

**THE EXPLORATION OF THE INFORMATION NEEDS OF STUDENTS USING THE  
UNISA EKURHULENI REGIONAL SERVICE CENTRE LIBRARY**

BY

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**DECLARATION**

I, Mokgethwa Damarice Pitseng, student number 33898197, declare that the thesis titled *The exploration of the information needs of students using the UNISA Ekurhuleni Regional Service Centre Library*, which is submitted to the University of South Africa for the Master of Arts (Information Science), has not been submitted before by me for any other degree at this or any other university. I further declare that this is my own original work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.



.....

Signature

18 November 2019

.....

Date

## DEDICATION

Above all things, let me first thank my Creator for the beautiful life He has bestowed upon me.

Ke fellelwa ke mafoko, mosa le Mogau wa gage di nkaparetse gare ga difefo le madimo geke be ke felelwa ke matla, ka lebelela koteng ya sefapano ka ikhomotsa ka gore Modimo ore.

“For I know the plans I have for you, plans to prosper and not to harm you, plans to give you hope and a future” (Jeremiah 29:11).

I see prosperity about my life. Amen!

This dissertation is dedicated to:

- My late parents, Ntombomzi and Maboyane Maphoto, who laid a good foundation in the early years of my life by giving me a proper education.
- My siblings: my only sister, Ramadimetsa, and my two brothers, Nkhupetseng and Malesela, for their encouragement and support throughout this journey.
- My children, Refentse, Mothekgi and Rethakgafaditswe, for always asking me this question: “Mama, when are you completing your Master’s?” It is done, my dear children. I hope this will be a motivation of perservance being the mother of success. May I become your role model.
- My husband, Mogwasha! Leso! Ben Madimetja Pitseng for believing in me and encouraging me to continue, even if there was no hope. Although there were times that he did not understand my frustrations, he would still lend an ear. I say, this is for us, for our future.
- My friends and colleagues: I would not have made it this far without you. Your encouragement and faith kept me going.

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- My employer, UNISA, for funding my studies.

## **ABSTRACT**

The objective of this study was to explore the information needs of students using the UNISA Ekurhuleni Regional Service Centre Library by employing a qualitative method of inquiry. A total number of thirty two students were selected as respondents by means of purposive sampling. The one-on-one interview was used as the data collection instrument and the collected data was analysed by means of descriptive analysis.

The findings indicate that students' information needs are influenced by several factors, such as their academic activities, e.g. writing assignments, preparing for the examination, personal development and reading for leisure. The findings also indicate that students are not fully satisfied with the information resources and services that are offered at the UNISA Ekurhuleni Regional Service Centre Library, because of the challenges prohibiting them from utilizing the resources and services. These challenges include inadequate library skills, inadequate information resources, noise in the library and the distance to travel to the library.

It is recommended that the infrastructure of the library, as well as the library collection and human resources be improved. The study also suggest that library training skills should be facilitated and that the awareness of information resources and services should be intensified.

**Key terms:** Information needs; user needs; information seeking; information use; information resources; information services; academic library

## **SENAGANWA**

Maikemišetšo a thuto ye ke go utulla dinyakwa tša tshedimošo tša baithuti re šomiša Lefelo la Ditirelo tša Bokgobapuku bja Selete sa Ekurhuleni sa ka go šomiša mokgwa wa go nyaka tshedimošo wa qualitative. Palomoka ya baithuti ba 32 e kgethilwe bjalo ka baarabi ba loketšego go dira seo le sešupo ka go se kgethe. Poledišano ya batho ba babedi e šomišitšwe bjalo ka sedirišwa sa go kgoboketša datha mme datha yeo e kgobokeditšwego e ahlahlilwe ka kahlaahlo ya go hlalosa.

Diphihlelelo di laetša go re dinyakwa tša baithuti tša tshedimošo di huetšwa ke dintlha tše mmalwa, go akaretšwa le ditiro tša bona tša thuto ya godimo (mohl. go ngwala asaenemente le go beakanyetša moleko), tlhabollo ya bowena le go balela lethabo. Diphihlelelo le tšona di laetša go re baithuti ga se ba kgotsofale go felela ka ga methopo ya tshedimošo le ditirelo tšeo di abjago mo Lefelo la Ditirelo tša Bokgobapuku bja Selete sa Ekurhuleni sa UNISA, ka gobane go na le mathata ao a mo šitišago go šomiša methopo le ditirelo. Mathata a a akaretša bokgoni bjo bo sa lekanago bja bokgobapuku, lešata ka gare ga bokgobapuku le bokgole bjo ba swanetšego go bo sepela go ya bokgobapuku.

Go digetšwe gore lenaneokgoparara la bokgobapuku, gotee le kgoboketšo le methopo ya bašomi, e kaonafatšwe. Thuto ye e ra gore bokgoni bja tlhahlo ya bokgobapuku bo swanetše bo sepedišwe, le gore temošo ka ga methopo ya tshedimošo le ditirelo di swanetše go matlafatšwa.

**Mareo a Motheo:** Dinyakwa tša tshedimošo, dinyakwa tša badiriši; go nyaka tshedimošo; tšhomišo ya tshedimošo; methopo ya tshedimošo; ditirelo tshedimošo; bokgobapuku bja thuto ya godimo.

Abstract : isiXhosa Version

## **ISISHWANKATHELO**

Injongo yesi sifundo kukuphanda ngezidingo zolwazi zabafundi abasebenzisa ithala leencwadi lesithili sasEkuhuleni, elaziwa ngokuba yiUNISA *Ekuhuleni Regional Service Centre Library*. Oku kwenziwe ngokusebenzisa indlela yophando lomgangatho. Kwakhethwa gabalala abafundi abangama-32 ababeza kuphendula imibuzo, bengakhethwa ngeempawu ezithile. Kwenziwe udliwano ndlebe lomntu ngamnye kuqokelelwa iinkcukacha zolwazi nezithe zahlalutywa ngohlobo lokucacisa okuhlalutywayo.

Okufunyanisiweyo kubonise ukuba izidingo zolwazi zabafundi zichatshazelwa yimiba eliqela, equka nemisebenzi yezifundo (umz. ukubhala iiasayinmenti nokulungiselela iimviwo), ukuziqhubela phambili nokufundela ulonwabo. Kuphinde kwafunyaniswa ukuba abafundi abanelisekanga ngokupheleleyo yimithombo neenkonziso ezinikwa leli thala leencwadi, ngoba kusekho imingeni enqanda ukuba bangakwazi ukuzisebenzisa ezi nkonziso nemithombo yolwazi. Le mingeni iquka izakhono eziqhwalelayo zamathala eencwadi, imithombo yolwazi esilelayo, ingxolo kwithala leencwadi kwanemigama ehanjwa ngabafundi ukuya kwithala leencwadi.

Kucetyiswa ukuba kuphuculwe izibonelelo zethala eli, ingqokelela yemithombo yolwazi kwanoncedo oluvela kubantu abasebenzayo. Esi sifundo sikwacebisa ukuba kuququzelelwe uqeqesho kwizakhono zamathala eencwadi, kuqiniseke ukuthathela ingqalelo imithombo yolwazi neyeenkonziso.

**Amagama aphambili:** Izidingo zolwazi; izidingo zabasebenzisi; ukufuna ulwazi; ukusebenzisa ulwazi; imithombo yolwazi; ithala leencwadi lezemfundo

# Table of Contents

DECLARATION .....	i
DEDICATION.....	ii
ACKNOWLEDGEMENTS .....	iii
ABSTRACT.....	iv
SENAGANWA .....	v
ISISHWANKATHELO .....	vi
LIST OF TABLES.....	xii
LIST OF FIGURES .....	xiii
LIST OF ABBREVIATIONS AND ACRONYMS.....	xiv
<b>CHAPTER 1: GENERAL INTRODUCTION.....</b>	<b>1</b>
1.1 Introduction.....	1
1.2 Background .....	2
1.2.1 Library collection.....	4
1.2.2 Number of available seats vs Library seating .....	4
1.2.3 Lending service and access to electronic information .....	5
1.2.4 Information services.....	5
1.2.5 Computers .....	6
<b>1.3 Problem statement .....</b>	<b>7</b>
1.4 Research objectives and questions .....	7
1.4.1 Research objectives.....	7
1.4.2 Research questions .....	8
1.5 Key concepts .....	8
1.5.1 Information need.....	8
1.5.2 Information seeking.....	8
1.5.3 Information resources .....	8
1.5.4. Information service.....	8
1.5.5 User needs .....	9
1.5.6 Academic library .....	9
1.5.7 Information use .....	9
1.6 Literature review .....	9



1.7	Importance of the study .....	10
1.8	Research methodology.....	10
1.9	Ethical considerations.....	11
1.10	Structure of the dissertation.....	11
1.11	Conclusion.....	12
CHAPTER 2: STUDENTS' INFORMATION NEEDS, SEEKING AND USE .....		13
2.1	Introduction.....	13
2.2	Background .....	14
2.3	Information needs of students .....	15
2.3.1	Levels of information needs .....	16
2.3.2	Factors affecting information needs .....	19
2.4	Students' information seeking.....	27
2.4.1	Tasks.....	28
2.4.2	Time .....	31
2.4.3	Personal factors.....	32
2.4.4	Reflection.....	35
2.5	Information searching .....	35
2.6	Information use.....	37
2.7	Library-related factors affecting information needs, seeking and use .....	38
2.7.1	Library facilities .....	38
2.7.2	Information services.....	41
2.8	User satisfaction .....	44
2.9	Conclusion.....	45
CHAPTER 3: RESEARCH METHODOLOGY .....		47
3.1	Introduction.....	47
3.2	Research paradigm .....	48
3.2.1	Positivism .....	50
3.2.2	Post-positivism.....	50
3.2.3	Interpretivism .....	51
3.3	Qualitative research.....	53
3.3.1	Natural settings.....	53

3.3.2	Researcher as the main instrument .....	54
3.3.3	Nature of qualitative data .....	55
3.3.4	Reflexivity .....	55
3.4	Research design.....	55
3.5.	Data collection procedure and methods .....	56
3.5.1	Access.....	56
3.5.2.	Consent .....	56
3.5.3	Population and sampling.....	57
3.5.4	Interviews .....	60
3.5.5	Pre-testing the research instrument .....	63
3.5.6	Administering the interview .....	63
3.6	Reliability and validity .....	65
3.6.1	Reliability .....	65
3.6.2	Validity.....	66
3.7	Trustworthiness, credibility and generalisation .....	66
3.7.1	Trustworthiness.....	66
3.7.2	Credibility .....	66
3.7.3	Generalisation.....	67
3.8	Data analysis .....	67
3.8.1	Transcribing.....	67
3.8.2	Coding.....	68
3.8.3	Searching for themes.....	68
3.8.4	Defining and naming themes .....	69
3.9	Conclusion.....	69
CHAPTER 4: EKURHULENI RSC LIBRARY USERS' INFORMATION NEEDS .....		70
4.1	Introduction.....	70
4.2.	Information needs.....	70
4.2.1	Reasons for visiting the library .....	71
4.2.2	Information needs prompting library visits .....	73
4.2.3	Finding information in the library .....	75
4.3	Information services and resources .....	77
4.3.1	Types of information resources used .....	78

4.3.2	Familiarity with library services.....	81
4.3.3	Knowledge of available information resources .....	84
4.3.4	Library support.....	86
4.4	Satisfaction of library users.....	88
4.4.1	Information resources .....	88
4.4.2	Library services.....	91
4.5	Challenges of usage .....	94
4.5.1	Infrastructure.....	94
4.5.2	Library rules and procedures .....	95
4.5.3	Security.....	96
4.6	Participants' suggestions to improve the UNISA Ekurhuleni RSC Library services	97
4.7	Summary of findings.....	98
4.8.	Conclusion.....	99
CHAPTER 5: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS.....		100
5.1	Introduction.....	100
5.2	Conclusion to the research questions.....	100
5.2.1	Information needs of students visiting Ekurhuleni RSC Library .....	100
5.2.2	Student awareness of information resources and services offered at the Ekurhuleni RSC Library.....	102
5.2.3	Student satisfaction with information resources and services at the Ekurhuleni RSC Library .....	103
5.2.4	Factors prohibiting students from using the Ekurhuleni RSC Library .....	105
5.2.5	Information needs of students using the Ekurhuleni RSC Library.....	106
5.3	Limitations of the study .....	107
5.4	Recommendations.....	107
5.4.1	Improved library infrastructure .....	108
5.4.2	Improved library collection .....	110
5.4.3	Increased human resources.....	110
5.4.4	Improved library skills training.....	110
5.4.5	Increased awareness of information resources and library services.....	110
5.4.6	Marketing of the information resources and library services.....	111

5.4.7 Distance to come to the library .....	111
5.5. Future research .....	111
5.6 Value of the study .....	112
5.7 Summary and final comments .....	112
REFERENCES .....	113
APPENDICES .....	138
Appendix A: Ethical clearance.....	138
Appendix B: Interview schedule .....	140
Appendix C: Informed consent .....	143

## LIST OF TABLES

<b>Table</b>		<b>Page</b>
Table 1.1:	Library collection	3
Table 1.2:	Available seats vs library seating	4
Table 1.3:	Access to electronic information and lending services	4
Table 1.4:	Information services	5
Table 1.5	Computers	6
Table 3.1:	Colleges represented in UNISA Ekurhuleni RSC Library	58

## LIST OF FIGURES

<b>Figure</b>	<b>Page</b>
Figure 1.1: Ekurhuleni RSC Library statistics, 2014–2017	3

## LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ALA	American Library Association
CD	Compact Disc
DTFL	Department of Tuition and Facilitation of Learning
HIV	Human Immunodeficiency Virus
ICT	Information Communication Technology
JOLIS	Journal of Library and Information Science
OER	Open Educational Resources
OPAC	Online Public Access Catalogue
RFID	Radio Frequency Identification Device
RSC	Regional Service Centre
UIR	UNISA Institutional Repository
UNISA	University of South Africa
VUT	Vaal University of Technology

# CHAPTER 1: GENERAL INTRODUCTION

## 1.1 Introduction

In order for academic libraries to render an effective service to their clients, it is necessary to know who its users are and what their information needs are. According to Bassey (2006:21), library users' information needs may be related to their educational activities, as well as a need for infrastructure, such as computers, and access to the Internet. This would allow them to access the library catalogue and information resources such as databases and online resources. Students' academic needs could also include the necessary space to study, assistance from library staff, and Wi-Fi connectivity. In addition to their academic needs, they may also have recreational needs, cultural activities and personal development needs that would motivate them to use the library.

Each student registering at the University of South Africa (UNISA) seems to have different expectations of the library services and facilities available to them. The UNISA Ekurhuleni Regional Service Centre (RSC) Library serves a number of different client segments with different service requirements, who choose to visit the library in person.

It has been noticed by the researcher, who is a librarian at UNISA Ekurhuleni RSC Library that the availability of resources does not guarantee student satisfaction and use, as students visiting the library are not taking full advantage of the available resources in the library. It is clear that they do not use it for the reasons they have been established, – i.e. to facilitate their learning experiences and success by providing academic support services. They are rather accessing the Internet to download music and movies and to access Facebook.

Therefore, the purpose of the study is to investigate UNISA students' information needs, particularly the needs of students who use the Ekurhuleni RSC Library.



## 1.2 Background

The University of South Africa (UNISA) is one of the foremost open distance learning universities in the world. In order to serve its diverse and geographically distributed students, UNISA has regional offices in Limpopo, Gauteng, Kwazulu Natal, Eastern Cape, Western Cape, Mpumalanga and the Midlands, as well as an office in Ethiopia. Due to the large geographical distance in provinces, UNISA has established regional service centres (RSCs), which are managed by hubs (Mashile 2012). Regional service centres are an integral element of UNISA's overall structure and were established, in order for students to be effective and independent learners.

The Ekurhuleni RSC Library is one such service centre. In February 2015, the total number of students registered at the Ekurhuleni Regional Service Centre was 25525 (Department of Tuition and Facilitation of Learning 2015).

As observed by Mashile (2012), library services at the regional service centres are regarded as primary support services, whereby students are provided with access to library resources that facilitate their study and production of knowledge. Mashile (2012) also notes that library items can be issued at and returned to the regional centres; students can conduct information searches; download online resources; attend information literacy instructions; and photocopy and print documents.

The Ekurhuleni RSC Library opened its doors on 2 June 2011. The menu of services in the library include the following: lending services, general and library related queries, customer training (one-on-one and group training), access to electronic information, search service and a browsing service. It had a collection of 8576 sources, which continues to grow and, in 2017, the collection included 9687 information resources. According to Kekana (2014), UNISA Ekurhuleni RSC Library serves academic staff, undergraduate students, Master's and doctoral students, staff from other academic institutions and temporary patrons. The availability of new formats of information that is available has brought changes in the way that clients use the library.

Currently, the Ekurhuleni RSC Library has an excellent collection of books. It also has computers with Internet connections, which can be used to search the library's Online Catalogue (OPAC), full text databases, LibGuides and UNISA Institutional Repository (UIR). Students, who use the library on a daily basis, have the opportunity to meet face-to-face with library staff, who can assist them in retrieving information that is relevant to their information needs. These staff members offer advice on recommended reading lists and they conduct in-depth literature searches to identify journal articles and books on selected topics. Should the required information not be available in the library, requests for interlibrary loans or sources from the main library can be done online.

UNISA Library regional report gives an overview of the services and resources available in the UNISA Ekurhuleni Regional Service Centre Library. Figure 1.1 and Tables 1.1 and 1.2 indicate the statistical usage of library resources and services in Ekurhuleni RSC Library. It also indicates the total number of equipment of the library.

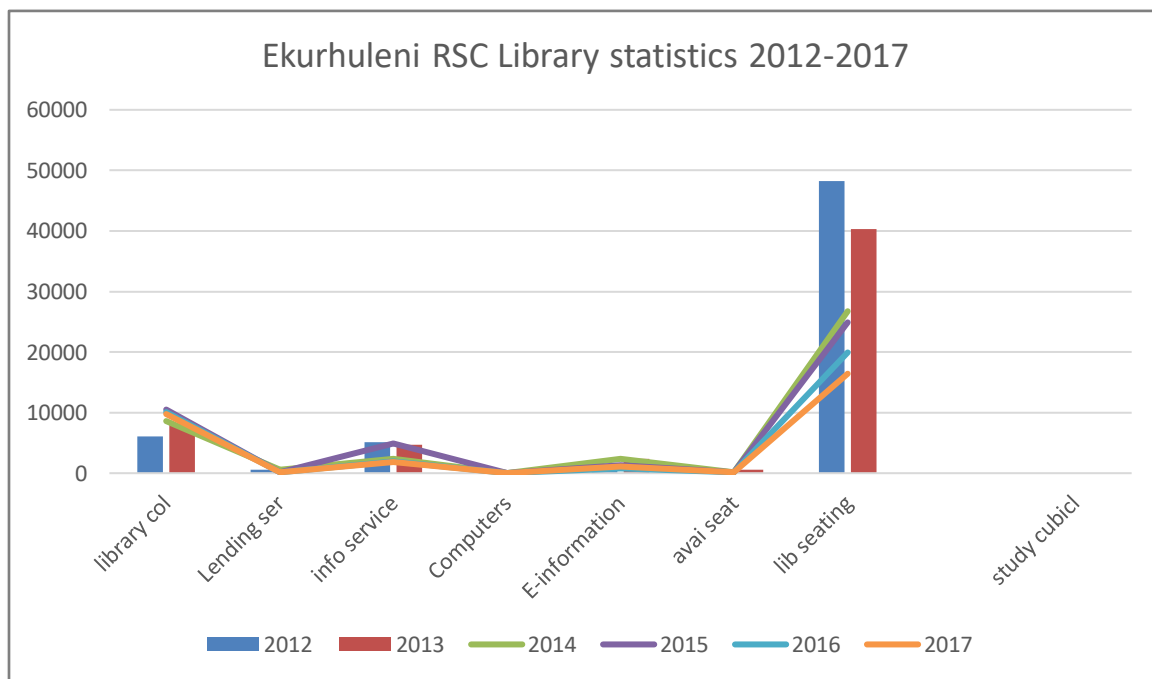


Figure 1.1: Ekurhuleni RSC Library statistics

### 1.2.1 Library collection

Table 1.1 provides statistics on the development of the library collection between 2012 and 2017.

*Table 1.1: Library collection*

<b>Year</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Library collection	6055	8079	8576	10548	10124	9767

Table 1.1 indicates that, although the usage of the library and the collection has increased since 2012, it is not as good as it could be and in, 2017, the collection has dropped to 9767 sources. This was due to the weeding of non-used or little used sources. As observed in the Introduction, it seems as if the library facilities are used for different purposes than it what they were intended to. The number of people visiting the library from 2012 to 2017 has dropped almost by a half. In 2012, the total number of books available in the library was 6055, which increased to 10548 in December 2015. In 2017, it dropped in 2017 to 9767, due to weeding of books.

### 1.2.2 Number of available seats vs Library seating

The number of seats that are available in the Ekurhuleni RSC Library and the seating of library users are reflected in Table 1.2.

*Table 1.2: Available seats vs library seating*

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Number of available seats</b>	554	554	168	168	168	168
<b>Library seating</b>	48274	40290	26741	24900	19935	16423

As shown in Table 1.2, the number of available seats in the Ekurhuleni RSC Library were reduced from 554 seats to 168 seats in 2014. This was due to the collaboration agreement between the Vaal University of Technology and UNISA, which took effect from December 2013. Furthermore, the 12 study carrels that used to be available in the Ekurhuleni RSC Library were all allocated to the VUT, as the two institutions are expected to share space

and the study carrels happened to fall in the VUT library space. The number of seats also contribute to the total number of people seating (i.e. sitting) in the library to conduct their activities. In 2011, 48274 students used the library, the number dropped by almost half in 2015 and in, 2017, it was down to 16243.

### 1.2.3 Lending service and access to electronic information

The use of the lending services and library users' access to the electronic resources are reflected in Table 1.3.

*Table 1.3: Access to electronic information and lending services*

	2012	2013	2014	2015	2016	2017
<b>Access to electronic information</b>	628	2359	2348	1279	774	1078
<b>Lending services (Issue, return and renewals)</b>	12579	21698	23632	25691	24199	23097

The lending service and access to electronic information also increased since 2012, which means that students are comfortable in lending library materials and they are accessing electronic information.

### 1.2.4 Information services

Table 1.4 reflects the use of the information services rendered at the Ekurhuleni RSC Library.

*Table 1.4: Information services*

	2012	2013	2014	2015	2016	2017
<b>Information services</b>	5158	4726	2380	4939	1949	1863

The statistics for information services provided in Table 1.4 includes the use of the library staff and search service. In 2012, the information service started on a high note of 5158

and, as the years went by, dropped, There was an improvement in 2015. However, the use of these services dropped drastically from 2017 to 1863.

### 1.2.5 Computers

The Ekurhuleni RSC Library has a number of computers available, which can be used by the library users to the library catalogue and other electronic resources to which the library provides access. Table 1.5 reflects the number of computers that have been available in the library for the period 2012–2017.

*Table 1.5: Computers*

	2012	2013	2014	2015	2016	2017
<b>Total number of computers</b>	7	21	21	21	21	21

As shown in Table 1.5, the total number of Online Public Access Catalogue (OPAC) computers that were available in the library in 2012 was seven. In 2013, 14 more computers were added to make 21. The seven computers are still used to search the OPAC and the additional 14 computers are used for other activities, such as browsing the Internet, and work and group charts. Although the number of computers increased, their use is not satisfactorily, all of which is a point of concern.

The issues of concern that can be deduced from this background can be summarised as follows:

- Librarians are concerned about students not using the Ekurhuleni Regional Service Centre Library as much as could be expected. These concerns are based on the number of students who register at the Ekurhuleni Regional Service Centre as compared to, the total number of students using the library.
- There seems to be a possibility of the Ekurhuleni Regional Service Centre Library not adequately providing in the students' needs.
- It also seems possible that students are not aware of the information resources and services available at the Ekurhuleni Regional Service Centre Library.

### **1.3 Problem statement**

From the background information above, the Unisa Ekurhuleni RSC library 's collection has grown over the years but the statistics for usage, the information resources and services were not used to the full maximum. The library also offers information literacy classes which are either in groups or one on one, which help students to be self sufficient. The information literacy classes are advertised on the Unisa library webpage, Unisa Gauteng regional facebook account and on the notice boards around the Unisa's Ekurhuleni RSC. The efforts of advertising information literacy classes are not serving its purpose because only few students make it to the classes.

It was also noted that students who frequent the library are there to access WiFi and uses internet for non academic related activities such as watching soapies, social media and downloading music.

It therefore became evident that the services and available resources seems not to serve a purpose because they are not used as it was expected. It became a major concern that students have different information needs which were obviously not catered for by the library. It is against this backdrop that the study explore the information needs of students using the UNISA Ekurhuleni Regional Service Centre Library.

### **1.4 Research objectives and questions**

#### **1.4.1 Research objectives**

The objectives of the study are to:

- Investigate the information needs of students using the UNISA Ekurhuleni RSC Library;
- Investigate students's awareness of the resources and services available;
- Evaluate the use of available service and resources;
- Establish students' level of satisfaction in using the library; and
- Investigate the factors hindering the use of available resources at the Ekurhuleni RSC Library.

## **1.4.2 Research questions**

In the context of the research objectives, the following research questions are identified:

- What are the information needs of the students visiting Ekurhuleni RSC Library?
- Are the students visiting the Ekurhuleni RSC Library aware of the services that are offered by the library?
- Are students satisfied with the services rendered by the Ekurhuleni RSC Library?
- Which factors prohibit the students from using the Ekurhuleni RSC Library?

## **1.5 Key concepts**

### **1.5.1 Information need**

In the *ALA glossary of Library and Information Science* (American Library Association 2013:135), *information need* is defined as the particular information needed by a user in a particular instance. It is regarded as a recognised gap between what one knows and what one wants to know, associated with the desire to seek answers, in order to reduce uncertainty or to make sense.

### **1.5.2 Information seeking**

Wilson (2000:49) defines *information seeking* as “purposive seeking for information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual information systems (such as newspapers or a library), or with computer-based systems such as world wide web)” retrieving, recognition and application of information in a meaningful context”.

### **1.5.3 Information resources**

Information resources are a collection of materials and equipment that is available in the library for its target group (American Library Association 2013:153).

### **1.5.4. Information service**

Information services are direct services that librarians use to supply users with information and indirect services created by librarians through which users can independently use to

find the information they need (Katz 2012:10). Indirect services are behind the scene services, which include cataloguing and acquisitions, and direct services include, lending, reference, search services interlibrary loans, research support and library training (Katz 2012).

#### **1.5.5 User needs**

As referred to by Aino (2004), user needs are information needs that enable individuals to resolve uncertainties or problems or that will help them to make sound decisions. In turn, Case and Given (2016:371) define *user need* as “a hypothesized state brought about when an individual realizes that they are not comfortable with their current state of knowledge”.

#### **1.5.6 Academic library**

An academic library is a library forming an integral part of a college, university or other academic institution for post-secondary education. It is organised and administered to meet the information needs of students, academics and affiliated staff of the institution (American Library Association 2013:4).

#### **1.5.7 Information use**

Information use involves the manner in which people handle information when collecting, searching, accessing and communicating information (Meyer 2003:109).

### **1.6 Literature review**

The literature review, which looks into the factors that influence students' information needs, seeking and use, is presented in Chapter 2. The literature review also explores the library factors that affect information needs, seeking and use. Lastly, it investigates the user's satisfaction. The information resources consulted in the literature review was obtained by means of databases such as EBSCOhost, Sabinet, Google Scholar, ERIC, UNISA Institutional Repository and Science Direct.



## **1.7 Importance of the study**

The study should benefit the UNISA regional libraries, as they will be able to identify information needs of their students, which will make it easier to serve them effectively and to determine the relevance of services and resources in relation to the information needs. It will also assist library managers to determine the most effective methods for continuous improvement, awareness and effective use of available services and resources, which will improve the library operation in general. Without regular evaluation of library services and resources, the required service/s may not be identified.

The last study focusing on UNISA students' information needs was conducted in 2009 by Ramasodi. The focus of her study was the information needs of all UNISA students using the UNISA main library in Pretoria: it did not address the needs of those students using regional service centres. No other studies focusing on UNISA students' information needs have since been conducted. Therefore, this study is highly significant, in that it explores the current needs of students using a UNISA regional service centre library.

## **1.8 Research methodology**

This study adopted a qualitative research approach, in order to acquire an understanding of the information needs of students using UNISA Ekurhuleni RSC Library. This decision was based on the fact that a qualitative approach focuses on understanding a phenomenon from a closer perspective (Creswell 2014:5). Furthermore, the study is a phenomenological study. According to Pickard (2009:52) phenomenological studies are concerned with an understanding of the phenomenon under study, as it is experienced by individuals.

By employing a qualitative research approach and a phenomenological research design, the researcher was able to ascertain why the available library resources in the Ekurhuleni RSC Library are not utilised effectively. Thirty two participants, who were selected by means of convenience and random sampling, were interviewed. One-on-one interviews were used as instruments for data collection and descriptive analysis.

## **1.9 Ethical considerations**

Regardless of the research approach, there are always ethical issues that need to be considered in the research process, because there may be risks involved. The researcher has to ensure that the well-being of participants is protected at all times – i.e. the researcher has to be accountable for all his/her actions throughout the research process. In alignment with the *Policy on Research Ethics (2007:9–17)* of UNISA, the researcher obtained ethical clearance (Appendix A) and also adhered to the following guidelines:

- Privacy, confidentiality and anonymity of research participants;
- Basic principles promoting moral principles on ethics, which are autonomy, beneficence, non-maleficence and justice;
- Individual consent forms; and
- Relationship between the researcher and the participant.

The researcher conducted the research from the understanding that reporting false information and not acknowledging sources consulted is unethical.

## **1.10 Structure of the dissertation**

### **Chapter 1**

This chapter discusses the introduction to and background of the study. The chapter introduces the study and provides a broad overview of the study.

### **Chapter 2**

In order to acquire an understanding of the information needs of students using the UNISA Ekurhuleni RSC Library, various relevant information resources were consulted to conduct a review of the literature. The reviewed literature concentrated on information needs, information seeking and information use. Various gaps are identified that may be explored in future research and a follow-up is made on previous literature.

### **Chapter 3**

This chapter discusses the research approach employed in the study, the research design, target population, sampling, data collection technique, as well as the reliability and validity of the instrument. The rationale for using the selected data collection and analysis methods is also outlined.

### **Chapter 4**

Chapter 4 presents, interpret and analyse the collected data.

### **Chapter 5**

As the last chapter, Chapter 5 is a reflection of the research findings. Apart from the final conclusions, it also presents recommendations for future research.

## **1.11 Conclusion**

This chapter provided a general introduction to the study. It also outlined the research focus areas, research objectives and research questions on which the investigation was based.

## **CHAPTER 2: STUDENTS' INFORMATION NEEDS, SEEKING AND USE**

### **2.1 Introduction**

Information needs do not arise or exist in a vacuum: they are consistent, persistent by-products of life (Dorner, Gorman & Calvert 2015:39). Furthermore, information needs are the motivating factors behind users' information seeking activities, which are focused on acquiring access to relevant information that would ensure task completion (Savolainen 2012:19). This view is supported by Naumer and Fisher (2009:2452), who describe information needs as a starting point and motivation that bring the user to engage in the process of information seeking and information use. Information needs vary according to the context, the user's function (or task), subject discipline and the age of the individual user (Kumar 2008).

When considering Savolainen's (2009:30) definition of context as being a "kind of time space container where phenomena reside and activities take place", an information need context would include certain elements, such as the tasks, time frames and subject disciplines. Examples of the context of information needs, as identified by Dorner, Gorman and Calvert (2015:39), include the user's work environment or the communities in which they live. Furthermore, the context in which information needs arise determine the information that is needed and from where it is sourced. As Singh, Kumar and Khanchandani (2015:25) explain, different functions, environments, disciplines and preferred information sources determine the type of information needed.

The purpose of this chapter is to foster an in-depth understanding of the concepts of information needs, information seeking, information resources and information services, all of which have been defined in Chapter 1. These concepts will be examined in general terms and their relation to one another will be explored. The discussion will also focus on important background and definitions on information needs, seeking and use. Thereafter, the services rendered by an academic library will be explored, insofar as these focus on satisfying users' needs. This exploration will endeavour to establish students' awareness

of library services to identify the elements that prohibit them from using the library to satisfy their academic and/or information needs.

## **2.2 Background**

Universities are diverse; they have unique educational goals and the qualifications they offer may differ. Therefore, the services that are rendered at university libraries should be focused on providing an information service and information access to information resources that are relevant to the research that is conducted and the courses that are being taught at the individual university (Maisango 2012:5). Therefore, the educational goals of each institution set unique requirements for the information that is needed and the way/s in which the registered students use the information. For example, students registered at the University of South Africa (UNISA) are enrolled at a distance learning institution and their information needs may be different from those of students who are enrolled at a residential university. This may be because distance education students receive their study material in printed or online format, whereas students at residential institutions attend lectures (Nwachukwu, Abdulsalam & Salami 2014:2).

Ramasodi (2009:34) asserts that distance learners do not have to be physically present on campus; they can use various technological methods to contact their lecturers or librarians. Barron (2002:21) states that the distance learning students have the same information needs than residence students, except that the mode of information delivery and requests for information may be different.

In order to support their users, information service providers, such as libraries, need to understand their users and the contexts of their information needs. This view is endorsed by Das (2014:130), who stresses the importance of understanding the users, who come to the library to borrow materials relevant to their studies and personal situations. As Das (2014) explains, the users' personal situations may also have an effect on their individual needs, which may be relevant to their information requests.

## 2.3 Information needs of students

The concept of information need, as defined by Case and Given (2016:371) is a “hypothesised state brought about when an individual realises that they are not comfortable within their current state of knowledge”. Herman and Nicholas (2010:248) refer to information needs as information mal-nutrients: a condition felt when an individual lacks the information that is required for decision-making. This view is supported by Kuhlthau (2004:16), who regards information needs as unexpressed needs for information. In this way, information needs arise when an individual notices that the current state of knowledge is insufficient to carry out a task or solve a problem (Chowdhury & Chowdhury 2011:26).

In turn, O’reilly, Wang and Sabatini (2019:2) also explain an information need as a certain incompleteness in the current knowledge of the user, or gaps of what the user sees around the world. This means that, when the user reads something familiar and the author cites something completely new with which the user cannot relate or identify, then the user realises there is a gap or a lack of knowledge in that particular area (Abdulraheem & Omopupa 2016:5).

Information needs are not basic human needs (Wilson 2000:51). According to Behera and Satpathy (2014:209) and Devi and Dlamini (2009:3), information needs are a situation or task dependable. In turn, situations and tasks are influenced by factors such as the individual user’s qualifications, gender, age, experience, socio-economic background and the availability of information sources that the user needs to consult. Their view is supported by Cole (2012:3), who opine that information needs are the motivating factors that encourage people to think and that give rise to information activities, such as information searching and information retrieval. Cole (2012:3) and Wilson (2000:51), therefore, regard information needs as secondary needs. Their reasoning is that information needs are not independent, but are influenced by the environment or the physical context of the user. Therefore, it is not a primary human need, like the need for food and water.

Cole (2012:33), Wilson (2000:51) and Kuhlthau (1993:341) associate information needs with feelings, thoughts and the execution of cognitive actions to find appropriate information, when an individual becomes aware of a need for information. Kuhlthau (1993) further notes that information needs are characterised by confusion, indecisiveness, ambiguous and rambling statements, which can be ascribed a lack of knowledge. Wilson (2003) and Kumar (2013:2) explains that information needs are personal needs, when they state that individuals' information needs are dependent on their work-related tasks, their personal knowledge, interests, subject profiles or specialisation. They also note that there exists a relationship between the work an individual performs and the context in which an information need arises.

According to Wang and Yu (2017), information needs are closely related to real life issues. Daly (2016:219) gives an example of a manager who needs information to solve an organisational performance problem. Other examples are provided by Iwara (2015), Baro (2013:183–184) and Cole (2012:33). These examples include that of a nurse needing information to explain clinical problems to patients; information to ensure better care and to improve medical administration; an engineer needing information to design and draft bridges; and a doctor who needs information to diagnose a medical condition and research findings on new medical procedures.

This can be interpreted that information needs vary from one individual to another and are influenced by daily happenings like work, personal interest and studies. Information needs also vary from the way it is going to be used .

### **2.3.1 Levels of information needs**

Cole (2011:182) proposed six theories in which information need is based, this was in interpretation to Vertical Information of Taylor's levels of information need which are visceral, conscious, formal and compromised needs. Cole (2011) also developed surrogate concepts of information need which are information seeking, search and use, problem, problematic situation and task, sense making and evolution adaptation.

### **2.3.1.1 Visceral information needs**

Taylor (2009) regards visceral information needs as the stage where the user is unconscious of his/her information need – i.e. the user is not yet aware of the information need. This would mean, for example that, when students see an advertisement of a scholarship that would allow them to study in a foreign country, they see it as an opportunity to improve their lives. As Yoon and Chung (2017:119) explain, at this stage, the students are unaware of the information they may need if the scholarship is approved and they have to move to another country.

In summary, this information need is dormant and the user is unaware and the information service may be able to bring some light to the user of the information.

### **2.3.1.2 Conscious information need**

A conscious information need is the information need that manifests during the conscious or pre-focus level reflects awareness. As Taylor (2009) explains, this is because the user is describing the information need mentally and the description serves as a response to the environment or topic at hand. At this stage, the user's information need is free-flowing and reflects different aspects of a topic (Taylor 2009).

In their research on international students, Yoon and Chang (2017:123) regard the stage of conscious information needs as the pre-arrival stage. They found that, during this stage, international students, who have just realised that they are going to settle in a new environment, are conscious or aware of their need for information about the new country. As a result, they start to explore various topics that will assist them in satisfying their information needs. The students' identified information needs may include financial information, information about housing, the school for their children, driver's licences, legal paperwork and career opportunities after graduation. According to Yoon and Chang (2017:123), the students are more focused on their daily activities than their academic activities during this stage.

Taking the above discussion into consideration, the students are at the stage of awareness and they are able to identify that they will need information but are not at



the stage where they know which type of information and where to look for that information.

### **2.3.1.3 Formal information needs**

The formal level or the focus level of the information need is the stage where the user understands the information need and is able to describe their knowledge gap (Taylor 2009). It is viewed as the operationalise stage, whereby the user or the student explores various information systems or contacts the librarian, in order to obtain answers to their information needs (Michael, Makarfi, Goshie & Jimadi 2014:11).

In terms of the international students, Yoon and Chung (2017:119,123) describe this stage as the settlement stage in which the students need to settle down and learn about the new campus life and their academic goals. According to them, these students need to adjust their social life. Their information needs include information on the weather, how to deal with being homesick, medical issues, transport, language, finding organisations that deal with foreign students, libraries and completing assignments.

From the above, the students can identify their knowledge gap, and they navigate different information systems in order to get information that will be helpful to them.

### **2.3.1.4 Compromised information need**

The fourth information need level, identified by Taylor (2009), is the compromised need or the current need. During this stage, the user can tackle the question by looking at the available resources that will be able to assist in answering the information need. Yoon and Chung (2017) observe that, once international students have settled and they are more confident and comfortable, they act as if they are citizens of the country. At this level, their information needs are focused on their research, writing their theses and in adopting search patterns in their library, entertainment as well as focusing on finding a job and everyday information.

Behera and Satpathy (2013:407) explain that it is difficult to quantify information needs. Their view is endorsed by Wasike and Munene (2012:97), according to whom information

needs are not observable, but the time the students spends using the library could be a sign or an indication of an information need. This view is supported by Wilson (1997:551), who notes that information needs are a subjective experience, meaning that it is an individual experience that cannot be experienced by the next person.

In summary, this is the action stage whereby the students uses various information resources in an attempt to respond to their information needs. This can be interpreted by that this is the stage whereby the students familiarise themselves with the information systems and in order to respond to their information needs. The user need to develop their own question seeking skills using the above levels.

### **2.3.2 Factors affecting information needs**

As pointed out by Dorner, Gorman and Calvert (2015:39), an information need is not context-free. Information needs are inevitable and they depend on many factors, which may differ from one person to another, e.g. different contexts (tasks) in which the need arises. Therefore, information needs therefore do not remain constant (De Silva & Chandrawamsa 2016:494; Chowdhury & Chowdhury 2011:26–27). The circumstances that influence students' needs for information are described by Sookhtanlo, Mohammadi and Rezvanfar (2010:8) as new educational conditions, instructional goals and the manner in which the information is acquired. In other words, information is not needed for the sake of needing it; it is needed in order to achieve a particular objective (Du Toit 2015:88).

Wilson (2000) opines that information needs are influenced by the use of the information itself, the background, motivation, professional orientation and individual characteristics of the user. For example, undergraduate students may need information resources for course assignments, whereas professors are more likely to search for the latest publications in their field of interest for a research project (Nwone & Mutula 2018:28; Abdulraheem & Omopupa 2016:6–7). The factors affecting information needs, as identified by Wilson (2000), include contextual and personal factors.

Emmanuel and Jegede (2011:257) endorse Wilson's (2000) view pertaining to the factors influencing information needs. According to them, the factors that influence information needs include the range of information sources that are available as well as the economic, political, legal, individual and regulatory systems surrounding the user.

Based on an extensive literature review, Courtright (2007:276) found that researchers have been using the terms "context" and "situation" interchangeably. Therefore, these concepts need to be clarified. Context is seen as a set of characteristics, factors, and elements related to the target entity that are not part of the entity itself". According to Lee (2011:96), context provides background information about the object, occurrence, time, place and relationships.

Kumar (2013:1) opines that context can be the location of the user, people who are with the user, or the users' identity, the activities surrounding the situation and the resources that are nearby. Therefore, context is characterised by the situation of the person or the object considered relevant between the interaction of the user and the application. Cole (2012:13), who supports this view, believes that context should be considered in terms of the individual's situation, motives for seeking information, specific activities, types of people, as well as the context involved when researching information needs. In turn, Sonnewald (1999:178–179) views context as being multidimensional, reasoning that context can attribute to many factors, such as place, time, goals, tasks, situations, organisations, processes and the type of participants.

Based on his research, Savolainen (2012) divides the contextual factors influencing information needs into the following three categories: situation in action, tasks and dialogue.

### **2.3.2.1 Situation in action**

Situation is regarded as the contextual element in which a problem may arise (Abdullahi, Magnus & Solanke 2015:13). According to Cole (2012:31), information needs are determined by the situation in which users find themselves. He views situations as being

a social context, e.g. information needed to make an organisational decision or study related decision.

Cole (2011:1223) also notes that individual users seldom know what information is required to satisfy their information needs. He therefore, stresses the importance of considering the information situation as being the starting point from where the need arises. Therefore, in order for an information need to be meaningful, the information need should be viewed in the world of the user. Cole (2012) further states that such an approach would support individual users in mapping their discussion or conversation, in order to retrieve information that would solve the problem. The context of the information need may also be the role that an individual plays in the working environment or in society (Savolainen 2012).

#### ***2.3.2.1.1 Individual versus group information needs***

Westbrook 2008 (274–248) notes that users can experience information needs at an individual as well as group level. At an individual level, a student may be looking for facts, advice or opinions, in order to fulfil his/her information needs. On a group level, information needs refer to a group of students being linked together to perform the same tasks, but their interest and information needs differ, which affect the way in which they use the information found (Kurruppu & Cimber 2006:209).

#### ***2.3.2.1.2 Time as an element of situation***

Situations concentrate on the nature of the activity in which the information need arises, which includes regular activities and special problems. As Julien and Michels (2004:552) explain, the information needed today may not be important tomorrow and next year. They further explain that circumstances may determine the specific information that is needed. Information needs are, therefore, not static. The availability of information may also bring about recognition of the information need that has previously not been recognised. The factors identified by Savolainen (2012) include profession, situation, the urgency of the task at hand and the outcome of an information seeking process.

### **2.3.2.1.3 Information technology**

Information technology may be a motivating factor for seeking information. Seeking answers by browsing the Internet may stimulate further enquiries (Kadli & Kumbar 2011:1). The context and situation often dictate how people engage with technology and makes it possible for students to stay loyal to the university library (Dempsey & Hill 2015).

One of the major developments in university libraries is the introduction of information technology for responding to student's information needs (Vijayakumar & Vijayan 2011:144). Information technology offers students an opportunity to access various resources at a go; it is easy to use; available at all times; and resources can also be shared (Vijayakumar & Vijayan 2011:144).

According to Nadiri and Mayboundi (2010), technology has brought changes in the way academic libraries operate and in user needs and expectations. This is because information technology has introduced different formats in which information can be accessed, such as databases, Open Educational Resources (OER) and Online Public Access Catalogues (OPACs). Some of these have proved to be replacing print-based sources.

Because of its speed, ease of use, availability and convenience, numerous information users rely on information technology to attend to their information needs (Iwara 2015:77). Due to its speed and availability, it allows users to select the most relevant and current information that would respond to their information needs. The information can be accessed faster, particularly if users are properly trained to conduct information searches (Bhoi 2017:453 & Safahieh 2007:28).

The information that is required to complete a certain task needs to be relevant to the situation or task. However, there are parameters that can affect the individual's need for information, particularly students' information needs. These parameters include limited networks, limited or insufficient resources, or resources that are poor in quality (Chiman & Nwokocho 2015:29).

#### **2.3.2.1.4 Relevance**

Relevance is a measure that is generally used to evaluate the suitability of the information needed and, in turn influences, the way in which information is going to be used (Johnson 2011). According to Sundin & Johannisson (2005:114) and Krikelas (1983), relevance is rated through the objectives that give rise to the information need, the characteristics of the problem and the relevance of the information that has been provided to solve the problem. Therefore, relevance can be measured differently by users under different circumstances, for example:

- The adequacy with which the services are provided and with which the results meet the assessment objectives (Safahieh 2007:47);
- The manner in which the problem has been resolved in terms of the user's situation (Rubin 2016:377);
- The performance of the information system when searching for information (Hansen 2011:112, 119);
- The information search conducted must fit the goal, make sense to the information problem and fit the topic and the task at hand (Behera & Satpathy 2014:407; Lachica, Karabeg & Rudas 2008:3);
- Users also view the development of a library as being relevant, if the information retrieved satisfies their information needs or supports them in completing their assignments (Khan & Sheik 2014:41).

In summary, the discussion on situation has shown how different elements of situation such as time, information resources and the relevance of the information sources give rise to information needs.

Emmanuel and Jegede (2011:251) stress the need to establish what students are doing with the information they access, in order to understand their information needs better. In a university set up, students require information related to their studies, in order to complete an assignment or to prepare for an examination. In other words, a task gives rise to an information need.

### 2.3.2.2 Tasks

The important question asked by Sundin and Johannison (2005) is: *For what purpose information is sought?* According to Blom (1983), who provides an answer to this question, work activities are one of the reasons why people seek information. In his quest to establish what is actually occurring in a particular situation, Chiwanga (2016) relates activities to tasks.

Hansen (2011:15) and Vakkari (2003:416) define *tasks* as activities that have to be performed to reach a goal. Hansen (2011:15) further indicates that tasks have practical goals and purposes, e.g. a student studying towards obtaining a qualification. Also, tasks can be viewed as being subjective or objective. Subjective tasks are defined by the individuals themselves, whereas objective tasks are defined by individuals in the way they see them. This means that students may be registered for the same course and writing the same assignments, but their response/s to the assignment questions differ (Byström & Hansen 2005:1054).

Ingwersen and Järvelin (2005:73) regard tasks as being abstract, objective sequences of action that can be divided into subtasks. Task-related activities that require completion can be subdivided into: task construction, task performance and task completion (Byström & Hansen 2005:1054).

In this section, the focus will be on task construction. As mentioned by Byström and Hansen (2005:1054), task construction occurs when an individual recognises t an information need. It is at this stage that the individual understands the preconditions and the goals required to complete a task. The identified task is defined, as well as the goal and specified requirements of the task.

In order to answer their assignment questions and to conduct research related activities, students prefer and use different information sources, such as lecturer notes, the Internet, textbooks, reference materials, e-journals, newspapers and printed journals. According to Oyadeyi (2016:72–76), they also seem to prefer search engines, like Google, Ask.com,

Yahoo and also Internet sources, such as Wikipedia and Bing, as opposed to the academic databases.

In summary, the use of information is required by all levels of society, regardless of the individual's location, the status, educational background, social condition and intellectual achievement. In their work and lives, individuals require information to make timely and quality decisions. Lecturers, students and users seek and use information for performing tasks. The lecturers require information for research and lecturing, whereas students require information for writing assignments or preparing for examinations or tests.

There is always a reason or a purpose for an information need and tasks are one such reason. Tasks are completed in various stages. The stages are, task construction, where a need is identified; task performance, which involves conducting the steps or activities to satisfy the identified need; and the activities performed leads to the satisfaction of the task or the end of the task.

During the process of performing a task, there are interventions, which can either be through a dialogue, communication or conversations when addressing the information needs of students.

### **2.3.2.3 Dialogue**

“Dialogue is the communication between two or more individuals, which may be spoken or written conversation, exchanging ideas, opinions who at that stage do not share the same point of view” (Reitz 2004:213). Dialogue can also be the exchange of information between the computer and the user – i.e. the activity performed between the human being and the machine (Lundh 2010:6). Dialogue results in conceptualising and emphasising or realising the uniqueness of an information need (Lundh 2010:4; Savolainen 2007).

Stede and Schlange (2004) believe that dialogue can prompt an individual to seek more information. Chang (2013:984) and Lundh (2010:4) regard dialogue as a question-negotiation activity, whereby unfamiliar terminology is used or an unfamiliar topic is discussed. Both Chang (2013) and Lundh (2012) have been influenced by the question-



negotiation level of Taylor's (1968) model. Therefore, dialogue results from the manner in which a need is articulated; how terminologies are used in a conversation; and the participants involved that conversation (Savolainen 2006).

In Taylor's model (2009), the users have a mental description of their information needs and they need assistance when describing their information needs. By consulting the librarians or information systems, users may or may not be aware that they are being assisted in the formulation of their information query. This is because the information system, which could be the librarian conducting a reference interview, formalises the question and puts it to the information system. Taylor's (2009) view is endorsed by Lundh (2010), who adopted the dialogue approach and opined that dialogue is formed through the process of negotiation or in a conversation. Furthermore, Savolainen (2012) observes that, because of the outcome of the dialogue, users may require even more information. However, he also notes that, once the price of the required information is made known, the users' interest could shift.

Mohammed (2014:503) suggests that students may engage in any conversation that may trigger the need to know more about the topic at hand. Mohammed (2014) is supported by Abdulraheem and Omopupa (2016:5), in that classroom discussions, questions raised by students or mass media could stimulate a need to know more. The student would then read more about something that is familiar. Abdulraheem and Omopupa (2016) further explain that an information need can also be triggered when the author refers to something that is completely new. The new information is regarded as an information gap or a lack of knowledge in that particular area. Dialogue is also bound by time and space, because, if the information need is not addressed in time, it will be opened for further negotiation (Savolainen 2012).

According to Zoontjie (2015:18), when the user experiences an information need, the specific information need leads to a choice of action. This means that, once an information need has been identified and articulated, the information seeking stage takes place, in order to respond or satisfy the information need.

In this section, it has been noted that people need information for different purposes, for example, health, educational, job-related and entertainment. In order to understand the information needs of the user, it is important to understand the context of the user. The context may be the task the user has to perform, or the problem at hand. Information needs are also influenced by a number of factors. In order to complete a task or to solve a problem, the user has to undertake the process of information seeking.

## **2.4 Students' information seeking**

Information seeking is described by Savolainen (2006) and Case (2002) as a user performing an activity, in order to respond to a knowledge gap or a need for information. It also involves acquiring information and the evaluation of the information that is found. Information seeking involves searching and locating information by using printed or online resources and applying the information in response to an information need (Kingrey 2002). Bates (2005) regards information seeking as an umbrella for manual interaction and computer-based information. As Savolainen (2017:19) explains, once an information need has been triggered, the user engages in information activities that are focused on satisfying the information need. Information seeking and information use are examples of information activities.

In line with this, Spezi (2016:79) indicates that, as part of the information seeking activity, the user identifies search strategies, the sources that need to be consulted and used and how to deal with the information seeking barriers.

Similar to information needs, Johnson (2003:739, 753) views context as being central to information seeking and he believes information seeking studies cannot be separated from context. According to Johnson (2003), context is equivalent to situation and contingency (that is where situational factors are specified) and it can serve as a framework within which information seeking is observed.

Situation involves the environment in which information seeking takes place. For the purpose of this study, the environment in which the information seeking occurs is the academic institution.

Furthermore, information seeking is affected by several contextual factors. Some of the factors that were identified by Nwobasi, Uwa and Ossai-Onah (2013:408) include the information user's qualification, gender, age, socioeconomic background, availability of information resources, services offered in the library, professional orientation, environment, tasks and work roles.

### **2.4.1 Tasks**

Limberg (2007:2) defines *tasks* as activities that are performed with the purpose of attaining a goal. In information seeking, tasks are the driving force that leads users to search for information (Wang 2018:363; Kim 2008). In the case of students, information seeking is a response to their academic information needs and personal related activities.

#### **2.4.1.1 Academic learning as a task in information seeking**

Tasks determine the type of information that is needed, the method that is applied to acquire the information and the way in which the information is going to be used (Taylor 1991). Students have specific information needs, which are related to their work, the problems they face and their academic related activities (Moodley 2013:93). They seek information that would support them in completing different kinds of academic-related tasks, such as assignment writing, studying for tests and examinations, as well as conducting research projects (Abdullahi, Magnus & Solanke 2015:9; Greenburg & Barllan 2014:188; Lawal-Solarin 2013:7). Abdullahi, Magnus & Solanke (2015) also note that students need information for personal development. The purpose for which students seek information is further described by Abdullahi, Magnus and Solanke (2015:14) as general awareness, reading and carrying out research.

Bryström and Hansen (2005) differentiate between real life tasks and simulated tasks. According to them, learning resembles simulated tasks, which forms part of the world outside the school and the results of the information seeking will be applied in the real world. In turn, Limberg (2007:3) regards learning as work tasks in an educational environment, which is an imposed task. According to her, the learning outcomes and the answers of an assignment are already known by the lecturers. She also relates information seeking as fact finding, where students are required to collect more information within a specified period. In the same vein, Tanni and Sormunen (2008:895) opine that learner tasks are teacher designed, but it is a learner centred activity that focuses on the specific area of knowledge, in order to help a student achieve specific learning outcomes when interacting with information resources. Saleh (2012:75) and Vakkari (2001) regard learning as a primary goal affecting the student's information seeking and use.

As indicated in Section 2.3, tasks can be subdivided into subtasks, such as task construction, task performance and task completion (Bryström & Hansen 2005:1054). This section deals with task performance and task completion. Task performance is defined as activities, routines or a set of procedures, practical actions or steps that are taken, in order to satisfy an information need and to reach an objective (Savolainen 2012).

Byström & Hansen (2005:1050–1051) assert that task performance is often regarded as the task process, where the focus is on performing an item of work, when a task is viewed as a process, the aim is to understand different information actions taking place during the task performance. Byström and Hansen (2005) further explain that the results of the actions taken gives meaning to information related actions and often lead to recommendations on how to assist people when they look for information. Also, the resources that are used to acquire the required information may trigger a need to look for more information (Thanuskodi 2012:46; Baro, Onyenania & Osaheni 2010:113–114).

Kuhlthau (1993) refers to task performance as information collection. The task performance stage is the stage where the user interacts with the information system or

interacts with the librarian. As Hansen (2011:8) explains, the choice of actions the student executes to tackle a problem depends on the availability of information. If the available information does not comply with the task requirements, the student's information needs cannot be satisfied. The opposite is also true: if the information gathered is accurate and relevant, the student's confidence increases and they are able to successfully complete their tasks.

Task completion can be viewed as a situation in which the information seeking process is completed and the relevant information for meeting the perceived information need has been collected (Byström & Hansen 2005:1054). This results in the closing of a task. It is at this stage that the results of actions accumulated separately, are joined to form a task resolution and the task performer completes the task performance (Byström & Hansen 2005:1054).

Task completion is often regarded as task evaluation, whereby the task performer looks at the task and the results obtained through the task performance (Byström & Hansen 2005:1054). It is at this stage that the task performers verify whether the retrieved information will enable them to address the problem and is, therefore, relevant to the task. "The task performer then arrives at the satisfaction stage" (Byström & Hansen 2005:1054). As Hansen (2011:119) notes, although the results of this stage are seldom observable, they can be communicated, because the results are linked to the task requirements.

#### **2.4.1.2 Everyday life information tasks**

Everyday life information tasks are tasks related to personal tasks, .e.g. health tasks, life issues and citizenship tasks (Kuhlthau 2008:70). According to Bhattacharjee, Sinha and Bhattacharjee (2014:19), the purpose of everyday life information seeking ranges from career development to reading for leisure and entertainment by reading through magazines and newspapers.

## 2.4.2 Time

Savolainen (2006:110) believes that time is the main contextual factor of information seeking and that information seeking has many faces that focus on the way it unfolds. There are three major approaches that can be applied when characterising time as a factor affecting information seeking, namely:

- Time as a major factor in context

In this instance, concepts that are linked to context and situation are defined and outlined. Savolainen (2006:113) states that certain everyday information activities are affected by social and cultural practices, which, in turn, affect the way people seek information. For example, there are certain cultural or everyday practices that are restricted by time and, as such, affect the information seeking processes.

- Time as a qualifier for access to information

According to Savolainen (2006:122), time allows individuals to access and use information to a certain extent. In most cases, this is affected by the pressure to get information within stipulated time frames, which, in turn, reduces the time available to consult more information sources. Access to information can also be affected due to limited information sources available and the channels to access those sources mostly depend on how quickly the information is needed.

- Time as an information seeking process which states the manner in which information resources are consulted

Savolainen (2006:119–120) states that an information need triggers information seeking, after which the user uses different sources and channels, which can be cyclic and nonlinear models, to consult information sources. Through the user's judgement pertaining to the relevance of the information source, the user then determines whether the source selected is appropriate for use (Savolainen 2006:119).

### **2.4.3 Personal factors**

The information seeking of library users is affected by several personal factors, such as the individual's qualification, sex, age, teaching and research experience, socioeconomic background of users, motivation, professional orientation and other individual characteristics (Nui & Hemminger 2013:336; Wilson 2000:52). The personal factors that will receive attention in this discussion are awareness, skills, attitude, library and information anxiety.

#### **2.4.3.1 Awareness**

Awareness involves a state on being conscious or alert of one's thoughts, perceptions and the knowledge and understanding that something exists (Rosental 2009:157). Lack of awareness is the state of not being conscious or knowledgeable about particular information or concepts (Namugera 2014:749). As Chimah & Nwokocha (2013:39) and Ozoemelem (2010) observe, lack of awareness manifests through a particular behaviour.

According to Fourie (2013:37), individuals, who unaware of their information needs, are often unable to recognise and express their information needs which becomes a barrier for fulfilling their information needs. Ozoemelem (2010) found that the majority of the responding undergraduate students in his study were not aware of the information resources available in the library and the issue has become a major concern, as it results in underutilisation of the library's resources. These concerns are supported by Hamade and Al-Yousef (2010), who found that electronic resources and services provided by academic libraries are not fully utilised and that many students still depend on printed resources, which are attributed to the lack of awareness of and competence in the use of the library's information resources. Choudhury (2013:10), Gunasekera (2010:59) and Hamade & Al-Yousef (2010) and Ozoemelem (2010) attribute the underutilisation of electronic resources and library services to a lack of awareness, lack of guidance or training and the lack of competence in the use of library and information resources.

#### **2.4.3.2 Skills**

Library skills refer to the ability to use the library and its resources (Aziagba & Uzoezi 2010:11). Lack of library skills will, therefore, refer to the incompetency to utilise the resources of the library (Carey 1998:11).

The lack of skills contributes to information needs and the selection of relevant resources. Information skills are attributes that students should possess to navigate information resources (El-Maamiry 2017:5). Aina, Ogunbeni, Adigun and Ogundipe (2011) point out that information literacy skills are designed as solutions to assist library users in utilising the facilities effectively. Since academic libraries are regarded as focal points in universities that are meant to support teaching and learning, the library should advance education and literacy by providing library skills training. Library users should have the skills to use the resources available, which will assist them in performing better in their studies (Buriamo & Oyefeso 2011:95). Furthermore, Sloan and McPhee (2013:5) noted that students want to access information quickly and the lack of knowledge and skills to access the resources presents a problem.

#### **2.4.3.3 Attitude**

Attitude is defined by Velnampy (2008:1) as a mental state whereby an individual views, evaluates and interprets things. Velnampy (2008) further explains that attitude determines how the individual feels, views behaves and interprets things in a given situation, irrespective of whether the individual's attitude is positive, negative or neutral.

According to Egbuni and Usman (2012), attitude appears in two forms: the attitude of students towards the library services and resources and the attitude of staff towards students. As they explain, the attitude of students includes their mode of thinking when requiring assistance and their approach to and opinion of the library staff and services. In turn, the attitude of the staff pertains to the attention they give students; their willingness to help the student; and their readiness to respond to queries. Saunders (2008:361–362) believes that staff, who understand the needs of students, are deemed to be



knowledgeable and, as such, instill confidence in users, who will in later be able to conduct searches on their own.

Carr (2006) posits that, in most cases, users get the “what we give them attitude” instead of what users want. Carr (2006) is supported by Haglund and Olsson (2008:57), who state that librarians should understand the needs of the users and should support them in the areas where they need assistance, rather than in areas where the librarians think they need assistance.

#### **2.4.3.4 Library and information anxiety**

Anxiety is a psychological problem, which prohibits the use of information resources to fill a knowledge gap (Lee 2011:3). In line with this description, library anxiety is described by Katapol (2012:5) as the fear of using the library to obtain information related to the user's needs. Battle (2004:140), who provides a similar explanation for library anxiety, regards library anxiety as the fear of being lost in the library; the fear to interact with the librarian; and the fear of other students who are more competent than they are and may make them feel that they are incompetent.

Similarly, McAfee (2018) and Kiile and Otike (2016:7–8) associate anxiety with the lack of self confidence and the fear of asking for assistance; lack of library exposure; staff appearing intimidating or too busy to assist; unfamiliarity with library equipment and technology to search the library catalogue to check the availability of library item and to locate the item on the shelves. Kiile and Otike (2016:7–8) believe that feelings related to anxiety can be unpleasant and make users feel disconnected from the library, overpowered, lost, helplessness, scared, confused and overwhelmed. Some library users may even stop using the library.

It was with the identified fears causing library anxiety in mind that Katapol (2012:5) expanded the concept of library anxiety to that of information anxiety. Katapol (2018:7) regards information anxiety as the state in which information is too much to meet the information needs of the student. In her study, she noted that the students became overwhelmed and unable to determine which information is relevant to their information

needs. Naumer and Fisher (2010:2132) opine that, due to the proliferation of information, many users tend to experience anxiety. The new technology has also made libraries more complicated and challenging and users find new ways of accessing databases more difficult, which results in more researcher needing to know how the users navigate this complex environment. This is supported by Wildenmuth (2017:138), who observed that students are unable to cope with the changes and advancement of information technology and, therefore, navigating the library becomes complex and challenging.

Abusin and Zainab (2010:55) observed that students, who do not have library skills and expertise to navigate the library, are afraid to use library resources and services to satisfy their information needs. Their fear leads to a state of uneasiness that results in a state of anxiety. After interacting with the library, they may also feel that their information needs are much more complex than they realised (Lee 2011:140).

#### **2.4.4 Reflection**

In this section, it has been noted that tasks influence information seeking and that there are a number of factors that give rise to information seeking. These include the level of education of the user, the time needed to complete a task and the skills required to access the information resources. In order for information seeking to take place, the user has to understand the context of the information need and the reason for seeking information. There are also certain contextual and personal factors that may prohibit the user from accessing the needed information sources, such as access, anxiety and attitude.

### **2.5 Information searching**

Saastamoinen (2017:18) defines *information searching* as a set of processes undertaken to retrieve information. Bryström and Hansen (2005:1056) regard information searching as a subtask of information seeking. Information searching results after an individual has realised that they have an information gap (Fatima & Ahman 2008). Therefore, users visit the library to fulfil their knowledge gaps, in a quest to solve their information problems. Information searching involves a number of stages. Kuhlthau (1980, 1991) identifies the following information search stages:

- The initiation stage: the student identifies an information need;
- The selection stage: the student identifies the topic to be investigated;
- The exploration stage: this stage is characterised by confusion, because the students need to explore, classify and narrow the topic;
- The formulation stage: the students' confidence with regard to the topic to be investigated is increasing;
- The collection stage is when the information is collected;
- The evaluation stage: during this stage, the information found is evaluated and decisions are made on whether the information responds to the problem; and
- Using the information that was found is the last stage.

During the information search process stages, useful intervention points are found that assist the information seeker to learn more about their topic, developments and also refine their topic (Kulthau 2006:70–71). These intervention points also assist the librarian in providing information services that are focused to the users' information needs and that help them to accomplish their tasks easily (Kulthau, Heinström & Todd 2008).

Kulthau, Heinström and Todd (2008) believe that “The information search process is valuable to researchers as well as when used practically for information seeking”. After the information need has been recognised, the search for information is conducted and the accumulated information is retrieved and used to solve a problem or to fulfil the knowledge gap (Maybee 2006:82).

From the above information search process can be interpreted as a process experienced by the user in order to retrieve the relevant information to respond to their information needs. The user experience uncertainty, anxiety and confusion due to lack of understanding. When the needed information is revealed the user becomes confident and the knowledge

## 2.6 Information use

Wilson (2000:50) defines *information use* as the “physical and mental actions involved in incorporating the information found into the person’s existing knowledge base”. As Wilson (2004:31) explains, the acquired information is processed by the users and becomes part of their knowledge base, which could be applied to create new information or new knowledge. According to Kuhlthau (1991), the acquired information may not answer the problem, which may result in uncertainty, due to a lack of understanding of a particular topic.

According to Taylor (1991:230), information use enlightens an information use environment and can, therefore, be used to explain a situation and enable a better understanding of the problem. According to Oladunjoye, Omiumi and Yomi-Owojori (2018), information seeking does not affect information use: information needs do.

Maybee (2006:82) identifies the following three stages of information use: source selection, information use processes and knowledge base.

- Source selection

In this stage, users choose the sources they are going to use to answer their information needs. Factors such as the organisation of the information sources and the tools for looking for information inside the source are taken into consideration.

- Information use processes

This stage is described as the sorting and narrowing of the information, with the desire to match it with the original information need.

- Knowledge base

The main reason for users retrieving information is to expand their knowledge base, so that the information can be used for decision-making, problem-solving, knowledge sharing and creation of new knowledge.

The accessibility of information and the arrangement of information sources affect the way they are going to be retrieved and used (Oladunjoye, Omiumi & Yomi-Owojori 2018). However, there are some factors that may prohibit the user from identifying the information need, seeking information and using of information.

This section concentrated on the use of the information that was found. Various reasons for seeking information were identified, depending on the information need of the user.

## **2.7 Library-related factors affecting information needs, seeking and use**

According to Chung and Yoon (2015:47–48), students in an academic environment have the intention of attaining their qualifications and, as such, have different individual information needs pertaining to their academic pursuits. When users (including students) recognise an information need, they seek information by inter alia consulting information systems or sources (Ikoja-Odongo & Mostert 2006:147). Academic library users may seek information in various sources available in libraries, such as journals, encyclopedias and books. However, certain library-related factors seem to affect students' information needs, seeking and use. These include library facilities and information services.

### **2.7.1 Library facilities**

Certain library facilities affect students' use of the library and its resources and act as barriers to information needs, seeking and use. Savolainen (2015:613) define *barriers* as "any physical or immaterial obstacles, hindering, delaying or preventing access to information". Therefore, barriers block and limit access to information. The library facilities that seem to act as barriers to information needs, seeking and use include physical space, collection, document delivery and research facilities.

#### **2.7.1.1 Physical space**

The physical space as a factor influencing the use of libraries pertains to those spaces where students can sit and study (Coghlan & Robertson 2012:41). The examples of physical spaces identified by Coghlan and Robertson (2012:14) include the availability of study carrels, study space and seating in the library. In addition to these physical spaces,

Mhinga and Agyei (2012) view facilities such as research commons, WiFi connectivity, library commons and photocopy services as important. The reason for the physical library need was observed by Sloan and McPhee (2013:4) and Ramasodi (2009:96).

According to Sloan and McPhee (2013), students prefer to use the library as a study space to avoid interruptions at home and they work with little or no contact with the librarian. Sloan and McPhee (2013:4) regard the physical space in the library as a conducive for and a perfect area for the development of ideas.

A learning commons is often used as a library space that encourages students' engagements with one another and with professional staff. Learning commons encourage collaborative learning and support the development of a research culture and output (Hart & Kleinveldt 2011:50; Turner, Welch & Reynolds 2013).

#### **2.7.1.2 Document delivery**

Saini (2014: 435) defines *document delivery* as a "service offered by a library whereby a user borrows library materials from another library". Users request library material through their library, which acts as an intermediary to ensure that the item is requested, received, made available to the user and returned to the rightful owner. In regional study centres, which form part of the library's collection, document delivery is known as interlibrary loan (Vijayakumar & Faten 2015:44). As Vijayakumar and Faten (2015) explains, this service is provided for free to ensure users are able to access library materials that are available in their local library.

Lending services is a comprehensive library function that is not confined to books only, as it includes all types of material (e.g non-book materials like DVDs and slides) and materials for the physically challenged, assistive devices such as JAWS screen reader and open book text reader (Igwebuike & Agbo 2015: 1) .

#### **2.7.1.3 Relevant collections**

Bawden and Robinson (2012) describe *relevant collections* as "organised sets of information bearing items chosen for a particular context." The University of the Free

State (2012:10) identifies various collections that are normally housed in an academic library as the following:

- An open collection that is on the library's open shelves and can be borrowed by all library users;
- Electronic collections;
- Reserved collections;
- Special collections consisting of rare and expensive collection (archives and media collections); and
- Periodicals (magazines, newspapers, reference collections and calendars) office or project collections, which are normally housed in the office of lecturers for a certain period.

Gunasekera (2010:58) notes that the adequacy of the collection contributes positively to the effectiveness of the library. He believes users should be involved in the selection of library materials. Constant dialogue with users should, therefore, be developed, which can be used as a method of evaluating the services from a customer's point of view or environment.

#### **2.7.1.4 Research facilities**

The term *research facilities* refers to those facilities that enable researchers to use a variety of information sources, such as Internet search engines, full-text databases, electronic journals and print resources (Cole 2012:65). The availability of research facilities would enable online and/or search services that are designed with the end user in mind to locate information sources (Adesoye & Amusa 2011). The online public access catalogue (OPAC) is an example of such a service.

#### **2.7.1.5 Reference services**

Reference services, which are regarded as a specialist service, are information units that are a combination of information technologies, with the aim of providing users with easy access to data and information (Woodworths & William II 1993:334). This service comes either electronically or in printed form (Stojanovski & Papic 2012:85). Reference sources

are normally not meant to be read from page-to-page, but can be consulted for meaning and to check facts or information background (Okeke, Ughenetga & Nwabi 2013:76).

According to Posey (2009:77), academic libraries have been striving to provide excellent services to its users, in order for their information needs to be satisfied. Students consult different information resources and, at times, they experience challenges that prohibit them from accessing those resources. According to Kwadzo (2014:44), the use of reference materials is affected by lack of skills; hence the introduction of literacy programmes is important.

#### **2.7.1.6 Information literacy programmes**

Information literacy programmes, which introduce users to basic library skills and procedures, can be conducted in a group or as one-on-one training in the use of the library catalogue and electronic resources . The information literacy programmes assist the users in determining the needed information; define the plan to acquire the information; and evaluate and assess the quality and relevance of the acquired information (Baro & Fyneman 2009:672).

#### **2.7.2 Information services**

In addition to the barriers that library facilities pose to information seeking and use, there are also certain information service related barriers that shape users' information seeking and use. Tuhin (2011:22) points out a lack of access to all information, lack of reading materials, lack of knowledge of information sources, lack of time and lack of knowledge of the use of library services.

##### **2.7.2.1 Information access**

Information access is the "ability to identify, retrieve and use information effectively" (Encyclopedia.com 2018). According to Gwang (2011:5) and Ugah and Chilaka (2011), access to information is characterised by technological advancement, library buildings, environment, library staff, services, speed of electronic resources, transfer and use of knowledge.



#### **2.7.2.1.1 Access to information resources**

Information communication technology (ICT) is a factor shaping individual users' information needs (Chowdhury & Chowdhury 2011:37). Jodhav (2017) endorses the view that ICTs affects individual information needs, particularly if they are not able to access the information resources. Library users regard access as a gateway to information resources, which entails accessibility of electronic resources, ease of use tools and library webpage and the location of information resources.

#### **2.7.2.1.2 Access to databases**

Chimah (2012:32) points out that students do not really use databases; they have limited knowledge of how the databases function. Gwang (2011:5) and Popoola and Zaid (2008:4) posit that, even if the information is relevant and available, it does not mean that the information is accessible and can be used. Users prefer to use resources that require no effort and that are easy to use. That is why it is important for the university library to evaluate their services and promote them to their users.

#### **2.7.2.2 Language**

Access to information can be constrained by language, meaning that the users' inability to articulate the information need to other people because of the terminology related to a particular field (Chowdhury & Chowdhury 2011:370). According to Savolainen (2015:616), users may also be unable to articulate their information needs while trying to search for information on the information system. This may prohibit them from seeking for information or capturing information correctly (Zoontjie 2015:70).

#### **2.7.2.3 Operating hours and the loaning period**

Kwadzo (2014:44) states that access can be restricted, if the library operating hours are not conducive, e.g. if the library only has short loan periods and restricts access to databases. Kiile and Otike (2016:8–10) further observe that users can feel intimidated by the library's loan policies and procedures; poorly managed information resources; inadequate collections; slow responses to service needs; and a lack of photocopiers and printers. Kille and Otike (2016) also observe that users may feel intimidated by the library layout, lighting, the air quality and temperature in the library building.

#### **2.7.2.4 Time and equipment**

Lack of time and the lack of technological skills are mentioned as constraints that hinder the use of available information resources (Dempsey & Hill 2015). Time is associated with how long it takes to fulfil an information gap. As shown in Section 2.7.2.3, information needs are not always satisfied and, due to time constraints, users tend to use information that is conveniently accessible to ensure task completion (Kwadzo 2014:44; Lee 2011).

Bhatt (2011) asserts that the five laws of Library Science, as proposed by Ranganathan, are still relevant. Sen (2008:87) confirms that the five laws of Ranganathan remain valid to librarianship. These laws, which have been extended to a modern version, and are as follows: documents are for use; every reader his/her documents, every document its reader; save the time of the reader and a library is a growing organism. The relevant laws applicable to this discussion are books are for use and save the time of the user. Zabel (2011:25) believes that the two laws put the library profession in perspective, because, in order to provide efficient access to information resources and to save the user's time, they have to be provided with relevant information.

#### **2.7.2.5 Information resources**

In any library, there are many information resources and services offered (Okeke, Onhenetga and Nwabu 2013:335). The concept information resources is defined by Chimah and Nwokocha (2013:48) as all forms of carriers that can be used to promote and encourage effective research activities and development projects. As noted by Machet (2012:10), the information resources that are used by people include persons, objects in the environment, newspapers, magazines, sound recordings, video recordings, DVDs and the internet. She further indicates that certain reference sources are ready reference sources. These include dictionaries, encyclopaedias, almanacs, yearbooks and atlases. These sources are referred to as *ready reference sources*, because they are arranged in such a way that students can access them easily and are easily identifiable in the library. Ready reference sources are also available online (Reitz 2004:594).

According to Adegun, Oyewumi, Oladapo & Sobalaje (2013), the effectiveness of a university library is judged in terms of its collection, information resources and the services they offer, meaning that the library building cannot be better than its collection. In terms of the collection, Oyewuni, Oladapo and Sobalaje (2013) are supported by Fatima & Tadasad (2013:363), in that the image of the library depends on its collection. Adegun, Oyewumi, Oladapo and Sobalaje (2013) further state that library users have the right to expect services and resources that match their needs. Adegun, Oyewumi, Oladapo and Sobalaje (2015:54) add that the users expect an adequate collection that is readily available, with guidelines for utilising the information resources.

Anyago (2014:11) found that, apart from requiring relevant resources being available to them, postgraduate law students also expected proper means of access to these resources, in order to meet their information needs. Bhatta (2008:6) found that the majority of students rely on books to satisfy their academic and research needs. She found that some of the students consider journals and encyclopaedias as important sources of information. These findings are endorsed by Chiwinga & Zozie's (2016:8–9), who found that students use lecture notes, books, colleagues, electronic books, newspapers, print journals, dissertations and theses as information resources. They also established that students mostly use learning manuals and the Internet, even though the majority of the students lack the necessary Internet skills for retrieving accurate and reliable information. The findings of the Internet are similar to those of Bhatta (2008), who found that only half of the students who participated in his study considered the Internet as an important resource for up-to-date information.

## **2.8 User satisfaction**

According to Adekunjo, Adepoju and Adeola (2015:2131–2132), user satisfaction plays a significant role in the creation and delivery of services in any library. In the same vein, Adeniram (2011) regards user satisfaction as a quality function whereby staff attitude and knowledge, collection, borrowing policy, information literacy programmes, library catalogue, photocopy and printing services of the library are evaluated. Tiemo and Atebo (2016:57) believe that the results of such an evaluation should indicate that the students

are satisfied and that the library services and resources are adequate to fulfill their information needs.

Maskari and Sanderson (2010: 860) believe that system effectiveness, user effectiveness, user effort and user characteristics are the factors influencing user satisfaction. The effectiveness of the system is judged in terms of how well it achieves its intended objective and its ability to retrieve relevant documents while ignoring irrelevant ones. User effectiveness is determined by the accuracy and completeness of the user's goal. User effectiveness is measured in terms of the total number of tasks completed, the total number of relevant documents saved, and the time taken to complete the task.

Maskari and Sanderson (2010:864) observe that user satisfaction may also be influenced by user effort, which is characterised by the number of queries attended to and the time taken to obtain relevant documents. Lastly, user characteristics that focus on the familiarity with the search topic, search skills and system expertise will give the user more confidence when interrogating the system.

According to Vijayakuma and Vijayan (2015:112), user satisfaction can be improved by simple library rules and procedures and library staff's helpfulness. Hsu (2016:137) and Deo (2016:17) suggest that conducting surveys in relation to library service and resources may assist students to come up with suggestions. For example, even if the library has limited resources, the fact that the resources are current does add value, because it improves the service quality.

User satisfaction is regarded as the most important factor that can be used to evaluate the service of the library, improve its performance, and increase user expectations.

## **2.9 Conclusion**

This chapter presented the review of the literature on students' information needs, seeking and use in an academic library. In order to do so, the concepts information needs, seeking and use were first clarified. From the discussion, there appears to be a relation

between information needs, information seeking and information use. As Wilson (2009:49) states, individuals notice a gap in their knowledge and take steps to address the information need by seeking information. Users then search for information that is relevant to their information needs, retrieve and use the information to solve problems, make decisions, or use it for entertainment. Information needs, information seeking and information use are identifiable in the various stages of the information seeking process and the factors that shape them are similar, although applicable in different context.

Information needs change as the person goes from one stage to another. A student may need information while studying and, after completing the studies, s/he may be required to seek information for career development. When seeking and searching for information sources in response to their information needs, users need satisfaction. There are situational factors that may influence the information channels and sources that users consult.

The next chapter will present the research methodology that has been used in the study.

## CHAPTER 3: RESEARCH METHODOLOGY

### 3.1 Introduction

Research methodology involves the way in which the researcher makes sense of the object of enquiry (Mohajan 2018:4). The research methodology deals with the 'what' and the 'how' of the research, thereby outlining the process of conducting research. The 'what' refers to the inquiry, which is regarded as the essence describing the research topic and the research question. The 'how' is the research plan or the process describing when, where and how data will be collected in order to address the research problem (Rallis & Rossman 2012:3; Clough & Nutbrown 2012:25–26).

Walonick (2008:8) describes the research methodology as a master plan or the key stages in the research process, which guide/s the research from the beginning to the end, in order to achieve the research objectives. The research methodology occurs when researchers, based on the knowledge, information or the assumption they have about something, wish to establish the authenticity of their knowledge or interrogate and find appropriate methods to validate or understand their thinking and the truth thereof (Rossman & Rallis 2012:7).

Bryman (2014:5) and Babbie (2016:33) indicate that, in order to make sense of the research question, there is always an underlying explanation or a frame of reference towards the truth, which makes it easier to understand the research question and will influence how the interpretation of the findings.

It is at this point, after the research questions have been formulated, that the research approach is chosen, in order to respond to the research question as posed in Chapter 1. Therefore, this chapter considers important steps to follow when determining a research methodology in support of the research questions. These steps, as outlined by Sarantakos (2013:121), relate to the philosophical framework, methodological construction, population and sampling, data collection instruments, and validity and reliability tests applicable to the study.

This chapter will discuss the research methodology that was followed in the empirical component of this study. The discussion consists of the research design, target population, sampling techniques, data collection techniques, reliability and validity, interview schedule and data analysis.

### **3.2 Research paradigm**

According to Creswell (2014:3), researchers cannot simply choose the research methodology: they should be guided by philosophical foundations, which means that research is dictated by theories (Bryman 2016:19). This is contradictorily to the view of Babbie (2016:31), who states that not all social research is intertwined with theory. – Sometimes people undertake research only to discover things.

According to Thomas (2009:291), Pickard (2013: xviii) and Creswell and Poth (2018), all research models are guided by philosophical foundations, which define their paradigm and explain logical frameworks behind the theories. In other words, the paradigm is the guiding vision or the philosophical assumption guiding the research subject or topic. Philosophical foundations shape the research methods, research questions and direct the output of the research (Descombe 2010a:117 & Punch 2014:14).

Descombe (2010a:117) and Neuman (2011) observe that philosophical foundations assist the researcher in approaching and looking at the world from a different angle. The philosophical foundation makes the researcher understand the assumptions underlying the choice of research and, lastly, it minimises the possibility of competition between researchers. Ngulube (2015) believes that philosophical foundations assist the researcher with the problem of the study, the questions to ask participants, and the theories to identify theories, in order to produce valid knowledge. It is important to explain paradigms in research, because, every decision made in the research process, should be guided by the philosophical foundation (Kivunga & Kuyini 2017:38).

Pickard (2013: xviii) mentions the following three components of research paradigms in Information Science, which should be understood before conducting any research: ontology, epistemology and methodology.

Sarantakos (2013:29) and Punch (2014:15) define *ontology* as the nature of reality – i.e. how an individual sees the world around them. It refers to the nature of the objects; how an object exists; and how objects are categorised or grouped. Descombe (2010a:118–119) states that there are two basic positions of ontology: realist and constructionist. Realists believe that the social world exists independently, whereas the constructionists regard the social world as something that exists in the human mind. This would mean that the researcher sees the world through perceptions of the objects under study and through human interactions.

Thomas (2010:87) and Pickard (2013:xviii) define *epistemology* as the way in which individuals create their own knowledge in the world and use philosophical assumptions to support their knowledge. Therefore, it is the researcher's position about the choice of the research procedure and design with regard to a study by basing the argument on the philosophical position (Yin 2016:15).

Pickard (2013:xviii), defines methodology as the angle that the researcher wishes to follow within a particular framework, in order to answer the research questions, which can relate to questions pertaining to why and where. These questions can be answered by qualitative research approaches.

Sarantakos (2013:30) opines that research paradigm is defined by three major questions, which should be contained in research, the aim being to simplify the complexity of the social world and to guide the research process. The manner in which the researcher responds to the three paradigm questions determines the paradigm position that s/he has to follow (Thomas 2010:292; Pickard 2013:22 & Punch 2014:14).



The research questions that the researcher should answer, as outlined by Punch (2014:15) and Pickard (2013:29) are:

- What is the nature of reality? (This relates to the ontology of the study);
- What is the nature of the relationship between the investigator and the participants? (This relates to the epistemology of the study); and
- How can we know it? (This question relates to the methodology that should be used to uncover the research problem).

In order to answer these questions, paradigm boundaries were established. The major research paradigms involved in Information Science, as outlined by Pickard (2013), are positivism, post-positivism and interpretivism. Descombe (2010a:119) and Neuman (2011:101) regard research boundaries as research positions and mention that positivism and interpretivism have been the only two approaches for years, before the third position of post-positivism was introduced.

### **3.2.1 Positivism**

Alakwe (2017:42) and Punch (2014) regard positivism as the oldest research paradigm, which uses scientific methods to gain knowledge of which the results are affirmed by existing theories. The ontological perspective of positivism is naturalistic and tangible. In positivism, physical evidence is important and researchers test hypotheses to uncover the truth and the results can be generalised. The research approach in positivism is quantitative (Chilisa 2011:13). Since the current study is a qualitative study, positivism was not the applicable research paradigm.

### **3.2.2 Post-positivism**

Pickard (2013:10) believes that post-positivism essentially resulted from a failed positivism. In other words, because of the hypotheses that failed in positivism, or when it was no longer possible to prove the hypotheses, post-positivism was developed. Post-positivism is commonly known as a catch-it-all approach, because it does not fit into positivism or interpretivism.

Braun and Clarke (2013:334) observe that, although the researcher still needs information about their research, they are influenced by their contexts. According to Braun and Clark (2013), the methodology of post-positivism is mainly mixed methods research. In post-positivism, data can be collected through experiments, statistical techniques and hypotheses are also tested, although context takes precedence. The outcome in post-positivism is generalised. Similar to positivism, post-positivism was also not a suitable research paradigm for this study.

### **3.2.3 Interpretivism**

According to Bryman (2016:24) interpretivism emerged from criticism formed against positivism. Interpretivism is concerned with how individuals view and derive meaning from social reality or the world (Bryman 2016:24). The ontological perspective of interpretivism is relativist (Pickard 2013:11). According to Pickard (2013:11), this means individuals may not see the truth as the same: truth is seen from the individual's view point or the circumstances surrounding it. The epistemological perspective of interpretivism is that the results of the investigations are the products of the interactions between the researcher and the participants on the subject under study (Bryman 2016:27). In this way, the researcher is the one responsible for the interpretation of the results of the interaction.

Individuals believe that their knowledge of a phenomenon is the truth or they assume is the truth, which is shaped by their experiences. This enables them to uncover the logic behind knowledge or assumption/s of the truth (Lather 1986:259).

The research question involved this study is: *What are the information needs of the students using the UNISA Ekurhuleni Regional Service Centre Library?* In an attempt to answer this research question, the researcher looked at the question itself and the logic it will present. Her response to the question was determined by the research methodology, data analysis and reporting.

The purpose of the study will also form an important part in determining the methodological approach to follow. In this study, the purpose was to obtain an in-depth understanding of the information needs of students using the UNISA Ekurhuleni Regional Service Centre Library. Therefore, based on the logic or the understanding discussed above, the philosophical foundation that guided the current study is interpretivism. The selection of interpretivism as the relevant research paradigm was based on the following considerations: the research would be conducted at the place where the subjects are; and the researcher was the key instrument, because she recorded and interpreted the collected data.

The results of the investigation were based on the information provided by research participants, according to how they viewed a particular object and the researcher's interpretation and understanding of the views expressed by the participants.

In interpretivism the nature of the inquiry is described in three dimensions which are, ontology, epistemology and methods.

- a. Ontology of interpretivism is that reality and the subject are inseparable. Individuals attributes different meaning to the same situation and reactions are also different and interpreted differently. In this study the researcher was able to access different views on the information needs, information resources and services that participants normally use in the Unisa's Ekurhuleni Regional Service Centre Library.
- b. Epistemological is concerned with how knowledge is acquired, which is acquired through lived experience and it is mentally processed and interpreted. The researcher and the participant are involved in the process of talking, listening and notes taking. The epistemological position of this study is through individual interviews whereby the researcher poses questions to the participants and the participants respond based on their knowledge and experience. The researcher is taking notes about the responses given.
- c. Methods and methodology in interpretivism seeks to understand the phenomena understudy from the participants' point of view. The researcher asks questions which seeks to explore, investigate and understand social context. The research

techniques governing interpretivism is phenomenology, ethnography, case study, grounded theory. The research technique for this study is phenomenology which will be discussed later in the chapter.

### **3.3 Qualitative research**

Qualitative research can be defined as is defined by “as a manner to study human-interaction in their natural settings representing what people view and experience” Lichtman (2014:12). This definition highlights the following: human interaction, natural settings and the nature of qualitative data. The purpose of qualitative research is to explore the participants’ meaning and understanding (Creswell 2014:32; Liamputtong 2013:9a). Therefore, it does not focus on numbers: it involves the understanding of the context and settings that are crucial in the participants’ lives (Liamputtong 2013:9a; Bui 2009:13). Qualitative research does not seek simple answers and themes; “it uses induction when analysing data” (Gorman & Clayton 2009:9–10).

In qualitative research, there is no hypothesis to test (Creswell 2007). As Creswell (2007) explains, the answers to qualitative research questions are not predetermined, nor are the participants limited to the researcher’s point of view or by the researcher’s choice of answers and they do need to respond to the answers provided by the researcher. Understanding the participants’ views or experiences is the key element in qualitative research – i.e. an understanding of how people feel and why they feel the way they do (Joubish, Ahmed, Khurram & Fatima 2011:2082–2083).

According to Marshall and Rossman (2016:3–4) and Creswell (2014:185), qualitative research has a number of common key elements that characterise it. These key elements are outlined in the following sections.

#### **3.3.1 Natural settings**

Leedy and Ormrod (2013:139) describe natural settings as real world situations, where the aim is not to uncover the truth, but to reveal the nature of multiple perspectives held by different individuals about the topic under study. This description links well with the

characteristics of interpretivism, where the main concern is how the participants view the world, experience, act and interpret it. There is also no manipulation and no controlling of situations as they unfold and the findings are not predetermined.

According to Mampuru (2009:70), natural setting is regarded as the key element or direct source from which data is collected. The participants are studied in their own environment. When studying phenomena in their own setting or environment, it deepens the understanding or the knowledge of the problem.

### **3.3.2 Researcher as the main instrument**

In the qualitative research approach, the researcher is the main or the active research participant, who collects data through direct interaction with the participants by using various research instruments. The researcher also analyses and interprets the data to make meaning by using his/her personal or professional skills, knowledge and experience to produce a coherent picture of the research as it has been experienced (Brodsky 2012:2–3).

According to Gummesson (2000:18), the qualitative research approach can be used to represent the participants' values, norms, standards, frames of reference, theories and procedures governing their thinking and actions. Gummesson (2008) further states that researchers investigate the problems from their point of view. Therefore, in order to understand what the students feel and think regarding the question under study, the researcher should possess the necessary research skills to produce reliable research findings.

Due to the closeness or the involvement of the researcher and the participants, qualitative research allowed the researcher to identify issues that were missed through probing, meaning that it deepened the understanding of the incidence or the problem investigated, thereby allowing flexibility of new ideas (Babbie: 2010: 281).

### **3.3.3 Nature of qualitative data**

Flick (2007:155) believes that qualitative data occurs in two different ways: verbal or visual data. Verbal data is data that is acquired through semi-structured interviews, whereas visual data is obtained through observation, analysis of photographs, videos and films. Due to the nature of this study, verbal data was collected.

### **3.3.4 Reflexivity**

Reflexivity relates to the way in which participants react when the researcher is around and how the researcher pays attention to intuitive insight, which will influence the study (Rossman & Rollis 2012:255). Rossman and Rallis (2012:77–78) are supported by Bryman (2014:394), who believes that reflexivity should include self-reflection, whereby the researcher does introspection, by looking into the relationship between him/her with the participants, and self-criticism, which involves the researcher's confession. It is at this stage that the researcher checks if his/her actions are align with the ethical principles.

## **3.4 Research design**

The research design is a blue print that provides details about the method of data collection and analysis that will be used. Zikmund, Babin, Carr & Griffin (2013:29) refer to research design as methods and procedures for collecting and analysing data; the plan to execute the research problem. In order to maximise the findings and the reliability of the study, the research design is divided into planning, structuring and executing.

Based on the research objectives of this study, as identified in Chapter 1, this study qualified as phenomenological, because the researcher concentrated on a single phenomenon (students), in order to obtain a perspective and a deeper understanding of their experiences and social context. The one-on-one interview was used as data collection instrument, in order to develop an in-depth analysis from the information provided by the participants (Creswell 2014:14). This is justified by Leedy and Ormond (2013:141), when they observe that a phenomenological study endeavors to understand the perceptions and understanding of a particular situation. Phenomenological research depends on the information obtained directly from the participants and the researcher

listens attentively as the participants describes their experiences (Leedy & Ormond 2013:142).

The research design for a study requires decisions pertaining to data collection and data analysis. The method of data collection and analysis that were employed in the current study on the information needs of students using the UNISA Ekurhuleni Regional Centre Library will form the focus of the following discussion.

### **3.5. Data collection procedure and methods**

*Data collection* is defined by Bryman (2015:12) as the management, analysis and interpretation of data. Bryman (2015) further states that data collection is the most important part in a research project. There are various methods that can be used to obtain information in the research, e.g. observations, questionnaires, interviews and focus group interviews and document delivery. In this study, interviews were employed as a method for data collection.

According to Creswell and Poth (2018:147), data collection involves ethical issues that need to be considered before and during the collecting data process, such as gaining access, privacy and consent. Due to the nature of this study, the researcher was compelled to obtain the participants 'consent or permission.

#### **3.5.1 Access**

Access involves gaining permission to the site, in order to enable easy collection of data (Creswell & Poth 2018:154). In this study, the researcher was granted permission to conduct research by involving UNISA students, after which a letter was written to the Ekurhuleni Regional Service Manager to obtain permission to access Centre.

#### **3.5.2. Consent**

“Consent refers to obtaining ethical rights to participate in the study. It is normally a written slip containing the processes and the purpose of the study to the potential participants” (Gorman & Clayton 2005:43–44). Curtis and Curtis (2011:17) divide the consent into

voluntary and informed consent. The information that should be included in the consent form, as identified by Flick (2015:32–33), is information pertaining to the goals of the study and the research methods. Babbie and Benaquisto (2010:66), Creswell (2013:95) and Curtis & Curtis (2011:7) point out that the request to participate in the study should be in written format, so that the prospective participants can make a voluntary decision by completing an informed consent form in which they agree to participate.

In this study, the researcher issued consent forms which appear on Appendix B, to each participant, informing them about the academic purpose of the study, and also explaining to them that their participation in the study would be entirely voluntary and that they might choose to withdraw from the study at any point. These reflected the researcher's respect for the participants.

### **3.5.3 Population and sampling**

*Population* is defined by Ngulube (2000:201) “as a group of people, stores, and organisations which share the same or common characteristics and is subject of the research interest”. The population is a unit of analysis from which the researcher draws representation for research, in order to reach a conclusion (Welman, Kruger & Mitchel 2005:52–53).

However, it may not be practical to study the entire population to answer the research questions and meet the research objectives. The total number of students using Unisa's Ekurhuleni Regional Service Centre Library was 16423 in 2017. Therefore, a sample of the population has to be used (Goddard & Melville 2001:34; Pickard 2009:59). For the purpose of this study, students who use the UNISA Ekurhuleni were sampled.

The topic of interest was influenced by her position of Senior Branch Librarian in the Ekurhuleni RSC Library and after observing the low usage of library resources and materials, as well as the students' difficulties in obtaining relevant materials for their studies. This became a challenge when writing monthly reports, because several questions emanated from the report, as top management questioned the statistical and



narrative report in terms of the low level of usage of library resources and materials in comparison to other regional service centre libraries in Gauteng. It became a matter of great concern, as the responsible librarian had to make assumptions as to the reasons for the low usage statistics. It was also noticed that students, who preferred to use the open public access catalogue (OPAC) station in the Library, were more interested in social media or the downloading of music.

Neuman (2014:4) defines a research *sample* as a “smaller case selected by the researcher from a larger pool”. Zikmund et al (2013:385), Punch (2014:161) and Yin (2016:93–95) differentiate between sampling methods that can be used in a qualitative research approach, namely convenience, snowball, random and purposive sampling. Of these four sampling methods, purposive sampling seemed to be the most suitable sampling method for this study. As explained by Creswell (2014:239) purposive sampling is based on the criteria that the researcher has prior knowledge about the population of interest, their availability and that the population fit the profile that needs to be researched, and their willingness to participate in the study. In other words Creswell (2014) opines that, purposive sampling involves the deliberate selection of participants, who would be able to provide the researcher with information that is relevant to the study.

According to Sarantakos (2013:177), the results of purposive sampling are the most relevant and they are rich in information. Sarantakos (2013) further notes that purposive sampling saves time, because the focus is on the selected individuals.

This study employed purposive sampling, because in-depth and rich information was required to answer the research question. The sample comprised of thirty two students who use the UNISA Ekurhuleni RSC Library. The criteria for the selection of students pertained to their use of the library, because, theoretically, these students would be able to provide rich information. In other words, there was a disposition where the researcher wanted to interview students whom she thought would provide the best possible answers but then realised that it would be biased and thus compromise the integrity of the study.

After permission to conduct research using the UNISA students had been granted, in order to gain access the site and to collect data, it was not easy to obtain permission from the students to conduct the interviews. Some students would volunteer to be part of the interview and after, explaining the purpose of the study, they realised that no incentives were involved, which resulted in them withdrawing. Some students stated clearly that the entire process was a waste of time. The researcher had to remain true to the ethical research principles and respect their choices.

In May 2018, the researcher approached students when they visited the library and requested them to participate in the study. Flyers were also distributed and notices were placed on the notice boards, inviting students to participate. This led to some students approaching the researcher for an interview. In the end, a total of 32 students were interviewed, as indicated in Table 3.1.

Table 3.1: Colleges represented in the UNISA Ekurhuleni RSC Library

Colleges	Number of participants
College of Law	10
College of Human Sciences	8
College of Education	5
College of Science, Engineering and Technology	4
College of Agriculture and Environmental Sciences	3
College of Economics and Management Sciences	2
<b>Total number of participants</b>	<b>32</b>

The participants were all undergraduate and post-graduate UNISA students, residing in Daveyton, Benoni Central, Crystal Park, Springs and Pretoria. Table 3.1 reflects the target population, which comprised of undergraduates and post-graduate students from various colleges. It was important for the researcher to have all the colleges in UNISA represented, in order to have a true reflection of the entire population, which would also increase the validity of the findings. The majority of the participants were from the college of Law, followed by College of Human Sciences.

### 3.5.4 Interviews

According to Descombe (2010a:101), the choice of a research design should be clear and appropriate for its intended use. In other words, the plan of action or the strategy should relate to the research question/s, and the search methods selected, in order to produce the excellent results. Given the qualitative nature of the study, the researcher employed interviews as the primary data collection method.

Babbie (2013a:250) defines an *interview* as a “conversation orchestrated and directed by the researcher”. The interview is a data collection method whereby one person asks questions pertaining to the research problem being investigated, while another person responds to the questions. Berg (2009:101) regards interviews as a direct exchange between individuals known to possess the knowledge. In the same way, Kvale and Svend

(2009:2), view interviews as the exchange of views between two or more individuals about a theme of mutual understanding.

Creswell (2009:4) identifies three types of interviews, namely, unstructured, semi-structured and structured interviews. Structured interviews consist of predetermined, standardised questions about a specific topic and answers are selected from a list of given options. Unstructured interviews employ broad questions to engage the participant in an informal or spontaneous discussion. Semi-structured interviews use predetermined questions that require the respondents to answer in their own words.

In order to gain a deeper understanding of the information needs of students using the UNISA Ekurhuleni RSC Library, a semi-structured interview was used. As pointed out by Creswell (2009:181), this type of interview allows the collection of a significant amount of information related to the study, which the respondents provide in their own words, expressing their own views and experiences (Creswell 2009:181).

#### **3.5.4.1 Advantages of interviews**

Interviews make it possible to reveal actions, thoughts and feelings (Sarantakos 2009:278). Semi-structured interviews allow the free flow of information, because participants respond in their own words, unlike structured interview, where answers are given and individuals selected from the pre-selected answers. In this way, semi-structured interviews then give a fair and full representation of the interviewer's perspective (Creswell 2003:20).

The researcher controls the data collected; has full control of the environment; and can control the conditions of the questions posed (Kumar 1999; Bless, Higson-Smith & Sithole 2013; Leedy 2015). Interviews also provide an opportunity to correct misunderstandings by respondents, because more clarity can be obtained in the interview process (Wallace & van Fleet 2012:180). Probing may be used to assist or encourage the respondents to continue with the response or make it easier for them to answer questions without being biased or leading the response (Sarantakos 2009:278).

Interviews benefitted the study, in that participants were allowed to ask unplanned questions and raise issues that the researcher had not anticipated. The interview questions were based on the four research topics and no logical sequence to the questions was followed. The researcher was in control of the questions and, therefore, the interview depended on the ability of the interviewee to interact with participants and to respond to questions, which meant that it was not a one-sided exercise. The information provided by the respondents was recorded and transcribed. Data was analysed directly from the responses given by the students.

Although interviews are considered as one of the most powerful method of collecting data, they also have limitations.

#### **3.5.4.2 Limitations of interviews**

Interviews may be time consuming for both the participants and the researcher. It takes great deal of time to organise, conduct, transcribe and translate/analyse the collected data, in order to obtain in-depth information. According to Creswell, (2009:191) interviews can be biased because of the researcher's presence. An interview becomes a challenge when the relationship between the researcher and participants is not clearly defined, because the quality of data depends on the authenticity of the information provided by the participants. Interviews are also not ideal for sensitive individuals.

In this study, each interview lasted for thirty minutes. Time was also a factor and there were instances where the researcher felt like abandoning the research. Deciding on the research site is important, because it allows one to be next to the site, which will make it easier to collect data. When the researcher was relocated from Ekurhuleni to Johannesburg RSC library it became difficult to travel to Benoni to interview only one participant.

The researcher also realised that, in order to produce a coherent research report, it was essential to remain objective and to allow the participants to share their experiences and views. Follow-up questions were based on what participants' responses.

In order to ensure the credibility and trustworthiness of the research results, it is important to select a data collection method that is appropriate for the research objectives and that will enable the researcher to answer the research question/s.

### **3.5.5 Pre-testing the research instrument**

The research was tested to establish the validity of the instruments in addressing the research question and also to identify potential concerns that may arise from the data collection process (Creswell & Poth 2018:154). In this study, the pre-testing was conducted on the first three participants, with the aim of establishing whether the participants understand the questions and would be able to give meaningful responses. The first question (*What are your information needs?*) proved difficult to comprehend and was refined to *For what reason do you visit the library?* The refined question was adopted into the final interview questions.

### **3.5.6 Administering the interview**

The interview questions were formulated in a semi-structured way. Semi-structured interviews employ open ended questions that do not give fixed answers, but do provide structure and guidance to the interviewee, in order to elicit rich and detailed information.

The interview question comprised of the following research questions:

1. Information needs, which consisted of four sub questions;
2. Information services and resources, which consisted of four sub questions;
3. Satisfaction with library services and resources, which had four sub questions;
4. Challenges in library usage;
5. Additional information that participants regarded as useful in responding to the research questions.

The interview questionnaire was divided into five questions. The first question was intended to provide background and demographic information about the participants. The

second question served as a motivation for the library visits, which was based on the participants' experience. The third set of questions intended to encourage the participants to provide more answers to the current resources and services that they have used. The fourth question was a reflection of the usage and importance of the available resources and services rendered. The fifth question focused on participants' opinions and suggestions as to what the library can provide to satisfy their information needs. The students were also afforded the opportunity to provide any additional information that would be relevant in supporting their information needs.

For the purpose of this study, permission was granted to collect data at the UNISA Ekurhuleni RSC Library. A communication was sent to the Regional Service Centre Manager, in order to gain access to the premises. Invitations were distributed on the notice boards, indicating the time and place for the interviews.

The interviews took place in UNISA Ekurhuleni RSC Library, in the office of the librarian (researcher). Data was collected for the period of two months, from 2 May to 30 June 2018. Each participant was allocated 30 minutes. In order to safeguard the participants' identity, each participant was allocated a number that served as a pseudonym. Prior to the interview, a structured recording for notes taking was prepared, where each question was allocated a new page. Audio recordings, made on the interviewer's cell phone, were kept for those unspoken gestures, such as laughing and sighing, which might have revealed meaning.

During the interview, as indicated by Creswell and Poth (2018:195) data analysis can happen concurrently with data collection. Tentative data analysis began by classifying of participants and identifying themes and patterns. More information was gathered, until there occurred numerous repetitions and no new information came to the forth, when the researcher stopped collecting data. Data collection was completed on the 13 June 2018 and a detailed data analysis followed.

It was also important to verify if the research instruments selected would be able to deliver accurate research result. This was done by validating and checking the reliability of the instruments.

### **3.6 Reliability and validity**

Research methods and findings are likely to be scrutinised and questioned. According Creswell and Poth (2018:253), it is important to evaluate the quality of research by ensuring that the methods and processes are reliable and validated.

Bosire (2011:105) posits that reliability is considered as how well the research instrument measures what it is supposed to measure, whereas validity is concerned with the consistency of the research instrument. The discussions below provides a clear picture of validity and reliability involved in this study.

#### **3.6.1 Reliability**

Flick (2015:230) defines *reliability* as "... the degree of exactness in the measuring of an instrument, meaning that if an instrument is used and the error is too small then the researcher can rely on the instrument because of its possibility in producing the correct results". Reliability is highly significant in an interview, because it guarantees the results obtain through data collection, e.g. if more than one of the participants respond to the same question in a similar way, it mean that it is appropriate (Flick 2015:231). According to Bryman (2016:117), validity encompasses trustworthiness, credibility and transferability. The validity of the findings will be tested in the presentation of the findings in the next chapter.

In this study, the reliability of the instrument was tested during the pre-test to ensure that participants understand the questions in the same way. Inter-code reliability was applied, which made it possible to analyse the content, based on the response given by participants to the questions. Reliability was tested through the verification process, whereby the researcher checked with the participants whether the information provided represented the true value of the response given.



### **3.6.2 Validity**

The validity of the research instrument was ensured by means of a checklist of the manner in which data was transcribed from the tape recording or through member checking. Member validation can be conducted immediately after the interviews with the participants. During a member checking exercise, the transcribed responses should be checked, in order to avoid misrepresentation and to correct possible errors (Braun & Clarke 2013:283). In this study, the transcribed information was checked with the participant immediately after the interview, which has assisted in clarifying some sentences, in order to give meaning.

### **3.7 Trustworthiness, credibility and generalisation**

In qualitative research it is important to make methodological descriptions visible in order to avoid the investigation being biased (Polit & Beck 2010: 1451).

#### **3.7.1 Trustworthiness**

According to Guwan (2015:4) trustworthiness is ensured through coding, member checking, detailed transcription. Guwan (2015:11) further states that trustworthiness is divided into credibility, dependability, transferability and confirmity. In thus study trustworthiness was ensured through proper coding and transcribing detailed information as responses coming from participants.

#### **3.7.2 Credibility**

Creswell (2014:253) believe that credibility is the extend to which data and data analysis is believable and trustworthy. Credibility is also achieved on how the findings of the study are compared to reality and interpretation. In this study credibility was establishe when the researcher shared with participants and were allowed to clarify and provide additional information where necessary. Members were not forced to participate in the study, those who participated participated willingly.

### **3.7.3 Generalisation**

Generalisation is defined by Polit and Beck (2010: 1452) as “the act of reasoning from drawing inferences from an unobserved to observed circumstances”. Polit and Beck further states that it is difficult to generalise in qualitative research but generalisation can be used to infer the sample to the entire population of the study especially for participants who share some selected characteristics. In this study the researcher has used the sample find the true value of the study. Coding can also be used used to generalised when conducting data analysis (Gheodea-Eladi 2015:114). In this study common words were grouped together to a general term when coding.

## **3.8 Data analysis**

Qualitative data analysis focuses on meaning or interpretation of the data collected (Creswell & Poth 2018:181). It is at this stage that the researcher starts by providing information about the processes employed in collecting data, until the final stage of the research. Creswell and Poth (2018:115) take it further and point out, that during the process of data collection, the researcher describes the content analysis; identify phrases related to experience; and categorises verbal data in order to classify, summarise and tabulate so that the richness of themes can be captured and to validate the remarks made by participants.

As advised by De Vos, Strydom, Fouché and Delport (2005:335), data analysis was done in two folds in this study, namely during the data collection stage and also after the data had been collected.

The data analysis methods that were used are outlined in the following sections.

### **3.8.1 Transcribing**

Transcribing refers to the transcription of all verbal word into textual form. Each response is organised according to the selected headings used in the interview schedule (Sutton & Austin 2015:228).

In this study, the researcher's transcribing skills were enhanced during her tenure as a secretary for the Gauteng Regional Quality Assurance. This enabled her to record the information provided by the participants in a diligent manner. The researcher came prepared with a note book to record each response. Each participant was allocated two full pages ,with pre-recorded titles and questions as they appear on the interview schedule. All the responses were recorded by the researcher and the recorded information was validated with the participants to verify their response. in order to ensure that their views were reflected.

### **3.8.2 Coding**

Coding refers to the organisation of data in a reliable and meaningful way. Once data is organised and coded, the relationship between categories is performed and the search results interpreted. This helps in discovering patterns and themes. The process of coding started immediately after the first set of interviews had been concluded. The researcher looked at the transcribed information , made notes and summarised statements made by participants by using highlighters and a pen. Key words and common words were noted and categorised. During the second set of the interview, the same procedure was followed and emerging ideas were also recorded. The ideas of the two sets of interviews were merged in order to check if there are any emerging or new ideas. The ideas were interpreted, codes were listed and categorised. The process continued until saturation.

### **3.8.3 Searching for themes**

Searching for themes involves looking at the codes and categories and identifying the key information. Bryman (2016:456) believes that the process of searching for themes is guided by the research focus; examination of relationships; checking for repetitions; identifying similarities and difference; and grouping of statements into broader units. The process of grouping statements into relationship is referred by Creswell and Poth (2018:201) as meaning or themes.

In this study, common codes from different issues were identified, categorised and merged to form one idea. These codes were categorised in terms of their interrelation to

one another. Patterns were identified and their meaning towards the current study was noted and themes were identified.

When reviewing themes, the researcher checks if the themes identified are relevant to the research literature; if there are possible links on codes that were re-evaluated; and to check for possible links and new concepts (Alhojailan 2012:40). In this study, the researcher repeated the process; relabelled ideas; and compared and matched the ideas with the information in the research literature. Re-emerging ideas were verified and validated.

#### **3.8.4 Defining and naming themes**

This stage involved checking if the themes make a meaningful contribution to the research; if they relate to the research question/s and the research objectives (Bryman 2016:458). In this study, the ideas emerging in the reviewing stage were identified as themes and were captured. The ideas are referred to as *concepts*, which will be interpreted in the next chapter.

### **3.9 Conclusion**

This chapter focused on the research methodology and the philosophical foundation underpinning it, which assisted in identifying the relevant research approach to follow. The primary data collection tool was the semi-structured interview, which was used to collect in-depth information, which was validated by the reflective observation of the researcher.

The population and the use of purposive sampling were also justified and ethical issues were also considered. The next chapter, Chapter 4, will present the research results and findings.

# CHAPTER 4: EKURHULENI RSC LIBRARY USERS' INFORMATION NEEDS

## 4.1 Introduction

The purpose of this chapter is to report and discuss the data gathered through personal interviews with the participants, who are registered students using the UNISA Ekurhuleni RSC Library. The presentation of data is guided by the research objectives and sub-questions and is categorised as follows:

- Information needs;
- Information services and resources;
- Satisfaction in the use of the library; and
- Challenges of usage.

The findings further relate to information gathered through semi-structured interviews, which were guided by the interview schedule (Appendix B).

## 4.2. Information needs

As indicated in Section 2.3.1, information needs are triggered by several factors, which give rise to information needs differing from one person to another, situations in which persons find themselves, and the relevant tasks that the individuals are supposed to perform. As noted by Gunasekera (2010:56), students use the library in order to write assignments, conduct research, prepare for examination and for their personal development. However, the possibility exists that the students could have other reasons for visiting the library. This discussion will address Research objective 1 and Research question 1 of the study, with the intention to investigate the information needs of the students using the UNISA Ekurhuleni RSC Library.

#### **4.2.1 Reasons for visiting the library**

In order to establish the reasons why students visit the UNISA Ekurhuleni RSC Library, the following question was asked: *Why do you use the library?*

The participating students' responses reflected various reasons for using the library. The recorded responses are outlined in the following sections.

##### **4.2.1.1 Computer access**

The participants visit the library to get access to the computers that are available in the library, so that they can connect to the Internet (P1, P7, P16, P23, P31 & P32). They also connect to the Internet by using their own devices (P1, P23 & P26). The reasons they gave for getting Internet access is writing of study related reports (P2, P13 & P17) and to look for jobs (P10, P24 & P18).

“If I am not reading my books, I use the computer most of the time to do group charts and type my assignments”. [P22]

In Section 2.7.1.1, it was indicated that students use computers in the library for collaborative interaction. The reported empirical findings suggest that students work together through online discussions to complete shared tasks, which influences their need for knowledge creation.

##### **4.2.1.2 Library infrastructure**

In section 2.7.1.1, library infrastructure was identified as a physical space where students can sit and study, connect to WiFi and use the library commons. Two of the participating Ekurhuleni students provided the following explanations for requiring study space:

“I require a quiet area to study, I live in a small house and there are small kids who like playing and makes a lot of noise; so I prefer coming to the library to study in quietness”. [P25]

“I normally do not require information only study space, because I use my own books”. [P13]

Similar responses were reported in the literature (Section 2.7.1.1), whereby library space and facilities such as WiFi are regarded as important and encourage the use of the library facilities for development of new ideas. As indicated above, it is evident that some of the participants' living environments are not conducive for study, which is why they prefer to use the library's space.

In addition to using the library for a different purpose, it became evident that students prefer to use the library's infrastructure, because they do not have Internet connectivity at home. Therefore, they need to use the WiFi at the library. This is advantageous when the students use their own devices, as there is no need for the library to free floor space to install more computers and the participants do not have to wait to use the library computers.

The findings also offer insight into how the library infrastructure can be stretched into a open platform where new applications , technologies and processes can be created.

#### **4.2.1.3 Academic related activities**

The academic related activities, as identified in Section 2.3, include writing assignments, preparation for examinations and conducting research. Some of the participating students accentuated their need to visit the library during the UNISA examination period. The following quotations reflect some of the participants' views in this regard:

“I am here to prepare for my examination”. [P6]

“It is examination period, so library is a must to come”. [P19]

Although the participants did not specifically state that they use the library for examination purpose only, it became evident from their responses that they use the library when preparing for their examinations, which is regarded as an academic activity.

These findings depict that students' library visits are triggered by various needs that do not necessarily involve an information need. Individual needs could be different if they were directed to a particular purpose.

## 4.2.2 Information needs prompting library visits

Having identified the reasons for visiting the library, it was important to establish what type of information is normally needed by students. In order to establish these needs, the following question was asked: *What type of information do you normally need when visiting the library?*

### 4.2.2.1 Academic tasks

In their responses, the participants identified both academic task related information needs, as well as some of the subject areas they needed information for. The responses of Participants 5, 9, 18, 20, 26, 24, 26, 31 & 32 clearly capture academic task related information needs:

“I require information to write my psychology portfolio”. [P5]

“I am looking for books related to my modules, criminal law and criminology”. [P9]

“Books that I do not have such as prescribed textbooks for criminology and psychology”. [P26]

“I am mostly here for organisational psychology and personology books”. [P31]

The subjects that were identified in these participants’ responses include Psychology, Criminal Law and Criminology. Other subjects that were mentioned by some of the participants include research in Information Science (P4, P13 & P29), Archival Studies, information technology and HIV/AIDS (P18, P20, P24 & P26). This indicates that the type of information needed by students relates to their fields of study and depends on the project or the assignment involved at the time when the interviews were conducted. These findings are similar to those reported in Section 2.4.1.3, where it was revealed that students need information in order to complete academic tasks.

The majority of the participants (seventeen out of thirty-two) indicated that their purpose for visiting the library is to acquire prescribed textbooks for their studies. These findings are linked to the findings reported in Section 2.4.1.3, where it was established that students still depend on prescribed books to satisfy their information needs.



#### **4.2.2.2 Everyday information needs**

Everyday information needs prompt everyday life information seeking. As shown in Section 2.4.1.1, users who seek everyday life information, seek health-related information, as well as information for skills development, leisure and entertainment purposes. Participant 11 is one of the UNISA Ekurhuleni RSC Library users who also uses the library for leisure and entertainment purposes. According to him, he visits the library “To read newspapers and magazines on PressReader”. [P11]

PressReader is an application that provides access to magazines and newspapers from 204 countries around the world. The findings indicate that the library has a role to play in providing in users’ needs to remain current and to ensure that the individual’s personal needs are satisfied.

#### **4.2.2.3 Reference materials**

Reference materials, such as dictionaries, maps and atlases, were also mentioned as information needed in the library. Participant 6 expressed the need for reference material as follows: “I consult dictionaries and encyclopedias to get background information about what I am studying”.

As indicated in Section 2.7.2.5, Machet (2012:10) also reported on the need for reference material . According to her, post-graduate students use reference sources to acquire background information, because they are easily accessible and identifiable sources of information.

#### **4.2.2.4 Embeddedness of library services**

According to Drewes and Hoffman (2010:75), embeddedness of library services is collaboration of library services with their teaching faculty. Academic libraries are also providing opportunities to promote projects, develop collections that support undergraduate and publications that connects the researchers and the faculties. This type of collaboration will give libraries access to the faculty they serve and also distance learning and online study The embeddedness has also proved to be an effective way to

reach a large number of users. There seems to be a gap that has not been realised by the Unisa Ekurhuleni RSC library.

### **4.2.3 Finding information in the library**

In Section 2.4.1.3, it was indicated that information literacy skills are a prerequisite to navigate library information resources successfully. Therefore, after the participants indicated their reasons for visiting the library and the type of information they need, it was important to establish whether they were information literate. Establishing their information literacy status was particularly important, because limited library skills may deter them from accessing resources and services that are available in the library. Since the UNISA Library offers different kinds of library skills training to support students in becoming self-sufficient, information pertaining to the participants' information literacy status would support the library in adapting the necessary training programmes. Therefore, participants were asked the following question: *Do you know how to find information in the library?*

Three words adequately captured the participants' responses – YES; NO; and PARTIALLY.

#### **4.2.3.1 Yes**

The participants who indicated that they know how to find information in the library, noted the following:

“I have attended library training once and it was fruitful so I find information with ease.” [P1]

“Yes, I received training on searching for books.” [P5]

“Yes, I know how to conduct my own information searches; I was trained on different trainings offered in the library.” [P18]

The participants who had attended library skills training seemed to have benefitted from training.

#### **4.2.3.2 No**

Although being information literate and having the necessary library skills is important to find information in a library, some of the participants acknowledged that they did not attend the training offered by the library. Some of their responses are reflected below.

“Training on different resources in the library, at the moment I use Google and apparently UNISA has sufficient electronic resources that we can use but if we do not possess the necessary skills, it becomes difficult to search for the e-resources”. [P18]

“I have received guidance during the student orientation”. [P3]

“No, I can do my own things”. [P4]

“I do not need training to study”. [P17]

“No, I ask staff to assist”. [P27]

Participant 17 seems to be one of the library users who only uses the library for study purposes. These users normally bring their study material and require space to sit or a quiet area to study. Participant 18 realises the benefit of library training and would like to get training, whereas Participant 27 depends on library staff and does not see the benefit of library training. This view opposes the views of the participants who did receive training and identified a lack of skills as being a knowledge gap that needed to be addressed.

#### **4.2.3.3 Partially**

There were participants who do not bother to search the library catalogue on the computer to establish whether a particular book is available or not. These participants go straight to the shelves and locate the books they need themselves.

“No, I do not know and have not received any training on the use of the library but I do my own things”. [P7]

“I have not been trained on how to use the computer to find books on the shelves, but I know which shelves to look for when I need books for my modules. I would

really appreciate if we were given training because at times even though I know where to get the books as it becomes difficult if the books are not on the shelf". [P12]  
"I have realised that the books I need are at one shelf, so normally I just go straight to the shelf and I am lucky to always find them". [P30]

The majority of the responses indicate that the participants are able to find books that they use regularly, although no formal library training was received. This finding on inadequate training concurs with the discussion in Section 2.4.1.3, where it is observed that the library participants find the required information resources through trial and error or coincidentally. This will, however, limit the students' exploration and effective use of more resources. However, in Section 1.2, it was shown that the UNISA Library does offer information literacy training to registered students, which should assist them in becoming more knowledgeable and help them to perform better in their studies.

Participant 7 does not realise the importance of information literacy training, because she can find books on the shelves, whereas Participant 12 would like to get information literacy training and reckons it is important, in that it enables her to establish whether a particular book is available in the library.

Information literacy skills and the use of different search strategies enable students to identify an information need, how information is organised, navigate through various information resources and use the services available in the library to access the relevant information that responds to their information needs.

### **4.3 Information services and resources**

This section addresses Research objectives 2 and 3 and responds to Research question 2 of the study, with the intention to draw on information on the awareness and use of the information services and resources that are available in the library. In order to achieve these objectives, four sub-questions needed to be answered. The intention of these questions was to determine how familiar the participants are with the information resources and services that are available in the library. The questions also endeavoured

to establish which information resources and services are preferred when the students using the UNISA's Ekurhuleni RSC Library want to address their information needs.

#### **4.3.1 Types of information resources used**

Information resources contain vital information that students use. Information resources come in different formats as online sources (e.g. online journals, e-books and e-newspapers) and printed sources (e.g. textbooks, magazines, newspapers and journals). These were mentioned in Section 2.7.2.5. The available information resources reflect the type of library and, as such, should match the information needs of the library users. Furthermore, it is also important for students to know where to locate the needed information by identifying relevant information resources. In order to establish the type of information resources that are used by the participants, the following question was asked: *What type of resources do you use when you visit the library?*

The responses to this question are subdivided according to the types of library collections that the students use, such as printed and electronic books, journals and databases.

##### **4.3.1.1 Library collection**

The UNISA Ekurhuleni RSC Library collection includes a list of categorised library materials such as reserved books, open collection, maps and law reports. The following responses indicate the type of library material the participants use when they visit the library.

###### **4.3.1.1.1 Books**

Eleven participants make use of the book collection in the library. In their responses, some of the participants also provided reasons for their preferences.

“It depends, if I am writing assignments, I prefer using prescribed and recommended books and when I am doing a research, online materials seem to be the relevant ones because I can find up to date information by browsing through journals”. [P6]  
“I rely on law reports to refer to cases that are cited and it is always easy to concentrate on a printed book unlike online information”. [P2]

“I use reserved and recommended books to study”. [P14]

“I come here for printed maps as they give me a clear picture of what I am looking for”. [P3]

“I use textbooks because it is easy to take them out and read them in my own time”. [P30]

#### **4.3.1.1.2 Journals**

Eighteen participants mentioned that they prefer to use electronic information resources, because they contain relevant information. The quotations below serve as examples of the reasons for participants’ preferences.

“I normally sit on the computer and download journal articles, which I will later read at home”. [P16]

“I come for online resources such as journals and e-books, they are easy to access and use”. [P24]

“My reason for coming here is mainly to use e-journals”. [P32]

The findings concur with the discussion in Section 2.7.1.3, which focused on the type of collections that students consult in the process of seeking information to provide in their information needs. The reported findings on the use of printed books and online journals reveal that some students rely on both books and journals. However, it is worth mentioning that some of the participants – i.e. P2 and P30 –still rely on printed books for their academic work. In general, online and information resources in print are viewed as equally important.

#### **4.3.1.1.3 PressReader**

PressReader is an application that provides readers with access to newspapers and magazines around the world. Four participants indicated that they consult PressReader when they need information contained in daily newspapers and magazines. Two participants even mentioned that they read the magazine to refresh their mind when they take a break from studying.

“I use PressReader, I was introduced to it during one of the library trainings and I can say I am hooked. I get to read most of the newspapers and magazines to refresh my mind when studying, I have also downloaded the app on my phone”. [P12]

“I get updates on what is happening around us, by reading the newspapers on PressReader”. [P11]

The findings indicate that PressReader is used to read current news and also for relaxation. The findings also reveal that information resources used by UNISA Ekurhuleni RSC participants are more than just books, journals, newspapers and magazines. Below are additional information resources that assist participants in responding to their information needs.

#### **4.3.1.1.4 Other information resources**

Other resources include resources such as LibGuides, UNISA Institutional Repository, encyclopedias and archival collections. As indicated in Section 2.7.1.2, access to other information resources is important, because they contain current information and meets users' information needs.

Seven participants, of whom five were postgraduate and two were undergraduate students, mentioned the electronic resources with which they are familiar. These participants are P6, P10, P11, P17, P21, P26 and P27. The following responses reflect the resources they use:

“I am familiar with accessing databases (EBSCOhost, ProQuest and Sabinet), personal librarians and also use LibGuides”. [P21]

“Google scholar is my preference, in actual fact my first choice, due to its friendliness and it is easy to use, I also prefer UNISA Institutional Repository”. [P26]

“I am a regular user of the online encyclopedia, because it provides me with background information”. [P27]

It became evident that some of the postgraduate participants are aware of the institutional repository, databases and LibGuides [P21 & P27].

LibGuides contain library resources such as books and databases that are relevant to a particular subject (Nova Southeastern University 2015).

Two participants (P1 & P17) mentioned Google Scholar, which they regard as a reliable source, particularly in searches for academically related information.

To follow-up on the resources the participants use, it is important to examine the familiarity with services in the library. The discussion aligns with Section 2.7.2.5 with regard to various library services as shapers of or barriers to information seeking and use.

### **4.3.2 Familiarity with library services**

As discussed in Section 2.7.1.3, the university library offers different types of services, which include the provision of physical space, research facilities, document delivery, reference services and relevant collections. As shown in Section 1.2, the UNISA Ekurhuleni RSC Library offers the following services: lending services, information search services in support of research, services to access archival and special collections, technology support, seating space and library admission services for the registration of membership. In order to establish the participants' familiarity with the various services that are available in the library, the following question was asked: *Which library service are you familiar with?* Responses can be subdivided according to the services they use.

#### **4.3.2.1 Lending services**

The library's lending services include activities such as issuing, returning and renewing of library material. This service is generally rendered at the lending desk, but can also be conducted through the use of radio frequency identification device (RFID). Half of the participants seem to make use of this service. Their responses are expressed in the following quotations:

"I normally use the service of taking out books, and I enjoy using the RFID machine, Oh! I also return books that I have taken out". [P1]

"I use the library to borrow and return books". [P3]



“I borrow books online and they get delivered to my address and later when I am done using them I submit them to this library”. [P5]

“I personally renew my books in this library”. [P14]

These quotations serve as examples of participants use of the library’s lending service.

#### **4.3.2.2 Library catalogue**

The online public access catalogue (OPAC) was mentioned as a tool that students could use to establish whether the library has certain sources, where to locate the sources, and if the required sources are available for loan. The following responses indicate some of the reasons for participants use of the library catalogue:

“My preference is to search if a book is available so that I do not waste time going to the shelves”. [P3]

“I come to search for books that I want to use for my assignments”. [P7]

“I search books on the computer catalogue so that I can get the correct shelf number”. [P19]

“I normally check the catalogue first before, to check if the library has a copy so that I can borrow it”. [P22]

The above responses indicate that participants use the catalogue to search for library items that are available for loan. The findings reveal that the catalogue is seen as a convenient way of checking for information resources. This aligns with the discussion in Section 2.8, whereby students search for information resources in the library catalogue, in order to satisfy their information needs.

The UNISA Library catalogue also has a mobile version, namely AirPac, which allows users to access the catalogue from a mobile device such as a cellphone or a tablet. Participants 11 and 21 reported on their use of the AirPac version of the library catalogue. According to P21, “I use AirPac to check for textbooks because of it is easy and convenient. It also helps me not to come to the library when the book I want is not available”.

Participant 11, noted that AirPac is a mobile version of the UNISA's library catalogue and can be accessed on a mobile device such as cellphone or a tablet. She also mentioned that she checks the library catalogue for the availability of a particular book.

In order for the students to respond to academic engagements, the UNISA Ekurhuleni RSC Library supports students doing research by offering various library services.

#### **4.3.2.3 Research support**

As indicated in Section 2.7.1.4, research support includes the use of a variety of services to support students conducting research. Examples of such services include specialist services, such as data management, curation, preservation, bibliometric analysis and training services, which enable clients to gain access to a vast range of information resources. The research support rendered by the UNISA Library includes different kinds of library training and the support of a personal librarian, who will ensure that students are able to use WorldCat in addition to UNISA Library catalogue, UNISA Institutional Repository, the subject databases and bibliographic databases to which the UNISA Library subscribes to and the UNISA Library's LibGuides, which provide guides on any topic and its use. The different research facilities enable the participants to access various information resources to satisfy their information needs. In this section, personal librarians are presented in this discussion as forming part of the research support.

##### **4.3.2.3.1 Personal librarians**

The personal librarians at the UNISA Library, who perform the duties of subject librarians, are responsible for assisting Master's and doctoral students with research related needs, such as training on the use of the library's databases. They also provide input to the UNISA Library collection development activities, since they work in partnership with academics and assist with the compilation of subject specific literature lists. Personal librarians are not available at the regional libraries. Students, who require this service, should subsequently contact the personal librarians at the libraries on the UNISA Muckleneuk and Florida campuses. The following response bears testimony of that:

“I am a Master’s student and I was advised to consult my personal librarian which I have attempted to use a few times and was not impressed so I prefer using the staff in this library, they seem to be knowledgeable and I also use online information resources when necessary”. [P31]

This student is aware of the service offered by personal librarians and wishes to use the service, but is frustrated with the support that was given, as it is not what was expected.

#### **4.3.2.3.2 Literature compilation**

Participants use different strategies to conduct literature searches for their research, such as the institutional repository.

“I am at the moment concentrating on my literature search and consult different avenues such as institutional repositories and subject databases to find relevant information”. [P10]

“I am presently doing my research and I am familiar with different databases as well as LibGuides, at times I look at research materials that were conducted by UNISA students and also compare their works”. [P24]

“I am busy with my conference paper so I do research in the library”. [P26]

Little or no knowledge of different library services put participants at the disadvantaged position. From the findings, it became evident that some of the participants are familiar with different research support services available in the library and are also utilising them to fulfil their information needs.

### **4.3.3 Knowledge of available information resources**

The Unisa Ekurhuleni RSC library provide information that is personally, academically , professionally and culturally enriching. As shown in Section 2.7.1.3, knowledge of the relevant information resources contributes positively to the fulfilling of information needs of the participants. Different subject fields determine the information resources are available in the Ekurhuleni RSC Library. Therefore, in order to establish whether the available resources are relevant, reliable and credible to the participants’ information

needs, the following question was asked: *Do you usually get information from the sources you consult?*

This question intended to establish whether the information resources are accessible to students in the library. Eleven of the participants indicated that they do get the information they required from the sources they consulted. The following responses bear testimony of that:

“Yes, the collection is right for my assignments and even when I need to prepare for my examinations”. [P13]

“Yes. Out of the libraries that I normally visit, Ekurhuleni seems to be the only library where I find what I want, maybe because there’s a few of us using the library”. [P7]

“I always get the information that I want”. [P15]

Findings give credit to library resources, which seem to be adequate and accessible to some of the students. However, although some of the participants are satisfied with the Ekurhuleni Library’s resources adequately providing for their information needs, some of the participants reported that the library does not adequately provide for their information needs. The following responses are evidence of that:

“I am in The College of Science, Engineering and Technology and I was informed that most of the books I require are available in Florida, which is too far”. [P16]

“The library is catering for people who are doing research, majority of research books are on the shelves”. [P21]

“There is a lot of books but I find them not relevant to my studies”. [P23]

The findings indicate that the library does have sufficient resources, although the information needs of some students are not met at all times. There is also a challenge for students enrolled at the College of Science, Engineering and Technology, since the majority of material related to their subject field is housed at the UNISA Science Campus in Florida and are not available at the branch libraries, such as the Ekurhuleni RSC

Library. The students seem to be aware that the collection is in Florida, but express their frustration about cost and distance, which make it difficult for them to travel to the Florida Campus to find library material to satisfy their information needs.

In addition to finding or not finding the information they required, some participants also acknowledged that they sometimes find the information they need. This view is reflected in the following responses:

“I normally phone to check the availability of the book that I require and if it is available I come, if not available I do not bother”. [P1]

“Some modules I find the books but some it is difficult to find”. [P31]

The findings in this question indicate that the majority (that is twenty two) of the participants’ needs in terms of library materials are not met, which contradicts what was mentioned in Section 4.3.2 (b). The findings also concur with what was reported on in Sections 2.3.1 and 2.7.1.3, where it was shown that the availability of material does not guarantee that the material will be used and that the available materials are relevant to the information needs of the users.

Library users consult different sources and, at times, it becomes difficult for them to find relevant information in the sources consulted. Therefore, they need support from the library staff.

#### **4.3.4 Library support**

It is evident that students become more engaged with their studies if they interact with the library staff and engage with information resources. In Section 2.4.1.3, it was indicated that the attitude of library staff towards students and the attitude of students towards the library services is important to consider when evaluating library support. Students may have a negative or positive attitude towards the library staff and vice versa. In order to establish whether the library users use the library on their own or whether they rely on support from the library staff and how they experienced the library staff’s attitude towards

them, the following question was asked: *Describe the support/assistance you get from the library staff.* The responses were grouped as follows into the sections outlined below.

#### **4.3.4.1 Personnel attitude**

The findings reveal that the library staff does support the students and displays a positive attitude when supporting them. These views are reflected in the following quotations:

“There is one particular librarian, her name is X, she is always willing to help even the simplest task of switch on the computers when I am unable to”. [P29]

“The staff here are always willing to help and assist, especially to search for books on the computer and checking for articles”. [P6]

“The staff assist in checking for us books on the system and we have to see to it that we find the books on the shelf”. [P3]

“I normally struggle to use EBSCOhost because it requires password every time I login, so in most cases I forward my query to the library staff who then conduct the search on my behalf and send the correct information to me. I have been doing this for some time now and it helps”. [P21]

The recorded responses relate to the attitude of staff towards students. It is evident from the positive responses recorded above that the students do receive support from staff, while also being able to do things on their own. The findings are in line with what was discussed in Section 2.5. It is also worth mentioning that, as indicated in Section 2.8, the library staff's helpfulness is a positive contribution to the degree in which participants feel content when using library resources. This is a quality function that can be used to evaluate information services and resources.

Although it was noted above that the library staff's support is commendable in assisting participants to satisfy their information needs, it was also mentioned that, due to the library staff not being specialists in research, their knowledge or assistance may be limited and, therefore, there is a need for a research librarian.

#### **4.3.4.2 Research librarian**

The research librarian is a specialised librarian who focuses on students who are conducting research, assisting in training and research related activities. The following quotations reflect the need for a research librarian at the UNISA Ekurhuleni RSC Library:

“Like I have mentioned earlier, these librarians cannot be one size fits all, we need specialised people who will assist students doing research”. [P21]

“You can notice that the staff is willing to help, but I also wish we can get a research librarian, at least so that some of the queries are not referred to the main library for assistance”. [P31]

It can be deduced that the measurement of the performance of staff providing the library services, the use of the library's resources and the client's satisfaction have to be taken into account when measuring library performance and information services and resources

### **4.4 Satisfaction of library users**

As described in Section 2.8, user satisfaction is used as an evaluation tool to determine the effectiveness of the information resources and services in meeting the information needs of users. User satisfaction is also used to recommend measures for improvement. This section addresses Research objective 4 and Research question 3 of the study. The intention is to establish user satisfaction regarding the use of the Ekurhuleni RSC Library.

#### **4.4.1 Information resources**

As indicated in the previous section, this question aligns with Research objective 4 and Research question 3, which focus on establishing the level of satisfaction when using the UNISA Ekurhuleni RSC Library services and resources. With this objective in mind, the participants were asked the following question: *Are you satisfied with the library service rendered by the UNISA Ekurhuleni RSC Library and why?* The responses recorded indicate that some of the students are satisfied, whereas others are not satisfied.

#### **4.4.1.1 Satisfied participants**

Six YES responses were recorded and the following quotations serve as examples of participant satisfaction with the library services and resources.

“Yes, I am satisfied. I always get books that I want”. [P14]

“Yes, I think the two-hour loan period works well, in order to allow other students to get a chance to use the book”. [P18]

“Their service is excellent”. [P22]

These findings conform with the discussion in Section 2.8, which indicated that users who are satisfied with the library resources, are satisfied because their expectations were met.

Unfortunately, there are also participants who are not satisfied with the information resources and services of UNISA Ekurhuleni RSC Library.

#### **4.4.1.2 Dissatisfied participants**

As shown in Section 2.3.1, library users are not always satisfied with the library services that are rendered. The findings of this study reports similar concerns. The participants’ dissatisfaction of information services and resources pertains to their dissatisfaction with electronic information resources and relevant collections.

##### ***4.4.1.2.1 Electronic information resources***

The participants expressed their dissatisfaction with electronic information resources as follows:

“UNISA subscribe to databases but when you want to access them, you struggle especially when using A–Z”. [P21]

“Training on the use of databases, at the moment I use Google and apparently UNISA has sufficient electronic databases that we can use, but if we do not possess the necessary skills it becomes a challenge”. [P28]



The A–Z list on the UNISA Library’s e-resources platform is an alphabetic list of databases. However, investigation into the availability of this facility revealed that it is no longer operational, despite the fact that the link to the facility is still available on the Library website. Participant 21’s dissatisfaction shows how a neglect to remove links on the library website can frustrate users.

#### **4.4.1.2.2 Relevant library collection**

The library collection includes both a print and an online collection. The print collection in the library includes the open collection, reserved/prescribed collection, reference collection and periodicals. Some of the participants are dissatisfied with the relevance of these collections to support their information needs. The following comments reflect their dissatisfaction:

“No. fewer copies for prescribed books, which are not available on a normal loan, I always struggle to get books on the shelves”. [P8]

“Partly satisfied. I am doing agriculture and most of my books are in Florida this library does not cater for all of us”. [P16]

“Books that are available on the systems but cannot be located on the shelves”. [P3]

“Yes, additional prescribed books. Prescribed books are expensive and poor family background also matters in this regard so we cannot afford to buy them”. [P21]

“Prescribed books. Sometimes they are not even available at the bookshops, so will struggle until you finish writing exams. It is only through luck that we sometimes find the books at public libraries around Benoni”. [P18]

“I cannot purchase a recommended book. African language books are scarce. The lecturer recommends a book that can only be found in one library, for example, in Durban. How possible do more than twenty students scattered around South Africa be able to use that one copy? It is even worse because the courier service of UNISA is not working properly, you will wait for a book for a long period”. [P13]

“Lecturers providing wrong titles inside the tutorial letters which makes it difficult to search for the books in the library”. [P14]

“Challenge to get books that are available on the computer but not finding them on the shelves”. [P2]

“Two hours’ control mechanism for computers usage, because students spend a lot of time on the computer just like in other campuses”. [P11]

Recommended books are books that were recommended by lecturers to supplement student’s reading for their modules. As shown in Section 1.2, the library procures multiple copies of recommended books to support students. In turn, prescribed books are books students need to buy to ensure that they master all aspects of the study material. The UNISA Library does not have the mandate to buy prescribed books and only limited books are available in the library collection.

In this section, participants are divided. – Some participants are of the opinion that the information resources are sufficient, whereas others believe that there is a need for additional resources to address their information needs. It can be deduced that there is a need for an additional collection that houses prescribed books. Unfortunately, the Library does not have the mandate to buy multiple copies of these books.

The issue of lecturers providing incorrect titles in the tutorial letters confuses the students and makes it difficult for them to find the correct book in the library catalogue. Unfortunately, this is not an issue that the library can address, although the participants view it as a reflection of the library services. There is also an outcry for more copies of recommended books, particularly books in African language, although it is not specified which African languages demand attention.

The reason for participants’ dissatisfaction can be ascribed to the fact that their expectations are not met. This finding is similar to those reported in Section 2.8, where it was shown that the library collection is used as a determining factor for evaluating the library effectiveness.

#### **4.4.2 Library services**

The library services offered in UNISA Ekurhuleni RSC include library infrastructure and staff. In order to establish the services students require in support of their information

needs, the following question was asked: *What other library services do you think the library should provide?*

This question afforded the participants an opportunity to share their needs and expectations of library services, so that the Library can plan or budget to realise their needs in terms of the services that are rendered.

This question yielded duplication in the participant's responses and some of the responses are reflected in Sections 4.3.2 (lending service, library catalogue and research support). Therefore, to avoid a duplication of responses, only those responses that are directly based on the library infrastructure are noted below.

#### **4.4.2.1 Library infrastructure**

Library infrastructure includes the provision of computers, seating space, lending, printing and photocopy services.

##### **4.4.2.1.1 Library computers**

The UNISA Ekurhuleni RSC Library has seven OPAC computers, which are reserved for information searching purposes only and students visiting the library can use them to search the library catalogue and other library-related resources. However, as shown in Section 1.2, there are fifteen computers available in the Library that can be used by library users for other purposes, such as typing of assignments, group chats and to look for employment. The following quotations reflect participants' responses pertaining to the library computers that are available for them:

“There is a lot of students registered in UNISA, so this library has only eighteen working PCs which becomes a challenge, when it is peak period we all want to seat in front of a PC and work”. [P24]

“There seems to be a challenge with network on busy days, it is very slow”. [P22]

“Computers that are not working due to network connectivity”. [P2]

“If the system is not effective, it will not be able perform effectively which becomes a problem to students”. [P9]

As reflected in the responses, participants complain about the small number of computers, which is inadequate to accommodate the large number of students who come to the library to use the computers. There is also a problem of poor network connectivity on busy days. Similar findings were reported in Section 2.8, where the user's satisfaction is judged by system's effectiveness.

#### **4.4.2.1.2 Seating space**

As indicated in Table 1.1, the UNISA Ekurhuleni RSC Library has a seating capacity of 168 library users. The library also used to have twelve study carrels, also known as *study cubicles*. These are individual rooms in the library designed for individual study. Unfortunately, due to the need to share space with the Vaal University of Technology (VUT), the library was divided into two and all the study cubicles ended up in the VUT study area and they are no longer available to UNISA students. Participant 24 raised some concerns about this situation: "Before VUT occupied the other space we had sufficient study carrels to accommodate post graduates so we need more of them".

The mentioning of study carrels indicates that participants prefer individual space for study purposes.

#### **4.4.2.1.3 Lending services/Loan period**

The loan period concurs with the discussion in Section 2.4.1.2, where it was mentioned that time can be a major factor affecting service delivery in satisfying users' information needs. This is because the time factor can allow and also restrict access to information. This means that the time allocated to use a book may be a limiting factor that may affect the process of seeking information to address information needs. Certain books, for example some of the prescribed and recommended books, may only be used in the library for two hours. This can be problematic. Participants 30 and 14 explained this as follows:

"The photocopy is a major concern because when I issue a two-hour loan period book, I have to go out and look for a photocopy machine, which sometimes becomes a challenge if I cannot find it nearer or even if I find it the costs are too much. So I

have to rush to my office which is at least fifteen kilometers from here. By the time I come back two hours has elapsed and possibilities of being fined are there”. [P30]  
“I feel that the library should have a photocopy machine because of reserved books, if I want to make copies I am unable to do so, I therefore rely on my cellphone to take pictures of the pages that I want to use”. [P14]

These responses indicate a need for a printing and photocopy facility. Such a facility is in high demand in a library and is unfortunately not available in the Library.

Students alluded that the library has no printing and photocopy services, which prompts them to either find an alternative means to satisfy their information needs (e.g. using a cellphone to photograph relevant sections) or to search for a photocopying machine off campus. In turn, the non-availability of this service may incur users with additional costs, in that they could be fined for returning the books after their loan period has expired.

#### **4.5 Challenges of usage**

Using the information resources and services in the library involves a number of challenges that may hinder students in using the library to attend to their information needs. These challenges are the focus of Research question number 4 and Research objective 5 of the study, which aim at investigating the factors that prohibit students in using the UNISA Ekurhuleni RSC Library to respond to their information needs. The following question was asked to determine the challenges that participants encounter when using the library: *What challenges do you experience when trying to get information in the library?*

These challenges are reflected in Section 2.5.

##### **4.5.1 Infrastructure**

The following two responses capture some of the infrastructural issues that challenge some students when they use the library:

“The library does not cater for students that are short, so it becomes a challenge to get books that are on the top shelves”. [P30]

“Provide more plugs in the library, some plugs are not working and on the open space, there are no single plugs only in the reading booths”. [P7]

High library shelves make it impossible for a short person or a disabled person using a wheel chair to access the library material shelved on them. It was suggested that the library should provide kick step stool steppers or ladders for easy access. In addition, a lack of electrical plugs was mentioned as a challenge. Electrical plugs are used to charge approved devices, such as personal laptops and mobile devices. In order for the participants not to unplug any library equipment, Participant 30 requested that additional plugs be provided. This would also be a way of making the library friendlier for mobile device users.

#### **4.5.2 Library rules and procedures**

Loan rules and procedures are used as a mechanism to control access to information sources and to maintain a safe and welcoming environment to library users. This view is also supported by responses reported on in Section 4.4.2.

“The library can increase the loan period of prescribed texts or they can purchase more than one prescribe book so that when one is issued to the student, the other one can remain so that those who visit the library are able to write or do their work”. [P29]

“Library rules are not followed by students, the notices are everywhere but students choose to eat, answer cellphones in the library and nobody is saying anything to them and this disturbs us because we came to the library to get quietness so that we can study”. [P8]

“VUT students and academic staff having classes in the library disturb students who are busy with their academic work”. [P11]

“Discussion in the library is a challenge, which also disturbs fellow library users who are studying”. [P17]

From these responses, it becomes evident that there is a need for access to more prescribed books and a review of the 24 loan policy for prescribed texts. A complaint was also raised about the library rules that are not adhered to by the UNISA Ekurhuleni RSC and VUT library users.

### **4.5.3 Security**

Library security refers to the security of library materials, library users and Internet sites (Akor 2013:40). As indicated by students, security comes in two folds, security in terms of the unauthorised use of Internet sites or Internet abuse. Students access sites that are not related to their academic studies. They visit sites related to gaming, shopping and downloading programmes for personal use. Participant 6's comment reflects this kind of abuse. She suggested the "blocking of sites on the computers which are not academically related because students watch 'soapies', download videos or listen to music while other students are waiting for their turn to use the computers".

The response of Participant 6 emphasises the need for more computers, which was also reported on in Section 4.4.2. The response also shows that students use the computers for personal entertainment, rather than to satisfy their academic-related information needs. This finding not only shows that the students experience a different need for the use of computers than what they are intended for, but that their needs for alternative uses of the computers affect those students, who are waiting for an opportunity to use the computers to satisfy academic-related information needs.

Also, there are cameras installed in the Library to ensure the safety of library users, library staff, library equipment and resources. Despite library security regulations to guard personal belongings, some students still leave their personal belongings unattended. This is reflected in the following comment made by Participant 28:

"I hope the cameras are working, because I tend to leave my personal belongings on the study table to go outside and get some fresh air or to look for a book on the shelf".

The challenges that participants experience mainly pertain to infrastructure and environmental issues, which enabled the participants to identify gaps and suggest measures for improvements in the library.

#### **4.6 Participants' suggestions to improve the UNISA Ekurhuleni RSC Library services**

Users' opinions are important and need to be considered when endeavouring to improve library services. The questions in this section were used to explore areas in which users can provide new and additional information to the challenges mentioned in Section 4.5. The question was posed as follows: *Do you have any additional information that you think may assist the library to provide an excellent service?* With this question, the researcher wanted to establish whether the participants wanted to add more information they viewed as important and that was not covered in the interview questions.

The participants indicated that they would like the Library to improve on their service delivery – i.e. the courier service, online requests and human resources. The online request is in corroboration with Section 2.7.1.2, which points out that students are provided with the interlibrary loan service to access library material not available in the local library. With regard to human resources, participants commented that additional staff is required in the library to supplement the available ones. Below are examples of comments made:

“When I have made an online request, can the library make it possible to deliver at my address?” [P5]

“Staff can help us do requests for books online”. [P27]

“Staff is limited in the library therefore the library support is also limited”. [P9]

The response of Participant 27 can be viewed as an indication of the participant's literacy skills, which the participant has not identified as being a problem and which could be rectified through training. The comments made by Participants 5 and 9 pertain to library



services. Participant 9's comment reflects a need for more library staff, whereas the request of Participant 5 involves a more complicated issue, as the UNISA Library courier services deliver library material to the addresses students use when they register at UNISA. Should they not update their addresses, or if they only provide the university with a postal address, this request cannot be executed.

The additional information that has not been included in the previous discussions includes comments on the lack of air conditioning in the library, which the participants experience as not making the environment conducive for study purposes.

“The library must purchase an air conditioner because it is extremely cold”. [P6]

“Majority of students are not satisfied with the library environment and recommends that the library invest on a good air conditioner”. [P31]

According to these findings, the lack of an air conditioner in the Library is a disadvantage, in that results in an environment that is not suitable to users.

#### **4.7 Summary of findings**

The findings of this study, based on participants' responses to the interview questions, makes it evident that the information needs of students are mostly related to academic pursuits, such as assignment writing, examination preparation, and study and also to access the computer, so that they can look for jobs or keep themselves updated by reading the newspapers and magazines. Various information resources and services are used to satisfy the students' information needs. Students prefer textbooks and online resources such as journal articles, LibGuides and the UNISA Institutional Repository. During the process of consulting information resources, students experience some shortcomings in using the information resources and services. The findings indicate that the majority of the students experience the inability to use certain information resources. This indicates limited information literacy skills and inadequate library services, which relate to a need for improved infrastructure, e.g. improved network connectivity, more study space, the installation of an air conditioner to regulate the temperature in the

Library, and a need for more knowledgeable staff (which specifically relates to the appointment of a dedicated research librarian in the UNISA Ekurhuleni RSC Library to assist with research related activities).

#### **4.8. Conclusion**

In this chapter, the data collected through structured interviews with students using the UNISA Ekurhuleni RSC Library was presented and analysed in the context of the literature review conducted in the study. The findings reveal which information sources are generally used by the students and what they are used for. In general, it seems as if the students' information needs are satisfied. In Chapter 5, the conclusions, limitations and recommendations will be addressed.

## **CHAPTER 5: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

The purpose of this chapter was to discuss the conclusions to the research questions that were formulated in Chapter 1 and to indicate the limitations of the study. Thereafter, suggestions for further research will be made and the value of the study will be discussed. The final summary and comments will conclude the chapter.

### **5.2 Conclusion to the research questions**

The problem statement guiding the study was formulated as follows: An exploration of the information needs of students using the UNISA Ekurhuleni (RSC) Library. The research question was: *What are the information needs of students using the University of South Africa's (UNISA) Ekurhuleni Regional Service Centre (RSC) Library?*

In order to answer the research, question the following sub-questions were identified:

- What are the information needs of students visiting Ekurhuleni RSC Library?
- Are the students visiting the Ekurhuleni RSC Library aware of services that are offered by the library?
- Are students satisfied with the services that are rendered by the Ekurhuleni RSC library?
- Which factors prohibit the students from using the Ekurhuleni RSC Library?

#### **5.2.1 Information needs of students visiting Ekurhuleni RSCLibrary**

The first objective of the study was to establish students' information needs, which motivate them to visit the UNISA's Ekurhuleni RSC Library. The study achieved its objective by demonstrating that, when the students experience an information gap or find themselves in a situation in which information was needed in order to complete their work roles or tasks, they visited the library. The students' individual tasks, situations and roles

trigger different information needs that related to their academic activities, personal development and entertainment or leisure.

#### **5.2.1.1 Situation of action**

A situation was regarded as the context in which an information need arose. The context in this study has been confirmed as being UNISA, which is a distance learning institution. The situations of action requiring information were prompted by the students' academic-related tasks and activities. Successfully completing their academic activities will support the students in realising their objectives of obtaining a qualification that would change their lives.

#### **5.2.1.2 Tasks**

The different tasks students receive in the course of their study gave rise to academic-related activities. In addition to these students also required information for personal development and for leisure purposes.

- **Academic activities**

The findings revealed that students who visited the Library in response to their academic-related information needs required them to complete activities, such as writing assignments, preparing for examinations, conducting research, studying and reading. The findings also revealed that students' information needs emerged from the specific subjects for which they are registered. These include courses or modules in Psychology, Criminology, Criminal Law, Personology, Organisational Psychology, Information Science, Archival Studies, Information Technology, Humman Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) courses.

- **Personal development**

Students also visited the library in response to the information needs that relate to their personal development and to search for employment.

- **Entertainment or leisure activities**

Lastly, the students visited the library in order to fulfil an information need related to entertainment, e.g. reading magazines and newspapers.

### **5.2.1.3 Dialogue**

As indicated in Section 2.3.1.3, dialogue comes in many formats. For example, it can be between the lecturer and the students through examination or through an assignment, through the librarian and the students and through the computer and the student or an information resource. Similarly, the findings revealed that the participants consulted library staff in an attempt to respond to their information needs. They also consulted various other information resources, such as Google, the UNISA Institutional Repository (UIR) and LibGuides. These resources often prompted them to look for more information. As a result, the students responded to the different information needs, consulted different information resources and used various library services.

## **5.2.2 Student awareness of information resources and services offered at the Ekurhuleni RSC Library**

The users' library skills enabled them to be aware and navigate information resources and services that are at their disposal. The users are as such able to access the information needed. Awareness of information sources is a personal factor, as it pertains to the individual student's personal knowledge and skills. The findings revealed that an awareness of information and where it is located supports the participants in locating and using the information sources that are available.

The findings resulting from this question confirmed that students are aware of different information resources, because they have actually used them (i.e. prior knowledge of the sources) and that they also consulted various library services to respond to their information needs. The information resources they consulted included books, journals and reference sources, such as encyclopedias. They also used services such as the library catalogue (OPAC), lending services and the databases to which the Library subscribes. Lastly, the participants also consulted the library staff for support.

The findings also showed a significant relationship between awareness, library skills and the use of information resources and services. This is evident in the findings of this question, which revealed that students, who have attended library training classes, are aware of the information resources and services that are available. As a result, their information searches yield productive results that could be used to respond to their information needs. The findings also revealed that students, who do not possess the necessary library skills, were not as successful in retrieving the information they required as those students who have attended training.

The participants' familiarity with and awareness of information resources and services give credit to accessibility and usage of the resources. In turn, their familiarity and use of retrieved and used information shows that the library resources are adequate to satisfy the students' information needs.

### **5.2.3 Student satisfaction with information resources and services at the Ekurhuleni RSC Library**

The third question reflected on information use, which was also discussed in Section 2.6. In that discussion, it was shown that the found information does not only support the information needs of students, but also supports the creation of new knowledge. The findings confirmed that notion by showing that the information that some of the students found was satisfactory and does respond to their information needs. Sadly, some participants were not satisfied with the information they have found. The satisfaction and dissatisfaction of the students was based on the availability of information resources, the accuracy of information sources, timeliness of the information received and relevancy of information resources consulted. This finding may imply that, although the library endeavours to respond to all students' information needs, it is not always able to do so.

#### **5.2.3.1 Information resources**

The library's performance was evaluated by its information resources and services rendered and how these were effectively used by the students.

#### **5.2.3.1.1 Availability of information resources**

The availability of information resources is the key responsibility of the library and library users are the judges in this regard. According to the findings, the UNISA Ekurhuleni RSC Library provides multiple information resources such as books and journals. The Library staff performs certain services to enable the smooth running of the library. The findings pertaining to the availability of information resources are indicative of some students' satisfaction with the available resources in the library. Unfortunately, there were some dissatisfied participants, particularly those who are registered students in the College of Science Engineering and Technology. These participants looked for information in the wrong library, as the printed resources that are relevant to their information needs are only available in the Science Library on the UNISA Florida Campus.

#### **5.2.3.1.2 Accessibility and use of information resources**

Providing accessible information resources is a goal of a library and, if the information resources can be used to address information needs, such as solving problems and performing tasks, the library has achieved its goal. The findings in this study confirm that students used the information they found to address their academic-related information needs. The resources that are useful in addressing research-related information needs include the resources found in the Unisa Institutional Repository, Google Scholar and the Lib Guides, which guide students to access the relevant information. The participating students, who were able to access and use the library resources, were satisfied, although some feel that the Library is catering for a certain group of people.

#### **5.2.3.1.3 Timeliness**

The availability of magazines and newspapers that are accessible online supports the participating students who need to access current information.

A setback for some of the students pertains to the fact that only a few copies of African language books are available. This is particularly problematic, since the resources may not be available at the local library and it may take some time to reach the requester. Furthermore, the participating students indicated that they could not afford to buy these resources, which are often not available at publishers either. These students'

assignments are bound to be submitted late and they may be penalised for the delay in finding the resources.

#### **5.2.3.1.4 *Relevance***

Relevance is judged by a number of factors, including the use of outputs received after an information search, the relevance of the information resulting from the search and if the user's objectives have been met. The findings in this study confirmed that students are satisfied with the materials they retrieved, as these do relate to their modules. However, it should be mentioned that their relevance judgement was based on their ability to use the resources to write their assignments.

#### **5.2.3.1.5 *Research support***

From the findings, it can be deduced that the UNISA Ekurhuleni RSC Library can improve this specialised service. This will be possible if a dedicated research librarian is appointed to assist students involved in research.

The findings make it evident that there are factors that trigger different information needs and also those that prohibit the use of information resources and different library services.

### **5.2.4 Factors prohibiting students from using the Ekurhuleni RSC Library**

The findings confirm those in previous research, as discussed in Section 2.7. According to that discussion, students have different information needs, which require different methods to address them. The factors that hinder the use of resources and services in the library are outlined in the following sections.

#### **5.2.4.1 Noise in the library**

The findings confirm those of Sloan and McPhee's (2013:4), as discussed in Section 2.7.1.1. According to those findings, students use the library to avoid interruptions at home, because the library is regarded as quiet and conducive for the development of new ideas. Unfortunately, the findings of this study reveal that the noise level in the library was a disturbing factor that does not make the library an environment conducive for study.



#### **5.2.4.2 Inadequate information resources**

Sections 2.7.1.2 and 2.7.2.5 revealed that users preferred to use information resources that are easily accessible. Unfortunately, this study revealed opposite findings. This could be ascribed to the fact that the A–Z list that was available on the Library portal and that could be used to access electronic resources via a publishers' portal is no longer functional. However, the link to this function is still available on the Library website. The availability of the link both confused and frustrated users, as they were not necessarily aware of a different methods of accessing the publishers' discovery platforms. Furthermore, access to some databases required users to provide login details more than once, which participants find discouraging.

#### **5.2.4.3 Distance**

The distance that some students need to travel to visit the UNISA Ekurhuleni RSC Library was a concern to some participants. The travelling costs were their main concern. This finding reflected how contextual elements, such as time and cost, affected access to information.

#### **5.2.4.4 Loan period**

There has been a concern about the two hour loan period for book. The library should consider extending the two hour loan period users enough time.

#### **5.2.4.5 Inadequate library skills**

A lack of library skills and a need for more library skills training seemed to affect the students' information needs and seeking behaviour. This was because the users, who did not have the required skills, were unable to navigate the Library's information systems and to search for information.

### **5.2.5 Information needs of students using the Ekurhuleni RSC Library**

The aim of the overall research question was to explore the information needs of students using the UNISA's RSC Library, the awareness of information resources and services, the satisfaction of the students in using the Library and identifying factors that hinder them from using the library.

This study concludes that the information needs of students are influenced by the need to respond to the academic tasks, personal development needs and also their entertainment needs. The students also use various information resources, such as printed materials and electronic resources. The services that are mostly used are the lending services, which are used to circulate library materials to fulfil their information needs. Other factors include the computers to download articles and to search for information. The students are not entirely satisfied with the library use, because, in the process of responding to their information needs, there are factors that prohibit them from using the information resources and services. These factors, which include noise in the library, inadequate information resources, inadequate library skills and the travelling distance to the library, affect the students' ability to submit their assignments on time.

### **5.3 Limitations of the study**

The study was confined to the students using the UNISA Ekurhuleni RSC Library only. The sampling method that was used does not represent the wider population. The data was collected during the examination period, which limited the time participants' had to participate in the interviews. Furthermore, the study only focused on the students' information needs and did not address their information seeking and use activities, which might have revealed other insights into their use of the Ekurhuleni RSC Library resources. This is justified in Section 5.2.5, where it is noted that students' lack of skills makes it difficult to seek information and no formal steps are followed when seeking information.

### **5.4 Recommendations**

In line with the findings mentioned above, the following interventions were recommended to enable the UNISA Ekurhuleni RSC Library to meet the information needs of students. The recommendations relate to an improved Ekurhuleni RSC Library infrastructure (Section 5.4.1) and improved access to information for the users of the library (Sections 5.4.2–5.4.5).

### **5.4.1 Improved library infrastructure**

The existing library infrastructure needs to be upgraded, in order to make it more user friendly. Infrastructural needs include the following:

#### **5.4.1.1 Electrical plugs**

There was a growing number of students, who used their own devices in the library when they seek information and make use of the library's resources. Therefore, there is a need to increase the number of electrical plugs that are available for their use. The library may also install device charging station or stackable electrical plugs which can accommodate numerous devices at a time.

#### **5.4.1.2 Kick stepper/library furniture**

One of the pressing issues highlighted by some of the participants was their inability to reach higher shelves. As a result, they were unable to access library materials stored on high shelves. It is recommended that the library provides kick steppers or step ladders to ensure easy access to the print collections, alternatively a shelf picking equipment or mobile robotic library system to retrieve books from the shelves.

#### **5.4.1.3 Additional computers**

The findings revealed that the seven computers that provided access to the library catalogue (OPAC) were not enough to support the students' information needs. Therefore, it is recommended that more computers be installed to accommodate the number of students who need to use the computers simultaneously to find the information that would support in their information needs.

The library can also be equipped with loanable computers or tablet vending machines which can only be used in the library or around the campus whereby authorised WiFi network is available.

#### **5.4.1.4 Increased study space**

Given the fact that UNISA shares the Library space with VUT was raised as a concern in terms of the available study space in the Library. The participants are of the view that the study space was insufficient to provide in all their needs. Some participants also indicated a need for discussion rooms and study cubicles. Study cubicles will support Master's and

doctoral students who are conducting their research. Reliable WiFi access will further support students, as they would be able to connect to the Internet by using their own devices.

Virtual discussion forum can also be recommended whereby students can meet online when the space for discussion is a challenge.

#### **5.4.1.5 Visibility of security/increased security**

Although the library does have strict rules regarding the safeguarding of personal belongings, participants raised concerns about the visibility of security personnel. It is, therefore, recommended that more security personnel be appointed to ensure a safer and more secure environment. More security personnel will also support the librarians in controlling disruptive behaviour (e.g. noise) and unacceptable behavior (e.g. eating in the library), which, in turn, will allow library staff more time to support students.

The library should also implement a reliable cybersecurity system that enables library users to access only legal Internet sites for academic research purposes.

In order to curb theft, the library can install secure desks whereby students can leave their personal belongings such as laptops, cellphones and books when they want to take breaks from reading or looking for materials on the library shelves.

#### **5.4.1.6 Air conditioning system**

Good library temperature contributes to making the library a place conducive for studying. Students complained about lack of airconditioning in the library. Therefore, it is recommended that the air conditioning system in the Library be upgraded.

#### **5.4.1.7 Printing and photocopying service**

The lack of a printing and photocopying services in the library is inconvenient to students. The findings revealed that students often have to travel far to access such services. It is recommended that one stop photocopying and printing facilities be made available for students in the library or around the campus.

#### **5.4.2 Improved library collection**

The library should evaluate its collection regularly to ensure that it remains relevant to the user needs. The current collection does not provide in the information needs of all the students, as indicated by the science and engineering students and students enrolled for courses in African languages. Therefore, it is recommended that the library collection be expanded to include more science and technology resources, as well as resources in African languages. Alternatively the library can improve collaboration with courier services which will enable speedy delivery of recommended books from the main library in Pretoria to Unisa Ekurhuleni RSC library.

#### **5.4.3 Increased human resources**

The findings recommend that there should be a designated librarian who focuses on students conducting research. Alternatively, the Library can provide a communication link between the researchers and the personal librarians based in the main library on the Muckleneuk Campus in Pretoria and on the Science Campus in Florida.

#### **5.4.4 Improved library skills training**

Library skills training has emerged as one of the pressing issues affecting the information seeking and use activities of students. The objective of library skills training is to provide users with an insight into the library facilities, so that they are able to navigate the information resources easily. Although the Library has different user instruction sessions and guides, these do not seem to support the students adequately. Therefore, it is recommended that library skills training programmes be adapted to be more effective and supportive of the students' training needs such as online information literacy skills training which is interactive or a module for all first entering students with the goal of increasing student knowledge about the library resources.

#### **5.4.5 Increased awareness of information resources and library services**

The Ekurhuleni RSC Library should regularly promote available information resources and library services to students, in order to improve awareness and usage. Plans to introduce new resources should also be adopted where on a monthly basis streaming of

different databases can be promoted. This could also be done during student orientations and during the Ekurhuleni RSC events

#### **5.4.6 Marketing of the information resources and library services**

The Unisa Ekurhuleni RSC library should develop an effective marketing strategy which will be used to market information resources and library services to students using variety of communications such as social media and relevant websites.

#### **5.4.7 Distance to come to the library**

Students also complained about the distance to come to the library and the amount of money they spent. The library can provide easy off campus access to information resources which is less complicated to enable them to access information at the right time and the right place. The library can also invest in softwares for embeddedness of library services whereby students can receive trainings and information resources online.

### **5.5. Future research**

As outlined in Chapter 1, the study explored the information needs of students in the UNISA Ekurhuleni RSC Library. The findings of this study cannot be generalised to all UNISA RSC Libraries. Therefore, the following elements may be considered for future research:

Information needs of students in the different UNISA colleges;

- Collection development in UNISA's RSC libraries;
- Marketing of information resources and services in the UNISA RSC libraries;
- The maximisation of library training to students in the UNISA libraries; and
- Future prospects of resource sharing between UNISA and VUT libraries.

Research into these aspects may assist library managers and provide an insight into the conditions and services in regional libraries.

## **5.6 Value of the study**

The outcomes of this study can support the regional library management, as it fosters a better understanding students' information needs, particularly of those students who use a regional service centre library. As such, regional library management would be able to assess the services that are provided to students better, in order to support them in their quest to achieve academically. This will assist the collection developers when they select information resources for the regional service centre libraries. The availability of necessary facilities will encourage students to use the library effectively and make a contribution to user satisfaction and also to also contribute to the services that are offered in the library.

## **5.7 Summary and final comments**

This chapter concludes the study and summarises of the research findings. The results of the study reveal that the information needs of students using the UNISA's Ekurhuleni RSC Library include their academic activities, personal development and entertainment. They visit the library to borrow, study and acquire new knowledge by using various resources and services in the library. The limitations of the study were highlighted and some recommendations were made for the improvement of the Ekurhuleni RSC Library services, as well as for future research were made. It was suggested that the findings of the study could support regional library management in making relevant decisions that would be supportive of students' information needs.

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## APPENDICES

### Appendix A: Ethical clearance

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

14 July 2017

Dear Ms Mokgethwa Damarice Pitseng

**Decision: Ethics Approval from  
28 July 2017 to 29 August 2019**

NHREC Registration # : REC-  
240816-052

CREC Reference # : 2017-CHS-  
027

Name : Ms MD Pitseng

Student #: 33898197

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**Researcher(s):** Ms Mokgethwa Damarice Pitseng  
Department of Information Science  
Unisa  
Theo van Wijk, Room 10-182  
0834919695  
[pitsemd@unisa.ac.za](mailto:pitsemd@unisa.ac.za)

**Supervisor (s):** **Madely du Preez**  
0124296792  
[preezm@unisa.ac.za](mailto:preezm@unisa.ac.za)

**Working title of research:**

**Investigation of the information needs of the students using Unisa's Ekurhuleni  
Reginal Service Centre Library.**

**Qualification:** Masters dissertation in Information Science

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Thank you for the application for research ethics clearance by the Unisa College of Human Sciences Research Ethics Committee for the above mentioned research. Ethics approval is granted for 5 years.

*The **low risk application** was **expedited** by the Chair of College of Human Sciences Research Ethics Committee on 14 July 2017 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment. The decision will be tabled at the next Committee meeting on 24 August 2017 for ratification*

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the CREC Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
7. No field work activities may continue after the expiry date (29 August 2019). Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

*Note:*

*The reference number 2017-CHS-027 should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Yours sincerely,

Signature

Prof AH Mavhandu-Mudzusi  
Chair : CHS Research Ethics Committee

E-mail: [mmudza@unisa.ac.za](mailto:mmudza@unisa.ac.za)

Tel: (012) 429-2055

Signature

Professor A Phillips  
Executive Dean : CHS

E-mail: [Phillap@unisa.ac.za](mailto:Phillap@unisa.ac.za)

Tel: (012) 429-6825

## **Appendix B: Interview schedule**

### **A. Introduction**

My name is Pitseng Mokgethwa Damarice (33898197), a master of Arts (Information science student). I am conducting a research on the investigation of the information needs of students using the UNISA's Ekurhuleni Regional Service Centre Library. My supervisors are Dr. Madely du Preez (preezm@UNISA.ac.za) and Dr. Jenny Raubenheimer (raubenheimerjenny@gmail.com ). For the research project to be successful I have to interview participants/students in order to get information, experiences and understanding of the services and resources that are available in the UNISA's Ekurhuleni regional Service Centre Library.

### **B. Brief description of the project**

The purpose of this interview is to investigate the information needs of students who use UNISA's Ekurhuleni Regional Service Centre and to find out if students are aware of the services offered. The information gathered will assist the library management in identifying the information needs of students and to determine the relevance of the service offered in relation to the information needs identified. This will in turn make it easier to serve the students effectively.

You are requested to answer the questions asked and may seek clarity where necessary. Please be honest. I will be taking notes as you respond to the questions, so as to make a formative feedback and to write an evaluation report as data acquired during the process.

The information provided will be used for research purposes only and will be treated as confidential. I received ethical clearance to conduct research from the UNISA's Research Ethics Committee. The ethics chairperson is Dr. Retha Visagie and her e-mail address is visarg@UNISA.ac.za, should you have any questions. The interview will take 20–25 minutes and it is voluntarily. You may, however choose to withdraw at any stage should you not be comfortable.

You are requested not to disclose your name.

Do you have any question before we start with the interview?

Time of interview :

Date :

Place :

### **C. Demographic**

- Which level of study are you?
- In which college are you registered?
- Which suburb or township do you live?

### **D. Information needs**

- Why do you use the library?
- What type of information do you normally need when visiting the library?
- Do you have the required skills to fulfil your needs?

### **E. Information services and resources**

- Which types of resources do you use when you visit the library?
- Which library services are you familiar with?
- Do you usually get information from the sources you consult when you are in the library?
- Describe the type of support you get or assistance from the library staff?

**F. Satisfaction**

- Are you satisfied with the services rendered by the Ekurhuleni Regional Service Centre library?
- Do you think there's a need for additional materials or resources that the library should provide?
- Are you satisfied with the library hours and the location of the library?

**G. Challenges of usage**

- What challenges do you experience when trying to get information from the resources in the library?

**H. Additional information**

- Do you have any additional information that you would like to provide regarding this study?

## Appendix C: Informed consent

### CONSENT TO PARTICIPATE IN THIS STUDY

I, \_\_\_\_\_ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the <insert specific data collection method.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname ..... (please print)

Participant Signature .....Date .....

Researcher's Name & Surname ..... (please print)

Researcher's signature .....Date .....