6) did not provide a response to this question, hence N=10. Some participants (P2; P9) indicated that they did not experience any barriers. Please note: participants could indicate more than one barrier, hence percentages do not add up to 100%.

Barriers *(Participants could indicate more than 1 barrier)*	Response count in terms of barriers *(N=10)*	Response rate
Insufficient skills (P1; P4; P5; P8; P10; P11)	6	60%
Infrastructure (P1; P3;P7;P8; P10)	5	50%

Table 4.11: Barriers to using social media

(1) Insufficient skills

The barrier of insufficient skills to fully exploit social media, was specified by 6/10 (60%) of the participants. Insufficient skills and the need for training refers to the need for creating awareness of and provision of training in the different social media features and how it can be used for library services. Skills also refers to creativity in displaying information, for example one participant (P11) spoke of taking the user on a journey, as he follows the library and in so doing, engages with the information he discovers. Participant (P5) said, "*The barrier is limiting it to media and marketing and not tapping into its full potential. Lack of real understanding of the real power of social media ... Reluctance to explore, crowd sourcing, engaging ... allowing users to become creators of content instead of users of content.*"

(2) Infrastructure

Infrastructure refers to issues with hardware, such as PCs are too slow, poor coverage of Wi-Fi throughout the library, and load shedding (power outages). From the participant responses, 1/10 (10%) participant (P2), said that he does not experience any barriers in this regard. Five/10 (50%) of the participants experience barriers related to infrastructure. The barriers that these participants experienced were not all related to the library, for example 1/10 (10%) participant (P8) specified that the Twitter message box allows for too few characters. Other participants (P3; P10) mentioned internet connectivity when not in the library as a barrier. One participant (P10) (1/10, 10%) mentioned that the Wi-Fi is not available campus wide. One/10 participant (10%) (P7) mentioned power outage as a barrier. A possible reason for this participant mentioning power outage could be because of the Electricity Supply Commission's (ESKOM) load shedding occurrences that started in 2014 in South Africa. These occurrences have since stopped for the moment.

4.5.6 Discovering information on social media

In question 6 of the interview schedule (Appendix 5), the participants were asked if they would be interested in discovering information on social media and if so, what type of information this would include.

From the analysis of the discussions, recurrent themes (themes mentioned by 2 or more participants) that emerged are presented in Table 4.12 in order of most popular theme. Participant (P6) did not provide a response to this question, hence N=10.

Theme *(Participants expressed 1 theme)*	Response count in terms of discovering information *(N=10)*	Response rate
Subject specific information (P1-P5; P7; P8; P10)	8	80%
Notifications (P9; P11)	2	20%

Table 4.12: Discovering information on social media

From Section 4.5.1.2, when participants were asked what they used the social media tools for, 6/10 (60%) participants mentioned using social media to discover information. This question looked at the type of information that the participants would like to discover using social media. Discovery of information includes following people or institutions of interest, participating in chat groups around a topic, and participating in WhatsApp groups to complete assignments. From the participant responses, 10/10 (100%) (P1-P5; P7-P11) specified that they would like to discover information on social media. One participant (P8) said *"I follow people and discover information that way, like they would say: 'I just published a draft chapter on my blog, for instance."*

(1) Subject specific information

Eight/10 (80%) of the participants said that they prefer to discover subject specific information on social media. One participant (P1) spoke of having subject specific Facebook pages or chats, *"It would be interesting if they could have library services specific to field, say for instance, Facebook page for criminology, something like that."*

(2) Notifications

Only two/10 (20%) participants said that they prefer to discover notifications on social media. This is an interesting finding as, in 4.5.1.2 of this chapter, eight/10 (80%) participants specified notifications as the main library service that they access on social media and in 4.5.3, eight/10 (80%) participants specified notifications as the main motivation for using social media for library services and yet, only 2/10 (20%) said that they prefer or would like to discover notifications on social media. The questions addressed in 4.5.1.2 and 4.5.3 examined the participants' current experience. This implies that notifications are probably the main library service provided on social media. This question examined the participants preferences in terms of what they would like to discover and only 2/10 (20%) specified notifications (currently supplied by library) and 8/10 (80%) specified subject specific information (not supplied by the library). This finding shows that the library needs to provide more subject specific information on social media. Given the parameters and limitations of this study (exploring user's perspectives and needs and not the library perspectives and provision), this emerging trend was not further explored in this study. Participant (P1) mentioned, *"Type of information, I guess anything, especially if it is related to your field. That's where the library comes in I guess. It would be interesting if they could have library services specific to field."*

4.5.7 Providing support in using social media to access information

In question 7 of the interview schedule (Appendix 5), the participants were asked if they had any suggestions on how the library could provide support in using social media to access information.

From the analysis of the discussions, recurrent themes (themes mentioned by 2 or more participants) that emerged are presented in Table 4.13 in order of most popular theme. Participant (P6) did not provide a response to this question, hence N=10. Please note: participants could express more than one theme, hence percentages do not add up to 100.

Theme *(Participants expressed more than 1 theme)*	Response count as regards support needed *(N=10)*	Response rate
Need for training (P1; P4; P5; P8-P10)	6	60%
Creating awareness (P2;P3; P7; P8; P11)	5	50%
Encourage use (P2; P8; P9)	3	30%

Table 4.13: Type of support needed

Six/10 (60%) of the participants suggested that the library should provide more training on how to successfully use social media to access information. This provides support for 4.5.6 where the majority of participants indicated that shortage of skills is a barrier to using social media. Some participants suggested even providing training videos on YouTube. Five/10 (50%) of the participants also spoke of creating awareness amongst users of the fact that the library is using social media for the different services. As one participant (P7) said, *"... if all they see is promotional information they won't know [better]."* Three/10 (30%) of the participants also suggested encouraging the use of social media among users; this of course, would carry implications for dedicated staff time as more users become active on social media.

4.5.8 Engagement and maintaining user attention

In question 8 of the interview schedule (Appendix 5), the participants were asked if they had any suggestions on how the library could engage with, and maintain user attention, using social media.

From the analysis of the discussions, recurrent themes (themes mentioned by 2 or more participants) that emerged are presented in Table 4.14 in order of most popular theme. Participant (P6) did not provide a response to this question, hence N=10. Please note: participants could express more than one theme, hence percentages do not add up to 100.

Theme *(Participants expressed more than 1 theme)*	Response count in terms of maintaining user engagement *(N=10)*	Response rate
Fresh sharable content (P1;P2;P4;P7;P10;P11)	6	60%
Mix of fun and serious (P2;P5;P9;P11)	4	40%
Communication – staying engaged (P3;P8)	2	20%

Table 4.14: Suggestions on how to maintain user engagement

(1) Fresh sharable content

Fresh sharable content refers to information that the library users find interesting and would want to share with others, such as recommendations, suggestions, regular updates, and comments about current topics. This means knowing what topics are currently trendy in the user communities. This refers to passive ongoing searching in terms of the adapted model (Figure 2.3). One participant (P4) suggested starting conversations such as chats regarding collections that deal with the current trendy topics. She said *"Letting people know about collections around topics, like, for language, the Neville Alexander collection. The thing with books is that they are not unique … can find them elsewhere but the collections are more unique stuff."*

Another participant (P11) advised that the library should not feel afraid to display collections that may evoke emotions as South Africa did have a troubled past. He said, *"… engagement doesn't have to be 'We love this'. Can also be 'We hate this'…. If we have a problematic history - put that up too, that is history."*

(2) Having a mix of fun and serious

Having a mix of fun and serious refers to creative communication with the user community. One participant (P5) said, *"You got to use the language of the internet appropriately so that you don't sound like a 60 year old trying to talk to a 20 year old. Can be serious and fun – bridge the generational gap."*

Another participant (P11) offered an example of fun and serious, in speaking of a language expert, he said, *"Did you know this language expert was arrested? Be transparent, like with*

Neville Alexander, we look at him as a superstar but yet he got arrested and we ignore that. Display must not ignore interesting stuff."

(3) Communication – staying engaged

Two/10 (20%) participants spoke of the importance of staying in touch with the user community. One participant (P11) said*, "… be in contact with the departments, what is happening on campus… continue the dialogue."*

4.5.9 Preferred library services on social media

In question 9 of the interview schedule (Appendix 5), the participants were asked what services they would like the library to offer on social media and what tools should the library use to offer these services. Table 4.15 summarises all the responses of all the participants who answered this question. Participant (P6) did not provide a response to this question, hence N= 10.

Table 4.15 provides a summary of all the responses of the participants in response to what services they would like the library to offer on social media and what tools the library should use to offer these services. The full response for each participant is captured in Table 4.15.

Participant	Summary of participant responses (N=10)
1	More videos, links to interesting resources, more interaction like polls for user opinions - YouTube, Facebook, Twitter
2	The library should post sharable engaging content - Facebook, Twitter
3	The library should post sharable engaging content - Facebook, Twitter
4	Chat groups on how to exploit different tools - Facebook, Twitter
5	Finding aids linked to other resources; new ways of working with data - mobile technology
7	Reference services, information literacy training - Facebook, YouTube and chat groups on WhatsApp
8	Know more about repository uploads - Facebook, Twitter
9	Real time online chats with librarians - Facebook, Twitter
10	Notices, collection awareness - Facebook, Twitter
11	Displays on awareness weeks; use interesting formats - Facebook, Twitter, Instagram

Table 4.15: Preferred library services

Figure 4.11 shows the preferences for library services on social media. Participants could express more than one library service, hence percentages do not add up to 100. Participant (P6) did not provide a response to this question, hence N= 10.

Preferred library services on social media

Training videos, 20%
Notices, 30%
Chat groups, 30%
Reference services, 10%
Collection awareness, 40%
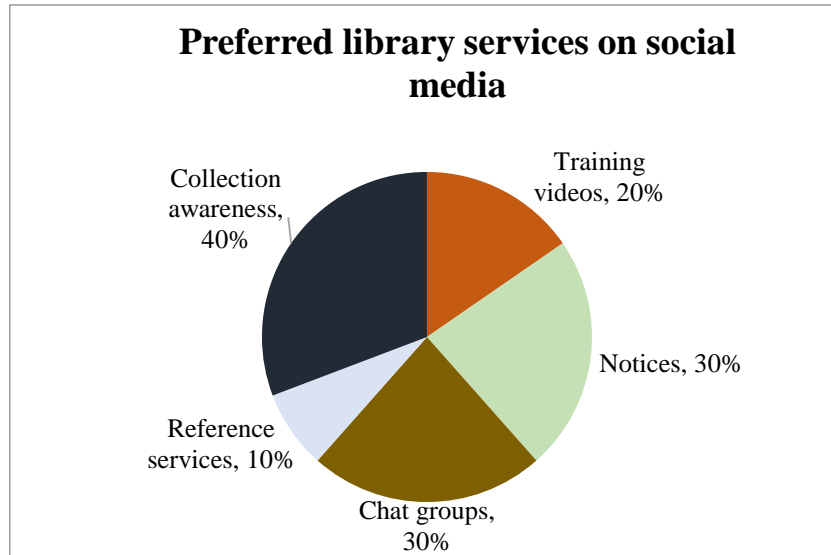
Figure 4. 11: Preferred library services on social media

From the participant responses, it appears that users want to be able to discover information themselves: 4/10 (40%) of the participants want the library to make their collections more visible and discoverable. Three/10 (30%) participants also want interactive type services, such as chat groups, and 2/10 (20%) of the participants want more visuals in the form of training videos. Post sharable content was specified by 2/10 (20%) of the participants. (Sharable content refers to information that the library users find interesting and would want to share with others, such as recommendations, suggestions, regular updates, and comments about current topics.)

4.6 TRIANGULATION OF FINDINGS IN RELATION TO THE LITERATURE

The mixed methods study design using the questionnaire and the profile questionnaire to collect mostly quantitative data and the interview schedule to collect mostly qualitative data, as well as the literature review preceding the empirical component enabled the triangulation of data by various means. From the data collected the following were in agreement. Only the key issues will be discussed in this section.

The participants indicated the tools that they were using for personal and for academic purposes. From quantitative and qualitative studies, Twitter emerged as the most popular social media tool used for academic purposes thus providing agreement with Padilla-Meléndez and Rosa del Águila-Obra (2013) who also found that Twitter was a preferred tool, especially in a special collection context.

In terms of the most popular services that social media are used for, notifications or keeping up to date, discovering information and sharing information emerged as being most popular from both the quantitative and qualitative studies. This finding confirms that of Chen, Chu and Xu (2012:5) which found that notifications, keeping informed and knowledge sharing attracted the largest number of users. In terms of discovering information, this finding provides confirmation for that of Kyung-Sun, Eun-Young and Sei-Ching (2011) which mentioned that social networking sites are frequently used for finding or discovering information for academic and non-academic purposes.

In terms of what motivates the participants to use social media, from the quantitative study, communication features that promote interactive engagement emerged as very important features in social media tools. From the qualitative study, engaging interaction was reported by the participants as being a motivation for using social media. This finding complements Russo, Watkins and Groundwater-Smith (2009) findings that the library has a role to play in engaging their users in knowledge sharing around their collections.

The participants also expressed concerns that they have about using social media. From quantitative and qualitative studies, breach of privacy (personal information posted on social media for public access) emerged as being very significant in terms of using social media. This finding confirms the findings of Baro, Ebiagbe and Godfrey (2013:17) that listed breach of privacy to be a concern in terms of social media usage.

The participants indicated barriers that they experience when using social media. From quantitative and qualitative studies, insufficient skills and lack of training in keeping abreast of advancing social media technologies emerged as being most significant to the participants, thus complimenting the study conducted by Baro, Ebiagbe and Godfrey (2013) that showed that the users to a university library in South Africa indicated a need for further training in using social media technologies. Other barriers that emerged from the qualitative study were

the lack of staff time to maintain the social media sites and engage with users. This finding agrees with Aharony (2012) who also found dedicated staff time for social media was a challenge.

There were some findings that came out in the qualitative study (with regards to affect and emotion) that did not come out of the quantitative study. These include instances when the participants actively expressed themselves (Examples provided in 4.5.8 [2 &3]) in the kind of engagement that they expect from the library for example Neville Alexander, a language expert was arrested. This fact can evoke negative emotions that also constitute engagement with the user.

4.7 CONCLUSION

In this chapter, the findings were presented from the quantitative and qualitative data collected. The findings show that social media is used for academic purposes, mainly for notifications and keeping up to date. However, when questioned as to what the users would prefer to use social media for, they were more in favour of using social media to discover subject specific information as compared to using it for notifications as they are presently doing. They were also in favour of more engaging communication using social media. The findings also showed features that participants prefer when using social media as well as the concerns and barriers that they have in terms of using social media for library services. The next chapter will discuss the findings and recommendations and will further provide a conclusion to the study.

CHAPTER 5 – FINDINGS, RECOMMENDATIONS AND CONCLUSION

5.1 INTRODUCTION

This Chapter will deliberate on the research questions, in Chapter 1, the literature review in Chapter 2 and the findings of the empirical investigation in Chapter 4. Flowing from the results of this study, this chapter will also provide a brief discussion on the practical and theoretical recommendation, and recommendations for further study. A conclusion for the research study is also provided in this chapter.

5.2 RESEARCH QUESTION AND SUB-QUESTIONS

This study was guided by the following question:

Based on the information seeking behaviour of the users of a special collection library of an academic institution, what role can social media play in the provision of information services to users?

Sub-questions to be answered from the literature:

- What has been reported on the use of social media in academic libraries?
- What has been reported on the use of social media in special collection libraries and related institutions (for example archives, museums)?

Sub-questions to be answered from the empirical component regarding the users of a special collection library of an academic institution:

- What is the information seeking behaviour of the users regarding social media?
- What are the needs for library/information services that can be met by social media?

5.3 SUITABILITY OF THE WILSON (1996) MODEL AS A FRAMEWORK FOR STUDIES ON THE USE OF SOCIAL MEDIA IN SPECIAL COLLECTION LIBRARIES

The 1996 model of Wilson was explained as a framework in section 2.5 of Chapter 2. An adapted model, based on the literature review was also presented in this section. This model guided the data collection. Following the interpretation of the data collection, the adapted model (Figure 2.3) is now considered for its suitability.

The adapted model (Figure 2.3) was able to serve as framework for this study. Issues that were accommodated in the adapted model (Figure 2.3), that could not be accommodated in the original 1996 model of Wilson (Figure 2.1) includes: intervening variables, such as barriers and concerns; activating mechanisms, such as reasons for having a social media account. The adapted model (Figure 2.3) also considered the person in context, context of the information, passive/ongoing searches, active searches and the intervening variables and activating mechanisms that were included in the original 1996 model of Wilson (Figure 2.1) such as environment and demographics.

5.4 SUMMARY OF THE EMPIRICAL COMPONENT

Activity	Discussion

Literature review	From February to April 2015 a literature review was conducted with the following headings:
	• Use of social media by academic libraries in relation to library services
	   ○ International libraries
	   ○ African libraries
	• Social media in special collection institutions
	• The use of social media by the users of academic libraries

Research method	Case study
Research approach	Mixed methods approach
Ethical clearance	Permission to conduct this study was granted by the Department of Information Science Research Committee, on behalf of the Faculty Committee for Research Ethics and Integrity of the Faculty of Engineering, Built Environment and Information Technology at the University of Pretoria and from the Humanities Research Ethics Committee at Institution A. Permission from the Director of Human Resources and the Director of Student Affairs was also granted to access the student and staff population for research.
Data collection	Data collection took place from 16 September 2015 to 2 October 2015. • Questionnaires were completed by 36 participants. • Semi-structured interviews were completed with 11 participants. Questionnaire to extract profile data from interview participants were completed by 11 participants.

Activity	Discussion
Participants	The participants included postgraduate and undergraduate students as well as academic staff and visiting researchers of the special collection library at Institution A. Recommendations from staff of the special collection library, as to users who could provide rich data to the study, were taken into account when selecting the participants to the questionnaire and the semi-structured interviews. Of participants to the questionnaires, key informants were asked whether they wanted to participate in the semi-structured interviews. In addition, other key informants were selected to participate in the semi-structured interviews, based on recommendations and availability.
Confidentiality	With regard to protecting the confidentiality and rights of participants and honouring their trust, no information was asked that could identify participants, for example names, student numbers, addresses were not required from participants. Where direct quotations were given from participant feedback, it was done anonymously. No names of individuals were mentioned when reporting the results. Data was locked away safely, in a locker. Reference to the institution being studied was made anonymously as Special Collection Library in a South African University or Institution A.
Reliability	All the instruments were tested on a pilot group of participants to ensure expected understanding before being used for data collection.
validity	The questionnaires were based on the research questions and were formulated in close collaboration with the supervisor of the study. Validity errors reflect biases in the instrument design, in other words, the options provided in the questionnaires could reflect biases. To minimise this type of error, an option for "Other" was included in every question.

Table 5. 1: Summary of the empirical component

5.5 FINDINGS FOR SUB-PROBLEMS

This research study aimed to investigate the role that social media can play in the provision of academic library services in a special collection context, based on user behaviour. The sub-questions in 5.2 were formulated to answer the main research question (Section 5.2). The following paragraphs report on the answers to the research sub-questions.

5.5.1 What has been reported on the use of social media in academic libraries?

The following discussion will briefly highlight the social media tools that emerged frequently in the literature. The discussion will also show what library services the tools were used for.

Blogs were used mainly for news events and posting notices, such as opening hours, borrowing services and question and answer services. Blogs were also used to promote user participation. Features of blogs included categorisation and archiving of posts. Instant messaging was used for quick online reference services and for asynchronous chats. It was popular with some libraries for its chat features. Twitter was used for personalised engagement with users and uploading photos, sharing links, videos, marketing library services and reference services. Twitter provided for active engagement for services such as question and answer services. Facebook was found to offer an effective means to engage and communicate with users and for building professional relationships. With regard to engagement, posts such as a competition, evokes a strong engagement whereas posts such as a photo upload evoke weak engagement.

There were also concerns that were noted in the literature that was considered in the empirical component of this study. These include: social media tools provide an effective method for library services provided that student privacy and coverage of all subject areas are taken into consideration; the tone of the communication is less formal and less professional and could be embarrassing, informal and not respectable. Some barriers to the adoption of social media include funding, training and development skills for librarians and library users, lack of facilities (such as computers) and lack of infrastructure (such as poor internet connectivity). Another barrier is lack of librarian time to engage with users through social media; this implies that communicating on social media was not part of core librarian functions. Other barriers were power failure, lack of facilities and lack of skills.

5.5.2 What has been reported on the use of social media in special collection libraries and related institutions (for example archives, museums)?

User expectations in terms of accessing information have changed and special collection libraries have faced increased pressure to make their collections more visible online. Collaboration and networking were found to provide a greater variety of images to a wider community of users. An example of a collaborative effect would be, to make collections available on Flickr, whereby all special collection libraries integrate their collections into a larger social space that users already engage in. Social media technologies also promotes discussions amongst the user communities around collections using social media to crowd source, to help identify unknown collections, for example surrogates of uncatalogued or unknown collections were hosted online and volunteers were invited from around the globe

to help catalogue the collections (Green, 2012). Social media technologies also provide opportunities for content creation, for example an institution can upload images onto its website and encourage users to provide other related information to these images. As much as these opportunities appear attractive, they do present challenges in terms of user perceptions regarding reliability and authenticity of the information if it is shifted to social media environments.

5.5.3 What is the information seeking behaviour of the users regarding social media?

In the investigations in this study, the researcher also took into consideration issues such as intervening variables and activating mechanisms, in terms of the Wilson's 1996 model (also discussed in 2.5 of Chapter 2). Although this study was conducted with users from a special collection library, books were the most frequently used resource. Items that were unique to the library such as artefacts are seldom used by the majority of the participants. This might imply a need to (1) repeat a much shorter poll with users, for example to determine the extent to which social media are used to discover special collection resources that are of a more archival type format such as artefacts and (2) to determine why books are still the most important resource. When searching for information, participants found, databases and e-journals to be very important search tools. Special collections that include artefacts and manuscripts cannot be discovered on databases and the library catalogue. There are special finding aids, AToM (Access to memory) that are used to discover these items. Even though AToM is online, most users are unfamiliar with this software which could explain why the special collection resources such as artefacts remain undiscovered. Social media are more widely used for personal purposes than for academic purposes. Twitter is the most popular tool used for academic purposes, mainly used for notifications and sharing information. In evaluating the information found on social media (motivators on whether to use the information or not) the majority of the participants found the input of academics and known scholars to be highly valued. In terms of using social media, the concerns (intervening variables) that participants found to be very significant were breach of privacy, for example personal information such as email address made public; the lack of distinction between user content and official content; and misuse, which refers to communication that is inappropriate, such as hate speech. The barriers (intervening variables and context) that were listed as very significant to the majority of participants included keeping abreast of technologies, lack of training and limited internet access, not all participants had internet access at home.

5.5.4 What are the needs for library/information services that can be met by social media?

It seemed apparent from the findings of this study that libraries need to provide more engaging communication and they also need to promote their collections so that they can be more easily discovered by users. Facebook is most preferred to meet library/information needs of users, such as posting library contact details and library hours, new acquisitions, reference queries, discussions with other library users and viewing digital collections. Blogs are preferred for discussions with librarians and study and research tips. YouTube is preferred for guidance on resources, as a how-to-guide. Twitter emerged as the most favoured tool for discovering information, where participants followed other researchers of similar research interests. Chat groups or study groups on WhatsApp, for working on similar assignments that include subject librarian's contributions, were reported as very favourable by the participants. Engagement refers to the interaction between the library and its users and the trend seems to be moving more towards active engagement as opposed to passive engagement, real time dual discussions as opposed to traditional one way direction. It seems that the user wants to become more involved in discovering the information rather than being given the discovered information. Users also prefer more subject specific information to be posted on social media which places a demand on libraries to ensure that all the disciplines that it services are catered for. In terms of the special collection libraries, there are many creative ways of using social media to make the collections more discoverable, such as using Twitter (the most favoured tool) to start discussions or to invite comments, and recommendations on certain manuscripts or photographs.

5. 6 LIMITATIONS OF THE STUDY

This study was a single case study. The findings might thus not be fully generalizable to the institution. This study used purposive sampling which also has the potential to introduce biases into the study, such as lack of variety of experience and viewpoints (Case, 2007:196). This study did not seek to generalize to the entire population of special collection libraries but did seek to include participants who could provide rich data in terms of providing an in-depth understanding of the phenomenon studied, namely the role of social media in providing library services in a special collection library context. Further to this, data were collected during a three week period in the month of September 2015; only participants that were present in the library during these three weeks were included in the sample.

5. 7 THEORETICAL RECOMMENDATIONS

The 1996 model of Wilson, adapted by Van Wyk (2015) in an academic context proved to be an excellent framework to guide the study and to allow for issues and components to be added that are suited for present day digital and social media driven academic contexts. In addition to the model presented in Figure 2.3, Chapter 2 (guiding the data collection) the following can be added:

- Intervening variables, such as barriers and concerns
- Activating mechanisms, such as reasons for having a social media account.
- Passive/ongoing searches, such as following researchers of interest on Twitter.

5.8 PRACTICAL RECOMMENDATIONS

Based on the findings, the following suggestions are made for practical implications in the special collection library where the study was conducted, as well as for other institutions hosting special collections.

Practical recommendations include:

(a) It must be ensured that the social media tool of the users' preference (for example Twitter in this case) is used to raise awareness of the collections that are unique to the library.

(b) The library should also consider marketing/promotional strategies that foster participation with the user as content creator such as asking for the user to provide related information to their special collections. An example of this would be to post a photograph from the photographic collections on Twitter and ask for user input to help catalogue the photograph.

(c) In encouraging user engagement, the library should give greater support to diversity of expression of knowledge. Negative reactions from users such as "I don't like that photograph" also constitutes engagement.

(d) The library should also get more involved in the research interests of its users. A suggestion would be to sit in on a few of their user community's discussions to see what topics or assignments are discussed and perhaps work on starting study/chats around these topics, offering resources (manuscripts, rare maps) for the assignments/projects that are not discoverable on the catalogue or the electronic

resources. Study group chats could be started on WhatsApp and suggestions referring users to special collection resources could be made. This would also mean that librarians would need to have a good knowledge of the special collections housed in the library so that they could suggest relevant special collections resources to their users.

(e) In addition to using social media such as Twitter for notifications, the library should explore using social media such as WhatsApp and Twitter to post subject specific information that covers all disciplines. An example of this would be to post a reference list related to a particular topic that refers users to the special collection resources such as manuscripts and artefacts. For example, the Kirby Collection of rare musical instruments could serve as a valuable resource to researchers studying the history of southern African music.

(f) Training in how to use the different features in social media would need to be developed and provided for both librarians and users. Training would need to focus on those features that promote the display of special collections resources such as the uploading of photographs and maps.

(g) The job descriptions of the librarians do not presently provide for social media activity, such as providing instant responses to queries posted on social media. Therefore a suggestion would be to revisit the job descriptions of librarians to include functions for social media activity.

5. 9 RECOMMENDATIONS FOR FUTURE STUDY

(a) This study focused on the user perspectives, further studies could use the issues that came out from the adapted model (Figure 2.3), also noted in section 5.6, to carry out surveys amongst:

(1) South African librarians hosting special collections, as well as (2) international libraries hosting special collections with regard to how social media are used for library services. Findings from further case studies can be compared and can lead to generalization.

(b) Research on using social media for ongoing investigations into user needs and user preferences in terms of subject focus, material to be included in special collections and users' preferences in using social media could also be very valuable.

(c) Studies that take a more practical slant as to how specific tools could be used in providing subject specific library services in a special collection context (for example, Flickr could be used to upload the Kirby Collection of rare musical instruments) would provide practical value to special collection institutions.

(d) The fact that items that were unique to the library such as artefacts are seldom used by the majority of the participants might imply a need for further studies to (1) repeat a much shorter poll with users, for example to determine the extent to which social media are used to discover special collection resources that are of a more archival type format such as artefacts and (2) to determine why books are still the most important resource.

(e) Affect and emotion in the use of social media for academic reasons with specific reference to the need for serious interaction as well as fun/enjoyment need to be investigated.

5. 10 CONCLUSION

The purpose of this study was to investigate how users of a special collection library of an academic institution seek information and how social media can play a role in service provision. This study has shown that social media does have a role to play in advancing library services into a dynamic, interactive and collaborative interaction between the library and its users. The participants are looking for engaging communication around subject specific information. There are many collections, for example the rare maps in the special collection library that could serve as valuable resources for disciplines such as History. Geology and Environmental Studies. The participants preferred features that provided for engagement and collaboration. The concerns noted in this study in sections 4.4.11 and 4.5.4 of Chapter 4 would need to be taken into consideration in providing library services using social media in a special collection context. However, the barriers related to infrastructure, discussed in 4.5.5 of Chapter 4 do not relate to the library. The barriers related to skills, would need to be addressed in providing library services using social media. This study has also provided insight into which library services are preferred by the participants on the different social media tools. The information gathered in this study enabled the researcher to make recommendations for future use on how social media can be applied in a special collection context with specific reference to making the special collections more visible and easier to find.

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APPENDIX 1: TABLE OF ANALYSIS FOR LITERATURE

This table is a brief summary of the literature; only relevant issues pertaining to this study have been included. Some of the studies noted here focused on the library perspective, in other words it focused on how the libraries are using social media, the challenges and motivations experienced by libraries in doing so. Other studies focused on the user perspective, in other words it focused on how the users are using social media, the challenges and motivations they experience in doing so. Under purpose it would be indicated whether the study focused on the library perspective or the user perspective.

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
Aharony (2012)	Descriptive analysis, content analysis	To explore use of the different sections of Facebook to determine patterns of use. Library perspective	Public and academic libraries mostly use Facebook to deliver information to users rather than as a venue for discussion. Information section of Facebook is used for basic information, eg contact details. Facebook wall is used for basic communication with other users. Photos section – 40% of academic libraries use Facebook to present photos to users. 30% of academic libraries provide links to databases, for example JSTOR on their profiles.	Facebook	The content uploaded on Facebook could be embarrassing, informal & not respectable. The tone of the communication is less formal and less professional. Librarians perceive the library as a place of learning and Facebook as a space for student networking. Privacy of information and	Wall posts are visible for everyone who visits the sites; hence, can be used as an effective marketing tool.

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
					lack of professional staff to maintain the site are also seen as challenges.	
Ayiah and Kumah (2011)	Descriptive surveys questionnaires	To investigate the possibility of having a social networking site linked to a university library's web page.	Findings indicated that students endorse the linking of social networking sites to the library's web pages. Social networking sites can be used to facilitate collaborations between the library and the university community. The users' main purposes of visiting the social networking sites was to connect with friends, to chat with friends as well as to visit pages of interest.	Facebook most preferred. Instant messaging is least preferred.	There is limited access to the internet.	By answering reference questions online using social media, the issue of limited space in libraries and the issue of having skilled staff to answer questions can be solved.
Baro, Ebiagbe and Godfrey (2013)	Comparative method Review of literature Questionnaires	To determine differences in the use of various social medial tools by librarians in university libraries in Nigeria and South Africa. To determine	Social media tools are used for video and image sharing and collaborating with colleagues, social tagging and bookmarking and uploaded training videos. These tools provide engagement with users. Facebook provides one way	Facebook	Lack of time, skills of users and librarians, facilities and power are listed as challenges.	Motivations are not discussed in this study.

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
		differences in the purposes for which the librarians use social media tools. To determine differences in the challenges the librarians in university libraries in Nigeria and South Africa face in using social media tools. Library perspective	interaction to deliver information and is not a discussion platform.			
Boateng and Liu (2014)	Website surveys content analysis – checklists Questionnaires	To examine the usage and trends of social media usage by academic libraries. Library perspective	Blogs were used to participate with the user community and to get feedback. Instant Messaging is used for quick online reference services. The findings reveal that the libraries are using social networking sites to upload photos, market library services, offer reference services, and share information about library resources.	Facebook & Twitter was most preferred. Wiki was least preferred.	The challenges of using social media tools are not discussed in this study.	Social media tools allows for the sharing of information ranging from personal to academic information. Instant Messaging is noted to provide real time connections with users as regards handling queries.
Chen, Chu	Mixed	To examine the	Four types of interactions were	Facebook,	The challenges of	Motivations are not

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
and Xu (2012)	methods approach Content analysis of social networking accounts and interviews.	interactions between the libraries and the users of libraries' Facebook, Twitter and Wiebo accounts. Library perspective	examined, namely, knowledge sharing, information dissemination, communication and knowledge gathering. Of the four types of interactions, knowledge sharing attracted the largest number of users on the social networking sites of libraries. Findings also showed that to avoid information overload and over exploitation of one tool, libraries' would have to consider the features of these tools, for example, Facebook should be considered as being more supportive in connecting communities and Twitter as being more of a news feed tool whereby users do not need to be friends, to better engage with their communities. Libraries would need to designate the different interactions to the different tools in terms of their features.	Twitter and Wiebo	using social media tools are not discussed in this study.	discussed in this study.
Dickson (2010)	The paper summarizes findings from articles	To examine the use of the major social networking tools in academic libraries	Social networking can be an effective method of student outreach in academic libraries if libraries take care to respect	Facebook and Myspace	Students may be resistant to befriending the library if their	It is possible to embed LibGuides and "Ask the Librarian" in

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
	published since 2006.	in the USA, especially outreach possibilities for distant users. Library perspective	student privacy and to provide equal coverage for all subject areas.		personal information is visible to university officials.	Facebook pages.
Din (2012)	Descriptive quantitative methodology was used. Data collection was done by using questionnaires.	This study sought to investigate the use of Facebook for information retrieval and its contributions towards academic performance. Users perspective	The findings show that Facebook does support information retrieval if students are aware of how to use Facebook for this purpose and that there is a relation between information retrieval and good academic performance. Users preferred online library services.	Facebook	The challenges of using social media tools are not discussed in this study.	The information retrieval process through Facebook can save time and cost for the users. Another benefit is to have subject specific discussions with experts in the field on Facebook as well as getting support from learners from other universities.
Franklin and Plum (2002)	User usage surveys	The study aimed to examine the usage patterns of users in the physical library space and users accessing the library remotely and went further to examine the	The results of this study showed that there seemed to be a greater dependence on online resources when compared to their physical counterparts.	This study investigated user behaviour and not social media.	The challenges of using social media tools are not discussed in this study.	Motivations are not discussed in this study.

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
		differences in purpose for accessing online library services between the users in the library space and the users accessing the services remotely. Users perspective				
Graham, *et al.* (2009)	Brief surveys	The main purpose of the study was to determine how and if other libraries were using Facebook to connect with their students. Library perspective	Although use of Facebook began for the expressed purpose of engaging with students, using this technology allowed professional relationships to develop as well. Universities have created applications for searching their library's catalogues directly from Facebook. Search modules for commercial databases such as JSTOR and WorldCat can also be added to profiles.	Facebook	Information on a social site such as Facebook presents a challenge in that the information posted to it can be deemed as informal and unprofessional.	As the librarians' friend lists began to expand so did their knowledge of colleagues across campuses. Common interests were discovered which helped build better professional relationships. Faculty and administrators who had once seemed distant were brought together in a way that may not have been possible through more

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
						traditional means.
Green (2012)	Exploratory study using personal experience augmented by extensive interviews with special collections professionals who use social media tools for work purposes.	To explore the variety of social media tools that are available and the advantages and disadvantages of exploiting them. To explore how special collections can promote their collections and its ensuing impact on staffing, resources and infrastructure. Library perspective	Twitter is used mainly for quick messages about new acquisitions. Facebook not as popular with special collections but are more popular with academic libraries which are developing applications to access library catalogues on Facebook. Blogs are used to engage with academics, and to highlight collections. Impact on infrastructure refers to the generation of statistics in terms of metrics that show impact. Blogs and Facebook pages that have photo and image intensive posts were popular; this impacts on equipment as one would need cameras or scanners. Staffing implications entail having dedicated staff to ensure continuous engagement.	Twitter, blogs, Facebook, Flickr	The challenges of using social media tools are not discussed in this study.	The messages on Twitter are widely visible as they are retweeted. Blogs are suitable for special collections type materials because they allow for photo uploads.
Gresham and Higgins (2012)	Methods used included a review of the relevant scholarly	The purpose of this paper was to examine the effects of social media on users' ability to	The social media technologies that are likely to improve browsability were identified. Results from the interviews showed that although social	RSS feeds, social bookmarking, collaborative filtering, user	Tagging is only considered beneficial if it is consistent. Unless the difference	Collaborative filtering has the potential to open up new connections between records.

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
	literature, content analysis and semi-structured interviews with purposive samples of staff responsible for online Catalogues and archives respectively.	browse online archive catalogues effectively.. User perspective	media may improve browsability for certain user groups, more fundamental improvements such as improved catalogue data were expected to be more effective. Interviewees did not see any clear benefits to social media implementation and had struggled to collect data on usage of some of the social media tools they used.	contributions, mashups, tagging/folks onomies were used.	between tags and bookmarking are clearly understood by the user, there can be no clear benefit in terms of its ability to provide access to resources. Official content needs to be separated from user generated content as user generated content can impose a bias on official content.	
Ivala and Gachago (2012)	In-depth interviews and focus groups	This study investigated the potential of Facebook and blogs in enhancing student engagement in an academic context. User perspective	Facebook and blogs if used appropriately does enhance learning in an academic context, onsite and remotely. Facebook groups and classroom blogs can serve as teaching tools that supplement face-to-face teaching and learning.	Facebook groups, blogs	The challenges included lack of access to internet, lack of staff time to update blogs, limited computer facilities, blurring of social & academic life, staff to keep abreast of	Motivations are not discussed in this study

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
					advancing technologies.	
Kyung-Sun, Sei-Ching and Yuqi, (2013)	Online surveys using online questionnaires	To examine what kind of of social media is used for what purpose, and to investigate what users do to evaluate the trustworthiness of the information provided by social media. User perspective	The study found that Wikipedia, social networking sites (eg Facebook) and online user reviews were among those frequently used for finding information, and that Wikipedia, YouTube, Q&A sites were used in both everyday-life and academic/course-related information seeking contexts. The study also revealed that strategies for evaluating the trustworthiness of information vary depending on sources.	Wikipedia, Facebook, YouTube	Social media provide information that is contributed by users whose authority or trustworthiness is often unknown, and difficult to evaluate.	Motivations are not discussed in this study
Linh (2008)	Quantitative study Content analysis - checklists Questionnaires	To determine the types of social media technologies applied in university libraries as well as their purposes and features. Library perspective	Blogs were used for news, advertising new resources, research and study tips, and to make suggestions for improvement. Podcasts were used for giving advice on library skills, guidance with resources and library orientation. Instant Messaging is used for chat functions for giving advice on library skills,	RSS is most preferred Instant Messaging is least preferred Other tools that were used included blogs and podcasts	Instant Messaging was the least used, even though it is a good technology for the library to implement virtual reference services. The reason is that such a technology requires librarians	RSS has been one of the most utilized technologies as it enables users to create a one-stop-shop of information. It is also simple and easy to use. Podcasts were used for visually disabled users

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
			guidance with resources and the library.		to be always online to support users. Therefore, some libraries possibly did not employ it because of a lack of library staff.	because of audio features.
Padilla-Meléndez and Rosa del Águila-Obra, (2013)	Mixed methods approach Literature review. Data collection included website content analysis, interviews with experts.	To present a theoretical framework for understanding the strategies that museums employ in use of the web and social media. Library perspective	Museums have created profiles on Twitter & Facebook. Most prominent examples of availability of content are found on Flickr and YouTube. Social media is used to promote products and services. The group of institutions that used minimal strategies to create value such as, producing websites to complement physical collections showed the lowest rankings whereas the group of institutions that go the extra mile in creating value online such as allowing users to create their own webpages of the institution using information that is relevant to them, had the highest rankings	Twitter, Facebook, YouTube & Flickr	The challenges of using social media tools are not discussed in this study.	Motivations are not discussed in this study

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
			and the biggest number of followers on Twitter, indicating value for the user.			
Palmer (2014)	Exploratory study, Content analysis of one university library – case study	To investigate the interaction of the library on Facebook and Twitter with a view to characterise the engagement of the library with these two social media tools. Library perspective	The categories of the Twitter user's engagement with libraries included accounts that are strongly linked to the library with daily tweets to/from the library and users. Those users that were weakly linked to the library had one or two tweets. The two forms of Facebook interaction with the library that emerged were those posts that reported multiple comments such as a competition, and posts that did not invite interactions such as a photo.	Only Facebook and Twitter were investigated.	The challenges of using social media tools are not discussed in this study.	The motivations of using social media tools are not discussed in this study.
Russo, Watkins and Groundwater-Smith (2009)	A survey of the literature was done using content analysis	The paper posits that social media can play a central role in informal learning in museums, libraries and galleries. It explores the way young people engage with	There is an effective innovative role that social media can play in creating authentic learning experiences in cultural heritage institutions based on social networking and informal knowledge sharing. Libraries and museums have a role to play in engaging their users in knowledge sharing	Not applicable	The provision of public participation and co-creation of knowledge in cultural heritage institutions can open debate for public criticism.	It encourages knowledge sharing. It provides a voice for the non-experts. It also facilitates the shift from knowledge transmission to engagement and participation.

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
		knowledge and learn in cultural institutions to become active participants. User perspective	around their collections.			
Samouelian (2009)	Exploratory study using content analysis of archival repository websites. Based on these findings interviews were conducted with staff who implemented these tools to determine reasons for implementation and challenges experienced.	To investigate the extent to which social media features have been integrated into archival digitisation projects. Library perspective	Of the 85 websites surveyed – 45% host social media features. Compatibility with the content management system would influence the type of tools used. Sharing and promoting content is the most common impetus for using social media. Feedback from users is not tracked and it is difficult to tell if they like or dislike the applications.	Not applicable	Requires staff time to keep applications current. There is a lack of consistency with descriptive standards. There is also a lack of control over content.	There is an increased promotion of collections, increased donations, increased staff skill sets, increased use of collections by users and increased management of digital objects.
Xu, Ouyang	Quantitative	To determine the	Blogs were used for providing	Instant	The challenges of	Blogs and RSS

Study	Methodology	Purpose	Findings	Most preferred tool	Challenges	Motivations
and Chu (2009)	study Content analysis	extent to which academic libraries in New York are using social media technologies. Library perspective	news and for tagging content. RSS were used to provide updates regarding subject specific content and news events.	Messaging	using social media tools are not discussed in this study.	keep history of conversations & synchronous communications.

APPENDIX 2: QUESTIONNAIRE

1. Please mark with an "X" the option that best describes you.

Faculty member	
Staff member other than faculty	
Doctoral student	
Masters student	
Honours student	
Undergraduate student	
Other (Please specify in space below)	

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2. Under what discipline does your work/research/studies fall?

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3. Why did you decide to come to the Special Collections Library (SCL) today to seek information? Please mark the appropriate option with an "X".

I know from past experience that the Library might have the information I need	
I found a record of the material I need in the library catalogue referring me to the Special Collections Library	
LibGuide/subject guide from the webpage of the Special Collections Library	
I was referred to the Special Collections Library	
Other (Please specify in space below) -- --	

4. Please indicate your use of the special collections materials by marking the appropriate option for each type of material with an "X".

Library materials	Never	Sometimes	Frequently	Very often
Artefacts				
Audio visual materials for example film				
Books				
Digital collections				
Manuscripts				
Maps				
Memorabilia				
Photographs				
Other (Please specify in space below) --				

5. Please indicate how important the following options are for you when searching for information for research and for academic purposes. Please respond to all search tools by marking the appropriate option with an "X".

Tools for searching for information	Will never use	Somewhat important	Important	Very important
Databases				
e-Books				
e-Journals				
Google Scholar				
LibGuides/subject guides				
Library catalogue				
UCT Scholar (Contains digital collections of SCL)				
Other (Please specify in space below) -- --				

6. Do you use social media for the following? Please mark the appropriate answer with an "X".

Personal purpose   Yes ☐   No ☐

Academic purpose (including research)   Yes ☐   No ☐

What type of social media do you use for the following?

(a) Personal purposes

(b) Academic purposes

----

7. Please rate the importance **for you in your personal and academic contexts to** have a social media account by marking the most appropriate option for each reason with an "X".

Reasons for having a social media account	Not important	Somewhat important	Important	Very important
To stay connected to people for personal reasons				
To keep in touch with colleagues, collaborators and other work related people				
To develop and nurture professional relationships and connections				
To communicate with librarians				
To keep up to date on news and events				
To find information on topics of interests				
To share and receive information, ideas, viewpoints and materials				
Other (Please specify in space below) --- --- --- --- --- ---				

8. How many hours per week do you estimate spending on using your social media accounts?

Purposes	Not using	< 1	2 – 5	6 – 10	11-15	16-20	> 20
Personal purposes							
Academic purposes							

9. Please rate the importance of the following social media features for your needs by marking the most appropriate option for each feature with an "X".

Social media features	Not important	Somewhat important	Important	Very important
Audio for example podcasting				
Audio-visual for example making or using videos				
Contributions (for example information, opinions) by other people				
Communicating (for example chatting)				
Networking				
Sharing information sources				
Keeping a history of communication				
Linking to library resources				
Reviews				
Recommendations				
Search functions				
Searching the library catalogue				
Synchronous (real time) interaction				
Other (Please specify in space below) --- --- --- ---				

10. Comments, reviews and recommendations can come from a variety of sources. Please rate how you value input from the following institutional sources, by marking the most appropriate option for each institutional source with an "X".

Institutional sources	Not valued	Somewhat valued	Valued	Highly valued
Academics				
A known scholar				
Colleagues				
Librarians and archivists				
Doctoral students				
Masters students				
Honours students				
Undergraduate students				
Other (Please specify in space below)				

Other (Please specify in space below)

----

11. Please rate the significance of the following concerns for you when using social media for academic reasons by marking the appropriate option with an "X".

Concerns about using social media in academic contexts	Not significant	Somewhat significant	Significant	Very significant
Contributions are open to public criticism				
Information on social media is not authoritative				
It is not useful as a discussion forum				
Lack of continuous updates				
Breech of privacy				
Non-coverage of some of my subject areas of interest				
Personal information is visible to all users, including subordinates and authorities				
Responses are not always timeously (i.e. immediately) given				
Social media is a space for social networking only				
Lack of distinction between official content (professionally generated content for example content by a librarian) and user generated content (content generated by users).				
Other concerns not mentioned above (Please specify in space below) -- --				

12. Please indicate the significance of the following barriers for you when using social media for academic reasons by marking the appropriate option for each barrier with an "X".

Barriers to your use of social media for academic purposes	Not significant	Somewhat significant	Significant	Very significant
Difficulty in keeping abreast of upgrades to social media technologies / software				
Lack of computers/mobile devices to access social media				
Lack of, or limited internet access				
Lack of training in using social media				
Other barriers not mentioned above (Please specify in space below) --- ---				

13. Please indicate which would be your preferred social media tools to access the library services by marking the appropriate options with an "X". You may mark more than one social media tool for each service.

    a) If there are other social media tools not mentioned in the table that you would like to use to access a specific service please indicate in the **column** marked "other".

    b) If there are services that you would like to access using social media that is not indicated in the table then please specify in the **row** marked "other".

    c) Please note that IM in the table below, refers to instant messaging (texting) and RSS refers to real simple syndication.

Library services	Blogs	Facebook	IM	Twitter	You Tube	Flickr	RSS	Other
Access to journal articles								
Access to LibGuides								
Guidance on using library resources for example information literacy training videos								
Library contact details								
Library hours								
New acquisitions								
Posting reference queries								
Discussions with librarians								
Discussions with other users								
Research and study tips								
Viewing								

Library services	Blogs	Facebook	IM	Twitter	You Tube	Flickr	RSS	Other
digital collections								

Other (Please specify in space below)

Thank you for participating in this study.

APPENDIX 3: LETTER OF INVITATION TO PARTICIPATE IN QUESTIONNAIRE

PROJECT TITLE: Information seeking behaviour of users of a special collection and the role of social media in provision of academic library services.

Good day. I am Lisa Kistain, a student at the University of Pretoria studying towards a M.IT (Masters of Information Technology) degree. I am conducting research in the form of a mini-dissertation as part of the fulfilment of a degree in the Department of Information Science, University of Pretoria.

The focus of my study is to determine the role that social media can play in providing library services – specifically in a special collection. My study aims to answer the following question:

Based on the information seeking behaviour of the users of a Special Collection Library, what role can social media play in the provision of information services to users?

- **Sub-questions to be answered from the empirical component:**

  - What is the information seeking behaviour of the users regarding social media?

  - What are the needs for library/information services that can be met by social media?

This questionnaire should take between 10-15 minutes to fill in.

Participants may contact the researcher or the supervisor, if there are any unethical practices that they want to report during data collection

My personal details are:

		Supervisor details are:
Name:	Lisa Kistain	Prof Ina Fourie
Email:	kistainl@gmail.com	ina.fourie@up.ac.za
Landline:	(021) 650-3633	(012) 420-5216
Cell:	082-336-9949	082-707-8062

I would greatly appreciate your participation and look forward to sharing the results of the study with you.

APPENDIX 4: INFORMED CONSENT TO PARTICIPATE IN QUESTIONNAIRE

PROJECT TITLE: Information seeking behaviour of users of a special collection and the role of social media in provision of academic library services.

This form must be signed by all research participants and will be kept on record by the researcher, Lisa Kistain. As a participant, you will also receive a copy of this form.

PROJECT TITLE:

Information seeking behaviour of users of a special collection and the role of social media in provision of academic library services.

- I --hereby voluntarily grant my permission for participation in the project as explained to me by Lisa Kistain.

- The nature, objective, possible safety and health implications have been explained to me and I understand them.

- I understand my right to choose whether to participate in the project and that the information furnished will be handled confidentially and presented anonymously. I am aware that the results of the investigation may be used for the purposes of publication.

- Please mark with an "X"

    - I agree to participate in the study   Yes ☐   No ☐

Signed: _____   Date: _____

Witness: _____   Date: _____

Researcher: _____   Date: _____

APPENDIX 5: INTERVIEW SCHEDULE

Interview schedule: Information seeking behaviour of users of a special collection and the role of social media in provision of academic library services.

My personal details are: Supervisor details are:

Name: Lisa Kistain   Professor Ina Fourie
Email: kistainl@gmail.com   ina.fourie@up.ac.za,
Landline: (021) 650-3633   (012) 420 5216
Cell: 082-336-9949   082-707-8062

Please note that for purposes of clarity, social media includes Facebook, Twitter, YouTube, Blogs, Real Simple Syndication (RSS), Flickr, Myspace, LinkedIn, Wikis, Bookmarking, , etc.

1. Do you use social media for library related issues?

    a. If so, what social media tools do you use?

    b. For what, do you use these social media tools?

2. Are there any other reasons for using social media that you think might be useful for the library to note?

3. As a user of the library, what would motivate you, to use library services provided on social media?

4. Do you have any concerns as regards using social media to provide library services?

    a. If so, what concerns do you have?

    b. How do you think the library can overcome these concerns?

5. Do you experience any barriers when using social media?

    a. If so, what barriers do you experience?

    b. What suggestion/s can you provide to overcome these barriers?

6. Would you be interested in using social media to discover information?

    a. If yes, what type of information would you like to discover on social media?

    b. If no, why not?

7. Do you have any suggestions on how the library can provide support in using social media to access information?

8. Do you have any suggestions on how the library can engage with and maintain user attention using social media?

9. What services would you like the library to offer on social media?

    a. Which tools would you recommend that the library use for these services?

Thank you for agreeing to this interview and contributing to the study.

APPENDIX 6: QUESTIONNAIRE FOR DEMOGRAPHIC DETAILS OF INTERVIEW PARTICIPANTS

PROJECT TITLE: Information seeking behaviour of users of a special collection and the role of social media in provision of academic library services.

My personal details are: Supervisor details are:
Name: Lisa Kistain   Professor Ina Fourie
Email: kistainl@gmail.com   ina.fourie@up.ac.za,
Landline: (021) 650-3633   (012) 420 5216
Cell: 082-336-9949   082-707-8062

14. Please mark with an X the alternative that best describes you.

- Faculty member   ☐

- Staff member   ☐

- Doctoral student   ☐

- Masters/graduate student   ☐

- Undergraduate student   ☐

- Visiting researcher   ☐

- Other (Please specify in space below)

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15. What discipline do you fall under?

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16. Are you currently using social media for

- Personal purposes   Yes ☐   No ☐

- Academic purposes   Yes ☐   No ☐

APPENDIX 7: LETTER OF INVITATION TO PARTICIPATE IN SEMI-STRUCTURED INTERVIEWS

PROJECT TITLE: Information seeking behaviour of users of a special collection and the role of social media in provision of academic library services.

Good day. I am Lisa Kistain, a student at the University of Pretoria studying towards a M.IT (Masters of Information Technology) degree. I am conducting research in the form of a mini-dissertation as part of the fulfilment of the degree in information technology in the Department of Information Science, University of Pretoria.

The focus of my study is to determine the role that social media can play in providing library services – specifically in a special collection. My study aims to answer the following questions:

Based on the information seeking behaviour of the users of a Special Collections Library, what role can social media play in the provision of information services to users?

- **Sub-questions to be answered from the empirical component:**

    o What are the information seeking behaviour of the users regarding social media?

    o What are the needs for library/information services that can be met by social media?

The interview should take between 15 – 20 minutes.

My personal details are:		Supervisor details are:
Name:	Lisa Kistain	Ina Fourie
Email:	kistainl@gmail.com	ina.fourie@up.ac.za,
Landline:	(021) 650-3633	(012) 420 5216
Cell:	082-336-9949	082-707-8062

I would greatly appreciate your participation and look forward to sharing the results of the study with you.

APPENDIX 8: INFORMED CONSENT FORM FOR THE INTERVIEWS

This form must be signed by all research participants and will be kept on record by the researcher, Lisa Kistain. As a participant, you will also receive a copy of this form.

PROJECT TITLE:

Information seeking behaviour of users of a special collection and the role of social media in provision of academic library services.

- I ---hereby voluntarily grant my permission for participation in the project as explained to me by Lisa Kistain.

- The nature, objective, possible safety and health implications have been explained to me and I understand them.

- I understand my right to choose not to participate in the project and the decision not to participate will not be held against me in any way. If I choose to participate, I have the right to withdraw from the interview at any time during the interview.

- I understand the information furnished will be handled confidentially and presented anonymously. I am aware that the results of the investigation may be used for the purposes of publication.

- I understand my right to choose whether to agree to this interview being recorded.

- Please mark with an "X"

  - I agree to participate in the study   Yes ☐   No ☐

  - I agree to this interview being recorded   Yes ☐   No ☐

Signed: _____   Date: _____

Witness: _____   Date: _____

Researcher: _____   Date: _____

APPENDIX 9: ETHICAL CLEARANCE – UNIVERSITY OF PRETORIA

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Enquiries	: Dr Marlene Holmner	**Faculty of Engineering, Built**
Tel. nr.	: +27 (0)12 420-5215	**Environment and Information**
Fax nr.	: +27 (0)12 362-5181	**Technology**
E-mail	: Marlene.holmner@up.ac.za	
Office	: IT 6-43	**School of Information Technology**

2015-07-28

ETHICAL CLEARANCE FOR LISA KISTAIN

Dissertation Title: Information seeking behaviour of users of a special collection and the role of social media in provision of academic library services.

To whom it may concern:

This is to confirm that the Research Committee of the Department of Information Science approved the application by Lisa Kistain for ethical clearance. Ms Kistain complied with the standard requirements for ethical clearance as set out by the University of Pretoria's Faculty of Engineering, Built Environment and Information Technology (EBIT), as follows:

- She signed and submitted all the application forms required for ethical clearance;
- She submitted her data collection instruments for vetting by both the Research and Ethics Committees; and
- She implemented all corrections recommended by the above-mentioned committees.

The Research Committee of the Department of Information Science therefore requests permission for Ms Kistain to collect the data she needs in order to complete and submit her mini-dissertation for examination. The Committee further appreciates any effort by appropriate authorities to expedite this process, and expresses its gratitude in anticipation.

Yours sincerely

Dr Marlene Holmner

Dr Marlene Holmner
Academic Coordinator: Carnegie MIT
Department of Information Science
E-mail: marlene.holmner@up.ac.za