

USE OF THE LIBRARY IN A TEACHERS' COLLEGE OF EDUCATION IN
BOTSWANA: A CASE STUDY

by

MICHAEL WISDOM KWAME GYIMAH

submitted in accordance with the requirements for the degree of

MASTER OF INFORMATION SCIENCE

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: Dr JA FOURIE

CO - SUPERVISOR: PROFESSOR MP MACHET

June 2011

**USE OF THE LIBRARY IN A TEACHERS' COLLEGE OF
EDUCATION IN BOTSWANA: A CASE STUDY**

by

MICHAEL WISDOM KWAME GYIMAH

submitted in accordance with the requirements for the degree of

MASTER OF INFORMATION SCIENCE

FOREWORD

The writing of this dissertation has been one of the most significant academic challenges I have ever had to encounter. This study would not have been completed without the support, patience and guidance of the following:

My profound gratitude and deep appreciation goes foremost to my heavenly father, the God of my Lord Jesus Christ, for granting me the grace to live and witness the completion of this study which was conducted during a very trying season of my life.

My special thanks and appreciation goes to my supervisor and co-supervisor Dr J .A Fourie and Professor M. Machet respectively for their patience, expert guidance and valuable comments. I would also like to thank Dr Robert Hall for his assistance in the calculation of the statistical indices and Ms Angela Addy for proof-reading the work.

I would like to express my gratitude to the management, library staff, lecturers and student teachers of Tonota College of Education in Botswana for their immense support and co-operation during the data collection phase of the dissertation.

I would also like to thank my lovely wife Barbara Akua Gyimah for being my source of encouragement.

This dissertation is dedicated to the honour and memory of my dear mother and father Matilda Ama Kwaku and Charles Kofi Gyimah respectively for their love and care for me and making it possible for me to achieve one of my academic dreams. Their souls rest in peace.

TABLE OF CONTENTS

	Page
Foreword	i
Table of contents	i
List of tables	ix
List of figures	x
Summary	xi
CHAPTER 1	1
GENERAL INTRODUCTION	1
1.1 Background to the study	1
1.2 Problem statement	7
1.3 Aims of the study	8
1.4 Significance of the study	8
1.5 Research method	9
1.5.1 Literature study	9
1.5.2 Empirical study	9
1.6 Scope and delimitations of the study	10
1.7 Definition of concepts	12
1.7.1 Library use	13
1.7.2 Library skills	13
1.7.3 Information literacy	14
1.7.4 Information skills	14
1.7.5 Teacher education	15

1.7.6	College of education	15
1.7.7	College library	15
1.7.8	User services	16
1.8	Research programme	16
 CHAPTER 2		 18
THE ROLE OF THE COLLEGE LIBRARY IN TEACHER EDUCATION		18
2.1	Introduction	18
2.2	Aims of modern education and resource-based learning	19
2.3	Aims of academic libraries	21
2.4	Resources and facilities of academic libraries	21
2.5	Role and functions of academic libraries	23
2.5.1	Preparation functions	24
2.5.2	User service functions	24
2.5.3	Management functions	26
2.6	Information literacy instruction	27
2.6.1	Role of the library in information literacy instruction	27
2.6.2	Types of information literacy instruction programmes	28
2.6.3	Evaluation and self-assessment	29
2.7	Promotion of library and information use	32
2.7.1	The role of librarians	32
2.7.2	The role of college administrators and lecturers	33
2.7.3	Integration of information literacy instruction into the curriculum	34
2.8	Summary	35

CHAPTER 3	37
STUDENT TEACHERS' AND LECTURERS' LIBRARY	
USAGE BEHAVIOUR	37
3.1 Introduction	37
3.2 Information users and user groups	38
3.2.1 User needs and motives	38
3.2.2 Information user behaviour	39
3.2.2.1 Wilson's model of information usage behaviour	40
3.2.2.2 Fouché's model of user behaviour	41
3.3 College library user groups	42
3.3.1 Lecturers as a user group	42
3.3.2 College students as a user group	43
3.3.3 Patterns of college library usage	44
3.4 Factors influencing the usage of college libraries	45
3.4.1 Availability of library resources and services	46
3.4.2 Information literacy skills and library usage	46
3.4.3 Cultural factors and library usage	48
3.4.4 Gender and college library usage	49
3.4.5 Age and college library usage	52
3.4.6 Course of study and library usage	52
3.5 Summary	54
CHAPTER 4	55
RESEARCH METHODOLOGY	55
4.1 Introduction	55
4.2 Research design	55
4.3 Population and sampling	56
4.3.1 Population	56

4.3.2	Sampling technique	57
4.3.3	Access to participants and research sites	59
4.4	Data collection	59
4.4.1	Questionnaires	59
4.4.1.1	Questionnaire design	60
4.4.1.2	Question formats	60
4.4.2	Interview questions	61
4.4.3	Pilot-testing	63
4.4.4.	Administering the questionnaires	63
4.4.5	Data analysis	64
4.4.6	Anonymity and confidentiality	66
4.5	Summary	66
 CHAPTER 5		 68
FINDINGS OF AN EMPIRICAL INVESTIGATION INTO THE USE OF THE LIBRARY AT TONOTA COLLEGE OF EDUCATION, BOTSWANA		68
5.1	Introduction	68
5.2	Library usage behaviour of student teachers at Tonota College of Education	69
5.2.1	Characteristics of student teachers	70
5.2.1.1	Gender and age	70
5.2.1.2	Year of study	71
5.2.1.3	Course of study	71
5.2.2	User needs and motives for using the library	74
5.2.2.1	Reasons for library usage	74
5.2.2.2	Activities carried out in the library	76
5.2.3	Patterns of library usage	79
5.2.3.1	Periods of usage	80

5.2.3.2	Frequency of usage	81
5.2.3.3	Library usage by year of study	82
5.2.3.4	Types of information sources used	84
5.2.3.5	Types of user services and facilities used	87
5.2.4	Student teachers' perceptions of their library and information literacy skills	89
5.2.4.1	Student teachers' self-rating of library skills	90
5.2.4.2	Relationship between student teachers' perceptions of their library skills and library usage	93
5.2.5	Student teachers' opinions about the contribution of the College Library to their academic success	95
5.3	Library usage behaviour of lecturers at Tonota College of Education	96
5.3.1	Characteristics of lecturers	96
5.3.1.1	Gender and age	97
5.3.1.2	Subjects taught	97
5.3.1.3	Years of teaching experience	99
5.3.2	User needs and motivation to use the library	100
5.3.2.1	Reasons for library usage	100
5.3.2.2	Activities carried out in the library	102
5.3.3	Patterns of library usage	104
5.3.3.1	Periods of usage	104
5.3.3.2	Frequency of usage	105
5.3.3.3	Types of information sources used	107
5.3.3.4	Types of user services and facilities used	108
5.3.4	Lecturers' perceptions about their library and information literacy skills	110
5.3.4.1	Lecturers' self-rating of library skills	110
5.3.4.2	Relationship between lecturers' library skills and library usage	113

5.4	Role of lecturers in motivating student teachers to use the library	114
5.4.1	Methods adopted by lecturers to motivate students to use the library	115
5.4.2	Effects on student teachers' library usage	117
5.5	Provision of resources, facilities and services	118
5.5.1	Current state of resources, facilities and services	119
5.5.2	Information literacy skills as a component of teachers' training programme	120
5.5.3	Information literacy skills instruction programme at Tonota College of Education	122
5.6	Summary	124
CHAPTER 6		127
FINDINGS, RECOMMENDATIONS AND CONCLUSION		127
6.1	Introduction	127
6.2	Role of college libraries in meeting the needs of student teachers and lecturers	128
6.2.1	Aims of education and college libraries	128
6.2.2	International research on student teachers and lecturers as library users	129
6.3	Empirical findings	130
6.3.1	Characteristics of student teachers and lecturers	130
6.3.2	Periods of library usage	131
6.3.3	Reasons for library use	131
6.3.4	Activities carried out in the library	132
6.3.5	Frequency of library usage	132
6.3.6	Usage of library resources, services and facilities	133
6.3.7	Library and information skills and library usage	134
6.3.8	Library use promotion techniques	134

6.4	Recommendations	135
6.4.1	Access to library resources and facilities	136
6.4.1.1	Physical access	136
6.4.1.2	Electronic access	137
6.4.1.3	Intellectual access	138
6.4.2	Promotion of library use by lecturers and librarians	138
6.4.2.1	Marketing and promoting information collections	139
6.4.2.2	Provision and maintenance of library resources	140
6.4.2.3	Human resource development	141
6.5	Further areas of research	141
6.6	Conclusion	142
 APPENDICES		
	Appendix A: Notice of research activity	143
	Appendix B: Cover letter for questionnaire; student teachers	144
	Appendix C: Cover letter for questionnaire; lecturers	145
	Appendix D: Questionnaire; student teachers	146
	Appendix E: Questionnaire; lecturers	152
	Appendix F: Interview schedule	158
	Appendix G: ANOVA frequency of library usage by year of study	160
 BIBLIOGRAPHY		
		161

LIST OF TABLES

	Page
2.1 Library and information service functions	23
4.1 Student teacher respondents by year of study	58
5.1 Student Teacher respondents by age	71
5.2 Major subjects taken by student teachers	72
5.3 Minor subjects taken by student teachers	73
5.4 Periods of library visits by student teachers	80
5.5 Frequency of library usage by student teachers' year of study	83
5.6 Types of information sources used by student teachers	86
5.7 Types of user services and facilities used by student teachers	88
5.8 Student teachers' self-rating of library skills	90
5.9 Effects of student teachers' library skills on ability to make use of library	93
5.10 Students' opinions about the contribution of the college library to academic success	95
5.11 Number of lecturers per subject department	98
5.12 Years of teaching experience of lecturers	99
5.13 Period of library visit by lecturers	105
5.14 Types of information sources used by lecturers	107
5.15 Types of user services and facilities used by lecturers	109
5.16 Lecturer's self-rating of library skills	111
5.17 Lecturer's library skills and patterns of usage	114
5.18 Tasks given by lecturers that require use of the library	116
5.19 Tasks requiring student teachers to use the library	118

LIST OF FIGURES

	Page
3.1 Wilson's information user behaviour model	40
5.1 Reasons for library usage by student teachers	75
5.2 Types of activities carried out by student teachers in the library	78
5.3 Frequency of library visits by student teachers	81
5.4 Reasons for library usage by lecturers	101
5.5 Activities carried out by lecturers in the library	103
5.6 Frequency of library visits by lecturers	106
5.7 Information literacy as a component of teachers' training programmes: lecturers' opinions	121
5.8 Information literacy as a component of teachers' training programme: student teachers' opinions	122

SUMMARY

The primary purpose of this study was to investigate the patterns of library usage of student teachers and lecturers, the factors influencing their usage behaviour and the methods used by lecturers to promote use. A case study was conducted at Tonota College of Education in Botswana. Questioning data collection methods were used. A total of 172 student teachers and 84 lecturers were selected by means of stratified random sampling. The findings revealed that both student teachers and lecturers made frequent use of the library. Borrowing for curriculum-related use constituted more than half of the reasons why student teachers and lecturers used the library. Most of the lecturers indicated that they adopted topic assignments as a method of motivating students to make use of the library. This was confirmed by the majority of student teachers. Most student teachers perceived the College Library as contributing to their educational success.

KEY TERMS

Botswana colleges of education; College libraries; Curricular library use; Information literacy; Lecturers' library usage; Library skills; Library usage; Library use promotion; Resource-based learning; Student teachers' library usage.

CHAPTER 1

GENERAL INTRODUCTION

1.1 BACKGROUND TO THE STUDY

The academic library is valuable for teaching, learning and research and has “the potential to affect student’s educational outcomes and gains” (De Jager 2002:34). Jubb and Green (2007) observe that academic libraries have played critically important roles in supporting research and learning in all disciplines within their host institutions. This is why it is of utmost importance that the development of interest, knowledge, understanding and skills in the use of the library as a resource must be an integral part of education in general and teacher education in particular.

In two influential studies conducted as far back as the 1960s on libraries and student outcomes, Knapp (1966) and Snider (1965) found that students most exposed to library programmes report lower attrition rates, greater academic performance, higher standardized test scores and greater success as they progress through college than peers not participating in such programmes. Subsequent research findings by other researchers in the area of library usage in higher education in both developed (Jiao & Onwuegbuzie 1997, Branch 2003) and developing countries (Sayed & De Jager 1997, Bitso 2000) seem to confirm the fact that there is a significant relationship between library usage and students’ persistence in academic performance and achievement.

Despite the potential value of libraries in education, studies have shown that most libraries in educational institutions are either not used or under-utilized (Fayose 2001, Bitso 2000, Martell 2008). This seems to imply that it is not enough to provide a library in an educational institution, but efforts must be

made to ensure that the library resources are adequately used to satisfy the needs for which it has been established.

The primary function of the library is to satisfy user needs. The library in an academic environment primarily serves as a source of organized information that has been made available and accessible to meet the educational and research information needs of students and the research and teaching needs of lecturers. Therefore, in conducting surveys to ascertain user needs and various aspects of library usage, it serves as an invaluable guide in determining the future direction of library provision.

There are many factors associated with undergraduate usage or non usage of academic libraries. However, the reality, according to Mason (2010:3), is that “many students come to the university unprepared and unequipped to handle the demands of their course work, primarily because they have no experience in library usage and have not acquired the skills needed to do meaningful research”. Mason concluded that this is “not the fault of the student but is indicative of the problems inherent in the public educational system gone astray”.

A study of the current educational thinking emphasizes resource-based learning and the empowerment of students to take control of their own learning (Wang 2007). This emerging new learning environment has a significant impact on academic libraries and librarians. The basic characteristic of the emerging pedagogic paradigm is that the teacher-centred college now becomes a learner-centred and resource-based environment. This is because learner empowerment requires an organized multi-media library information resource to enrich lecturers’ teaching and students’ learning. It also requires a change of attitude both on the part of the student and the lecturer. Furthermore, learner empowerment requires the acquisition of relevant skills for effective information usage (Stanger 2009). Therefore, the

need to ensure the integration of the use of information and library resources into the modern educational curriculum has therefore become a matter of urgency in recent times.

In a situation where teaching and learning has become student-centred, resource-based, and individualized, the ability to use the resources effectively must become a principal concern of education in general and teacher education in particular. The academic library is increasingly becoming a multi-media information centre. The growth of information in multi-media formats compels students to learn how to find, select and use a wide range of resources. Higher education must develop the habit and skills in their students for the effective usage of these information sources in order to produce qualified individuals, who are ready to engage in the lifelong pursuit of knowledge for personal and professional growth. For pre-service teachers in colleges of education in particular, the habit of library usage and the ability to effectively utilize information resources is a key issue, since it may help them to enhance the quality of their teaching when they become professionals. In addition, it is expected that an educator who is comfortable in the use of library resources may encourage his or her students to do the same, and thus contribute to information literacy. It is therefore important for pre-service teachers to become both information literate and effective library users during their training.

Though several factors may contribute to the effective utilization of library resources, the conscious techniques adopted by lecturers in their teaching in order to motivate library usage among their students cannot be underestimated. This kind of teaching method helps to create an opportunity for students to practice the information skills that they have acquired by applying them to the selection and use of information sources as they use the college library. When students gain confidence in the use of their acquired skills during training, then they are likely to apply them elsewhere.

A research study conducted in South Africa by Karelse (2000) has indicated a positive relationship between lecturers' training in library skills, and subsequent promotion of library usage among their students. With the idea of addressing under-utilization of libraries and information resources by students in South Africa, the Cape Libraries Co-operative (CALICO) initiated a project that was known as InfoLit. The aim of the project was to ensure the integration of information skills into the learning experiences of students with a view to empowering them to use information and library resources (*INFOLIT: Annual Report 1996:3*).

The potential role of the lecturer and the librarian as sources of motivation and stimulation for students' use of the college library resources cannot be underestimated and will be investigated in this study.

In Botswana, the 1994 Revised National Policy on Education (RNPE) highlighted the need for the provision of libraries and computer laboratories at all levels of schooling. The policy also recommended the introduction of Computer Science as a subject option in senior secondary schools, and computer awareness for the three years of junior secondary schools. As a result, a new curriculum for computer awareness has been developed and piloted in some secondary schools. The curriculum aims at equipping learners with computer skills that can be applied in all subjects. The policy has also recommended the provision of library facilities at all levels of education. December 2010 was set as the target date for all schools and libraries to be in possession of computers with Internet connectivity and for all teachers to have received ICT training. It is yet to be known whether this aim has been achieved.

Botswana appears to have made a commendable effort to provide computer laboratories and libraries in secondary schools. However, a report by Isaacs (2007:1-14) observed that in most cases access to computers and the Internet

in schools and colleges in Botswana is limited. In situations where these ICT facilities exist at present many struggle with their effective usage. He also noted that while there are libraries in most schools and colleges, they often do not have trained librarians and current collections. Apart from this the majority of learners and teachers lack the basic information skills necessary for the effective utilization of available resources. He concluded that a comprehensive national information literacy framework that is aimed at equipping teachers and students with the necessary skills for effective information usage is imperative.

There are five colleges of education in Botswana, namely Tonota College of Education (established 1990), Molepolole College of Education (established 1985), Tlokweng College of Education (established 1984), Francistown College of Education (established 1973) and Serowe College of Education (established 1964).

Although there is paucity of empirical research studies to ascertain the extent of usage of library resources in colleges of education, a research study by Oladukun and Fidzani (2002:47-57) revealed that almost all the libraries in the colleges of education in Botswana required improvements in terms of physical facilities, resources, staffing and services. As a result of their findings, they recommended that the quality of libraries in the colleges should be improved as a matter of urgency.

The five colleges of education in Botswana have in recent years, experienced a significant increase in budgetary allocation for the acquisition of information sources, ICT applications and the construction of purpose-built libraries in some of the colleges. The librarians and deputy principals of these colleges of education have also formed a standing committee that meets periodically to address common issues affecting the provision of library services in the colleges. The teaching of elements of information skills has been introduced

as a subject module for all student teachers in the colleges of education. What is currently not clear is whether the teaching of these skills have in any significant way influenced the library usage in these colleges.

It is important to note that the type of information sources available in college libraries determines the nature and content of the information literacy programme adopted by each college. For example, if the available information sources are limited to books and other print media or reference sources, student-teachers' information literacy skills will be limited to library skills and printed sources. However, if the collection is composed of multi-media and electronic resources, then the skills training programme will also be multi-varied. This study attempted to investigate the nature of the information skills instruction programmes that are offered to student teachers and lecturers in Botswana, and its influence on college library usage.

As a college librarian based in Francistown, Botswana the researcher became concerned about the quality of college libraries in Botswana. In order to improve resources, services and facilities, however, it is important to know the extent of library usage and the factors determining the needs and usage behaviour of students and lecturers. This enables librarians to understand and meet their information needs. To improve usage the lecturer's task is to motivate students by giving them a variety of assignments. Therefore, it is important to find out the lecturers' role in this regard. As information skills are necessary for effective information usage it is also necessary to determine students' and lecturers' library skills, and whether the library provides information skills instruction programmes. However, not much research has been done in respect to the above aspects in Botswana. Therefore, an appropriate investigation was required.

The Library at Tonota College of Education was investigated as a case study in this research. There are four other colleges offering teacher education and

training programmes in Botswana. However, Tonota College of Education is one of two colleges that offer a diploma in secondary education. The other colleges offer diplomas in primary education. Tonota College of Education also has the highest student enrolment and the largest library amongst the teachers' training colleges in Botswana.

1.2 PROBLEM STATEMENT

The primary purpose of this study is to determine the extent to which student teachers and their lecturers make use of the college library, to study the factors influencing their information needs and behaviour, and to identify the methods used by lecturers to stimulate students' use of the library.

The problem of this study is to investigate the nature and patterns of library usage by pre-service student teachers and lecturers at the Tonota College of Education in Botswana, the factors determining their information needs and usage behaviour, and the role played by lecturers and the College library staff in stimulating student-teachers to make use of the library resources for educational and social purposes. The study also investigates students' and lecturers' perceptions of their own library skills and how these perceptions influence their library usage. The problem can be grouped into the following main and sub-problems.

- 1.2.1 What is the nature and extent of library usage by student teachers and lecturers and what factors influence their usage behaviour?
 - 1.2.1.1 What are the characteristics of student-teachers and lecturers?
 - 1.2.1.2 Why do student teachers and lecturers use the library?
 - 1.2.1.3 What are their patterns of library usage?
 - 1.2.1.4 What types of sources do they use?

- 1.2.1.5 What types of services do they use?
- 1.2.1.6 What are students' and lecturers' perceptions of their own library skills and is there a relationship between these perceived skills and their library usage?
- 1.2.2. What roles do lecturers and librarians play in motivating student-teachers to use the library so as to succeed in their studies?
 - 1.2.2.1 What methods are used by lecturers to motivate students to use the library?
 - 1.2.2.2 What information literacy skills instruction programmes are offered at the college library?
 - 1.2.2.3 What are student teachers' opinions about the contribution of the college library to their academic studies?

1.3 AIMS OF THE STUDY

Answers to the research questions above will contribute to the understanding of how different factors determine the use or non-use of college library resources by student teachers and lecturers. This will enable the researcher to make recommendations that would improve library and information service practice.

1.4 SIGNIFICANCE OF THE STUDY

Knowledge about the extent of use of resources and services will enable college libraries to develop collections and services to meet the needs of college library users. It will also enable them to draw up relevant policies and guidelines for improved resources, services and facilities. Knowledge about the characteristics of each group, their reasons for library use and activities engaged in when they visit the library will enable college libraries to predict

the information needs of users and therefore to meet their potential information needs. Knowledge of information skills will enable the librarian to develop information literacy instruction programmes (user guidance services), and it could also assist lecturers in facilitating the development of students' information literacy. Findings about the methods used by lecturers and librarians to motivate use of the college library by students can contribute to insight into the ways in which information skills can be integrated into the curriculum.

1.5 RESEARCH METHOD

The research method involves a literature review and an empirical study.

1.5.1 Literature study

A literature review was conducted to provide an overview of the current theoretical and empirical research which will serve as a framework for the study. A review of the subject literature shows the relationship between resource-based learning and the library as an integral part of teacher education, and as essential to achieving the aims of modern education. Research findings reported in the subject literature on the characteristics of students and lecturers as library users, and the link between these characteristics and other factors influencing the nature and pattern of library usage, including the relationship between users' information literacy and library usage is provided.

1.5.2 Empirical study

The study was conducted at Tonota College of Education in Botswana. The college is situated in a small town called Tonota in the north eastern part of

Botswana. The college is one of the two colleges in Botswana that offer diplomas in secondary education for teachers. There are three other colleges that offer programmes in primary teacher education and training. Tonota College also has the largest student enrolment and the largest library facility.

The survey population includes the student-teachers and lecturers of colleges of education in Botswana. Tonota College of Education was selected from among the two secondary teachers' training colleges in Botswana as a case study because it is representative of the libraries in the other colleges in Botswana.

The empirical study consisted of a case study and a survey of the library usage behaviour of student teachers and lecturers. In addition to the methods used by lecturers to motivate student teachers' library usage, the perception of the student teachers and lecturers of their own levels of library skills were also evaluated. Data was collected by the use of questionnaires and interview. Two separate questionnaires were used to gather the relevant data from student teachers and lecturers respectively. A library staff member was also interviewed on the telephone using an interview schedule.

1.6 SCOPE AND DELIMITATIONS OF THE STUDY

The units of analysis were the Tonota College of Education Library and its student teachers and lecturers. The aspects studied were students' characteristics such as gender, age, year of study, major and minor subjects taken. Lecturers' characteristics such as gender, subjects taught and length of teaching experience were also analysed. The study also attempted to determine whether the different methods used by lecturers to motivate library use influenced student teachers' actual library usage behaviour. Lecturers' and

student teachers' perceptions of their own library skills were also investigated. However, their actual library skills were not measured.

Although computer skills and online searching skills are forms of information literacy, these skills were not investigated because at the time of this study, access to computer facilities and the Internet at colleges of education in Botswana were very limited. As a result, only students' and lecturers' perceptions about their own library skills were examined. This study does not investigate any further aspects of the information literacy skills of students and lecturers for the following reasons:

- The College library is in the very early stages of introducing Information and Communication Technology (ICT) in the form of Internet access, electronic media and automation of library processes. Library skills, therefore, provide the basis for making better use of ICT when it eventually becomes established. In view of this, library skills are an important first step in information literacy
- Information literacy became important when ICT was introduced. Prior to that, library skills have been taught to all student teachers as a compulsory subject since 2002 to date. This is because student teachers who are to be employed in schools which do not have computer facilities, and where pupils have no access to the Internet have to be well grounded in library skills
- Moreover, it is difficult to measure information literacy skills as a whole because it involves aspects, such as, the person's ability to evaluate information and apply it in problem-solving. This would require both quantitative and qualitative data collection methods. This study, on the other hand, involves primarily a quantitative survey of

library usage and the factors influencing it, and not an in-depth qualitative study of only one facet of usage behaviour

- It was also not possible to validate the results of the self-rated library skills levels of student teachers and lecturers since this would have involved compiling additional interview schedules for student teachers and lecturers. However, time, logistics and finance did not permit

Another limitation of the study lies in the fact that, it deals with a single case at a given point in time since it took place during one school term, namely, the second semester of the 2007 academic year. It may therefore not be possible to generalize with much confidence from findings from this study to situations in other colleges in Botswana or at Tonota College at any other period.

However, in an effort to bring the collected data up-to-date, interviews with the Librarian –in-Charge of Reader Services were conducted in November 2009. The purpose of the interview was to collect information about the developments that had taken place, particularly in the area of information literacy education and ICT applications in the library. It was not possible to conduct face-to face interviews since the researcher had relocated from Botswana to Ghana.

1.7 DEFINITION OF CONCEPTS

The concepts below are defined in the context in which they are used in this study.

1.7.1 Library use

In general library usage is part of information user behaviour, may be defined as “those activities a person may engage in when identifying their information needs, searching for information and using or transferring that information” (Wilson 1999:249). User behaviour therefore begins with the need for information, and is followed by a decision to engage in information seeking, and the selection, retrieval, interpretation and usage of the information.

The term “use” according to the *Collins Concise Dictionary (2001:1,656)* means to “apply for a given purpose or to avail oneself of something”. According to Gyimah (1999:2) library use is an interaction between an individual or a group of individuals and a library or information service with a view to satisfying the need for information. For the purposes of this study, the term “library use” is defined as a purposeful visit to the library with a view to utilizing its resources and services to satisfy a need. Thus, use will be measured by the following: (a) the reason or purpose for a visit to the library; (b) the times or period of the visit; (c) the frequency of use; (d) the type of library resources and services used.

1.7.2 Library skills

The term “library skills” has been used in the literature by various authors to denote “the ability to use the library,” “study skills” “bibliographic skills” or a combination of the above (Bruce, 2000). Library skills is a subset of a broader range of skills termed information skills. For the purposes of this study, these skills have been categorized as (a) knowledge of the system of arrangement of information sources in the library; (b) knowledge of available library services; (c) knowledge of different sections of the library; (d) ability to locate information sources in the library; (e) ability to use the card catalogue; (f) ability to use reference sources; (g) ability to browse for information; (h)

ability to make notes from a range of sources; (i) and ability to compile a bibliography from different information sources. Other library skills include, for instance, skills in online information searching. Although these skills are also part of library skills they are not included in this operational definition for the reasons outlined in Section 1.7 above.

1.7.3 Information literacy

The concept of information literacy first appeared in the literature in the 1970s (Zurkowski 1974) in response to rapid growth in information technology and ‘the recognition that finding, selecting and using information was becoming increasingly complex’ (Behrens 1994:311). Different authors have given different definitions for the concept but the definition that is both current and has achieved wider consensus is that given by The Chartered Institute of Library and Information Professionals (CILIP) which defines information literacy as “knowing when and why information is needed, where to find it and how to evaluate, use and communicate it in an ethical manner” (CILIP ... 2005:15). Information literacy is therefore a composite of a wide range of interrelated types of literacy including library literacy and computer literacy.

1.7.4 Information skills

The term “skill” according to the *Oxford Concise Dictionary of Current English* (1995: 1,303) is defined as “practised ability, a person’s ability to do something well and also as an expert”. In the context of this study the concept information skills refers to the skills that are involved in information literacy as defined by CILIP (2005:15). As a result, library skills and computer skills are essential components of information skills.

In this study the terms “information skills” and “library skills” will each be used where specifically relevant.

1.7.5 Teacher education

Teacher education refers to the formal process of preparation, induction and continuing professional development of teachers for professional work in the education system (Adeyinka 2000:167-175). In Botswana, “these teachers are expected to devise and follow curricular activities that would facilitate and enhance the realization of the objectives of the National Policy on Education” (Botswana. Ministry of Education 1994:3).

1.7.6 College of education

This is a higher education institution, offering programmes leading to the award of a teaching diploma in either secondary or primary school education.

1.7.7 College library

A college library is a library that provides information sources, services and facilities to serve the information needs of a college. The college library is an academic library as are university libraries. They however are usually smaller than the aforementioned types of academic libraries. The term “college library” will be used mainly in this study; the term “academic library” will also be used to refer to libraries at tertiary institutions in general.

1.7.8 User services

The term “user services” refers to the composite range of professional library functions which aim to create effective communication between information records and users. The terms “user service” and “user guidance” are often used as synonyms as guidance is at the core of user services. User service functions include information provision or reference work, user education (which deals with the instruction and education of users) such as information literacy instruction, user advice (which consists mainly of guidance and advice in the use of information media) and a specialised form of user guidance, namely, bibliotherapy which is aimed at users with personal problems (Fourie 2006:73-75).

In this study the term “user services” will be used to refer to the above mentioned functions although the emphasis will be on user education especially in the area of information literacy instruction.

1.8 RESEARCH PROGRAMME

Chapter 1 outlines the background to the study, the problem under investigation, the purpose and significance of the study, the research questions, the research method, the scope and delimitation of the study. It also provides the definition of the terms used in the study.

Chapter 2 outlines the role and functions of a library in education in general, and teacher education in particular based on a literature review.

Chapter 3 examines the characteristics of college students and lecturers as a user group. It also reviews research findings reported in the current subject

literature on studies conducted on college students and lecturers and their library usage and the factors influencing usage.

Chapter 4 outlines the research method adopted for this study. The study population and setting, data collection procedures, and the design and administering of the questionnaire are described.

Chapter 5 presents the findings of the empirical study on the nature and patterns of library usage by student-teachers and lecturers, their perceptions of their own information skills and its relationship to library usage and the role played by lecturers and librarians in promoting students' usage.

Chapter 6 highlights the conclusions drawn and recommendations made based on the findings. Other themes and areas for further research are also identified in this chapter.

CHAPTER 2

THE ROLE OF THE COLLEGE LIBRARY IN TEACHER EDUCATION

2.1 INTRODUCTION

Despite the potential value of libraries to education, studies have shown that most libraries in educational institutions in both developed and developing countries are under-utilized. However, before one can determine whether the college library is under-utilized by student teachers and their lecturers, it is necessary to determine what role and function the college library should play in education in general and teacher education in particular. As pointed out in chapter 1, the library is an important component of resource-based learning. The point of departure of this chapter, therefore, is to examine how the library could contribute to enriching education in general and teacher education in particular.

The chapter examines the aims of modern education and its relationship with resource-based learning and information skills in Section 2.2. It identifies the aims and the various user service functions of an academic library in Section 2.3 and 2.5. Resources in academic libraries, with particular reference to the situation at college libraries in Botswana are discussed in Section 2.4. The chapter also explains how lecturers and librarians can collaborate to create a variety of learning opportunities through the use of the library by students and in this way facilitate independent learning. The different approaches to information literacy instruction and research findings on students' and lecturers' self-evaluation of their library skills and library promotion by lecturers and administrative college staff are examined in Sections 2.6 and 2.7.

2.2 AIMS OF MODERN EDUCATION AND RESOURCE-BASED LEARNING

There are diverse schools of thought regarding the aims of education in the subject literature. Despite the divergent views, the consensus is that the primary aim of education is to fully develop the capacities of the individual and groups so that they become useful to themselves and to the society in which they live. In other words, the aim of modern education is to empower the learner to become an independent productive life-long learner. D'Amicantonio and Scepaniski (1994:11) have noted that “the utilitarian, socio-economic rationale of training to carry out a specific function at a particular age is rapidly giving way to a much more holistic view of education as a life-long process”. Resource-based learning appears to be the foremost pedagogy model that seeks to address these aims of modern education.

Resource-based learning is defined as “learning directly by engaging with resources”. Resources could include “books journals, television, online databases, radio, community experts, government agencies, and the Internet” (Breivik 1998:25). Thus resource-based learning constitutes a refocus of education away from the traditional teacher or lecturer-centred model where the lecturer is the only and most important source of information and the student is viewed as a passive receiver of information, to a situation where the focus is on the student. The lecturer is no longer the most important source of information but integrates the use of multiple resources into the learning process with the view to enabling students to “access a variety of information sources, select and analyze information on a given subject, plan how to use information sources for different purposes and develop competence in using sources of information like libraries” (Cross 2001:31). It is evident that an important pre-requisite for the successful implementation of resource-based education is a resource rich environment such as a well-stocked, accessible and adequately staffed library.

The elements of resource-based learning as discussed above indicate that it is a learning strategy which requires the ability to find and use information and knowledge effectively since it integrates thinking strategies, especially those involving the effective use of multiple information sources into the learning process. In view of this, there appears to be a clear overlap in the concept and practice of resource-based learning and information literacy. The concept of information literacy and information skills has been defined in Chapter 1 Sections 1.7.3 and 1.7.4. The factor that needs to be considered urgently by academic libraries is the fact that resource-based learning at the higher education level is only possible if students are in possession of a range of information handling skills, including library use skills.

Resource-based learning also serves as an opportunity for collaborative professional partnership between the librarian and the lecturer. According to Wang (2007:155) resource-based learning is an “ideal pedagogy for librarians and lecturers interested in working together to integrate information literacy into the curriculum”. Where learning is resource-based, then the library becomes a natural extension to the classroom, and the lecturer and the librarian form a collaborative partnership by facilitating students’ learning in such a way that it genuinely responds to the needs of individuals and develops their potential in unique ways. For instance, lecturers in collaboration with the librarian could promote the use of the library by referring students to a variety of information sources through deliberately designed assignments, project works, required reading lists and similar types of tasks. The librarian could in turn use information sources as learning tools to help students to become knowledgeable and independent learners. The aims of resource-based learning are invariably linked to the aim of modern education, since it emphasizes the empowerment of students and encourages them to take control of their own learning. It is, therefore, important that college libraries play an integral, instead of a peripheral, role in education in general and teacher education in particular.

2.3 AIMS OF ACADEMIC LIBRARIES

The aim of the academic library and the librarian in education has expanded and diversified over the last two decades as a consequence of social, technological, economic and political developments that have transformed academic institutions globally. Key features of the contemporary tertiary education landscape include renewed focus on skills development as a result of technological transformation of institutional infrastructure manifested particularly in the shift from print to digital resources and from physical to digital delivery of information and learning with implication for libraries as learning resource facilities (Abson 2003:3, Brophy 2005:106-115).

The primary aim of the academic library is to provide information resources and develop user services that will meet the teaching, learning and research information needs of the academic communities that they serve.

2.4 RESOURCES AND FACILITIES OF ACADEMIC LIBRARIES

Modern academic libraries are made up of a wide range of physical and non physical resources and facilities. The physical building or space of a library is usually the most visible resource of a library. Human resource, that is, professional and support staff, are important elements of library resources. The print and non-print media and information sources also constitute elements of the resources of a library. For example, Tonota College library has books, magazines, newspapers, journals, and the Botswana collection of United Nations (UN) publications. Non-print media and information sources include electronic databases, e-books and videos. Reprographic equipment, that is,

photocopiers and printers are inclusive. The advent of Information and Communications Technology (ICT) has added a wide range of facilities and equipment to the resources of the library. ICT includes electronic hardware components such as computers and accessories. It has led to the digitization of information collections and facilitated the availability and accessibility of remote electronic resources through the Internet, electronic databases, multimedia and hypermedia products. Last, but not least, are the financial resources of the library. There is a significant relationship between the resources of a library and the type and quality of its user services. For example, it would be impossible for a library that does not have computers with Internet access to offer its students any information literacy programme that has a computer skills component.

In Chapter 1, Section 1.1, it was noted that Botswana appears to have made a commendable effort in recent years to provide computer laboratories and libraries in secondary schools and colleges. However, while libraries exist in most schools and colleges, they often do not have adequate collections and professional library staff. The Government of Botswana has a national ICT policy, known as Maitlamo within which it has a policy for the promotion of e-learning dubbed ThutoNet. According to these policies “December 2010 is the target date for having all schools and libraries with computers and internet connectivity, and for all teachers to have received ICT training, for ICT content to be available at all levels of education and for achieving the 1:7 PC-to-learner ratio” (Isaacs 2007:1-14). The reality is that, apart from the libraries of the five colleges of education who were given some few computers in 2008, access to computers and the Internet in schools in Botswana in most cases is limited. In places where these ICT facilities exist, “the use poses a challenge for practicing teachers who already have their own established ways of teaching and do not know much about computers because ICT was not part of their pre-service training” (Batane 2004:2).

There is no doubt that ICT has now become a very crucial resource of the higher education classroom and library. The advent of ICT in the academic

library has led to the opening of new opportunities in respect of professional library functions such as user services. All the above mentioned resources support the professional library functions.

2.5 ROLE AND FUNCTIONS OF ACADEMIC LIBRARIES

Functions “are performed by individuals who assume particular roles” The term “function” refers to “the specific activities that have to be performed in order to satisfy the demands of the roles” (Woolfolk 2004:278). Roles therefore provide a broader context for the performance of functions, although they are often used as synonyms in the literature.

Professional library functions or tasks may be grouped into three main interrelated and interdependent categories namely preparation functions, user services functions and management functions (Fourie & Gericke 2009:5, 12-13). The academic library as an information service is illustrated in Table 2.1 below.

TABLE 2.1

Library and information service functions

Preparation Functions	Service rendering Functions	Management functions
Collection development Retrieval	Information provision User instruction User advice Bibliotherapy	Planning Organization Administration Control Financing Staffing Marketing Research

2.5.1 Preparation functions

The preparation function involves certain processes such as:

- collection development and management (e.g. collection development policies, selection, acquisition)
- information organization and retrieval for accessibility (e.g. cataloguing, classification and other aspects of technical processing)
- information presentation and dissemination for availability

The preparation function of the academic library is considered as the foundation function since it serves as the basis for the development of user services and determines the quality of service provision at other levels.

2.5.2 User service functions

A service orientation, that is, an attitude of being of service or doing work to benefit others, is a mark of a profession. User service or user guidance is regarded as an active service, a professional guidance function which aims at bringing information records and the user together.

Service provision differs from one type of library to another, and may even differ within the same type of library. Prerequisites for user services are community contact and access to source materials. According to Monroe (in Fourie 2009:8) in the hierarchy of user needs model, the librarian engages in community contact with the view to ascertaining the characteristics and real needs of the user community that the library is established to serve. As pointed out in Chapter 1, Section 1.8.7, four forms of service provision or user guidance can be identified.

- Information provision

Information provision, including reference work, is aimed at conveying information to students and lecturers by means of selection, evaluation and interpretation. Reference work is a form of user guidance. Katz (in Fourie 2009:53) states that "in one sense the reference librarian is constantly serving as a guide to readers in the choice of materials, either specific or general."

- User education

User education enables users to recognize their information need. It involves providing instruction in library and information literacy skills to users for the effective usage of library resources in all formats and the handling of technological delivery systems. User education is also referred to sometimes in the subject literature as the instructional role or function of the library.

The terms "user education" and "information literacy instruction" are used interchangeably for the same function. Both are aimed at orienting, informing and guiding users to make effective use of libraries and other information services, facilities and information sources, and equip them with the relevant skills to find, use, evaluate and apply information to problem-solving, both inside and outside the library context.

Information literacy instruction is a form of user education and is dealt with in Section 2.6.

- User advice

User advice involves reading guidance and motivation given to users and non-users aimed at stimulating them to use library resources. User advice assumes

the librarian's acquaintance with the library resources from which he or she selects and interprets the potential of the most appropriate materials to meet the need or interest of the particular user or group of users. According to Monroe (in Fourie 2009:114), user advice can be used by both the librarian and lecturers as “an effective strategy for stimulating students’ use of the library resources since its objective is to help users in the choice of information sources and it contains a strong element of user motivation and encouragement”. This service level consists mainly of counselling and advice in the use of information media.

- **Bibliotherapy**

Bibliotherapy is a library function that is closely associated with user advice. However, bibliotherapy, unlike ordinary reading or user advice, has a therapeutic aim. This is because it is deliberately aimed at guiding the user to a better insight into his or her personal problems (Fourie & Gericke 2009:6).

2.5.3 Management functions

The management function links the preparation and user services functions into an effective library service provision. Good management knowledge and skills is the prerequisite for effective library service delivery. The critical activities that the academic librarian is engaged in at this level consist of planning, organizing, recruitment of staff, directing, decision- making, coordinating, budgeting, marketing and research. All these management activities are performed to ensure the effective delivery of information services in the academic library environment. It is important to note that the management style or attitude of the academic librarian can serve to either attract or distract students and lecturers from the library.

2.6 INFORMATION LITERACY INSTRUCTION

2.6.1 Role of the library in information literacy instruction

Tyckoson (1997:11) believes that the “complexity of the modern library requires librarians to continually re-instruct existing library users” New technologies bring with them new sources and services. As a result, instruction in the use of “library resources has become more important and central to the role and function of the library in education than it has been in any other time in the past and there is no reason to believe that this need will change in the future” (Elmsborg 2002: 455). For example, despite being able to access remote databases information users still require user guidance and advice from the librarian to negotiate the ever expanding range of options for information sources. Hope, Kajiwara and Liu (2001:13-26) have noted that the advent of the Internet has not reduced the librarian’s instructional role in education. Reference and related services are still being offered in academic libraries but, this time, through sophisticated delivery systems requiring the acquisition of new information skills by the library staff, library users and non-users. Furthermore, some research studies have revealed a positive relationship between information skills and the library usage behaviour of students (Cochrane 2006:97-123, De Jager & Nassimbeni 2003:108-114)

Hence the need for teacher education institutions to incorporate strategies for the promotion of library usage and information skills instruction into their training and library user guidance programmes. Evidence is yet to show whether adequate information literacy instruction and other user services are being offered to student teachers and lecturers in Botswana.

2.6.2 Types of information literacy instruction programmes

Academic libraries have long had a role in helping their users to acquire information skills. As pointed out in Section 2.4.2c above, information literacy instruction is another term for user education. Advances in information and learning technologies have provided growing opportunities for librarians and faculty to collaborate in facilitating information literacy (IL) instruction in higher education. According to Peacock (in Wang 2007:150), current information literacy instruction in higher education can be approached in four main ways. These are intra-curricular, inter-curricular, extra curricular and the stand-alone information literacy programmes.

- Intra-curricular information literacy instruction

This type of information literacy instruction programme is integrated into learning outcomes, learning activities, or assessment of an academic course or a teaching programme, commonly through collaborative partnerships between academic and library staff.

- Inter –curricular information literacy instruction

This type of programme is provided as an add-in session for an academic course or programme by the library in consultation with or at the request of individual academic staff. Normally, attendance is a requirement of the course or programme.

- Extra-curricular information literacy instruction

This type of information literacy programme is provided by the library outside of an academic curriculum and attendance is voluntary.

- Stand-alone information literacy instruction

This type of information literacy programme is taught as an independent course and is solely devoted to information literacy as part of the students' curricula. The stand-alone information literacy course

is either taught as a compulsory course or as part of the general education programme offered in a faculty or university.

The type of IL programme that is being implemented in colleges of education in Botswana is unique in the sense that it does not fit into any of the four types of approaches that have been identified above it rather shares some of their characteristics. It is a collaboratively designed modular programme within the syllabus of the subject Communication and Study Skills. The programme is offered for three years it is and compulsory for all students. The details on the information literacy skills instruction programme practised at Tonota College of Education, which is the same for all other colleges of education in Botswana, are dealt with in Chapter 5, Section 5.5.3.

2.6.3 Evaluation and self-assessment

It is important in higher education to periodically evaluate the impact of information literacy instruction programmes, with the view to ascertaining whether the programmes are achieving the desired objectives. A variety of desired outcomes or objectives are identified in the subject literature. However, the primary motive for evaluating information literacy instruction programmes is to measure its impact on students' and lecturers' perceptions of their own levels of ability in the use of information resources. For instance, Maughan (2001) gives two primary reasons for the need to measure students' information literacy as follows:

- to establish a baseline for students skills around which the information literacy programme might be built
- to assess the effectiveness of particular library instruction approaches or sessions to determine the impact of library instruction programmes

on the students' information literacy skills and academic success, and to generate data with which to communicate with faculty

Most information literacy skills programmes developed for students focus on the ability to use the appropriate resources and services of a university library and to identify, select and locate materials, both print and non print, on a variety of subjects. The initial approach is to focus on the fundamentals of information competence. The most basic skill upon which the higher order information literacy skills of analysis, synthesis and evaluation could be built would be to be able to access information resources.

The following are some examples in the subject literature that have used the above approach. The Teaching Library of the University of California (UC) in Berkley conducted a study over a five-year span to measure the library skills of college students that allowed the respondents to self-rate their competencies. The study used a self-administered survey questionnaire to measure the information literacy levels of graduating UC Berkley seniors (Maughan 2001; 71-82).

The first three questions were designed to collect information about the respondents themselves while the remaining questions were designed to test the respondents' mastery of basic library skills and knowledge of the UC Berkley library system. The questionnaires were administered to three cohorts of graduating students in Political Science and Sociology. Respondents were asked to rate their knowledge and skills on a focus point scale ranging from "Excellent" to "Pretty poor". Over half of the respondents and in some cases as high as 70% to 77% of the respondents self-assessed their skills as either "Excellent" or "Pretty good". In no case during the five year span of the study did more than 14% of the graduating senior student self-ranked their skills as "Pretty poor".

The students' self-assessments of competencies were then compared with their actual scores on a questionnaire designed to measure their library and information research skills. The results showed that between 35.5% and 81% of the respondents actually received poor or failing scores (defined as a score of 65% or lower) on the survey question. The result shows that graduating seniors surveyed held a higher opinion of their library skills than they were able to demonstrate by their test score. They found that respondents who self-assessed their library literacy skills as "Excellent" or "Good" were markedly higher among seniors than fresher's, yet there was "no dramatic trend of higher proficiency from fresher's to senior in the test categories".

In another study that was conducted to evaluate library skills among undergraduates of Johns Hopkins University, Coupe (2001:188-193) found that juniors and seniors were more likely than fresher's to rate their skills as "Excellent" or "Pretty good". However, in contrast to the UC Berkeley results, Coupe found a significant relationship between students' opinion of their library skills and their actual scores. In the course of analyzing the UC Berkley survey results, five basic library skills areas were identified, so as to compare test results among the subgroups surveyed. The areas identified were as follows: the ability to read a call number correctly, ability to identify subject headings in a library catalogue record, ability to identify a reference to a book, ability to identify references to journal articles and the ability to interpret location information in a catalogue serial record.

In only one case, that of arranging library call numbers in order, that 66% or more of the respondents was able to demonstrate their basic skills consistently. In the other basic skills areas the percentage of students who were able to demonstrate the basic skills being tested ranged from 21% to 100%.

It would appear from the studies above that most students tend to over-rate their skills. This implies that self-assessment is an unreliable measure of students' actual library skills. Student teachers' and lecturers' self-rating of their own levels of library skills in the Botswana context will be one of the subjects of investigation in this study.

2.7 PROMOTION OF LIBRARY AND INFORMATION USE

Libraries can play an important role in promoting library and information use and in facilitating information literacy development among students and lecturers.

2.7.1 The role of librarians

Library use promotion is an important aspect of the user guidance functions of the librarian. It involves the adoption of strategies and techniques to make the user aware of library resources and services, and by so doing stimulate usage. These promotional techniques and strategies often take the form of the publication of manuals, bulletins, guides, literature lists, catalogues and bibliographies. Other strategies include organizing special activities, that is, exhibitions, publicity, current awareness services and outreach programmes. Whatever the strategy or technique adopted, the librarian can only effectively promote the use of the library with the cooperation of the college administration and lecturers.

Studies have shown that a significant number of undergraduate students are overwhelmed by the library environment when it comes to actually using the resources to achieve a purpose. Anxiety is often the result. For example Valentine (1993:300-304) found that students were very hesitant about asking

librarians for help; some even expressed their fear when they had to approach particular librarians. Keefer (1993:333-339) suggests that making reference librarians more caring would go a long way to encouraging students to seek help and invariably promote library usage. The lack of adequate recognition of the value of the librarian and the library in the educational and academic programmes of schools and colleges have also been revealed by researchers in many southern African countries and could be described as negative promotion (Zinn 1997, Olën 1993, Metzger 1997). These studies concluded that, in practice, libraries in education play a very small role in the educational process in schools and colleges in developing countries. The extent to which users appreciate the value of the college library in teachers' educational institutions will be explored in this study so that this issue can be put into perspective.

2.7.2 The role of college administrators and lecturers

A study by Nametsegang (1997) investigated the attitude of education administrators in Botswana towards school and college libraries. It was revealed that despite the huge government expenditure on the provision of libraries in educational institutions, many of the library facilities were severely under-utilized because of the negative attitude of college administrators towards libraries.

Hardesty (1995:339-367) in his study developed a set of Likert scale questions designed to measure the attitude of college lecturers with regard to their views on the educational value of libraries and bibliographic instruction. His findings revealed that the majority of lecturers acknowledge that library use could broaden a student's personal and academic horizon. However, the majority of the lecturers in his study felt it was not their responsibility to motivate students' use of the library. Baker (1997:178) suggests that one way of achieving optimum utilization of library resources by students is for lecturers to regularly "design useful, appropriate and do-able assignments" for their

students, and be supported by effective partnership between librarians and lecturers. This strategy will foster the integration of information skills into classroom teaching and learning.

A study conducted by Amoa-Antwi (1992:15) to investigate the library and its programme in one private educational institution in Botswana revealed that the library had “rich and varied stock; and the stock are effectively organized and exploited by teachers and students”. Amoa-Antwi (1992:22) attributed the effective utilization of the library resources to the following: (a) a high level of co-operation between the librarian and teacher: (b) the teaching method of frequently giving assignments to students to ensure the use of library resources and services.

The above assessment suggests that one of the major obstacles to effective utilization of college library resources is lecturers’ teaching strategies. In other words, lecturers who do not promote the use of the library in their teaching and by their own example are not likely to motivate their students to use the college library. The attitude of the lecturers and the librarian’s are important factors that influence the rational and effective implementation of a college library programme.

2.7.3 Integration of information literacy instruction into the curriculum

Information literacy instruction programmes in tertiary institutions have taken a variety of forms such as stand-alone courses or classes, web-based tutorials, course-related instruction, or course-integrated instruction. There are some who have argued whether information literacy should be taught as a separate unit or integrated into the curriculum. Most authors seem to agree that information literacy can be integrated into the subject areas (Rasfte 2002,

Town 2002:83-103). Webber and Johnston (2000:381-397) on the other hand, differ by advocating that information literacy can be treated as a discipline of study in its own right. However, there seems to be a consensus on the need for a collaborative approach in the development and implementation of the information literacy instruction programme. The trend is towards an increasing emphasis on lecturer-librarian partnership and the application of modern information communication technologies (ICT) in delivering information literacy courses.

In view of the above, it is essential for this study to explore the information literacy instruction practices in colleges of education in the Botswana.

2.8 SUMMARY

There appears to be a consensus in the subject literature regarding the fundamental aims of modern education, that is, to fully develop the capacities of the individual and groups so that they can become useful to themselves and to the society in which they live. The aim of modern education and resource-based learning is to enable students to become independent life-long learners. This can only be achieved if the student is information literate consequently bringing into focus the important role of the academic library as a vital resource in any resource-based learning programme. This can be looked at in terms of provision of information resources and the empowering of learners by equipping them with relevant learning skills and attitudes.

The changing trend in information communication technology (ICT) and its impact on the role and functions of the academic librarian has also been acknowledged in the subject literature. A positive relationship between library usages, user education and information literacy instruction has been generally acknowledged in the subject literature. Information literacy instruction is

offered through the library's user education programmes. The academic librarian should play a dynamic instructional role in collaboration with lecturers to develop user services and teaching methods that promote library and information use among students and lecturers.

Findings in the subject literature in respect of students' self-evaluation of their own information skills appear to be inconclusive. Some studies have indicated that most students tend to over-rate their skills. This implies that self-assessment is an unreliable measure of students' actual skills. In contrast, however, other studies have found a significant relationship between student's opinions of their information literacy skills and actual scores. Although it is important to compare records of students' self-assessed competencies with their actual scores on a questionnaire that has been designed to validate their level of competencies, this study did not seek to go that way.

CHAPTER 3

STUDENT-TEACHERS' AND LECTURERS' LIBRARY USAGE BEHAVIOUR

3.1 INTRODUCTION

The preceding chapter determined that the aim of education is to develop the capacity of individuals and groups so they can become useful to themselves and society. It also noted that the primary role of the academic library in this endeavour is to provide the information resources and services that support the teaching, learning and research needs of students and lecturers. It also emphasised the relationship between information skills and library usage and the instructional role that the academic library has to play in order to equip students and lecturers with the necessary information skills that will make them effective library users and life-long independent learners.

This chapter reviews the subject literature on the library usage behaviour of student teachers and lecturers and the factors which influence their patterns of library and information usage. User needs and motivation as a factor influencing user behaviour in general are discussed. This chapter focuses on the typical characteristics of college students and lecturers as a user group as well as other determining factors. These factors include the socio-cultural milieu, gender, age, course of study, the availability of library resources and services, the role of librarians, college administrators and lecturers in library use promotion and information skills instruction.

3.2 INFORMATION USERS AND USER GROUPS

An individual or group of individuals who engage in the act of employing information resources both inside and outside the context of the library to satisfy a need are termed “users” (Gyimah 1999). Other synonymous terms used alternatively in the literature are “readers”, “clientele” and “customer” (Oladokun & Fidzani 2002:47-57). Consequently, a group of users who are located in a defined area are termed a “user community”. For example, the “user community” of the Tonota College Library includes the students, lecturers and administrative staff. Everyone is an information user at one time or the other.

The users of services have to be known if the services offered are to be effective. Different user groups are found in different types of libraries. Different conceptual frames of reference have been developed for the study of different groups of library users. User groups can be identified according to demographic, social, cultural or personal characteristics. Kim and Little (1987) for example have identified user groups according to their occupational role. The different user groups and their unique characteristics invariably determine different information needs, which consequently give rise to the motives to use the library.

3.2.1 User needs and motives

Understanding the motive or driving force behind both college lecturers and students’ use of the academic library is vital to efficient service rendering. The notion of information need has its roots in the field of “User Studies”. Wilson (1995:15) defines an information need as “a situation that requires a solution”.

A number of factors (variables) affect the individual when he or she needs information.

Some authors view a motive as an expression of a basic need (Maslow 1998). Woolfolk (2004) distinguishes between two stages of motivation. These stages are as follows

- the initiating stage in which the need generates a motive
- the decision stage in which the motive leads to a specific type of action or form of behaviour

In order to determine the most basic reason for the use of information resources, various categories of user motives or needs should be identified. The average person has recreational, educational and informational needs which serve as a motive to use diverse information channels, including the library to satisfy the identified need. In order to satisfy potential information needs, therefore, it is important to be concerned with the reasons why information is required.

3.2.2 Information user behaviour

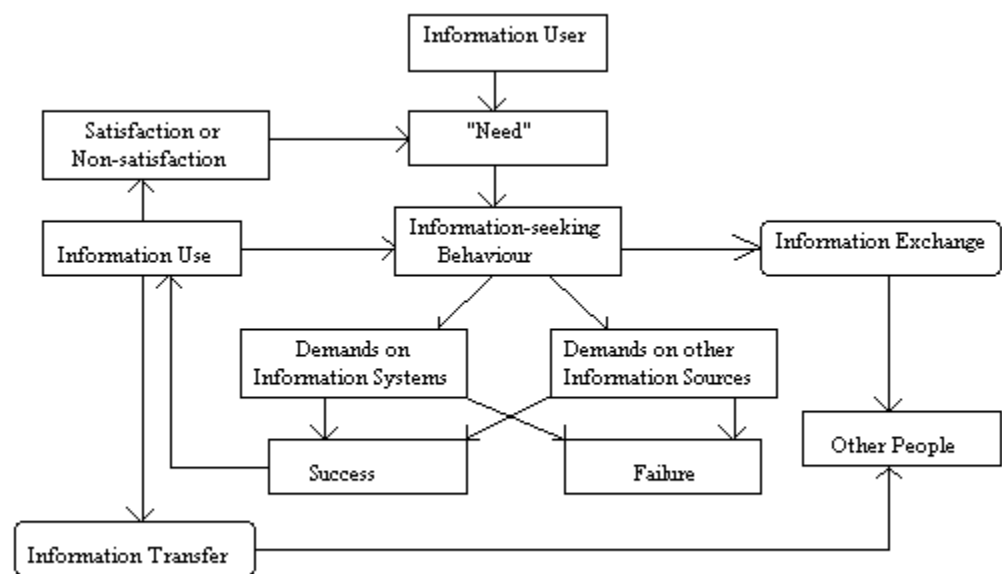
As noted above, information usage is motivated by certain needs. The need generates a motive which then leads to specific actions or user behaviour and ends with the satisfaction of the need through the use of information resources. These actions considered together are known “as information user behaviour”.

3.2.2.1 Wilson's model of information user behaviour

Wilson's (1999: 251) model below attempts to illustrate the relationship between the various aspects of information user behaviour

FIGURE 3.1

Wilson's information user behaviour model



Source: Wilson (1999:251)

The model suggests that information user behaviour arises as a consequence of a need perceived by any information user, who, in order to satisfy that need, makes demands upon formal or informal information sources or services, results in success or failure to find relevant information. If successful, the individual then makes use of the information found and may either fully or partially satisfy the perceived need or, indeed, fail to satisfy the need and have to reiterate the search process. The model also shows that part of the information user behaviour may involve other people through information

exchange that information perceived as useful may be passed to other people. It may also be used by the person himself or herself.

3.2.2.2 Fouché's model of user behaviour

The following phases of usage behaviour are distinguished by Fouché (1972 in Du Preez & Fourie 2010:65) in his model of the reading event or user behaviour as follows:

- the decision to read or use information
- the selection of information sources, systems and channels
- the acquisition of the sources and information
- the utilization of the information and information sources (i.e. the interpretive act)
- the immediate response or long-term effects of information utilization

Information user behaviour includes a descriptive and an explanatory aspect. Facts about the observable aspects of user behaviour provide the researcher with a description of users' information usage patterns. A study of the explanatory aspects of information user behaviour involves identifying and describing the factors that affect and determine the phases or activities described above. Studies of the factors that influence these activities enable researchers to explain user behaviour. These factors include the social, cultural and physical milieu of the user and the context of the information environment, namely record form, content, availability and accessibility.

The abovementioned theoretical framework is used to systematise and discuss the findings reported in the subject literature on college library users in this chapter as well as the empirical findings in Chapter 5.

3.3 COLLEGE LIBRARY USER GROUPS

Findings of earlier studies can be used to develop a profile of the typical student or lecturer as a user of the college library.

3.3.1 Lecturers as a user group

College lecturers are engaged in various disciplines such as the natural, social and physical sciences. It is also important to note that lecturers already have a sound knowledge of their particular subject field, and often require information on small aspects to supplement their knowledge. They also usually search for information themselves when they need it. Lecturers as a user group fulfil a variety of roles during the course of their daily lives, this require the use of information apart from their job performance and occupational roles. It is essential to identify these characteristics in order to be able to determine their needs and thus predict their library usage.

After investigating library use among college lecturers, Jiao and Onwuegbadze (1997:413) found that their user needs and, consequently, their patterns of usage were influenced by the following factors: (a) the variety of roles (work and non-work related); (b) their job demands and performance which requires the use of information; (c) the nature of their disciplines such as the natural, social and physical sciences; (d) lecturer soundness of knowledge of their particular subject field; and (e) a lecturer's research needs. Other studies make reference to lecturers' use of the academic library for leisure purposes (Faber 1999, Kakoma 1991).

3.3.2 College students as a user group

College students as information users are classified by Williams (1995:31-47) into two main contexts. The first relates to, students as information users in a non-school or curricular context. That is students' use of library information resources for leisure, personal or social needs. The second relates to college students as information users in the formal educational or curricular context that is students' use of information resources to satisfy academic or course-related needs.

The current literature seems to suggest that different factors combine to influence trends in students' use of academic libraries. Fayose (2001:16) found that academic and non-academic motives drive students to use academic libraries. He states that "the non-academic motives include students' use of information resources for leisure, personal or social purposes". Academic motives relate to students as information users in a formal educational or curricular context. Thus, students are motivated to use the library's information resources to satisfy academic or course-related needs. Jiao and Onwuegbadze (1997:411) emphasized that the main reason students cited for their use of the library was "to obtain a book or an article for a course paper". An auxiliary reason that the students cited for using the library was for "studying for a test".

Jiao and Onwuegbadze (1997) studied college students to determine how and why they used their library, and they developed a general profile of the college student as a library user. They found that the frequency of library usage among students differed, but the majority of students used the library at least once a week. The study also revealed that students who used the library most frequently tended to be older. A similar study by Burns (1997:31-74) revealed very few differences in personal characteristics between users and non-users

of the library. However, Burns found a positive relationship between the students' year of study and their patterns of library usage.

Furthermore, Jiao and Onwuegbuzie (1997) found that students who prefer to study alone tend to utilize the library more often than students who prefer to learn in co-operative groups. They argue that this may be explained by the fact that many library activities are carried out individually by students. This explanation is supported by their earlier finding that students who prefer to study co-operatively tend to utilize the library more for activities which can be undertaken collaboratively, namely, to study for a test, to study for a class project, to read books on reserve, to read current newspapers and to meet with their friends.

3.3.3 Patterns of college library usage

In a review of the literature on the use of the library by teaching staff and students in academic institutions, Berger and Hines (1994:306-309), reported that most students use the library very rarely and that some students manage to do adequate college work without using the library. The infrequency of library use among students found in the afore-mentioned study highlights the problem of library under-utilization in education, found in other earlier studies. For instance, Knapp's (1959:59) study revealed that "the average student's use of the library was extremely limited and that faculty attitude and librarians are significant obstacles in the way of an effective academic library programme". In conclusion, she recommended that the development of interest, understanding and skill in the use of libraries is an important aspect of college education.

Library use studies conducted in South Africa have also produced some very useful findings, which provide further insight into the problem of under-utilization of educational library facilities evident in Botswana. Olën (1994), for example, surveyed five colleges of education and three universities which offered teacher training programmes in South Africa. The study investigated how perception of the role of the library affects usage. The study found that more than half (56.6%) of the students either visited the library once or twice during the year or never visited it at all. Those students who used the libraries did so as a function of the demand of the assignments given to them by their lecturers. The question that arises is; why do students fail to use the library voluntarily?

The phenomenon of under-utilization of libraries in education has been noted in the overseas literature as well. For example, Breivik (1991) reports the under-utilization of library resources in many schools and colleges in the United States of America. A survey by Valentine and Brain (1988) in three regions in the United Kingdom examined the perception of educators regarding the role of their librarians and libraries. It revealed that despite the varying professional qualifications of the educators, the majority of them in all three regions were not regular users of their libraries. Nearly one-third never used their academic libraries at all. Valentine and Brain (1988) concluded that the library lacks relevance to the particular user group.

3.4 FACTORS INFLUENCING THE USAGE OF COLLEGE LIBRARIES

The subject literature has identified certain factors that influence the patterns of college library usage (Toda & Nagata 2007, Stanger 2009). These are cultural factors, including oral- based culture and inadequate publications in local languages, demographic factors (such as, gender and age), available

library resources and services, teaching methods, attitudes of lecturers and administrators, the relationship between the curriculum and the library, that is the integration of information and library use into the curriculum, and the nature and level of information skills.

3.4.1 Availability of library resources and services

In chapter 2, the different types of professional library functions and their relationship with the aims of education in general and teacher education in particular were discussed. Library resources and processes support user services.

A survey investigation of educational library services in sub-Saharan Africa by Tawete (1991:153-164) provided evidence of the poor state of library provision and utilization in schools and colleges. The study found that although there had been some improvement in the provision of libraries, library services were generally undeveloped and not fully utilized. As a result, according to Metzger (1997:65), “most students left college without acquiring the ability and skills to retrieve and use information”

3.4.2 Information literacy skills and library usage

In chapter 2, information literacy was described as an essential prerequisite for achieving resource-based education and self-directed learning. Information literacy relates to an awareness of information and the ability to use it. As teaching and learning have become student-centred, resource-based and individualized, many scholars, including Werner (2010) and Wang (2007) are

in agreement that the ability to use library resources effectively must become a principal concern of education, and teacher education in particular.

As pointed out in Chapter 2, Section 2.6 the role of the library is to provide user education as part of its user services function, by ensuring that students and lecturers are equipped with the relevant information skills in order to make maximum and effective use of the library (Maughan 2001a:71-82). Information skills in the academic arena are regarded in the subject literature not only as a “functional requirement, but also as a survival requirement” (September 1993:12). This means that it should be a vital component of a student’s education. For this reason, user education or information literacy education should become an integral component of college education.

South Africa has been active in recent years in the area of the integration of information literacy instruction and library use in the outcome-based curriculum for all learning areas and at all educational levels. For example, there has been considerable interest in the Cape Libraries Cooperative (CALICO) information literacy (INFOLIT) project which is aimed at providing undergraduate students, particularly those from disadvantaged backgrounds, with enhanced information literacy (Coetzee 1995:34-40). One of the outcomes of the CALICO project was Likonelo Bitso’s (2000:29-32) empirical investigation of the students of the University of Cape Town to determine whether patterns of library usage and information literacy skills have any bearing on students’ academic performances. The study revealed “a positive correlation between students’ academic performance, their information literacy and library usage” (Bitso 2000:29).

Middleton (2005:12-15) conducted a study to investigate how the Northumbria University’s information literacy programme has impacted on students’ usage of library and information technology (IT) services. Data was

collected from cohorts of first- and second-year business marketing students. In an attempt to measure students' information literacy competencies, data was also gathered from students' assignment bibliographies, research dairies and focus groups. The results of the study revealed that the majority of the second-year students used the library more; they also used a wider range and quantity of information sources than the first-year students. This was attributed to the better information skills, wider experience and longer face-to-face user education that they had received from library staff. The study also revealed that students' use of information sources was strongly influenced by their academic tutors (lecturers) and was largely assessment-driven. Furthermore, the study revealed that the library user education programme and library staff had marketed services and resources to the academic staff in a more focused way in order to indirectly influence students to use the library.

As far back as 1984, Gifford and Gifford (1984:5-9) investigated the effect of a two week library skills instruction unit upon students. The two evaluation measures were frequency of use of the library and the amount of help requested after the unit. Results of the study indicated that teaching a two-week unit on skills for library usage did significantly increase the total usage of the library by students. It was also found that fifteen times versus fifty-one times the experimental group requested assistance significantly less often than the control group.

In the Botswana context, it is not clear whether information skills mediate library use among student-teachers and lecturers in the colleges of education.

3.4.3 Cultural factors and library usage

The term 'culture' is defined by the *Chambers 21st Century Dictionary* (2001:327) as "the customs, ideas, values, symbols, objects etc of a particular

civilization, society or social group at a particular time”. Culture, therefore, is the way of life of a particular social group at an historical point in time. Cultural factors can be explained as those essential elements that characterize a particular social group as an expression of their way of life.

Language is an important medium for expressing culture. An oral-based culture and inadequate publications in the local languages has often been cited in the literature as factors determining academic library usage in developing countries. According to Taole and Chakalisa (1995:12-15) “an educational system which encourages the over reliance on textbooks hinders the use of the library by students”.

In terms of language use, Jiao and Onwuegbuzie (1997) found that in countries where English is the medium of instruction, those students whose native language is not English visit the library more frequently than their counterparts. The authors suggest that this pattern of use might be explained by the fact that these students experienced significantly greater problems adapting to, and using the library than did their counterparts as a result of cultural differences, communication difficulties, and the inability to conceptualize and apply the English language. The authors further suggested that it might be that these students took a longer time to accomplish tasks in the library and thus had to make more trips. This phenomenon may also apply to students who study in countries in southern Africa where the medium of instruction and library resources are predominantly in a language other than their mother tongue.

3.4.4 Gender and college library usage

The relationship between lecturers’ gender and library use has not been dealt with in a substantial way in the subject literature. However, gender differences

in students' behaviour in respect of certain subjects have been examined. For example, Jungwirth (1991:263) suggests that "over a long period the gender of the participants in the mathematics class, for instance, does not play a role in classroom interaction or in library use". Singer (1996:659-679) surveyed 443 college faculty members in Mathematics, English, Biology and Psychology in 163 institutions. He examined the effect of teachers' gender on their teaching approaches. Among the nine variables (gender, academic discipline, profession, age, academic rank, tenure, class level, class size, selectivity level of teachers' current institutional affiliation and teaching loads) investigated, gender emerged as one of the most significant predictors of faculty teaching patterns. In particular, female teachers tended to promote learning environments that are more student-oriented, facilitative and resource-based. The findings in the afore-mentioned studies seem to suggest that female lecturers are more inclined towards facilitating information skills development and library use among students.

Female teachers also appeared to use class discussion more frequently, encourage collaboration and affective learning techniques, such as project work, rather than other instructional behaviour. The extent to which gender is linked to the methods used by college lecturers to promote student-teachers' library use has not been explored in the Botswana context.

The current subject literature also seems to suggest that factors, such as, gender and the year of study of students appear to influence user needs and behaviour. In a study of student teachers in Botswana, Gyimah (1999) found that 56% of students who used the library for research or project work were in the third year, 30% were in the second year and 12 percent were in the first year. He concluded that this may be due to the fact that students in the third year have to produce a project as part of their course requirements.

In the same study, Gyimah (1999) found that 63% of those who came to the library to read newspapers were first-year student-teachers, and that more

male student teachers tend to visit the college library for this reason than their female counterparts. In contrast, more female students tend to read popular magazines such as *Bona*, *Thandi*, *People*, and *SA Ebony* than male student teachers. The college library subscribes to these magazines.

One of the earliest studies conducted by Oppenheim (1962:42-57) to assess the information-seeking behaviour of students using academic libraries, attempted to compare first, second and third year students; to compare men and women; and to compare the impact of the course being taken by the student. The study found more book-buying than had been anticipated, with women students buying less than men. The study also showed heavy reliance on the library, with more women than men rating the attitude of staff and provision of seats as factors influencing use.

Oppenheim (1962:55) concluded that there was some evidence to suggest that those who disliked the college library seemed to dislike reading generally: “they owned somewhat fewer books, read somewhat less, and were less prone to read a book from cover to cover, used the lending library less often, and in extra-curricular reading their taste more often ran to fiction, especially crime, detective, westerns, and mysteries.”

Jiao and Onwuegbuzie (1997:411-420) on the other hand, developed a demographic profile of the typical student user of the college library in the United States. They found that males frequent the library more often than females, and do so in order to study for a test or to study for a class project, and to meet their friends. Females tend to use the library more often to obtain a book or an article for a term paper. The authors concluded that it appears that males tend to utilize the library more co-operatively and for social activities than do females.

3.4.5 Age and college library usage

Onwuegbuzie, Jioa and Bostik (2004: 121-127) found a positive relationship between age and frequency of library visits. Older students undertake most of the library activities, and utilized library resources more extensively. They mostly use the library for reading current events in newspapers, obtaining a book or article for a course, checking out a book, and searching for information for research theses. The authors concluded that the finding may be explained by anxiety levels. Younger college students typically have higher levels of anxiety than their older counterparts (Jiao, Onwuegbuzie & Lichtenstein 1996:151-163). The authors argue that the relationship may also reflect library experience, since a positive relationship was found between age and the number of library courses taken.

3.4.6 Course of study and library usage

Maughan (2001b:354-366) studied the purposes that drove lecturers and students in the United Kingdom to use their academic libraries. She found that the purpose varied, depending on the department. She reports that the majority (over 75%) of lecturers in the departments of Classics, Ancient History and Mediterranean Archaeology, Chemical Engineering, Chemistry and Political Science responded that they browse library sources “sometimes” or “often”. On the other hand, smaller percentages of lecturers and students in the fields of Business (65%) and Latin American Studies (57%) do so. She also asked students about browsing the library stacks as a specific means of finding research materials or exploring ideas. The percentage of students in each faculty who engaged in browsing for these purposes varied. In the case of Ancient History and Mediterranean Archaeology, the majority (92%) of students browsed through the library stacks to find information. The

percentage of students who engaged in browsing was much lower in the case of Chemistry (52%) and Chemical Engineering (50%).

Maughan (2001b) found that more than three quarters of students in the faculties of Ancient History and Mediterranean Archaeology, followed by 62% of students of Classics and Latin American Studies said that they “often” “sometimes” or searched print indexes and bibliographies, more than half of Business and Chemistry faculty students said that they “rarely” or “never” searched these print resources. She concluded that library use varied across departments. The reason why fewer students studying science-based disciplines browsed the library stacks for information may be due to the fact that recent information in these disciplines is important and is more likely to be available electronically. In teachers’ training colleges, the composition of students using the library and the distribution of these students from different faculties or departments is unclear.

Whitmire (2006:379-385) attempted to determine whether students’ patterns of library use changes over time. The study was conducted over a three year period following students throughout their years of study. A notable characteristic of the study is the fact that it was conducted in multiple institutions. Findings from this study indicate that students engage in the following activities, listed in descending order as follows: using the card catalogue or computers, compiling a bibliography; using the library to read or study; and reading in the reserve or the reference section. Her analysis indicates that usage in each area either increased or remained constant throughout the three years covered by the study.

3.5 SUMMARY

This chapter evaluated the current literature on the patterns of library usage and the factors influencing the usage behaviour of academic library user groups in both developed and developing countries. It reveals that diverse factors influence library use among student teachers and lecturers. It was also noted that the inadequate provision of library resources and over reliance on textbooks impact negatively on library usage. Findings suggest that female lecturers tend to be more inclined towards facilitating information skills development and library usage than their male counterparts. Oral-based culture and inadequate publications in the languages of those cultures, and lack of information literacy have also been cited in the literature as militating against students' library usage.

The extent to which the findings reported in the current subject literature hold true among student teachers and lecturers in Botswana are not clear, hence the motivation for conducting this investigation. The next chapter outlines the research design and methodology for an empirical investigation of the factors influencing library usage in a college of education in Botswana.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

In chapter 3, a review of findings reported in the subject literature indicates that the factors that influence the library usage behaviour of lecturers and students in an academic environment are gender, age, year of study, course of study, availability of library resources and services, teaching methods, nature and level of information skills, and attitudes towards the library. In chapter 1, it was pointed out that there is the need for an empirical study to determine the extent to which student teachers and lecturers in colleges of education in Botswana make use of the library and what factors play a role in their library usage.

This chapter outlines the methods and procedures adopted in this empirical investigation into the nature and extent of college library usage by student teachers and lecturers, the factors influencing their usage behaviour, and the methods used by lecturers and librarians to promote usage. The research design, sampling procedure, instrumentation and population of the study, data collection and analysis are described; an overview of ethical measures adopted is also explained.

4.2 RESEARCH DESIGN

A research design is a blue-print of how any investigation is conducted (DeVos 1998:37-50). Although the survey research design used was largely quantitative and descriptive, a qualitative element was incorporated by including open-ended questions in structured questionnaires and in-depth questions in an interview with the Readers' Services Librarian of Tonota College of Education Library. The study is largely cross-

sectional although two years elapsed between the survey and the interview mentioned above. This was due to the fact that the researcher had to relocate from Botswana to Ghana as explained in Chapter 1, Section 1.7.

4.3 POPULATION AND SAMPLING

The population and sampling techniques adopted in this study have been identified and discussed in Sections 4.3.1 and 4.3.2 below.

4.3.1 Population

As already explained in chapter 1, there are five teachers' colleges of education in Botswana. However, by virtue of the time frame for the completion of this study and the resources available, the investigation could not cover the entire population of student teachers and lecturers at all the Colleges of Education in Botswana. Instead, Tonota College of Education and its student teachers and lecturers were selected as the survey population. This was done in view of the fact that it is typical of the other colleges of education in Botswana in terms of facilities and student enrolment. It also has a purpose-built library. As at June 2007 when the investigation was conducted, the total number of student teachers and lecturers at Tonota College was 567 and 84 respectively. The study sample was selected from student teachers and lecturers of Tonota College of Education.

This study involves elements of an in-depth study and a description of a single individual case with a view to providing insight into a particular problem situation. The results from the study could be indicative of problems that might exist in other colleges of education in Botswana or elsewhere and enable researchers to understand other cases of a similar nature. This study can therefore, be described as a typical case study. A case study enables an in-depth study of a particular situation rather than a sweeping statistical survey (Creswell 2009).

4.3.2 Sampling technique

According to Gay and Airasian (2003), the minimum sample size depends on the type of research involved, it ranges from between 10 to 20% for descriptive research to 30% for correlation, causal-comparative and true experimental research to 100% for a research population size of less than 100. A probability sampling technique was adopted with the idea that the results from the sample would be applicable to the whole population of Tonota College of Education.

In particular, a stratified sampling technique was adopted for the selection of the sample population. The study population was divided into three strata, namely the first, second and third years of study. Within each stratum, a systematic sampling technique was adopted in the selection of the sample. The sample for each stratum was then combined to obtain the total sample size. Stratified sampling ensures that every student teacher in every year of study has an equal chance of being selected in relation to their proportion within the total study population. It is a mixture of random selection and selecting on the basis of specific identity or purpose (Creswell 2009:21)

Systematic sampling ensures that choosing every n th case also ensures that the selection within every year of study is also random. The principal advantage of these two sampling techniques over others is its ability to guarantee that crucial factors relevant to the research, such as student teachers' year of study and gender are covered in proportion to the way they exist in the wider population.

The study population is composed of student teachers studying different courses and a unique set of course learning requirements, and lecturers from 16 subject departments. As a result, soliciting answers from as many student teachers and lecturers as possible at

different levels of operation was the best approach to understanding the patterns of library use and the methods adopted to promote usage.

Preliminary information about student teachers, which included the complete list of student enrolment for the first, second and third years, was obtained from the office of the Dean of Students.

Using the stratified random sampling technique described above, a total sample of 172 (30.3%) student teachers was selected from the total population of 567. In order to ensure greater representation of the overall population, the sample selected is 30.3%, approximately 10% above the minimum range of between 10 to 20% recommended by Gay and Airasian (2003) for descriptive research. Table 4.1 below shows student teacher respondents by year of study. The sample selection within each year of study was done to reflect the proportion of student teachers in each year of study in relation to the overall population. Out of a total student teacher enrolment of 165 in the first year, 46 (26.7%) students were selected, of a total of 178 enrolments in the second year and 224 in the third year, 57 (33.2%) and 69 (40.1%) student teachers respectively were selected.

TABLE 4.1

Student teacher respondents by year of study

Year of study	Enrolment	Sample Pop	%of Pop
Year 1	165	46	26.7
Year 2	178	57	33.2
Year 3	224	69	40.1
Total	567	172	100.0

Preliminary information regarding lecturers was obtained from the office of the Deputy Principal responsible for academic affairs. It included the complete staff list, their biographical data and respective subject departments. All 84 (100%) lecturers were included in the sampling frame since their population was less than 100 (Gay & Airasian 2003)

4.3.3 Access to participants and research sites

The researcher wrote to the two Deputy Principals for academic and administration affairs at Tonota College of Education and sought permission to conduct the research after explaining the purpose of the research. This helped to remove possible administrative obstacles that would have otherwise inhibited the investigation. The researcher also visited student teachers and lecturers to request their participation. These measures prepared the way for data collection. (Copies of these letters appear in appendices A, D and E)

4.4 DATA COLLECTION

Quantitative and qualitative data was gathered by means of questioning methods, namely a structured questionnaire and an interview.

4.4.1 Questionnaires

The questionnaire design and format adopted in this study have been identified and discussed as follows.

4.4.1.1 *Questionnaire design*

Two separate questionnaires were designed: one for student teachers (see appendix D) and the other for lecturers (see appendix E). Both questionnaires consist of three main sections:

Section solicited demographic information, such as gender, age, and year of study. In the case of the lecturers' questionnaire, information was solicited about courses taught and years of teaching experience.

Section B dealt with user needs and motivation for use, such as data on reasons for use or non-use, types of activity carried out in the library, types of information sources, collections and services used. This section also gathered data regarding patterns of use, such as periods of library visits and frequency of the visits.

Section C dealt with factors influencing usage, such as students' and lecturers' self-evaluation of their own information skills, methods adopted by lecturers and librarians to stimulate students' library use. It also elicited the opinions of students and lecturers about the state of user services provision and the contribution of the college library to the success of academic studies and whether information literacy should become an essential component of teacher education programmes.

4.4.1.2 *Question formats*

The questions were a combination of closed and open formats. Some of the questions were dichotomous requiring a 'yes' or 'no' answer. For example, question 4 stated

“Have you made use of the college library in the past year?” The options were ‘yes’ or ‘no’. This was followed up with an open question in question 5: “If your answer is ‘No’ then why have you not made use of the library in the past year?”

The question format also included multiple-choice questions. For example, questions 8 and 9 on the lecturer’s and student’s questionnaire respectively asked respondents: “For which of the following reasons do you make use of the library?” The following options were provided for lecturers: to do research, to borrow information sources for curriculum use, to borrow books for recreational use, to assist my students, to photocopy. The options for the students’ questionnaire were to study own notes, to borrow books for curriculum use, to borrow books for recreational use, to be with friends, to photocopy. Both questionnaires also provided with an “Other (specify)” option to enable respondents to give answers beyond the choices provided.

The question format also allowed respondents to express their opinions about issues regarding the state of user services provision. For example, questions 16 and 19 of the student teachers and lecturers questionnaire respectively asked “Please give your opinion on the following statement: ‘information skills instruction should be an essential component of teacher training programmes” Respondents were given the following options to choose from, ‘strongly agree’, ‘agree’, ‘disagree’, and ‘strongly disagree’, ‘not sure’. The variety of question formats allowed for a range of quantitative and qualitative data and information to be gathered.

4.4.2 Interview questions

The telephone interview method was used to collect information from the Librarian-in-Charge of Reader Services at Tonota College of Education on 19 November, 2009. The purpose of the interview was to fill in some information gaps that the questionnaire could not cover in 2007 when the survey was conducted. The researcher relocated to Ghana

and was unable to continue with the research in 2008. The telephone interview also enabled the researcher to glean more recent information regarding developments that have taken place in colleges of education in Botswana after he had relocated to Ghana. For example, information regarding the introduction of information and communication technology (ICT) resources into the library was obtained through the telephone interview method. The interview questions also addressed issues regarding the information literacy programme of the college and the role of the college library staff in the design and implementation of the programme.

The interview schedule which is included in Appendix F, covered aspects relating to available computer facilities in the library aimed at providing students with access to electronic information resources and the Internet. It also enquired whether the college library offered any information literacy (IL) education (or information skills instruction) programme to students; whether such a programme is a part of the college curriculum; whether the programme is offered separately in a scheduled class period or within the context of the curriculum, that is, whether information skills are applied to specific assignments, and the duration of the IL programme.

In addition to the above, the interview also sought to find out whether the IL programme has a library skills, (that is, library orientation and bibliographic instruction) or computer skills component and if neither of these components are included, the reasons for this. During the interview the researcher also attempted to find out whether there was any co-operation or collaboration between librarians and lecturers in the design and implementation of the IL programme, what the nature of the collaboration was, and if not, the reasons for the lack of cooperation. The methods librarians employ to motivate students' and lecturers' usage of the library and the key challenges librarians faced in the provision of IL education were also covered. Finally, the librarian was asked to offer suggestions as to how students' and lecturers' use of the college library could be stimulated.

4.4.3 Pilot-testing

The questionnaires were developed and administered in English in a pilot phase; the final questionnaire was also in English. The pilot survey was conducted to establish the reliability of the questions. The questionnaires were administered to ten lecturers from the six colleges of education. Twenty student teachers at Francistown College of Education were asked to complete the student questionnaire. Based on these responses, further editing was done to improve it. For example, a column was created on the margin of the questionnaire, for coding purposes. Separate categories were included on the questionnaire for type of information sources, and services used. An additional question was included on both questionnaires to solicit opinions on whether information literacy skills instruction should be an essential component of the teachers' training programme.

4.4.4 Administering the questionnaires

The questionnaires were administered by the researcher with the help of lecturers to 172 student teachers and 84 lecturers. All the questionnaires had a covering letter (see Appendix B & C) which briefly stated the purpose of the study and stressed the need for the participants to complete the questionnaire and return it to class for collection the next day by the researcher.

The researcher administered questionnaires to the sampled student teachers during the first few minutes of lecture periods. The completed questionnaires were returned to their lecturers the next day and subsequently collected by the researcher. The questionnaires for lecturers were deposited in their respective mail boxes in the Staff Room. The heads of each subject department collected the completed questionnaires from their respective staff members and submitted them to the researcher. As a result of this questionnaire administration procedure, 100% response rate was achieved.

4.4.5 Data analysis

Quantitative data from the questionnaires was analyzed using the computer software called Statistical Package for Social Sciences (SPSS) version 13. The programme allows for the performance of a variety of statistical analyses frequency distribution, cross-tabulation and T-test.

Provision was made on the questionnaire for coding. The quantitative data from the questionnaire, in particular the close-ended questions, were then coded and captured using the SPSS template design based on the coded scheme. The dataset that was generated was then used for the analyses of the data for the study. According to Trochin (2006), descriptive statistical methods are useful for presenting quantitative data in a manageable manner that makes comparisons across people and other units possible.

In view of the above, most of the data was analyzed by means of descriptive statistical techniques such as the mean, frequency distribution, cross-tabulation and T-test. The mean is another term for simple averages that is calculated by adding up all the scores of individual variables and then dividing the sum by the number of scores. The mean or average is a commonly used method for describing central tendency and standard deviation in a frequency distribution. Frequency distribution is a statistical technique that enables the frequency of individual values or ranges of values for a variable to be summarized by grouping the scores into categories, such as, age, gender, year of study and teaching experience, according to the ranges of the values. Cross tabulation is a statistical technique that establishes an independent relationship between two tables of values but does not establish a causal relationship between the values. T-test technique is used to test the statistical significance of the cross tabulation results (Patten 2005:10)

The results of the responses of student teachers and lecturers to the questions in the questionnaire were presented in the form of frequencies and percentages in tables and histograms. There was also univariate analysis of responses to questions that were exclusively answered by either the student teachers or the lecturers. Since the study was not guided by any hypotheses, no hypothesis testing was carried out on the quantitative data and for the entire study.

Indices were used to create composite scores of different variables so that they could be compared. When comparing indices in relation to one another, the highest index score is equated to 100. The variable with the highest average value (variable a) was equated with 100 and the values of other n th variables were calculated in accordance with the following formula (Tustin *et al.* 2005:487-490):

$$\frac{\bar{n}}{\bar{a}} \times 100$$

where

\bar{n} = the average of the variable under consideration and

\bar{a} = the average of the variable with the highest measure of importance.

Thematic content analysis was used to analyze the data collected in response to the open-ended questions in the questionnaires and the responses from the interview. According to Corbin and Strauss (1998:67) and Miles and Huberman (1996:66), thematic content analysis is intended to facilitate the identification of prominent patterns and themes in the data. Thus, the responses to the open-ended questions in the questionnaire and the responses from the interview were analyzed first to identify any emerging themes or categories. These themes were coded and categorized accordingly. Each theme and category that emerged was then compared to eliminate repetitions. The results of the thematic content analysis were presented in the form of a summary.

4.4.6 Anonymity and confidentiality

The anonymity and confidentiality of the subjects was maintained in this study. To achieve this, the name and address of data sources was not recorded. Every attempt was made to group the data collected so that personal characteristics or traceable details of the participants would not be possible (Robinson in Strydom 1998:28).

4.5 SUMMARY

A quantitative descriptive research design was adopted to conduct a survey of the library usage behaviour of student teachers and lecturers at Tonota College of Education. Stratified and systematic random sampling techniques were used to select a sample of 172 student teachers and 84 lecturers out of a total population of 567 student teachers and 84 lecturers respectively.

A case study approach was adopted in view of the limited time and resources available and the nature of the problem. A case study also lends itself to in-depth investigation of a problem within a reasonably short space of time. Questioning methods were used to gather data from the respondents. An interview was conducted to gather information regarding ICT resources in the Tonota college library, the information literacy (IL) education programme of the college, and the role of the library in the design and implementation of the programme.

Two questionnaires covered aspects, such as demographic information, the nature and patterns of library usage, methods used by lecturers to stimulate student teacher library use and student teachers' and lecturers' self- evaluation of their own levels of information literacy skills. A pilot survey was conducted to establish the validity of the

questions. The procedure according to which the questionnaires were administered, and the data analysis techniques that were adopted, have also been presented and discussed in this chapter.

In the next chapter, the results of the empirical investigation will be presented and discussed.

CHAPTER 5

FINDINGS OF AN EMPIRICAL INVESTIGATION INTO THE USE OF THE LIBRARY AT TONOTA COLLEGE OF EDUCATION, BOTSWANA

5.1 INTRODUCTION

The previous chapter outlines the methods and procedures adopted in an empirical investigation on the use of the library by student teachers and lecturers at Tonota College of Education, Botswana. The investigation was limited to the Tonota College of Education because of the limited time and resources available to conduct the research. Furthermore, the college could be seen as typical of the other colleges of education in Botswana in terms of library facilities, resources and services.

The case study research design involved both quantitative and qualitative approaches. Questioning methods were used to conduct a survey and an interview. The data gathering instruments were a questionnaire and interview schedule. Two separate questionnaires were used to collect data from student teachers and lecturers respectively. In addition to the questionnaire survey, an interview was conducted by telephone using an interview schedule in order to gather information from a senior library staff member. A sampling frame of 172 (30.3%) student teachers was selected from the total population of 567. All 84 (100%) lecturers at the college were included in the sampling frame since their population was less than 100.

This chapter presents and discusses the findings of the empirical investigation. The empirical investigation addressed various aspects of the two main problems identified in Sections 1.2.1 and 1.2.2, namely the user behaviour of students and lecturers, on the one hand, and the functions of the lecturer, and the college library, on the other. Thus, these research questions are mainly addressed separately. Firstly, research findings on various facets of the library usage behaviour of students and lecturers are presented and analyzed in Sections 5.2 and 5.3. Secondly, the responses in respect of the methods adopted by lecturers to stimulate library usage among student teachers are discussed in Section 5.4 since these aspects are related to lecturers' teaching functions. Section 5.5 deals with responses in respect of students' opinions about the current state of service provision since these aspects are concerned with the library's functions. The responses of the Librarian-in-Charge of Readers' Services during the interview have been integrated into the discussions in relevant sections to supplement, interpret and explain the results of the questionnaire survey. The chapter ends with a summary of the key findings of the investigation.

5.2 LIBRARY USAGE BEHAVIOUR OF STUDENT TEACHERS AT TONOTA COLLEGE OF EDUCATION

Student teachers and lecturers as user groups can be characterized according to demographic, occupational, social, cultural and personal characteristics. All these factors determine different information needs which consequently influence the nature and pattern of library usage within and among user groups.

The characteristics of student teachers, their user needs and reasons for library usage, the activities they carry out in the library, their patterns of usage, the types of resources and services they use, their perceptions of their own library skills and the library's contribution to their academic success are presented and discussed according to the framework of the model of user behaviour outlined in Chapter 3, Section 3.2.2.2.

5.2.1 CHARACTERISTICS OF STUDENT TEACHERS

Student teachers' characteristics that have been investigated in this study are of a biological and academic nature, namely age, gender, course of study, and year of study. The data on the characteristics of student teachers who responded to the student questionnaire are displayed in Tables 5.1, 5.2 and 5.3 below. A total number of 172 student teachers participated in the investigation.

5.2.1.1 Gender and age

In question 1, respondents were asked to indicate their gender. Of the 172 student teachers who participated in the investigation, 102 (59.3%) were female and 70 (40.7%) were male. This percentage is almost consistent with the enrolment register of the college which shows that the proportion of female to male ratio is 60: 40 respectively.

In question 4, student teachers were asked to indicate their age groups. Respondents were given the following age group categories to choose from: 17 to 20 years, 21 to 24 years, 25 to 28 years and 29 years and above as shown in Table 5.1.

The results in Table 5.1 below indicate that 74.5% of the respondents were between 21 and 24 years of age at the time of the investigation. This is followed by 14.5% of the respondents who were between the ages of 17 and 20 years, and 11% who were between 25 and 28 years of age. None of the student teacher respondents were 29 years of age and above.

TABLE 5.1

Student teacher respondents by age

Age of student teachers	Frequency	% of respondents
21 - 24 years	128	74.5
17 - 20 years	25	14.5
25- 28years	19	11.0
29 years and above	0	0.0
No of respondents	172	100

5.2.1.2 Year of study

Year of study identifies whether the student teacher is in the first, second or third year of study. The participant student teachers were pursuing the three-year diploma programme in teacher education and were chosen randomly from the different year categories as already shown in Chapter 4, Table 4.1. As already mentioned in Section 4.3.2, forty percent (40.1%) of the respondents were in year three, one-third (33.2%) in year two and one-quarter (26.7%) in year one. This is also consistent with the enrolment register, which shows that third year students constitute 40%, second year students 31% and first year students constitute 29% of the total student enrolments respectively.

5.2.1.3 Course of study

A course of study identifies the subject of study of the student teacher. There are three main categories of subjects that student-teachers are expected to study. The first category is the core subjects. These subjects consist of Foundations of Education and Communication and Study Skills. The core subjects are taken throughout the three years of study and are compulsory for all students. In

addition, every student is required to select one subject each from the other two categories of subjects known as major and minor subjects. The second category namely the major subject becomes the student's major teaching subject. The main difference between the major and minor subjects is that the student teachers in the major subjects have more contact hours with lecturers than those enrolled for minor subjects.

Students were asked to indicate their major and minor courses of study in question 3. In terms of major subject, the data in Table 5.2 below shows that 22 out of the total of 172 student teacher respondents majored in Science. This is followed by Religious Education (20), English Language (19) and Home Economics (19). The figures for Agriculture (17), Moral Education (17), Setswana (16) and Social Studies (16) indicate that student teachers' choice of major subjects tends to be more or less evenly distributed throughout the student body. However, only 14 student teachers out of a total of 172 majored in Business Studies and 12 in Mathematics.

TABLE 5.2

Major subjects taken by student teachers

Major subjects	Frequency	%
Science	22	12.8
Religious Education	20	11.6
English	19	11.0
Home Economics	19	11.0
Agriculture	17	9.9
Moral Education	17	9.9
Setswana	16	9.3
Social Studies	16	9.3
Business Studies	14	8.2
Mathematics	12	7.0
Total	172	100

As shown in Table 5.3 below, the minor subject with the highest proportion of respondents is Guidance and Counselling; this is taken by 28 out of the 172 student respondents. This is followed by Mathematics (26), and Physical Education (25). Based on this data, there appears to be a balanced representation among students taking the sciences, humanities and arts subjects. It is important to note that Library Studies is offered as a minor subject only; 17 out of a total of 172 respondents were enrolled for this subject. Student teachers who take Library Studies as a minor subject eventually become teacher-librarians in secondary schools after completion of their training. Furthermore, library skills have been taught in the colleges of education in Botswana since 2003 as an aspect of the subject Communication and Study Skills, and it is compulsory for all student teachers.

TABLE 5.3

Minor subjects taken by student teachers

Minor subjects taken by student teachers	Frequency	%
Guidance & Counseling	28	16.3
Mathematics	26	15.1
Physical Education	25	14.6
English	17	9.9
Library Studies	17	9.9
Agriculture	16	9.3
Science	13	7.6
Religious Education	10	5.8
Setswana	9	5.2
Social Studies	6	3.5
Home Economics	4	2.3
Moral Education	1	0.6
Total	172	100

5.2.2 User needs and motives for using the library

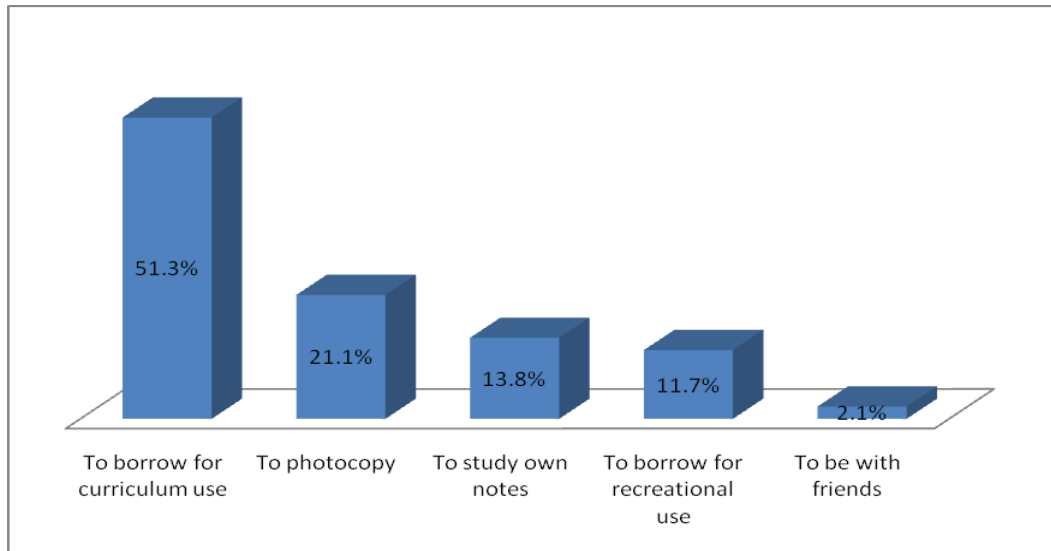
As pointed out in Chapter 2, students' needs and motives for seeking information have been ascribed to factors within the academic and non-academic or extra-curricular context. Users' reason for using the library is a consequence of user needs and motives.

5.2.2.1 Reasons for library usage

In question 9, student teachers were asked: "For which of the following reasons/purposes do you make use of the library?" Respondents were required to select answers from the following options: to study own notes; to borrow books for curriculum use; to borrow books for recreational use; to be with friends; to photocopy. They could indicate more than one option. They were also given the option to indicate any other reasons for which they used the library that were not included in the list of options that were provided. The results are shown graphically in Figure 5.1 below.

FIGURE 5.1

Reasons for library usage by student teachers



Note: % refers to number of responses i.e. 298

Figure 5.1 shows the findings in respect of student teachers' reasons for visiting the library. To show the relative importance of different reasons for library visiting, the percentages were calculated from the total number of 298 responses. The data indicates that the most frequent reason (51.3 % or 153 responses) for student teachers' visits to the library is to collect information for curriculum-related use. This is followed by visits to the library to photocopy material (21.1% or 63 responses), visiting the library to study their own notes (13.7% or 41 responses) and visiting the library for the purpose of borrowing items for recreational use (14% or 35 responses). Visiting the library for the main reason of being with their friends comprised only 2.1% (or 6) of the responses. To show the percentage of respondents who visited the library for a particular reason, the responses (153) can be calculated out of the total number of 172 respondents. Thus, the data shows that the majority (89%) of student teachers visit the library for curricular use.

The findings of this investigation seem to confirm that the predominant reason for students' use of the college library is related to curricular demand. In other words, the majority of students who use the college library do so in response to assignments and activities that are deliberately designed by their lecturers to stimulate that kind of use. This indicates that, the main reason for student teachers' use of the library is course-related. If one groups together the responses in respect of borrowing for curricular use and studying own notes, then the indication is that curricular use constitutes 65% of the reasons for library visits. The findings also show that only a small percentage of student teachers visit the library for relaxation or to meet friends. On the other hand, the fact that some student teachers also visit the library to borrow items for recreational use suggests that academic libraries should consciously promote the recreational use of the library among all students

The fact that the library is not visited for leisure purposes to any great extent may imply that it is a valued academic resource on the campus. In Table 5.9, a majority of students (84%) rated the contribution of the library as either very essential or essential to their academic success.

5.2.2.2 Activities carried out in the library

Reasons for use of the library can also be reflected in the type of activities that users engage in while in the library. As a result, Question 10 was designed to collect data and information on the type of activities that student teachers engaged in when they visit the library.

In question 10 student teachers were asked: "Which of the following activities do you carry out when you visit the library?" Respondents could select activities from a list of the following options: to collect information for an assignment; to collect information for a project; to read newspapers; to read magazines; to read

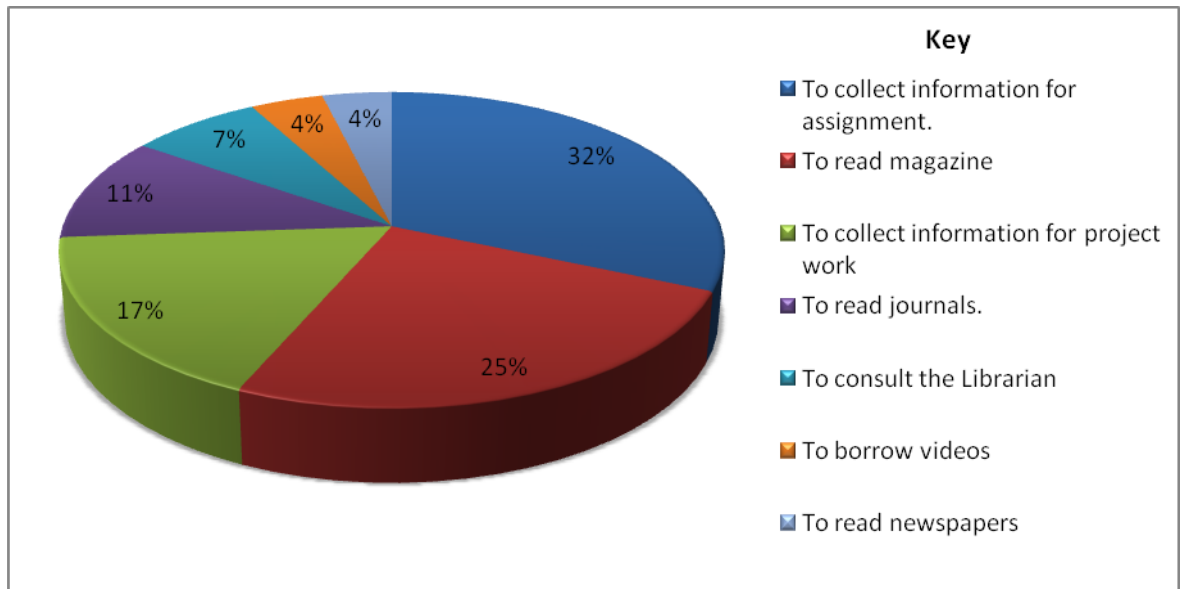
academic journals; to consult with the librarian; to borrow videos. They could indicate more than one option. They were also given the option to specify any other activity that they carried out in the library that was not included in the list.

A student assignment is a task that is given to student teachers by lecturers, either at the beginning or the end of teaching a topic or a module to assess their understanding. An assignment is usually expected to be completed within a short period of time that is a few days to two weeks, and does not entail extensive research. Project work is a task that is given to student teachers in the third year of study that requires them to first choose a topic and prepare a project proposal for approval by the lecturer or supervisor. The research is then conducted and a formal report presented for assessment within a semester. Project work is considered a requirement for graduation. In view of this requirement, there is no doubt that respondents would have been well aware of the distinction between project work and assignments.

Activities that student teachers engage in when they visit the library are closely linked to their reasons for library usage as already pointed out in Section 5.2.2. The percentages expressed in Figure 5.2 have been calculated out of a total number of 514 responses to show the relative importance of different activities engaged in during library visits. Figure 5.2 below shows that the activities engaged in by student teachers during library visits were, in the order of those activities most frequently indicated, collecting information for an assignment (31% or 162), reading magazines (24% or 129), collecting information for project work (17% or 89) and reading journals (11% or 55). Visiting the library to consult with the librarian (7% or 38); to read newspapers (4% or 21) and to borrow videos (4% or 21) were not frequent activities. Calculated out of the total number (162) of 172 respondents the data shows that the majority (94%) of students collect information for assignments when they visit the library.

FIGURE 5.2

Types of activities carried out by student teachers in the library



Note: % refers to number of responses i.e. 514

Reading magazines and journals comprise over one-third of student teachers' library activities. Usually, articles contained in journals are scholarly in nature and deal in specialized subject areas, for example, the *Journal of Educational Management*. Magazines, on the other hand, usually deal with various subject areas; magazine articles are shorter and often accompanied by photographs and targeted at the general public. Examples of the magazines in the College Library are *Bona*, *Thandi* and *Home and Garden*.

The respondents would have been aware of the distinction between a journal and a magazine because they are taught this during Library Orientation. Furthermore, journals and magazines are displayed on separate display shelves in the College Library. If one groups together the data in respect of the activities of collecting information for assignments, and project work and reading journals, it becomes

clear that 60% of the activities in which students are engaged in on their visits to the library are curricular- related. It is interesting to note that the data from Figure 5.1 and Figure 5.2 seem to suggest that the primary motivation behind student teachers' usage of the library is to satisfy their curricular information needs

The findings above (Figure 5.2) is consistent with that of Jiao and Onwuegbuzie (1997) who report that obtaining a book or an article for a course paper and study for a test appeared to be the most important reasons for students' visits to the library. The fact that the students in this study and in Jiao and Onwuegbuzie's (1997) investigation used the library to work on assignments and projects means that course assignments play a vital role in determining students' library usage.

Based on the information deduced from the data, one could also conclude that the relatively high usage of journals and magazines may be attributed to the need for student teachers to access current information in order to satisfy project work requirements, since magazines and journals are a primary source of current information. Magazines could serve as a popular source of information for student teachers studying Home Economics, since this is where they might find information on topics such as home management, fashion and design. However, it should be borne in mind that this information is often not accurate and cannot be used for academic purposes. Magazines are therefore generally read for recreational and personal purposes.

5.2.3 Patterns of library usage

This study defines the term "library use" as a purposeful visit to the library with a view to utilizing its resources and services to satisfy a need. The pattern of library usage is defined as a facet of user behaviour that includes period and frequency of usage, and the type of information sources and services used.

5.2.3.1 *Periods of usage*

In question 5, student teachers were asked: “Have you made use of the college library in the past year?” Respondents were given the option to answer either “yes” or “no”. All of the student-teacher respondents answered that they had made use of the College Library in the previous year.

In question 7, student-teachers were asked: “What times do you visit the library?” The library service hours were categorized into groups as follows: 9h30 to 12h30; 14h00 to 16h30; 16h30 to 18h00 and 19h00 to 22h00. They were given the option to indicate more than one category. Table 5.4 below indicates the data regarding times of visit. The percentages are calculated out of the number of respondents.

TABLE 5.4

Periods of library visits by student teachers

Period of visits	Respondents	Frequency	%
9h30 – 12h30	172	17	9.9
14h00 – 16h30	172	70	45.9
16h30 – 18h00	172	10	5.8
19h00 – 22h00	172	142	82.6

The results in Table 5.4 indicate that the majority (82.6%) of both male and female student teachers visit the library during the evenings from 19h00 to 22h00. The library service period between 14h00 and 16h30 is patronized by 45.9% of student teachers. Only 9.9% of the respondents visit the library between 09h30 and 12h30 and 5.8% visit the library between 16h30 and 18h00

This trend in periods of usage may be explained by the nature of the activities student teachers are engaged in during the day. It could be that, since the pre-

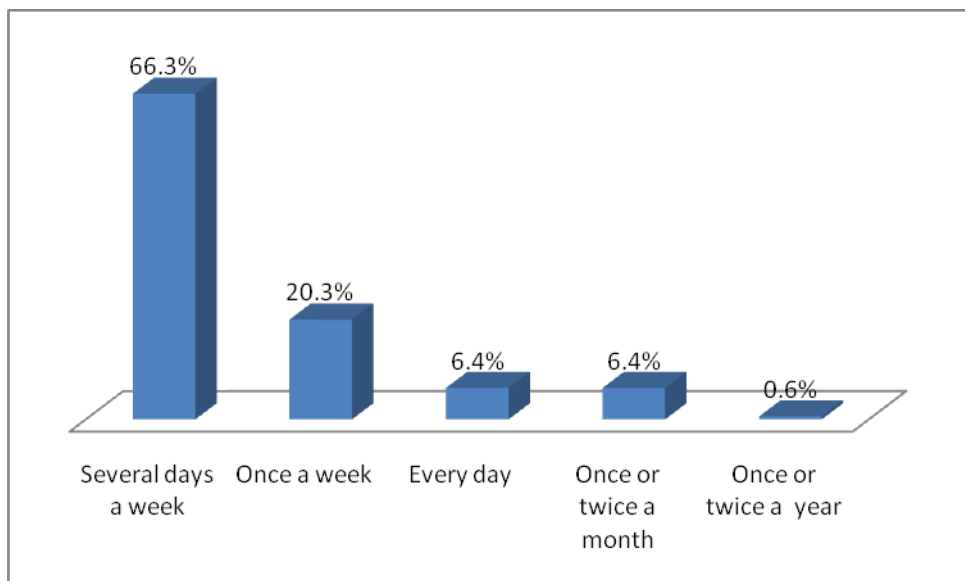
lunch or morning session is the time set aside for most lectures, many of the student teachers would be attending classes and would perhaps find it difficult to use the library meaningfully except for those courses that have been indicated on the timetable to take place in the library. The pre-dinner period is also taken up by sporting, social club and other extra-curricular activities. This may be the reason why the majority of student teachers patronize the library during the late evening session.

5.2.3.2 *Frequency of usage*

Question 8 attempted to establish the frequency of library usage by student teachers. They were asked “If your answer to question 5 is ‘yes’, then how often did you use the library this year?” The following categories of responses provided on the questionnaire were as follows; every day, once a week, several days a week, once or twice a month, once or twice a year. The results are shown in Figure 5.3.

FIGURE 5.3

Frequency of library visits by student teachers



Note. % refers to number of respondents i.e 172

As indicated in figure 5.3, the frequency of library visits by respondents varied. The percentages expressed have been calculated from the total number of respondents. Almost two-thirds (66.3% or 114) of the student teachers visited the library several days a week. This is followed by 20.3% (35) who visited the library once a week, 6.4% (11) who visited the library every day and 6.4% (11) who visited the library once or twice monthly. Only one student teacher visited the library once or twice a year.

A key finding in the data above is that 93% of the student teachers use the library at least once per week. This percentage is obtained by adding up the percentages of the respondents who either visit the library several days a week, once a week or every day. The high percentage of student frequency of library usage recorded in this investigation corresponds to Gratch's (1997) finding of 83% and Jiao & Onwuegbuzie's (1997) finding of 81% in their respective library use studies in tertiary institutions.

However, the above results do not agree with Olën's (1994) findings in her study of five colleges of education and three universities offering teacher training programmes in South Africa. She found that more than half (56%) of the student teachers in her study either visited the library once or twice during the year or never visited it at all. She attributed the poor utilization to students' poor perception of the value of the college library for their academic success.

5.2.3.3 Library usage by year of study

The data obtained regarding the frequency of library usage by student teachers was further analyzed with the use of cross tabulation, t-tests and ANOVA tests to establish whether there was any statistically significant difference between gender, course of study and year of study of student teachers and frequency of

library usage. The results in the tables in Appendix G indicate that there is no statistically significant difference between male and female student teachers' frequency of library use and course of study. However, there is a significant difference between third and first year student teachers' frequency of library usage.

The mean is another term for simple average. The mean has to be calculated to measure the average for the set of scores in a frequency distribution in order for comparisons to be made among different variables or scores. According to Table 5.5 below, the mean (3.88) for year three is higher than the mean (3.43) for year one. The indication is that there is a significant difference in the frequency of library usage between the third and first year groups. Hence, the conclusion can be drawn that third year student teachers visit the Library more frequently than the first and second year groups. The mean for year three (3.88) is higher than that for year one (3.43) and year two (3.74).

TABLE 5.5

Frequency of library usage by student teachers' year of study

YEAR OF STUDY	<i>frequency</i>	Mean	Std. Deviation	Std. Error
FIRST	46	3.43	.750	.111
SECOND	57	3.74	.768	.102
THIRD	69	3.88	.557	.067
Total	172	3.72	.705	.054

The findings here seem to agree with the results of a similar study conducted by Burns (1997), which reported a positive relationship between students' year of study and their patterns of library usage. The study was based on a self-report survey of 140 San Diego State University students. Although very few

differences were found in the personal characteristics of users and non-users of the library, the study found a positive relationship between year of study and library usage. A study by Onwuegbuzie, Jiao & Bostick (2004: 121-127) has attributed the low usage of the library by first year students to what is described in the literature as “library anxiety”.

As indicated in Figure 5.1 and 5.2 above, student teachers use the library mostly to satisfy curricular needs. The reason behind the high frequency of library usage among third year student teachers might be due to the fact that they pursue more advanced courses and are given more comprehensive assignments to do, than the first or second year students. For example, project/research work is undertaken only in the third year of study. Furthermore, it is important to note that it is the expectation of lecturers that student teachers use the library (Section 5.4). As a result, they make conscious efforts to motivate them (Section 5.4.2) to use the library.

5.2.3.4 Types of information sources used

Information sources are defined as the different media, such as books and periodicals that contain information. Information sources also include electronic and non-book resources, such as CDROMs, e-journals and videos. The format in which information is packaged may also influence users’ choice of sources and frequency of usage. Individuals are motivated to visit the library to satisfy diverse needs which require the use of information sources in different formats. It is important to determine the type of sources that are used by students in order to provide for them adequately. However, at the time of administering the questionnaire for this study, Tonota College Library did not have access to electronic resources. The only non-book material in the library collection at the time was videos.

In question 11, student teachers were asked “What type of information sources do you use in the library and how often?” Respondents were given the following options; the reference, reserve, video, journal, magazine, newspaper, Botswana, fiction and non-fiction collections. Respondents could also specify any other source that is used, but not included in the list. They could indicate more than one type of source. They were asked to indicate how frequently they made use of the different types of sources. The options listed were “very often”, “often”, “sometimes” or “never”. The results are shown in Table 5.6 below.

Table 5.6 shows the data on the type of information sources used by student teachers when they visit the library. In order to gain a more balanced overall view of the individual responses, a weighted index was compiled. (The formula used to calculate the index is set out in Chapter 4, Section 4.4.5). In calculating the index, a greater weight, was given to “very often” as against “often”, “sometimes” and “never”. In this instance, weights of 1, 0.66, 0.33 and 0 were used respectively to weigh the relative importance of the four responses given. On the left hand side of the table are the frequencies and on the right-hand side are the calculations according to the 4-point scale of weights with their respective averages. On the extreme right of the table are the calculated index scores. The highest average score of 36.56 (rounded off to two decimal points) is equated to 100. The other scores are calculated relative to this maximum index.

TABLE 5.6*Types of information sources used by student teachers*

Information source	Very Often	Often	Some times	Never	Total	Very Often	Often	Some times	Average	Index
Weight						1	0.66	0.33		
Non-fiction	46	75	43	7	171	46	49.5	14.2	36.56	100
Reference	37	56	77	2	172	37	37	25.4	33.12	91
Magazines	34	45	87	6	172	34	29.7	28.7	30.80	84
Newspapers	33	49	79	11	172	33	32.3	26.1	30.47	83
Fiction	12	40	89	30	171	12	26.4	29.4	22.59	62
Botswana Collection	8	25	114	24	171	8	16.5	37.6	20.70	57
Journals	10	26	102	34	172	10	17.2	33.7	20.27	55
Reserve	7	21	107	37	172	7	13.9	35.3	18.72	51
Videos	3	1	78	90	172	3	0.66	25.7	9.8	27

The index of type of information sources used by student teachers in Table 5.6 is highest for the non-fiction collection (100). Non-fiction is therefore rated by student teachers as their primary source of information in the library. This is followed by the reference collection (91), magazine (84), and newspaper (83) collections. The relatively small differences among these three indexes imply that all three collections are also important sources of information for student teachers; the fiction (62), Botswana (57), journal (55), reserve (51) and video (27) collections are less important. The type of information source that is of the least value to student teachers in terms of usage is the video collection. The data above indicates that the journal collection is not an important source of information for student teachers. This finding seems to be in agreement with the results obtained in relation to students' activities in the library in Section 5.2.2.2. However, in view of the fact that student teachers make use of the library mainly for curricular purposes, it is surprising that the use of journals is so low. The magazine collection, on the other hand, is well used but associated with recreational use.

It is important to note that publications of the United Nations Educational, Scientific and Cultural Organization (UNESCO) are part of the Reference

collection of the College Library. The Librarian- in- Charge of Reader Services mentioned in the interview that lecturers often referred student teachers to the UNESCO publications on Botswana. This may be the reason for the high usage of the Reference collection.

Furthermore, in order to ascertain whether the library's users had access to electronic information sources, the Librarian (Reader Services) was asked in the interview; "Do you have computer facilities in your library to provide student teachers with access to the Internet?" Her answer was in the affirmative. A follow-up question was asked as follows. "When did you introduce the Internet services and how many computers are in the library with Internet access?" The Librarian responded to the question by indicating that the Internet service was introduced in November 2008. She was then asked a further question "If computer facilities are made available for students' use, how many computer terminals are available in the library?" Her response was that the library had 12 computers with access to the internet. To a follow-up question; "Does the library subscribe to electronic information sources or databases?" Her response was that the library subscribed to the Ebscohost database. It is important to note that since the data collected through the questionnaires was done prior to the introduction of the Internet service, it was not possible to obtain data from student teachers and lecturers regarding usage of electronic sources. At present the ratio of only 12 computers with internet access to 567 student teachers and 84 lecturers is in any event inadequate.

5.2.3.5 Types of user services and facilities used

Library and information systems consist of inputs or resources (i.e. facilities, funds, collections and staff), processes (i.e. information organization and retrieval, collection development, dissemination) and output or user services. The coordination of all these three principal components of resources, processes and output in the form of user services is a management function. User services

include the following forms of guidance namely, information provision or reference work, user education and user advice. These services are aimed at providing access to, and enhancing the effective use of library resources (Fourie 2009:13-14).

In question 12, students teachers were asked to indicate “What types of services and facilities do you make use of when you visit the library and how often?” Respondents were given the following services as options to choose from; reference/information, circulation and photocopying services and facilities. Respondents were given an option to indicate any other services used that had not been provided for among the options. They could indicate more than one type of service and indicate the frequency with which they used these services. The options given were “very often”, “often”, “sometimes” and “never”. The results are shown in Table 5.7 below.

TABLE 5.7

Type of user services and facilities used by student teachers

Type of user service	Very often	Often	Some times	Never	Total	Very Often	Often	Some Times	Average	Index
Weight						1	0.66	0.33		
Reference/info	69	62	38	0	169	69	40.9	12.5	40.82	100
Circulation	15	33	104	11	163	15	21.8	34.3	23.7	58
Photocopy	3	14	99	51	167	3	9.24	32.7	14.97	37

Table 5.7 shows data on the types of user services that are used by student teachers when they visit the library. The data was also used to compile a weighted index of the relative extent of usage of the different types of user services. Once again weights of 1, 0.66, 0.33 and 0 were used respectively to weigh the four responses “very often”, “often”, “sometimes” and “never”. On the left-hand side of the table are the frequencies and on the right-hand side are the calculations according to the 4-point scale of weights, with their respective averages. On the extreme right of the table are the calculated index scores. The

highest score of 40.82 (the figure has been rounded off to two decimal points) is equated to 100. The other scores are calculated relative to this maximum index.

According to the index in Table 5.7, Reference/information service has the highest index score (100). This means that the Reference/information service is the primary user service that is used by student teachers. This is followed by the circulation service (58) and the photocopying facility (37). The significantly wide differences between these three index scores imply that the Reference/information service is more important, in terms of usage, to student teachers than the circulation service or the photocopying facility.

An interview conducted with the Librarian-in-Charge of Reader Services revealed (Section 5.2.3.5) that the College Library has also introduced new facilities in addition to its user services since the initial survey data was collected. The new facilities which include Internet access, and subscriptions to electronic journals, have extended the collection for users. The library has also started automation of key processes and procedures. However, it was not possible to obtain data from responses to the questionnaire on the usage of the new facilities at the time of the survey since these facilities were introduced only after the survey data had been collected.

5.2.4 Student teachers' perceptions of their library and information literacy skills

It is indicated in Chapter 2 that in order to make effective use of information resources, student teachers and lecturers need to become information literate. Library skills and knowledge of the library constitute an important component of information literacy.

5.2.4.1 Student teachers' self-rating of library skills

In question 17, student teachers were asked: “How would you rate your level of library skills competency in the following areas?” The skills areas presented to respondents were as follows: ability to locate information sources in the library, knowledge of the system of arrangement of the library’s information sources, knowledge of the different sections of the library, knowledge of available library services, ability to use the catalogue to locate information, ability to use reference sources (e.g. encyclopaedia, dictionaries etc.); ability to browse for information; ability to make notes from a range of sources to complete an assignment; and ability to compile a bibliography from different information sources. Respondents were also given the option to indicate their competency level in respect of each skill as either “very good”, “good”, “average” (fair), “poor” and “very poor”. The results of the self-rating of student teachers’ perception of their level of library skills are presented in Table 5.8 below.

TABLE 5.8

Student teachers' self-rating of library skills

Library skill, i.e. ability to:	Very Good	Good	Fair	Poor	Very poor	Total	Very good	Good	Fair	Poor	Average	Index
Weight							1	0.75	0.5	0.25		
make notes	62	78	26	5	1	172	62	58.5	13	1.25	33.68	100
locate information	57	67	40	6	2	172	57	50.3	20	1.5	32.18	96
know library sections	52	73	35	10	2	172	52	54.8	17.5	2.5	31.68	94
use reference sources	52	69	41	8	2	172	52	51.8	20.5	2	31.56	94
compile bibliography	58	64	34	10	6	172	58	48	17	2.5	31.37	93
browse for information	47	70	41	9	5	172	47	52.5	20.5	2.25	30.56	91
know library arrangement	39	72	45	14	2	172	39	54	22.5	3.5	29.75	88
know user services	35	51	65	16	5	172	35	38.3	32.5	4	27.43	81
use catalogue	35	53	46	23	15	172	35	39.8	23	5.75	25.87	77

Table 5.8 shows that the data was used to compile a weighted index of the five responses “very good”, “good”, “fair”, “poor” and “very poor”. In this instance, the 5-point scale was reduced to a 4-points scale by combining the data for the responses “poor” and “very poor”. Thus, weights of 1, 0.75, 0.5, and 0.25 were used respectively. On the left-hand side of the table are the frequencies and on the right-hand side are the calculations with their respective averages. On the extreme right of the table are the calculated index scores. The highest score of 33.68 (rounded off to two decimal places) is equated to 100. The other scores are calculated relative to this maximum index.

According to the index at the end of Table 5.8, student teachers have given the highest rating to their ability to make notes from a range of information sources (100). This is followed by their ability to locate information sources (96), knowledge of different sections in the library (94), ability to use reference sources (94), ability to compile a bibliography (93), ability to browse for information (91), knowledge of the system of arrangement of the library (88), knowledge of available services (81) and ability to use the catalogue (77).

The index scores indicate that out of the nine library skills that have been identified in the table, the ability to make notes from a range of sources has been rated by student teachers as their best skill. On the whole, the relatively high index scores recorded for all the nine skills coupled with the relatively small differences between the scores imply that student teachers perceive themselves to be competent in all the library skills identified. However, the extent to which this is a true reflection of their library skills is not known, since the findings of studies abroad do not agree in this regard.

For instance, the Teaching Library of the University of California in Berkley conducted a study to measure the library skills of college students; this allowed the respondents to self-rate their competencies. The students' self-assessment of their competencies was then compared with their actual scores on a questionnaire designed to measure their library and information research skills. The result showed that graduating seniors surveyed held a higher opinion of their library skills than they were able to demonstrate by their test score (Maughan 2001:83).

On the other hand, another study that was conducted to evaluate the library skills among undergraduates of Johns Hopkins University found, in contrast to the UC Berkley results that there was a significant relationship between students' opinion of their library skills and actual scores. (See Chapter 2 Section 2.5 for details of research).

In this study, it was not possible to conduct an independent test to verify student teachers' rating of their own library skills due to the limited time and resources of the researcher. The fact that library skills is taught as part of a compulsory subject for all student teachers throughout their three years of study at Tonota College of Education might partly explain the reason for students' own high perception of their library skills, as shown in the results of their self-evaluation in Table 5.8. Nevertheless, the above findings can only be considered as student teachers' perceptions of their own library skills, until such time as they can be verified in a more in-depth study. The high positive opinion expressed by student teachers towards their own library skills could, however serve as an indication of the high value they place on these skills in relation to their studies.

In order to ascertain whether the information literacy (IL) instruction programme of the College now has a computer skills component, the Librarian (Reader Services) was asked: "Does the IL programme have a computer skills component?" Her response to the question was in the affirmative. She was further

asked “Does the IL programme include instruction in online searching?” Her response to this question was also in the affirmative. She explained that users are instructed on how to use the online public access catalogue (OPAC) and also how to browse and access electronic databases.

5.2.4.2 Relationship between student teachers’ perceptions of their library skills and library usage

The researcher also asked student teachers in question 18, as a follow-up to question 17 above: “Now that you have rated your skills, in which of the following ways does your library skill help you to make effective use of the library?” The following statements were provided for respondents to indicate either “Yes” “No” or: “Not Sure” in a column that had been provided, at the end of each statement. The statements were as follows, “I am able to make use of the library resources with ease and confidence.” “I am able to make frequent use of the library.” The results are shown in table 5.9 below.

TABLE 5.9

Effects of student teachers’ library skills on ability to make use of the library

Ways in which skills help	Frequency						
	N	Yes	%	No	%	Not Sure	%
Able to use library with ease and confidence	172	105	61	61	35.5	6	3.5
Able to make frequent use of the library	172	119	69.1	45	26.2	8	4.7

Table 5.9 shows that out of the total of 172 student teachers, 105 (61%) indicated that their library skills have enabled them to use the library with ease and confidence. Over two-thirds (69.1%) indicated that their library skills had enabled them to make frequent use of the library. If one combines the data for these two questions to find the average number, then 112 or nearly two-thirds (65.1%) of the student teachers thought that their library skills enabled them to use the library effectively.

However, over one-third (35.5%) or 61 of the student teachers indicated that their level of library skills had not enabled them to make use of the library with ease and confidence; 6 (3.5%) of the student teachers were not sure. Over one-quarter (26.2%) indicated that their library skills had not enabled them to make frequent use of the library and 4.7% were not sure. If one combines the data for these two questions to find the average number, then nearly one-third (30.8%) or 53 of the students teachers thought that their library skills do not enable them to use the library effectively, whereas 7 (4%) were not sure.

Although it was not possible to assess the validity of student teachers' own rating of their library skills for the reasons already explained in Section 5.2.4.1, the general indication by the majority of student teachers seem to suggest that their perceived levels of library skill has influenced their ease and frequency of library usage. At least, it can be said that a significant number of student teachers have a positive perception of the relationship between their library skill and their ability to make effective use of the library. It is important to note that the majority of student teachers rated their library skills levels as good, very good and fair. Nevertheless, a small number of them rated their library skills levels as poor and very poor.

The results in Table 5.8 should, therefore, be compared to the number of student teachers in Table 5.9 who indicated that their library skills levels have not helped them to use the library with ease and confidence or to use it frequently. Taken as a whole, it would seem to suggest that student teachers are not as confident about their levels of library skills as the data in Table 5.8 indicates. These results imply that the information literacy (IL) instruction programme of the College needs to be intensified and broadened to accommodate other relevant information literacy skills areas.

5.2.5 Student teachers’ opinions about the contribution of the College Library to their academic success

Student teachers’ opinions about the contribution of the college library to their academic success could be viewed as an effect or outcome of their user behaviour. Therefore, responses in this regard are presented as the final step in their library usage. It is also related to the tasks which require them to use the library (dealt with in Section 5.4).

Respondents were asked in question 16: “In your opinion, how would you rate the contribution of the College Library to the success of your studies?” They were given the options to indicate their answer; “Essential” “Not so essential” and “Unessential”. The results are shown in Table 5.10.

TABLE 5.10

Students’ opinions about the contribution of the College Library to academic success

Response	Frequency	Percentage
Essential	145	84.3
Not so essential	24	14.0
Unessential	3	1.7
Total	172	100

According to the data in Table 5.10 the majority of student teachers, 145 (84.3%) out of the total of 172 rated the contribution of the College Library to the success of their studies as essential. Only 27 (15.7%) student teachers described the contribution of the College Library to the success of their studies as either 'not so essential' or 'unessential' when these responses are combined. The findings in Table 5.10 indicate that in the opinion of the majority of student teachers, the library is a valuable resource that has the potential of impacting positively on their academic output.

5.3. LIBRARY USAGE BEHAVIOUR OF LECTURERS AT TONOTA COLLEGE OF EDUCATION

As in Section 5.2, the library usage behaviour of lecturers is presented and discussed according to the framework of the model of user behaviour outlined in Section 3.2.2.2.

5.3.1 Characteristics of lecturers

As already mentioned in section 5.2, various demographic, occupational, social, cultural and personal factors influence the usage behaviour of lecturers. These factors determine different information needs, which consequently influence the nature and patterns of their library usage. Tables 5.11 and 5.12 reflect the biological and occupational characteristics of lecturers who participated in the research investigation.

5.3.1.1 Gender and age

According to Line (1963), factors such as gender, subject discipline and years of professional experience appear to influence lecturers' information needs and motivation to use the library.

In question 1, lecturers were asked to indicate their gender. A total of 84 lecturers from across 16 subject departments took part in the study. The majority, 51 (60.7%) of these lecturers, are male and 33 (39.3%) are female.

5.3.1.2 Subjects taught

In question 2, lecturers were asked to indicate the name of the subject department in which they taught. They were given the option to name more than one subject department.

Table 5.11 below shows that 84 respondents teach in 16 different subject departments. The Department of Foundations of Education has the highest (8) number of lecturers. It is important to note that Foundations of Education is a core subject; it is a compulsory subject for all students. This is followed by the departments of Agriculture, Business Studies, Communication and Study Skills and Home Economics with 7 lecturers in each of these departments. The departments of Science and Social Studies have 6 lecturers each while the departments of English Language, Mathematics, Moral Education and Setswana have 5 lecturers each; the Learning Resource Centre on the other hand, has only 2 lecturers.

It is important to note that information literacy (IL) instruction is offered as a component of the Communication and Study Skills subject syllabus of which

library skills is an integral module. Communication and Study Skills is also a compulsory subject for all student teachers; it is offered throughout the three years of study. It is interesting to note that although the Learning Resource Centre has only two staff members, it is obliged to handle the computer applications component of the information literacy instruction programme for the entire college community.

TABLE 5.11

Number of lecturers per subject department

Subject department	Frequency
Foundations of Education	8
Home Economics	7
Agriculture	7
Business Studies	7
Communication and Study Skills	7
Science	6
Social Studies	6
English Language	5
Setswana	5
Mathematics	5
Moral Education	5
Physical Education	4
Religious Education	4
Guidance & Counseling	3
Library Studies	3
Learning Resource Centre	2

5.3.1.3 *Years of teaching experience*

In question 3, lecturers were asked to state their number of years of teaching experience since this could be a factor influencing the nature and pattern of library usage. Respondents were given the option to choose from the following categories grouped by number of years of teaching experience: 0 to 5 years, 6 to 10 years, 11 to 15 years, 16 to 20 years and 21 years and above. The results are shown in Table 5.12 below.

TABLE 5.12

Years of teaching experience of lecturers

Years of teaching	Frequency	%
11 -15 years	27	32.2
6 - 10 years	18	21.4
21+ years	17	20.2
16 -20 years	16	19.0
0-5 years	6	7.2
Total	84	100.0

Table 5.12 shows that nearly one-third or 27 (32.2%) of the lecturers had between 11 and 15 years of teaching experience while 18 (21.4%) of the respondents had between 6 and 10 years of teaching experience at the time of the study. In addition, 17 (20.2%) of the lecturers had done more than 21 years of teaching while 16 (19%) of the respondents had between 16 and 20 years teaching experience. Thus, cumulatively, a total of 60 (71.4%) lecturers at Tonota College of Education had more than 10 years of teaching experience.

5.3.2 User needs and motivation to use the library

The reason for library usage is a consequence of user needs and motives as indicated in Chapter 2. Questions 8, 9 and 10 were designed to gather data on the reasons why lecturers visit the library, and the type of activities they engaged in when they visited the library.

5.3.2.1 *Reasons for library usage*

Research findings reported in the subject literature, as indicated in Chapter 2, seem to show that various academic and non-academic information needs lead to the usage of college library by lecturers. In view of this, it is important to determine their reasons for use in order to adequately cater for their needs.

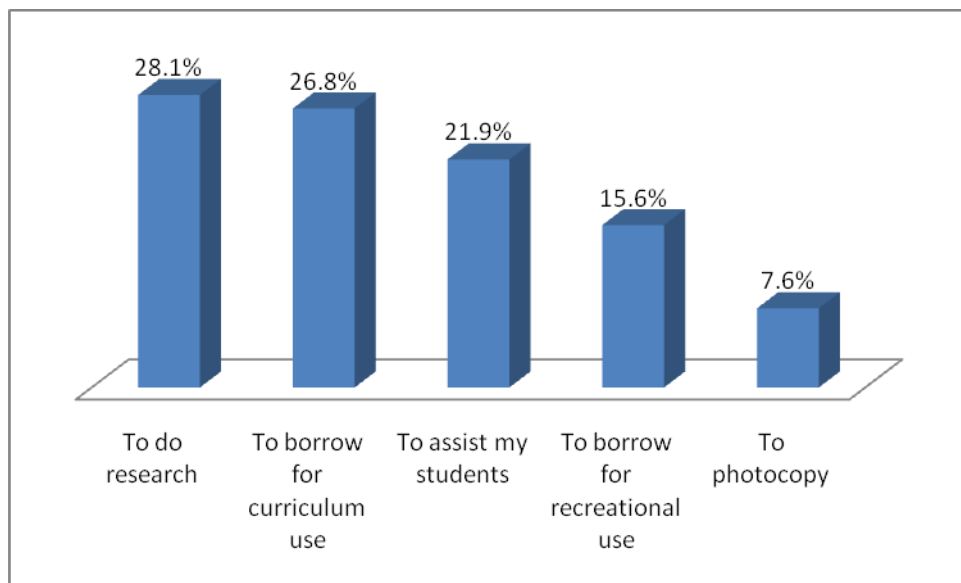
In question 8, lecturers were asked: “For which of the following reasons do you make use of the library?” Respondents were given the following options: to do research, to borrow information sources for curriculum use; to borrow books for recreational use; to visit my students; to photocopy. They could choose more than one option. Respondents could also specify other reasons that were not covered in the options provided. The results are shown in Figure 5.4 below.

Figure 5.4 shows that lecturers use the library for diverse reasons. To show the relative importance of different reasons for library visits, the percentages were calculated out of the total number of 224 responses. Using the library for the purposes of research (28.1%) and borrowing sources for curriculum use (26.8%) were the most frequently indicated reasons for lecturers’ use of the library. Visiting the library to assist their students (21.9%) and borrowing items to satisfy their recreational needs (15.6%) were further reasons for lecturers’ use of the library. Visiting the library to make use of the photocopying services was

indicated in only 7.6% of the responses. If calculated out of the total number of 84 respondents, the data shows that the majority of lecturers visited the library for research (75% or 63 responses) and curricular (71.4% or 60 responses) purposes.

FIGURE 5.4

Reasons for library usage by lecturers



Note: % refers to number of responses i.e. 224.

Meyer (2005) reported the results of an investigation of faculty's (or lecturers) perceptions about students' use of the library in 20 Michigan colleges. He noted in his findings that lecturers collectively have a clear sense of the methods that can be used to improve library use. However, their views as to whose responsibility it is differ. It appears as if the majority of lecturers in the current study have identified the need for student teachers' to be assisted in making use of the library's resources and have shown a clear sense of responsibility to doing something about it. This is evidenced by a fairly significant percentage of responses indicating that lecturers visit the library for the purpose of assisting their students. It was noted in the researcher's interview with the Librarian-in-Charge of Reader Services that it was common practice for lecturers to group their students and bring them into the library during library periods which have

been built into their time table. The subject departments concerned are Communication and Study Skills, Home Economics, Science, English Language, Social Studies and Moral Education. This might explain why lecturers indicated that they visit the library to assist their students.

Furthermore, although the above data reveals that the College Library is used to a lesser degree, to satisfy the recreational needs of lecturers, academic libraries should also cater for the non-academic needs of their user community. In addition, academic libraries should attempt to promote the recreational use of the library among their user community.

5.3.2.2 Activities carried out in the library

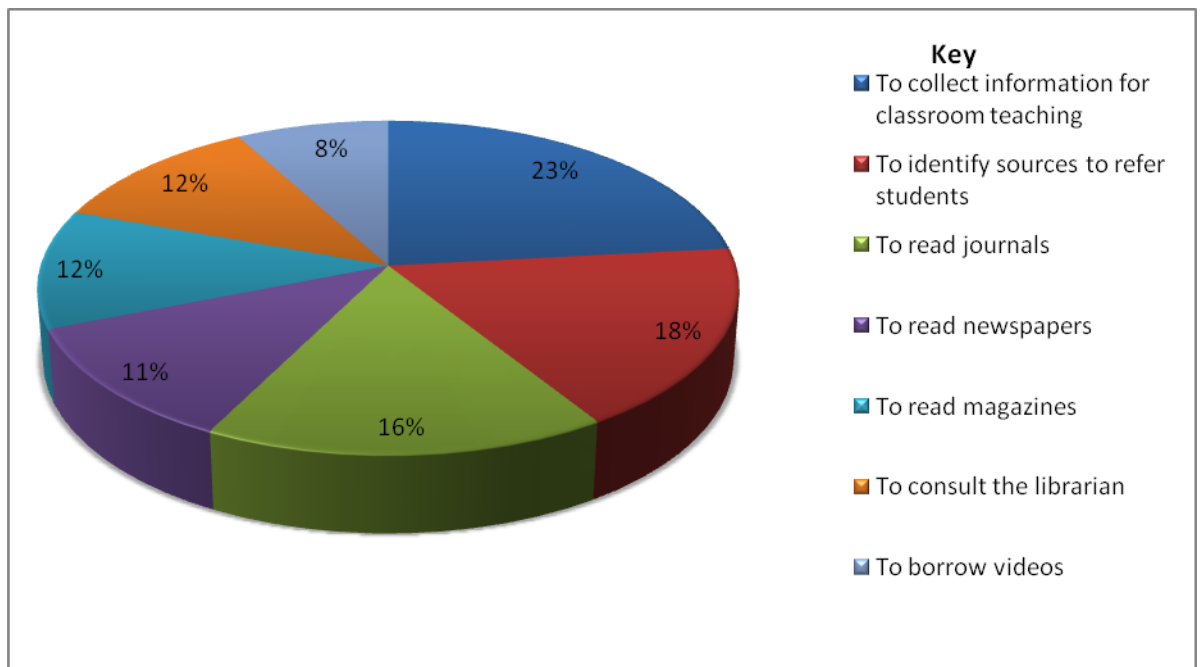
The type of activity that is carried out in the library by users is closely linked to their reasons for using the library. In question 9, lecturers were asked: “Which of the following activities do you carry out when you visit the library?” Respondents were provided with the following answers to choose from in addition to an option to provide their own answer: to identify sources in order to refer students; to collect information for classroom teaching; to read newspapers; to read magazines; to read academic journals; to consult with the librarians; and to borrow videos. Respondents could indicate more than one option.

The pie-chart in Figure 5.5 below shows the percentages in respect of the types of activities carried out by lecturers when they visit the library. To show the relative importance of the different activities engaged in during library visits, the percentages were calculated out of a total number of 339 responses by the 84 participating lecturers who visit the library. Collecting information for classroom teaching (23%), identifying sources in order to refer students (18%), reading journals and magazines (16%) and consulting the librarian (12%), comprised the most frequently indicated activities engaged in during library visits. Reading

newspapers and borrowing videos comprised a further 11% and 8% respectively of the activities of lecturers when they visited the library. It is important to note that a significant percentage of responses pertained to lecturers' work-related or occupational needs. It is also important to note that a visit to the library to identify relevant sources in order to refer student teachers is related to lecturers' attempts to promote resource-based learning.

FIGURE 5.5

Activities carried out by lecturers in the library



Note. % refers to number of responses i.e. 339

During the follow-up interview, the Librarian (Reader Services) was asked about the level of co-operation and collaboration between lecturers and library staff, especially in the area of information literacy instruction. She described the level of collaboration and cooperation, especially among library staff and lecturers of the Communication and Study Skills Department and the Learning Resource Centre, as satisfactory. She added that a workshop had been organized to train staff and faculty in these three departments in the use of the computer as a

learning tool; she added that these skills were being passed on to student teachers in the IL programme. The fact that some lecturers visit the library to consult the librarian (Figure 5.5 above) seems to support her view. Although it is not clear as to the details of the nature of consultation that lecturers engage in with library staff, the fact that there is consultation between lecturers and library staff is a healthy sign of professional collaboration and partnership. On the other hand, if the reason for the consultation is for lecturers to receive assistance from library staff in the use of the library, then it might cast doubts on the results in respect of student teachers' and lecturers' high self-evaluation of their library skills.

5.3.3 Patterns of library usage

As already mentioned in Section 5.2.3, patterns of library usage include periods and frequency of usage, and the type of information sources and services used.

5.3.3.1 Periods of usage

In question 4, lecturers were asked: "Have you made use of the College Library in the past year?" Respondents could indicate "Yes" or "No". All of the 84 lecturers indicated that they had used the College Library in the past year.

In order to ascertain their period of library usage, lecturers were asked in question 6: "What times do you use the library?" Respondents were given the following category of periods to choose from; 09h30 to 12h30, 14h00 to 16h30, 16h30 to 18h00 and 19h00 to 22h00. They were given the option to choose from more than one category.

Table 5.13 below shows that for lecturers, the most popular time for visiting the library is during the pre-lunch period. This is followed by the afternoon and evening periods between 14h00 and 16h30 and 19h00 and 22h00. Few lecturers visit the library in the late afternoon, between 16h30 and 18h00.

TABLE 5.13

Periods of library visits by lecturers

Period of visits	Respondents	Frequency	%
9h30 – 12h30	84	59	70.2
14h00 – 16h30	84	35	41.7
16h30 – 18h00	84	35	41.7
19h00 – 22h00	84	1	1.2

The data in Table 5.13 indicates that a high number of lecturers use the library during the periods that most student teachers are not using the library. However, 35 (41.7%) out of a total of 84 lecturers also make use of the library between 14h00 and 16h30, which happens to be the period that nearly half of the student teachers make use of the library. It is also interesting to note that this is the period on the time table for library visits for Communication and Study Skills. Using the library for the purposes of assisting student teachers was one of the most frequently indicated reasons for lecturers' usage of the library and the above findings seem to confirm this.

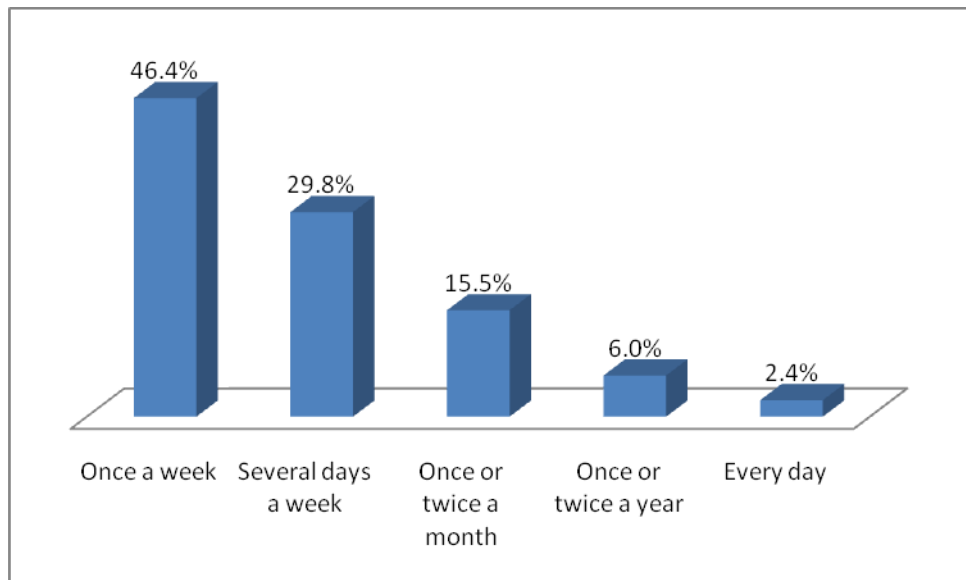
5.3.3.2 *Frequency of usage*

In order to ascertain how often lecturers visit the library, they were asked in question 7: "If your answer (to question 4) is 'yes', how often did you visit the library last year?" Respondents were to choose from the following options: every

day, once a week, several days a week, once or twice a month and once a year. The results are shown in Figure 5.6 below.

FIGURE 5.6

Frequency of library visits by lecturers



Note: % refers to total number of respondents i.e. 84

Though all the lecturers in the study indicated that they make use of the College Library, they differ in their frequency of library usage. The data in the bar chart in Figure 5.6 indicates the percentages in respect of frequency of lecturers' visits to the library. These percentages have been calculated from the total number of respondents. It shows that 46.4% of the lecturers visit the library once a week, nearly one-third (29.8%) visit the library several days a week and 15.5 % visit it once or twice a month. Only 6.0% of the respondents visit the library once or twice a year and 2.4% visit it every day.

5.3.3.3 *Types of information sources used*

Cross (2001:30-37) points out that lecturers' knowledge of information sources and services is essential for quality teaching and the promotion of students' use of library resources.

In view of the above, lecturers were asked in question 10: "What type of information sources do you use in the library and how often?" Respondents were provided with the following options to choose from: the reference collection; reserve collection; video collection; journal collection; magazine collection; newspaper collection; Botswana collection; fiction collection and non-fiction collection. Respondents were also given the option to specify other sources used but not included in the options. In addition, they were required to indicate frequency of use, which is whether they used these sources "very often", "often", "sometimes" or "never". The results are shown in Table 5.14 below.

TABLE 5.14

Types of information sources used by lecturers

Type of collection	Very Often	Often	Some - times	Never	Total	Very Often	Often	Some - times	Average	Index
Weight						1	0.66	0.33		
Reference	25	32	23	4	84	25	21.1	7.59	17.90	100
Newspapers	11	33	35	5	84	11	21.8	11.6	14.77	83
Non-fiction	11	35	30	8	84	11	23.1	9.9	14.66	82
Journals	10	37	28	9	84	10	24.4	9.24	14.55	81
Botswana Collection	12	31	33	8	84	12	20.5	10.9	14.45	81
Fiction	11	31	30	12	84	11	20.5	9.9	13.78	77
Magazines	8	24	47	5	84	8	15.8	15.5	13.11	73
Reserve	4	31	33	16	84	4	20.5	10.9	11.78	66
Videos	1	20	49	14	84	1	13.2	16.2	10.12	57

Table 5.14 shows the data on the type of information sources used by lecturers when they visit the library. The data was used to compile a weighted index of the relative frequency of use of the various collections. In calculating the index, a greater weight, was given to “very often” (1) as against “often” (0.66), “sometimes” (0.33) and “never” (0) in order to weigh the relative importance of the responses given. On the left-hand side of the table are the frequencies and on the right-hand side are the calculations according to a 4-point scale of weights with their respective averages. On the extreme right of the table are the calculated index scores. The highest score of 17.9 is equated to 100. The other scores are calculated relative to this maximum index.

According to the index, the reference collection (100) is the most frequently used. This means that the reference collection stands out as the primary source of information in the library for lecturers. This is followed by the newspaper (83), non-fiction (82), journal (81), Botswana (81), fiction (77), magazine (73), reserve (66) and video collections (57) respectively. However, the relatively small differences between some of the index scores implies that the newspaper, non-fiction, journal and Botswana collections serve as relatively important sources of information for lecturers.

5.3.3.4 Types of user services and facilities used

In question 11, lecturers were asked: “What type of user services and facilities do you use in the library and how often?” Respondents were provided with the following options: reference/information service; circulation service and photocopying facilities. Respondents were also given the option to specify other services used that were not included in the prescribed options. In addition, they were required to indicate whether they used these services “very often”, “often”, “sometimes” or “never”.

Table 5.15 below shows data on the types of user services and facilities that are used by lecturers in the library. The data was used to compile a weighted index of the relative frequency of use of particular services and facilities. In calculating the index, greater weight, was given to “very often” (1) as against “often” (0.66), “sometimes” (0.33) and “never” (0) in order to weigh the relative importance of the responses given. On the left hand side of the table are the frequencies, and on the right-hand side are the calculations according to a 4-point scale of weights with their respective averages. On the extreme right of the table are the calculated index scores. The highest score of 20.13 (rounded off to two decimal points) is equated to 100. The other scores are calculated relative to this maximum index.

The index in Table 5.15 shows that the Reference/information service (100) is the highest, indicating that it is the primary user service that is used by lecturers. This is followed by the Circulation (83) and the Photocopying facilities (50). The relatively narrow difference between the first two index scores implies that the Circulation facility is also frequently used by lecturers. The photocopying facility is not frequently used. This trend could be due to the frequent breakdown of the equipment alluded to in the responses given by lecturers when asked to express their opinions about improvements that could be made in respect of user services and facilities. Both lecturers and student teachers expressed concern about the frequent break-down of the photocopying equipment in the library.

TABLE 5.15

Types of user services and facilities used by lecturers

Type of user service & facilities	Very Often	Often	Some-times	Never	Total	Very Often	Often	Some times	Average	Index
Weight						1	0.66	0.33		
Reference/info	34	30	20	0	84	34	19.8	6.6	20.13	100
Circulation	11	47	25	1	84	11	31	8.25	16.75	83
Photocopy	4	13	53	14	84	4	8.58	17.5	10.02	50

5.3.4 Lecturers' perceptions about their library and information literacy skills

5.3.4.1 Lecturers' self-rating of library skills

It is important that lecturers should be information literate in order to be able to transfer their knowledge and skills to the students and also serve as role models to them.

In question 14, lecturers were asked: "How would you rate your level of information skills competency in the following areas?" The skills presented as options to respondents were as follows: ability to locate information sources in the library; knowledge of the system of arrangement of the library's information sources; knowledge of the different sections of the library; knowledge of available library services; ability to use the catalogue to locate information; ability to use reference sources (e.g. encyclopaedias, dictionaries etc); ability to browse for information; ability to make notes from a range of sources; and ability to compile a bibliography from different information sources. Respondents were also given the option to indicate their competency level in respect of each skill as either "very good", "good", "average", "poor" and "very poor". The results of the self-evaluation of lecturers' perception of their levels of library skills are presented in Table 5.16 below.

TABLE 5.16*Lecturers' self-rating of library skills*

Library skill i.e. ability to:	Very good	Good	Fair	Poor	Very poor	Total	Very good	Good	Fair	Poor	Average	Index
Weight							1	0.75	0.5	0.25		
locate information	43	35	6	0	0	84	43	26.3	3	0	18.06	100
use reference sources	49	23	12	0	0	84	49	17.3	6	0	18.06	100
make notes	40	26	17	0	1	84	40	19.5	8.5	0	17	94
compile bibliography	35	35	14	0	0	84	35	26.3	7	0	17.06	94
browse for information	37	33	12	2	0	84	37	24.8	6	0.5	17.06	94
use catalogue	36	31	16	1	0	84	36	23.3	8	0.25	16.87	93
know sections	33	33	17	1	0	84	33	24.8	8.5	0.25	16.62	92
know arrangement	28	29	24	0	3	84	28	21.8	12	0	15.435	85
know services	13	48	19	4	0	84	13	36	9.5	1	14.87	82

Table 5.16 shows the data on the responses regarding lecturers' perceptions of their levels of library skills. The data were used to compile a weighted index of the relative level of competency in the various skills. In the calculation of the index, a greater weight was given to "very good" as against "good", "fair", "poor", "and very poor". In this instance, the 5-point scale was reduced to a 4-point scale by combining the data for 'poor' and 'very poor'. Thus, weights of 1, 0.75, 0.5, 0.25 and 0 were used respectively to weight the relative competency in the various skills. On the left-hand side of the table are the frequencies, and on the right-hand side are the calculations and their respective averages. On the extreme right of the table are the calculated index scores. The highest index score of 18.06 (rounded off to two decimal points) is equated to 100. The other scores are calculated relative to this maximum index.

The index indicates that out of the nine library skills that have been identified in the table, lecturers rated the ability to locate information sources (100) and the ability to use reference sources (100) as their best skills. This is followed by the

ability to make notes from a wide range of sources (94), the ability to compile a bibliography (94), the ability to browse for information (94), the ability to use the catalogue (93), knowledge of different sections of the library (92), the ability to browse for information (91), knowledge of the system of arrangement of the library (85) and knowledge of available services (82).

On the whole, the relatively high index scores recorded for all the nine skills, coupled with the relatively small differences between the scores imply that lecturers, as in the case of student teachers, perceive themselves to be competent in all the library skills identified. Lecturers' perceptions of their own levels of library skills could not be verified by the researcher, due to time and resource constraints. Nevertheless, the findings could still serve as an indication of the high value lecturers attach to information literacy. (In Chapter 2, Section 2.5, the possible shortcomings of drawing firm conclusions from research findings on the self-rating of information skills was explained).

The high rating by lecturers and student teachers of their own library skills and knowledge seems to correspond to the high rating by student teachers of their opinions about the contribution of the college library to their academic success (see Section 5.2.4.3). This means that it would be wise to develop lecturers' and student teachers' information literacy skills since this could positively influence their effective use of the college library. The recent introduction of computers and Internet access in the library coupled with the extension of the content of the information literacy instruction programme will go a long way to further enhance the use of the library.

5.3.4.2 Relationship between lecturers' library skills and library usage

In order to ascertain whether lecturers' own perceptions of their library skills influence their use of the library, lecturers were asked in question 15: "Now that you have rated your library skills, in which of the following ways do these skills help you to make effective use of the library?" The following statements were made: I am able to make use of the library resources with ease and confidence; I am able to make frequent use of the library. In a column provided at the end of each statement, respondents were to indicate either "Yes" "No" or "Not sure".

The data in Table 5.17 below shows that nearly two-thirds of the lecturers, that is, 55 (or 65.5 %) out of the total of 84 lecturers indicated that the levels of their library skills have enabled them to make use of the library with ease and confidence. With respect to the second statement as to whether the level of their skill has helped them to make frequent use of the library, 62 (or 73.8 %) of the lecturers answered, "Yes". If one combines the data for these two questions to find the average number of lecturers who answered in the affirmative, then well over two-thirds (69%) or 58 of the lecturers thought that their library skills enabled them to use the library effectively. However, when one combines the data to find the average number of negative responses, then nearly one-quarter (24%) or 20 lecturers thought that their library skills do not help them to use the library with ease and confidence, nor to use it frequently; 5 (or 6%) lecturers on the other hand were not sure. These results imply that almost one-quarter needs help in improving their library skills.

TABLE 5.17*Lecturers' library skills and patterns of usage*

Ways in which skills help	Frequency						
	N	Yes	%	No	%	Not sure	%
Able to use the library with ease and confidence	84	55	65.5	21	25.0	8	9.5
Able to make frequent use of the library	84	62	73.8	20	23.8	2	2.4

In attempting to determine the effects of library use on student teachers, the role of lecturers in motivating them to use the library was examined.

5.4 ROLE OF LECTURERS IN MOTIVATING STUDENT TEACHERS TO USE THE LIBRARY

In Chapter 2, reference was made to research findings that seem to indicate that there is a relationship between the attitude of lecturers towards the library, the lecturers' teaching methods and library usage. In Section 2.7.2 the importance of using assignments and project work to facilitate the development of information skills was pointed out. Lecturers' roles in motivating students to use the library by means of assignments, projects and tasks pertain to their teaching functions. Nevertheless, conclusions could be drawn about the effects of these teaching methods on students' library usage by linking responses in this regard to students' reasons for use. In that respect, teaching methods could also be viewed as a factor influencing students' library usage.

In view of the above, lecturers were asked in question 12: "Do you encourage your students to make use of the College Library?" The respondents were given

the option to answer either “Yes” or “No”. All 84 lecturers answered in the affirmative.

5.4.1 Methods adopted by lecturers to motivate students to use the library

As a follow-up to question 12, lectures were asked in question 13: “What tasks do you give your students which require them to use the library?” Respondents were provided with the following answers to choose from: required reading, optional reading, topic assignments, research/project work and discovery reading. Respondents could indicate more than one option and also given the option to specify their own answers.

The result in Tables 5.18 below shows the kinds of tasks that lecturers give to student teachers which require them to use library resources.

The percentages expressed in Table 5.18 are calculated out of the total number of respondents rather than the total number of responses. The data indicates that lecturers use a variety of teaching methods to stimulate their student teachers to use the College Library. Out of a total of 84 respondents, the majority of lecturers give student teachers topic assignments (89.3%), research projects (82.1%) and required reading (76.2%) with the view to stimulating them to use the college library. More than half (51.2%) of the lecturers, use discovery reading to motivate student teachers to use the library. Optional reading is used by only 41.7% of the lecturers with the view to stimulating student use of the library.

TABLE 5.18

Tasks given by lecturers that require the use of the library

Types of task	Lecturers				
	N	Yes	%	No	%
Topic assignment	84	75	89.3	9	10.7
Research/Project work	84	69	82.1	15	17.9
Required reading material	84	64	76.2	20	23.8
Discovery reading	84	43	51.2	41	48.8
Optional reading	84	35	41.7	49	58.3

The data reveals that giving topic assignments and research projects are the teaching methods that are most favoured by lecturers to stimulate use of the library by student teachers. The least used teaching method among lecturers is optional reading.

Lecturers were also asked an open question in question 17: “In your opinion, what other teaching techniques can be used to motivate students’ use of the library?” The question was answered by 78% of the respondents. A variety of opinions were expressed by lecturers.

The following are the main suggestions from lecturers in respect of the above question.

- Extra marks should be given to student teachers who show evidence of library usage in their assignments, project work or other presentations
 - There should be more collaborative programmes and activities between the library and subject departments to promote resource-based learning
 - Students should be given specific times on the timetable to use the library
- In order words, in addition to the Communication and Study Skills

Department, other subject departments should set aside specific periods when student teachers are accompanied by their lecturers to the library to use the resources

- Library management should compile records of students and lecturers who make frequent use of library. This information can be given to the college management to give recognition and awards annually
- The need for the celebration of a library-use week every academic term

5.4.2 Effects on student teachers' library usage

In order to ascertain whether teaching methods used by lecturers to motivate library use had any effect on the students' usage of the library, student teachers were asked in question 13: "Do your subject lecturers expect you to make use of the library?" In response, the majority (88.4%) of student teachers answered "yes", 10.4% answered 'sometimes' and only 1.2% responded in the negative.

Student teachers were further asked in question 15: "Which of the following tasks do your lecturers give that require you to make use of the library?" Respondents were required to select from a list of options but could also specify any other task used which was not included in the list. The options comprised required reading, optional reading, topic assignments, research projects, discovery reading. They could indicate more than one option. The percentages are calculated out of the number of respondents. The data (Table 5.19) below indicates that the majority (87.8%) of the student teachers selected topic assignments as the type of task given by lecturers that most stimulated them to make use of the college library. More than half (54.7%) of the student teachers indicated required reading material; 51.9% who selected research/project work and 40.1% who selected discovery reading as the tasks that stimulated them to make use of the library. Optional reading was indicated by only 24.4%. These results are not surprising, as data collected in respect of student teachers' reasons for library usage indicate

that the satisfaction of information needs relating to their assignments and project work is the primary reason why they use the library.

TABLE 5.19

Task requiring student teachers to use the library

Types of task	Student teacher response				
	N	Yes	%	No	%
Topic assignment	172	151	87.8	21	12.2
Required reading material	172	94	54.7	78	45.4
Research/Project work	172	89	51.7	83	48.3
Discovery reading	172	69	40.1	103	59.9
Optional reading	172	42	24.4	130	59.9

Student teachers' motivation to use the library as a result of tasks assigned to them by their lecturers is also reflected in their positive attitudes in respect of the library's contribution to their studies as shown in Section 5.2.5 above. Knowledge about the user behaviour of student teachers and lecturers could enable the librarian to develop relevant resources, facilities and user services that would meet their needs.

5.5 PROVISION OF RESOURCES, FACILITIES AND SERVICES

In chapter 2, Sections 2.4 and 2.5, it was pointed out that library resources, facilities and processes support user services. In chapter 3, it was noted that the availability of library resources is an important factor that influences library usage. In view of this, an attempt was made to solicit the opinions of student teachers about the current state of user services and facilities in the College Library, and what should be done to improve these services.

5.5.1 Current state of resources, facilities and services

In question 20, student teachers were asked the following open question: “Please complete the following sentence, The ONE thing the College Library could do that will improve services is” The issues of concern that were raised by student teachers in response to the above question have been grouped under three main categories.

The first category of concern was about issues regarding physical access to the library. Student teachers complained about the length of opening hours of the library. They suggested much longer and more flexible library opening hours that should include Saturdays and Sundays.

In Section 5.2.3.2, it was shown that the majority of student teachers visit the library during the late evening session; it was suggested that the pre-dinner period is taken up by extra-curricular activities. This may explain why most student teachers were of the opinion that an extension of the library opening hours was necessary.

The second category of concern was about the manual operating processes in the library, and the absence of the Internet for library users. The student teachers suggested that library processes and procedures such as acquisitions, circulation and retrieval should be computerized.

The third category of concern to student teachers was about the frequent breakdowns of photocopying machines and malfunctioning air-conditioners, and the long delay repairing them.

Other specific issues of concern raised by the student teachers related to the library collections, staff, borrowing facilities, electronic access and the general library environment. The following are specific concerns that were expressed:

- noise in the library during the night session
- irregular supply of periodicals, especially newspapers
- mis-shelved books

The following recommendations were also made:

- acquisition of additional sources for the Botswana collection
- acquisition of additional sources for the Setswana section
- employment of additional library staff to assist students
- extension of borrowing period from two weeks to one month
- extension of the number of items that can be borrowed from the current three to six or more items
- electronic connection with the University of Botswana Library resources

5.5.2 Information literacy skills as a component of teachers' training programme

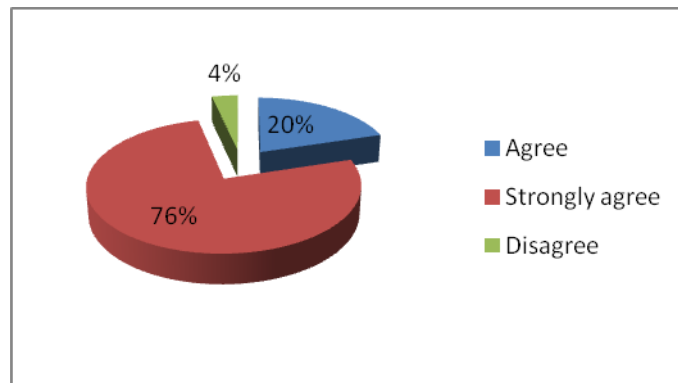
The researcher sought the opinions of lecturers and student teachers in questions 16 and 19 respectively to: "Please indicate your opinion on the following statement 'Information literacy skills instruction should be an essential component of teacher training programmes'." The respondents were given the option to choose from the following answers "strongly agree" "agree" "disagree" "strongly disagree" and "not sure".

The results in respect of lecturers' opinions are shown graphically in Figure 5.7. Out of the total of 84 lecturers, 65 (76%) strongly agreed whilst 16 (20%) agreed with the statement. Only 3 (4%) lecturers disagreed with the statement that

information literacy should become an essential component of the teachers' training programme. Thus, the majority of lecturers were strongly in favour of the inclusion of information literacy skills in the teachers' training programme.

FIGURE 5.7

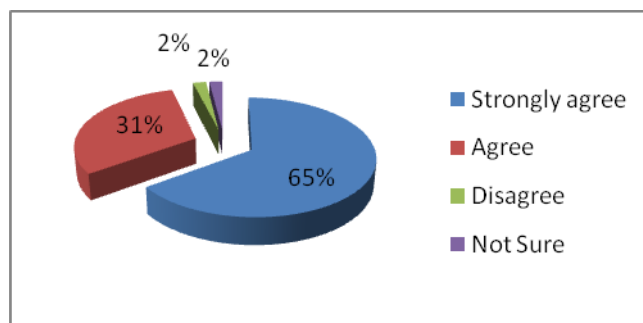
*Information literacy as a component of the teachers' training programme:
lecturers' opinions*



The results in respect of student teachers are shown in Figure 5.8 Out of the total of 172 student teacher respondents, 111 (65%) of them strongly agreed and 54 (31%) agreed respectively with the statement that information literacy skills should become an essential component of the teachers' training programme. Only 2 (2.3%) disagreed, and 2 were not sure whether information literacy should become an essential component of teacher training programmes. Thus, as in the case of the lecturers, the majority of student teachers were also strongly in favour of the inclusion of information literacy skills in the curriculum in the teachers' training programmes.

FIGURE 5.8

*Information literacy as a component of teachers' training programme:
student teachers' opinions*



5.5.3 Information literacy skills instruction programme at Tonota College of Education

The information literacy (IL) instruction programme is part of user education and a form of user guidance or professional user service. During the researcher's telephone interview with the Librarian-in Charge of Reader Services, she was asked this question: "Does the College or the College Library offer information literacy education or information skills instruction to students?" It was revealed that the college has offered an information literacy (IL) instruction programme since 2003. A further question was then asked: "If the college offers an information literacy instruction programme, is it part of the curriculum? If it is, what is the duration of the programme?" Her response was that the IL programme is a three-year modular programme that is scheduled on the timetable and administered jointly by the departments of Communication and Study skills, the Learning Resource Centre and the College Library. According to her the programme is compulsory for all student teachers of the College. The Librarian (Reader Services) was then asked: "Does the IL programme have a library skills component?" Her response was "yes". A follow up question, "Does the IL programme have a computer skills component?" had an affirmative response. She

went on to explain that at present the (IL) programme has a library skills component and a computer skills component.

Prior to 2008, the IL instruction programme was essentially composed of basic library skills. The library skills component, as at the time of administering the survey questionnaires for this research (see Appendices D and E), was essentially concerned with the application of manual skills and knowledge regarding such things as ability to locate information sources in the library, ability to use the catalogue, ability to use reference sources, ability to browse for information, ability to make notes from a range of sources, ability to compile a bibliography, knowledge of the system of arrangement of library material, knowledge of different sections of the library and knowledge of available services.

It has been noted in Section 5.5.1 that student teachers were asked in the questionnaire to express their opinion regarding the then state of user services. The majority of student teachers expressed concern regarding the lack of computers and internet facilities in the library. The Librarian further indicated, during the interview, that in 2008, the college library began to automate key library processes and procedures. In addition, 12 computers and Internet services were installed in the library. The introduction of information and communication technology (ICT) into the library was also accompanied by the introduction of computer skills instruction; this was aimed at equipping student teachers with the skills for locating, accessing, and evaluating, retrieving and using electronic information.

In her answer to the question, “What are the key challenges faced by Librarians in the provision of the IL instruction programme?” The Librarian (Reader Services) expressed concern regarding heavy workloads due to understaffing, and inadequate training. As a result, library staff is unable to cope with emerging trends in professional practice. She went on further to say that the fundamental challenge faced by librarians in the college which seems to impact negatively on

the performance of their duties, relates to the ambiguous position of library staff within the College structure. Under the current arrangement, library staffs in the colleges of education are seconded from Botswana Library Services which is a department under the Ministry of Home Affairs. The colleges fall under the Ministry of Education. This arrangement does not allow the College authorities to have effective control over the quality and number of library staff in their colleges. Library staffs who are seconded to these colleges often consider themselves neglected because neither the colleges nor their parent ministry seem to bother about their professional development and welfare. These issues seem to impact negatively on the morale of library staff and service quality. There is therefore the need to be address this urgently.

5.6 SUMMARY

The purpose of the empirical investigation was to explore the extent to which student teachers and their lecturers utilized the college library resources. The specific factors that hinder or enhance the use of the library were also investigated.

The study revealed that most of the student teachers and their lecturers make use of the College Library. When the two user groups are compared, however, it becomes clear that they differ in their times of access and frequency of visits to the library. The pre-lunch or morning session is the period when the majority of lecturers visit the library. This may be due to the fact that lecturers use the library during the pre-lunch session when they are not delivering their lectures. This is almost in contrast to the time that most of the student teachers visit the library. For the student teachers, the night session represents the period when the majority of them visit the library. Only a small percentage of the students visit the library during the morning session. This difference in times of use of the library is not mentioned in the subject literature which has generally focused on aspects, such

as, frequency of library visits, and reasons for visiting the library. This important area was ignored in spite of the fact that knowledge about this facet of library usage can inform decisions concerning the scheduling of library service hours to meet the needs of all user groups. The implication of these findings is that the institution will have to review its current opening hours to try to accommodate both student teachers' and lecturers' demands for extended hours of opening. This may be possible if the required additional staff to man the library at these times can be budgeted for.

It also came to light in the study that student teachers in their third year of study use the library more frequently than students in the first and second years of study. In addition the study also revealed that the majority of lecturers visit the library to collect information for classroom teaching and for research purposes while the majority of student teachers use the library to complete their assignments and project work. The library is, therefore, valued by student teachers and lecturers as an important teaching and learning resource.

All of the lecturers indicated that they encourage students to make use of the library by giving them a variety of tasks that requires their use of the library's resources. Furthermore, a significant number of lecturers schedule to meet their student teachers in the library to engage in information literacy (IL) programme activities.

The study also revealed that only a small number of student teachers and lecturers use the College Library to borrow books for recreational use. This seems to highlight the need to promote the recreational use of the library.

It seems that all the lecturers adopt the same teaching methods to stimulate their students to use the library. However, the majority of lecturers use topic assignments as a strategy to integrate information and library use into the

curriculum and the majority of student teachers indicated that they are motivated to make use of the College Library resources when given topic assignments.

The study also revealed that both student teachers and lecturers rate their own library skills as very high. The majority of student teachers' perceptions that the College Library is essential to their academic success can be viewed as a positive effect of their library usage. Their opinions correspond with that of the majority of lecturers, namely, that information literacy should become an essential component of teacher education.

Furthermore, the findings revealed that there should be more collaborative programmes between the library and subject departments. These programmes should be specifically designed to stimulate library usage. Both student teachers and lecturers have suggested other creative strategies, such as awarding extra marks for evidence of library usage, and the celebration of library-use week among others.

The conclusions and recommendations arising from these findings are presented in chapter 6.

CHAPTER 6

FINDINGS, RECOMMENDATIONS AND CONCLUSION

6.1 INTRODUCTION

The primary purpose of this study was to investigate the extent to which student teachers and their lecturers at Tonota College of Education make use of the college library. The aim was to determine the patterns of library usage, the factors hindering or enhancing usage and the methods used by lecturers and librarians to stimulate use. Findings in this regard would enable the researcher to make recommendations for college library practice in Botswana and elsewhere.

To achieve the above purpose, the study sought to answer the following research questions:

- 6.1.1 What is the nature and extent of library usage by student teachers and lecturers and what factors influence their usage behaviour?
 - 6.1.1.1 What are the characteristics of student-teachers and lecturers?
 - 6.1.1.2 Why do student teachers and lecturers use the library?
 - 6.1.1.3 What are their patterns of library usage?
 - 6.1.1.4 What types of sources do they use?
 - 6.1.1.5 What types of services do they use?
 - 6.1.1.6 What are students' and lecturers' perceptions of their own library skills and is there a relationship between these perceived skills and their library usage?
- 6.1.2. What roles do lecturers and librarians play in motivating student-teachers to use the library so as to succeed in their studies?

- 6.1.2.1 What methods are used by lecturers to motivate students to use the library?
- 6.1.2.2 What information literacy skills instruction programmes are offered at the college library?
- 6.1.2.3 What are student teachers' opinions about the contribution of the college library to their academic studies?

These research questions were addressed in a review of the literature and in an empirical investigation. A summary of the findings of the literature review are presented in Section 6.2 and the findings of the empirical study are summarised and discussed in Section 6.3 with reference to relevant earlier studies.

6.2 ROLE OF COLLEGE LIBRARIES IN MEETING THE NEEDS OF STUDENT TEACHERS AND LECTURERS

The literature review in chapters 2 and 3 focused on the role and functions of college libraries in education in general and teacher education in particular, and examined the characteristics of college students and lecturers as a user group. It also reviewed research findings reported in the current subject literature on studies conducted on college students and lecturers, and their library usage and the factors influencing usage.

6.2.1 Aims of education and college libraries

The review of the literature indicates that the aims of modern education, resource-based learning, information literacy and college libraries are intertwined. The aim of both modern education and resource-based learning is to develop students who are independent learners, this requires the ability to find and use information

effectively. The academic library serves as a vital resource in any resource-based and information literacy programme in terms of provision of information resources and equipping students with information literacy skills through information literacy instruction programmes. It has also been suggested that one way of achieving optimum utilization of the library by students is for lecturers to give them “appropriate and do-able” assignments and research projects. Librarians are also expected to play a major role by giving guidance and support in the use of the resources, and training students on how to make effective use of the library.

6.2.2 International research on student teachers and lecturers as library users

User groups have been identified in the literature according to demographic, social and personal characteristics. Characteristics are distinguishing features that help to define and categorize individuals and groups in an environment. These characteristics influence the information needs, motives and information usage behaviour of user groups in an information environment. Understanding the characteristics of student teachers and lecturers as a user group is vital for providing services that meet their needs. Research findings reported in the subject literature indicate that both curricular and non-curricular motives drive students and lecturers to use the library.

Research findings indicate that the factors that influence the nature and patterns of college library usage by students and lecturers include characteristics, such as, gender, age, year of study, course of study, and the cultural environment. The availability of library resources and services, teaching methods, information skills, attitudes towards the library, and library promotion strategies also influence library usage. For instance, findings show that inadequate provision of library resources

and over-reliance on textbooks, and the negative attitudes of students, lecturers and librarians towards the library impact negatively on library usage.

6.3 EMPIRICAL FINDINGS

A case study descriptive research design was adopted in the empirical investigation. Questioning methods, namely, questionnaires and an interview schedule were used to collect quantitative and qualitative data. Out of the five colleges of education in Botswana, the library in Tonota College was selected for the study, since it is typical of other college libraries in Botswana.

6.3.1 Characteristics of student teachers and lecturers

The investigation focused on student teachers and lecturers as user groups. The following characteristics were associated with these groups. Out of the total of 172 student teachers who participated in the investigation well over half were female. The majority of student teachers were in the age groups of 21 to 24 years. The student teachers were pursuing the three year diploma programme in teacher education of which 40.1% were in year three, 33.2% in year two and 26.7% in year one. Student teachers were studying a variety of subjects from a range of 16 subject areas.

All of the 84 lecturers from across 16 subject departments at Tonota College of Education participated in the study. Nearly three-quarters of them had more than 10 years teaching experience. Almost two-thirds were male and one-third was female. Foundations of Education as a subject discipline had the most (8) lecturers. This was followed by the departments of Home Economics, Agriculture, Business Studies and Communication and Study Skills with seven (7) lecturers each.

6.3.2 Periods of library usage

The findings regarding the times when student teachers visited the library indicate that the night session from 19h00 to 22h00 was the most popular. The session between 14h00 and 16h30 was patronized by nearly half of the student teachers due to the fact that student teachers are mostly engaged in lectures in the morning and sporting and other extra-curricular activities during the late afternoon. On the other hand, over two-thirds of the lecturers used the library during the day sessions between 09h30 and 12h30 when most student teachers did not visit the library. However, a fairly large percentage (41.7%) of lecturers made use of the library between 14h00 and 16h30, and 16h30 and 18h00. These afternoon sessions are also the times during which nearly half of the student teachers made use of the library. This is the period when most IL instruction visits to the library were time-tabled. The finding seems to correspond with another finding in the study, namely, that one of the most frequently indicated reasons for lecturers' usage of the library were for purposes of assisting student teachers.

6.3.3 Reasons for library use

Borrowing for curriculum-related use constituted more than half of the reasons why student teachers used the library. Visiting the library to photocopy material, study own notes and borrow for recreational use were other reasons for library use.

On the other hand, lecturers use the library for diverse reasons, namely, to do research to borrow sources for curricular use, to assist their students and to borrow items to satisfy recreational needs. The findings in this study are consistent with findings in similar studies by Yusuf and Iwu (2010) and Jiao and Onwuegbazie (1997).

6.3.4 Activities carried out in the library

The activities that student teachers and lecturers carry out when they visit the library are closely related to their reason for library usage. The findings in this respect indicate that collecting information for an assignment is the predominant activity that student teachers engage in when they visit the library. This is followed by reading magazines and collecting information for their project work. The activity that is least engaged in by both student teachers and lecturers are the borrowing of videos. Furthermore, the activity that engages the attention of lecturers most when they visit the library is collecting information for classroom teaching, and identifying sources to refer student teachers. The low patronage of the only non-book media in the library's collection is a cause for concern. This is because it seems to indicate that lecturers do not use videos in their own teaching. As a result, student teachers are not motivated to use them in their own learning. It might also suggest that there are few facilities within or outside the library for viewing non-book media.

6.3.5 Frequency of library usage

All of the 172 student teachers and 84 lecturers indicated that they have visited the library within the year prior to the study. With respect to the frequency of visits, two-thirds of the student teachers visited the library several days a week while nearly half of the lecturers visited the library at least once per week. However, only a small percentage of student teachers and lecturers visited the library every day. The frequency of usage recorded in this study does not correspond with Olen's (1994) finding that over half of the student teachers in her study visited the library once or twice in a year or not at all. It is possible that students in Botswana also use the college library as a quiet place to study because they do not have the relevant facilities or information sources at home.

This study also found a fairly significant difference in the frequency of library usage between the first and the third year student teachers in the sense that, student teachers in their third year of study frequented the library more than their first year counterparts. This trend may be due to the fact that third year student teachers pursue more advanced courses which require them to conduct research projects. This finding is consistent with the findings of Burns (1997), Jiao and Onwuegbadze (1997) as well from similar studies.

6.3.6 Usage of library resources, services and facilities

The findings revealed that the non-fiction collection constituted the primary source of information for student teachers. This is followed by the reference collection and the magazine collection. Reference sources were the primary source of information for lecturers, followed by the newspaper collection. The least used information source was the video collection. This finding is consistent with that of Yusuf and Iwu (2010) who found that newspapers and reference sources were the primary sources of information for students of Covenant University in Nigeria.

This study also revealed that out of all the user services and facilities, the reference or information service was the most used by student teachers and lecturers. The least used facility by both student teachers and lecturers was the photocopying equipment. However, both user groups expressed much concern about the frequent breakdown and poor maintenance of the photocopier machines.

6.3.7 Library and information skills and library usage

Student teachers and lecturers rated very highly their own levels of competence in each of the nine library skill areas identified in the study, but particularly their ability to make notes from a range of information sources and to locate information sources in the library. Although their actual levels of competency could not be verified in this study, the way in which student teachers in particular rated their skills is reflected in the high opinion they held of the library's potential to make a positive contribution to their academic success. These findings are similar to those reported by Maughan (2001) and Toda and Nagata (2007).

Almost two thirds of the student teachers and lecturers thought that their levels of library skills had helped them to make use of the library frequently and with ease and confidence. However, almost one third of both user groups indicated that they need help with their library and information literacy skills in order to make effective use of the library. The afore-mentioned results cast some doubt on students' and lecturers' high rating of their own skills. Indeed, Maughan (2001) came to the conclusion that students and lecturers tended to over-rate their own skills.

6.3.8 Library use promotion techniques

Lecturers encourage students to make use of the library by giving them a variety of tasks that require their use of the resources. Most of the lecturers indicated that they adopt topic assignments as a strategy. This is confirmed by the majority of student teachers who indicated that they are motivated to make use of the college library resources when given topic assignments. Their perception of the library's contribution to their studies is a positive outcome of their task-related library usage. However, less than one-quarter of the lecturers followed their student

teachers up to the library to assist them with the use of the library. Furthermore, it was not possible to ascertain the nature of the lecturers' assistance.

The information literacy instruction programme that is collaboratively designed and implemented by library staff and lecturers from the Department of Communication and Study Skills and the Learning Resource Centre is used to stimulate library use among student teachers. Although findings of Cochrane's (2006:97-123) study indicated a positive relationship between information skills and library usage, this study did not measure the effect of the programme on the library usage behaviour of student teachers. Therefore, it is not possible to draw any conclusions in this regard.

However, the interview with the Librarian-in-Charge of Reader Services revealed that some critical challenges confront the IL instruction programme, namely, under-staffing in the College Library and the Learning Resource Centre, the ambivalent status of the professional library staff within the college structure; inadequate computers; and the fact that the programme content is predominantly lower-order library skills with a bias towards print media sources.

6.4 RECOMMENDATIONS

This researcher would like to suggest certain recommendations based on the findings of this study. These recommendations are made bearing in mind the financial and other resource constraints currently prevailing in Botswana and other developing countries in southern Africa.

6.4.1 Access to library resources and facilities

The provision of improved access to enable optimum usage of college libraries should be approached from three angles; the physical, electronic and intellectual access.

6.4.1.1 *Physical access*

The provision of physical access entails the extension in the opening hours of the library. Since the night session is the most popular time for the majority of students to use the library, the night session should be extended to enable student teachers have more time to use the facility. The library service hours could even be extended to include Saturdays and Sundays. The extended service could be managed cost effectively through the adoption of a shift working system, by engaging student volunteers to assist with the provision of routine tasks such as photocopying, circulation and shelving, and by providing on-campus accommodation for library staff.

The library could also develop new services such as “information commons” or “learning commons” to promote group study in a specially designated area in the library. This innovation posits the library as a supplier of space for group study. This may bring considerable changes in the pattern of students’ library use.

Since the majority of both student teachers and lecturers expressed their concern about specific resources, facilities and services, the library management needs to resolve these issues urgently. Based on the principal concerns, the library should consider; the acquisition of additional information sources for the Setswana subject and Botswana collections, the employment of additional professional library staff,

the extension of the number of books and the loan period for student teachers from 3 to 6 books and 2 weeks to a month respectively, the replacement of old photocopiers, the reduction of noise in the library especially during the night opening sessions. The introduction of small fees for reprographic services might assist with the raising of funds for the maintenance of equipment.

The above recommendations should be applicable to other college libraries in Botswana since they have almost the same challenges.

6.4.1.2 *Electronic access*

Electronic access entails the provision of electronic aids that enable users to access information remotely, without necessarily visiting the physical library in person.

Access to the Internet is vital to increase the resources of the library and to provide a wider access to networked scholarly resources. Acquisition of appropriate ICT applications such as wireless technology, digitization, additional computers, and subscriptions to additional electronic databases could enable users' access scholarly information resources via the Internet, hence removing the constraints of time and location. The college library should as a matter of urgency provide a minimum of 50 computer terminals with Internet access and 4 networked printers on the average 1 computer to 10 student teachers. In addition to Government funding, private companies including the large mining companies and individuals in Botswana, should be encouraged to invest in ICT and library provision in the colleges in return for tax rebates.

The tertiary education authorities and libraries in developing countries should lobby their national governments to develop national ICT and information literacy policies that, among other things aim at heavily subsidizing the costs of internet bandwidth to educational institutions and libraries.

6.4.1.3 *Intellectual access*

Intellectual access entails equipping users to make effective use of information sources through information literacy programmes.

There should be a qualitative review of the current information literacy (IL) instruction programme that is provided in the colleges of education in Botswana with the view to incorporating relevant knowledge and skills, such as media and computer skills. Since the way that students rate their own competence may be related to the way in which they used the library resources, the information literacy instruction programme should be expanded to include the teaching of the higher-order cognitive skills of analysis, synthesis, and evaluation, creating and sharing information which is an essential component of information literacy.

National and regional library associations in developing countries should establish agencies and professional networks that aim at promoting library and information usage and the conduct of research and dissemination of research information in the effective use of information.

6.4.2 Promotion of library use by lecturers and librarians

Since professional collaboration is essential for a successful resource-based learning programme, college library staff and lecturers should broaden areas of professional collaborative partnership. This can be done by developing user services and teaching methods with the view to promoting library usage among student teachers and lecturers and developing information literacy.

As students' use of the library is in response to deliberate teaching methods adopted by lecturers then information skills acquisition, which is an aim of resource-based learning should be formalized in all the colleges of education in Botswana. Every course of instruction across the college curriculum should have an information literacy objective which is measurable in the same way other course objectives are assessed. The strategy could also be promoted by awarding extra marks and including other forms of recognition, such as special certificates, to students who consistently show evidence of library usage.

The colleges of Botswana have already built the foundation for inter-collegiate professional collaboration through the development and implementation of the common IL instruction programme in all colleges. Other avenues of collaboration that would promote the usage of the library could be explored. The collaboration could extend beyond into neighbouring countries, such as South Africa, to share from their experiences with the CALICO project and other similar initiatives.

6.4.2.1 *Marketing and promoting information collections*

The librarians in the colleges of education should conduct regular user needs surveys to identify user needs and improve user services, resources and facilities in order to be able to effectively advertise and deliver on their promises to their user groups.

The aim of modern education is for the holistic preparation of students for life yet only a few student teachers and lecturers use the library to satisfy recreational needs. The academic library should therefore make a conscious effort to provide

for, and promote the academic, recreational and voluntary use of the library through its user service functions.

Since students' mainly use the library to collect information for assignments and projects, the library management should also consider alternative ways of marketing and promoting the voluntary use of college library resources. Tonota College of Education and other colleges in Botswana could organize regular events such as "book fairs", exhibitions, competitive debates, quizzes and seminars to indirectly serve as a platform to advertise and promote its resources, facilities and services.

Since the video collection was under-utilized by both student teachers and lecturers, the library management should make a conscious effort to introduce other non-book information sources, such as DVDs and e-books into the collection and ensure the provision of space and equipment within or outside the library for their usage. Librarians should develop strategies that would improve upon the use of the non-book collections among student teachers and lecturers who should integrate their use into classroom teaching.

6.4.2.2 *Provision and maintenance of library resources*

The colleges of education in Botswana should come together to develop a "Standards for College Libraries" in Botswana. A policy document or instrument by which college libraries in Botswana can be assessed with respect to their objectives, organization, staffing, services, collections, equipment, ICT, budget and space. The document should provide both qualitative and quantitative standards to assist colleges in improving all facets of their library and learning programmes.

In view of the fact that most student teachers and lecturers expressed concern regarding the poor maintenance of library resources, especially the reprographic and air-conditioning equipment, the library management and the college authorities should develop and implement a comprehensive maintenance and replacement policy for the library building, equipment and furniture.

6.4.2.3 *Human resource development*

Given that the most valuable resource of every organization is its staff, it is important that adequate steps are always taken to create opportunities for continuous professional development, and to keep the morale of staff high. In view of this, the concerns expressed by the library staff should be taken note of, and resolved with urgency. The right number of qualified staff should be employed. These should be people who are capable of effectively handling the changing information needs of academic institutions especially in the key areas of ICT applications and the professional library functions, namely, user services and user education.

6.5 FURTHER AREAS OF RESEARCH

There is the need for further study on the use and users of college libraries in Botswana and other developing countries in southern Africa, especially in such areas as the roles and strategies that librarians, lecturers or academics and the college administration can adopt to empower students to become effective users of information and life-long learners. A study to investigate the relationship between students' patterns of library usage and their academic outcomes is also suggested. An investigation into whether information literacy skills acquired by student teachers during their training are being passed on to their students in the secondary school classroom during teaching practice is essential. A qualitative study

involving measuring student teachers' information skills and information usage behaviour are possible areas of further research.

6.6 CONCLUSION

The findings of this study revealed that the majority of both student teachers and lecturers used the college library frequently. Most student teachers used the library during the late evening opening hours, whereas most lecturers used it during the pre-lunch opening hours. Third year students used the library more frequently than first and second year students. Most student teachers used the library to satisfy their curriculum-related information needs, whereas lecturers used the library mainly to satisfy their academic and recreational information needs. It was the expectation of lecturers that their students would make use of the library, and library usage was promoted by giving student teachers assignments, project work and other curricular-related tasks. Most student teachers were of the opinion that the college library is essential to their academic success. Furthermore, lecturers and student teachers were of the opinion that information literacy instruction should become an essential component of teacher education.

The challenge now is how the management of the Tonota College of Education and other colleges of teacher education in Botswana will be able to channel these positive perceptions about the library into concrete educational benefits, and build upon this foundation to improve resource-based learning and information literacy. This study could further increase knowledge and understanding of the nature and patterns of library usage in colleges of education in Botswana in particular and other developing countries as well as academic libraries in general.

APPENDIX A

P. O Box 205

Francistown

Botswana

6th January, 2007

The Deputy Principal (Administration)

Tonota College of Education

P O Box 48

Tonota

Botswana

SUBJECT: NOTICE OF RESEARCH ACTIVITY

This is to inform you that I am currently enrolled as a Masters of Information Science Degree student with the University of South Africa by research and I have chosen your institution to serve as a case study for my research.

The topic of investigation is “Use of the Library in a Teachers’ College of Education in Botswana: a case study”.

It is my hope that the outcome of this research study will accrue dual benefits by satisfying the requirement for the award of a Masters degree, while providing useful insight and information that would improve library provision in your institution in particular, and other colleges of education in Botswana in general.

The duration of the research will be for two years during which I will be collecting data and information through questionnaires and interview from student teachers, lecturers and library staff. I will also be requesting for enrolment figures and other related information on students and lecturers.

I am looking forward to your support and co-operation in the conduct of the research.

Thank you.

MWK Gyimah.

cc. Deputy Principal (Academic)

Heads of Departments

APPENDIX B

COVER LETTER FOR SURVEY QUESTIONNAIRE

Dear Student teacher,

Thank you for accepting to complete the attached Survey Questionnaire to assist with my research on the topic **“Use of the Library in a Teachers’ College of Education in Botswana: a case study”**

The purpose of the research study is to fulfil the requirement for the award of the Masters Degree in Information Science by the University of South Africa.

The confidentiality of any information provided by you is guaranteed.

I will collect the completed questionnaire back from you tomorrow2007, during your Communication and Study Skills class.

Thank you.

Michael W. K Gyimah

APPENDIX C

COVER LETTER FOR SURVEY QUESTIONNAIRE

Dear Lecturer,

Thank you for accepting to complete the attached Survey Questionnaire to assist with my research on the topic **“Use of the Library in a Teachers’ College of Education in Botswana: a case study”**

The purpose of the research study is to fulfil the requirement for the award of my Masters degree in Information Science by the University of South Africa.

The confidentiality of any information provided by you is guaranteed.

Kindly submit your completed questionnaire, sealed in the attached envelope, to your Head of department by **Friday, 5th July, 2007** for my collection.

Thank you

Michael W. K Gyimah

APPENDIX D

USE OF THE LIBRARY IN A TEACHERS' COLLEGE OF
EDUCATION IN BOTSWANA: A CASE STUDY

LIBRARY USE SURVEY QUESTIONNAIRE

STUDENTS ONLY

SECTION A: Demographic Information

(Please tick (✓) your answer in the appropriate column)

1. Gender

Official Use Only

Male	1	Female	2
------	---	--------	---

2. Year Group

First	1	Second	2	Third	3
-------	---	--------	---	-------	---

3. Course of study

Main Course.....	1
Minor Course.....	2

4. Age

17-20 years	1
21-24 years	2
25-28 years	3
29 years and above	4

SECTION B: Reason and Pattern of Library Use

(Please tick (✓) your answer in the appropriate column)

5. Have you made use of the college library in the past year?

Yes	1	No	2
-----	---	----	---

6. If your answer is NO, then why have you not made use of the library in the past year?

.....

--	--

.....

7. What times do you use the library?

9h30 – 12h30	1
14h00 – 16h30	2
16h30 – 18h00	3
19h00 – 22h00	4

8. If your answer to question number 5 is YES, how often did you use the library in the past year?

Everyday	1
Several days a week	2
Once a week	3
Once or twice a month	4
Once or twice during the year	5
Never	6

9. Which of the following reasons/purpose do you make use of the library?

To Study own notes/books	1
To borrow books for curriculum use	2
To borrow books for recreational use	3
To be with friends	4
To photocopy	5
Other (specify)	

10. Which of the following activities do you carry out when you visit the library?

To collect information for assignment	1
To collect information for project	2
To read newspapers	3
To read magazines	4
To read academic journals	5
To consult with the librarian	6
To borrow videos	7
Other (specify)	

11. What type of information sources do you use in the library and how often?

Type of Collection	Very Often	Often	Some-times	Never
Reference	1	2	3	4
Reserve	1	2	3	4
Video	1	2	3	4
Journals	1	2	3	4
Magazine	1	2	3	4
Newspaper	1	2	3	4
Botswana	1	2	3	4
Fiction	1	2	3	4
Non Fiction	1	2	3	4
Other (specify).....	1	2	3	4

12. What type of services and facilities do you use in the library and how often?

Type of Service	Very Often	Often	Sometimes	Never
Reference/Information				
Circulation Service				
Photocopy				
Other (specify).....				

PART C: Methods Adopted to Motivate Library Use.

(Kindly tick (√) your answer under the appropriate column)

13. Do your subject lecturers expect you to make use of the library?

Yes	1	No	2	Sometimes	3	<input type="checkbox"/>
-----	---	----	---	-----------	---	--------------------------

14. If your answer is YES, state which subject lecturer(s).

<input type="text"/>	<input type="text"/>
----------------------	----------------------

15. Which of the following tasks do your lecturers give that require you to make use of the library?

Required Reading Material	<input type="checkbox"/>
Optional Reading	<input type="checkbox"/>
Topic Assignment	<input type="checkbox"/>
Research/Project	<input type="checkbox"/>
Discovery Reading	<input type="checkbox"/>
Other (please specify).....	<input type="checkbox"/>

16. In your opinion, how would you rate the contribution of the college library to the success of your studies?

Essential	1	Not so essential	2	Unessential	3	<input type="checkbox"/>
-----------	---	------------------	---	-------------	---	--------------------------

17. How would you rate your level of library skills competency in the following areas?

Type of skill	Very good	Good	Average	Poor	Very poor
Ability to locate information sources in the library	1	2	3	4	5
Knowledge of the system used in the arrangement of library information sources	1	2	3	4	5
Knowledge of the different sections of the library	1	2	3	4	5
Knowledge of available library services	1	2	3	4	5
Ability to use the catalogue to locate information	1	2	3	4	5
Ability to use reference sources e.g. encyclopaedia dictionaries etc	1	2	3	4	5
Ability to browse for information	1	2	3	4	5
Ability to make notes from a range of sources to complete an assignment	1	2	3	4	5
Ability to compile a bibliography from different information sources	1	2	3	4	5

18. Now that you have rated your library skills, in which of the following ways does it help you to make use of library resources?

	Yes	No
I am able to make use of library with ease and confidence.	1	2
I am able to make frequent use of library.	1	2
I am not helped in any way	3	
Other (specify)		

19. Please indicate your opinion on the following statement. 'Library and information literacy skills instruction should be an essential component of teacher training programme'.

Strongly Agree	1
Agree	2
Disagree	3
Strongly Disagree	4
Not Sure	5

--

20. Please complete the following sentence (Please be brief)

The **ONE** thing the college library could do that will improve services is

.....

--	--

THANK YOU

APPENDIX E

USE OF THE LIBRARY IN A TEACHERS' COLLEGE OF
EDUCATION IN BOTSWANA: A CASE STUDY

LIBRARY USE SURVEY QUESTIONNAIRE

FOR LECTURERS ONLY

SECTION A: Demographic Information

(Please tick (✓) your answer in the appropriate column)

1. Gender

Official Use Only

Male	1	Female	2
------	---	--------	---

2. Name of Subject Department

.....

3. Year of Teaching experience

0 – 5 years	1
8 – 10 years	2
11 – 15 years	3
16 – 20 years	4
21 years and above	5

SECTION B: Reasons and Pattern of Library Use

(Please tick (✓) your appropriate answer)

4. Have you made use of the college library in the past year?

Yes	1	No	2
-----	---	----	---

5. If your answer is NO, then why have you not made use of the library in the past year?

.....

.....

--	--

6. What times do you use the library?

9h30 – 12h30	1
14h00– 16h30	2
16h30 –18h00	3
19h00 – 20h00	4

7. If your answer to question number 4 is YES, how often did you use the library in the past year?

Everyday	1
Several days a week	2
Once a week	3
Once or twice a month	4
Once or twice during the year	5
Never	6

11. What type of services do you use in the library and how often?

Type of Service	Very Often	Often	Some-times	Never
Reference/Information	1	2	3	4
Circulation Service	1	2	3	4
Photocopy	1	2	3	4
Other (specify).....				

SECTION C: Methods Adopted to Motivate Library Use.

(Kindly tick (✓) your answer under the appropriate column)

12. Do you encourage your students to make use of the college library?

Yes	1	No	2
-----	---	----	---

13 What kinds of task do you give your students which require them to use library resources?

Required reading material	1
Optional reading	2
Topic assignment	3
Research/Project	4
Discovery Reading	5
Other (specify).....	

14. How would you rate your level of library skills competency in the following areas?

Type of skill	Very good	Good	Average	Poor	Very poor
Ability to locate information sources in the library	1	2	3	4	5
Knowledge of the system used in the arrangement of library information sources	1	2	3	4	5
Knowledge of the difference sections of the library	1	2	3	4	5
Knowledge of available library services	1	2	3	4	5
Ability to use the catalogue to locate information	1	2	3	4	5
Ability to use reference sources e.g. encyclopaedia dictionaries etc	1	2	3	4	5
Ability to browse for information	1	2	3	4	5
Ability to make notes from a range of sources to complete an assignment	1	2	3	4	5
Ability to compile a bibliography from different information sources	1	2	3	4	5

15. Now that you have rated your library skills, in which of the following ways does it help you to make use of the library?

	Yes	No
I am able to make use of library with ease and confidence.	1	2
I am able to make frequent use of library.	1	2
I am not helped in any way	3	
Other (specify)		

16. Please indicate your opinion on the following statement. ‘Library and information literacy skills instruction should be an essential component of teacher training programme’.

Strongly Agree	1
Agree	2
Disagree	3
Strongly Disagree	4
Not Sure	5

--

17. In your opinion, what method can be used to motivate students to make use of the library? (Please be brief)

.....

--	--

18. Please complete the following sentence (Please be brief)

The ONE thing the college library could do that will improve services is

.....

--	--

THANK YOU

APPENDIX F

INTERVIEW SCHEDULE	
QUESTION	OBJECTIVE OF THE QUESTION
1. Do you have computer facilities available in your library to provide students with access to information resources?	To ascertain availability of computers in the library
2. If the answer to the first question is “No” why are there no computers for student use in the library?	To ascertain reason for non availability
3. If computer facilities are made available for student use, how many computer terminals are available in the library?	To establish the computer ratio per student population
4. Do you provide students with access to the Internet in the library?	To ascertain availability of Internet for students’ use
5. If the library does not provide students with access to the Internet, could you explain why this is so?	To establish reason for non access to the Internet
6. Does the College or College Library offer any information literacy (IL) education (or information skills instruction) programme to students?	To ascertain if there is IL programme in the college
7. If the College or College Library does not offer an information literacy education programme, what are the reasons for this?	To establish reason for non existence
8. If the College offers an information literacy education programme, is it a part of its curriculum?	To ascertain if the IL programme is a curriculum requirement of the College
9. Is the programme offered separately in a scheduled class period, or within the context of the curriculum, that is, is information skills applied to specific assignments?	To establish whether information skills are taught separately or integrated into the curriculum
10. What is the duration of the IL programme?	To establish the duration of the programme
11. Does the IL programme have a library skills (that is, library orientation and bibliographic instruction) component?	To ascertain if library skills instruction is a component of IL programme
12. If not, why does it not have a library skills component?	To establish whether library skills is a component of the information literacy programme
13. Does the IL programme have a computer skills component?	To establish if computer skills instruction is part of IL programme
14. If not, why does it not have computer skills instruction as a component?	To establish the reason why it is not a component.

15. Does the IL programme include instruction in online searching? 16. If so, why not?	To establish whether student teachers are taught online searching
17. Is there any co-operation or collaboration between librarians and lecturers in the design of the IL programme?	To ascertain whether the librarian plays a role in the designing of the contents of the IL programme
18. If there is no co-operation between librarians and lecturers in developing the information literacy programme, why is this so?	To ascertain reason for non-cooperation
19. Is there any co-operation/collaboration between librarians and lecturers in the implementation of the IL programme? In other words, does the librarian participate with the lecturer in implementing the IL programme for students?	To establish the role played by the librarian in the delivery of the IL programme
18. If lecturers and librarians do not co-operate, why do they not?	To establish reason for not co-operating
19. If there is cooperation between librarians and lecturers in developing and implementing the IL programme for students, has the collaboration between the librarians and lecturers been formalized?	To ascertain whether the collaborative relationship is entrenched in the organizational structure of the college eg committee etc
20. If formalized, how has the collaboration relationship been formalized (e.g. in a policy or procedure document)?	To establish whether decisions are documented
21. Does a library committee coordinate the programme?	To establish whether the library committee plays a coordinating role
22. What form does the co-operation take, (e.g. communication between the lecturer and the librarian about forthcoming assignment topics)?	To establish the nature of the co-operation
23. What methods do librarians employ to promote students usage of the library?(e.g. user motivation techniques to encourage voluntary reading and personal information use)	To ascertain methods used to promote student information and library usage
24. What methods are used by librarians to promote lecturers' usage of the library? (e.g. user profiles and SDI services)	To ascertain methods used to promote usage among lecturers
25. What are the key challenges faced by librarians in the provision of IL education? (E.g. students may not have had any information skills instruction at school and may be unable to use the library independently.)	To ascertain some of the challenges faced by librarians in the IL instruction
26. What suggestions can you offer to enhance students and lecturers usage of the college library?	To solicit suggestions from the librarian to enhance usage

APPENDIX G

Table 1: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.611	2	2.806	5.969	.003
Within Groups	79.429	169	.470		
Total	85.041	171			

Table 2: Frequency of library usage by student's year group

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
First	46	3.43	.750	.111	3.21	3.66	1	5
Second	57	3.74	.768	.102	3.53	3.94	2	5
Third	69	3.88	.557	.067	3.75	4.02	2	5
Total	172	3.72	.705	.054	3.61	3.82	1	5

Table 3: Post Hoc Tests Multiple Comparisons

(I) Year	(J) Year	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
		Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
First	Second	-.302	.136	.088	-.64	.03
	Third	-.449(*)	.130	.003	-.77	-.13
Second	First	.302	.136	.088	-.03	.64
	Third	-.147	.123	.488	-.45	.16
Third	First	.449(*)	.130	.003	.13	.77
	Second	.147	.123	.488	-.16	.45

*The mean difference is significant at the .05 level.

From the ANOVA Table (Table 1), the P value (.003), which is greater than .005, shows that there is a difference in the frequency of library usage within the group (Year of study). This difference is between the first year and third year students as could be seen in Table 3. Hence, we conclude that third year students frequent the library than the first and second year students.

BIBLIOGRAPHY

- Abson, C. 2003. The changing picture of higher education, in E Oyston (ed.) *Centered on learning: academic case studies on learning centre development*, Aldershot: Ashgate: 1-17.
- Adeyinka, A. 2000. The role of the teacher in national development, with special reference to Botswana, in *Developing strategies for teacher education in Botswana*, edited by Letsholo, DT, Moanakwena, PG, Yandila CD, Matenge, BG, Slave, PT, Dikole, Sebogodi, MK, Senwelo, RM, & Khama, SY. Selected papers presented at the 4th Biennial Conference on Teacher Education, 8-10 February, Gaborone, Botswana: Government Printers: 167-175.
- Amoa-Antwi, YP. 1992. Maru-a-Pula High School Library: a case study. Postgraduate Diploma Dissertation, Gaborone, University of Botswana.
- Baker, RK. 1997. Faculty perceptions towards student library use in a large urban community college. *Journal of Academic Librarianship*, 23(3):177-182.
- Batane, T. 2004. In-service teacher training and technology: a case of Botswana. *Journal of Technology and Teacher Education*, 12(3) 387-410. Also available: <http://www.accessinglibrary.com/article.JGI-123128008/in-service-teacher-training-and-html> (Accessed 15 October 2009).
- Behrens, SJ. 1994. A conceptual analysis and historical overview of information literacy. *College and Research Libraries*, 55 (July 1994): 310-331.
- Berger, K & Hines, R. 1994. What do users really want? a user survey report. *Journal of Academic Librarianship*, 20:306-309.
- Bitso, L.2000. Investigating information literacy skills and academic results of undergraduate students. *Innovation*, 21:29-32.
- Botswana (Republic of). Ministry of Education. 1994. *Report of the National Commission on Education*, Gaborone: Government Printer.
- Botswana (Republic of). Ministry of Education. 1994. Revised national policy on education. Gaborone: Government Printer. (Government white paper, no. 2 of 1994).
- Branch, JL. 2003. Non-traditional undergraduate at home, work and school: an examination of information seeking behaviour and impact of information literacy instruction. *Research Strategies*, 19: 3-15.

- Breivik PS. 1998 *Student learning in the information age*. Phoenix, Arizona: American Council on Education and ORYX Press.
- Breivik, PS. 1991. Literacy in an information society. *Information report and bibliographies*, 20(3): 10-14.
- Brophy, P. 2005. *The academic library*. 2nd edition. London, Facet.
- Bruce, CS. 2000. Faculty-Librarian partnership in Australian higher education: critical dimensions. *Reference Services Review*, 29(2):106-115.
- Burns, MA. 1997. The relationship between the use of the San Diego Library and personal characteristics of the student population. ERIC ED 154807, Dec: 31-74
- Chambers 21st century dictionary*, 2001. Mumbai: Allied Chambers Ltd.
- Chartered Institute of Librarianship and Information Professionals ... See CILIP
- CILIP*. 2005. London: CILIP.
<http://www.cilip.org.uk/professionalguidance/informationliteracy/difinition/>
 (Accessed 20 August 2010).
- Cochrane, C. 2006. Embedding information literacy into an undergraduate management degree: lecturer and student perspectives. *Education for Information*, 24(2-3):97-123.
- Coetzee, JA. 1995. CALICO: restructuring for access. *Innovation*, 10: 34-40.
- Collins Concise Dictionary*, 2001. 5th edition. Glasgow: HarperCollins Publishers.
- Concise Oxford Dictionary of Current English*, 1995. 9th edition. Edited by Fowler, HW. Fowler, FG. Thomson, D. Oxford: Clarendon Press.
- Corbin, J & Strauss, A. 1998. *Basics of qualitative research: grounded theory, procedures and techniques*. Newbury Pary: Sage.
- Coupe, J. 2001. Undergraduate library skills: two surveys at John Hopkins University. *Research Strategies*, 11(1):188-193.
- Creswell, JW.2009. *Research design: qualitative, quantitative and mixed method approaches*. 3rd edition. London: Sage Publications.

- Cross, PK. 2001. Leading edge methods to improve teaching: the Hesburg awards. *Change*, 33(4):30-37.
- D'Amicantonio, J & Scepaniski, JM. 1994. Strengthening teacher preparation through a library programme. *Education Libraries*, 21(1&2): 11-16.
- De Jager, K. 2002. Successful student: does the library make a difference? *Performance Measurement and Metrics*, 3(3): 34 -41.
- De Jager, K & Nassimbeni, M. 2003. An exploration of the current status of information literacy instruction in South African tertiary institutions and proposals for curriculum design. *South Africa Journal of Library and Information Science*, 69(2), 108-114.
- De Vos, AS. 1998. Introduction to the research process, in *Research at grassroots: a primer for the caring profession*. Edited by Strydom, H, Fouche, CB, Poggenpoel, M & Schurink, and EW. Pretoria: Van Schaik: 37-50.
- Du Preez, M & Fourie JA. 2010. Development of a conceptual model for studying engineers' information behaviour. *Mousaion*, 28(1):62-88.
- Elmsborg, J. 2002. Teaching at the desk towards reference pedagogy. *Libraries and the Academy*, 2(3):455-461.
- Faber, E. 1999. Faculty-librarian co-operative: a personal retrospective. *Reference Services Review*, 27(3):229-234.
- Fayose, PO. 2001. The need for knowledge of librarianship for education students, *Education Libraries Journal*, 34(1):15-29.
- Fourie, JA. 2009. *Serving the user in library and information practice: only guide for AIS3703*. Pretoria: Unisa, Department of Information Science.
- Fourie, JA & Gericke, EM. 2009. A theoretical model for the provision of educational and career guidance and information services for high school learners in public libraries. *Mousaion*, 27(1):1-23.
- Gay, LR & Airasian, P. 2003. *Educational research competencies for analysis and applications*. 7th edition. New Jersey: Pearson Educational Books.
- Gifford, V & Gifford, J. 1984. Effect of teaching a library unit to Seventh-Graders. Paper presented at the Mid-South Education Research Association Conference, 14-16 Nov. ERIC Document. (ED254 230):5-9.

- Gratch, L. 1997. Defining and measuring the library's impact on campus-wide outcomes. *College and Research Libraries*, 59:546-570.
- Gyimah, MWK. 1999. Information needs and pattern of library use of students and faculty at Tonota College of Education: a project assignment report presented to the Department of Information Science, Unisa, Pretoria. (Unpublished).
- Hardesty, L. 1995. Faculty culture and bibliographic instruction: an exploratory analysis. *Library Trends*, 44(2):339 – 367.
- Hope, BC, Kajiwara, S & Liu, M. 2001. The impact of the Internet increasing the Reference Librarians' role as a teacher. *The Reference Librarian*, 74:13-26.
- INFOLIT Annual Report*. 1996. Cape Town: Cape Library Cooperative (CALICO).
- Isaacs, S. 2007. Survey of ICT and education in Africa: Botswana Country Report: 1-14. Also available <http://www.infodev.org> (Accessed 20 July 2009).
- Jiao, G. & Onwuegbadze, JA. 1997. Prevalence and reasons for university library usage. *Library Review*, 46(6):411-420.
- Jiao, G, Onwuegbuzie, A & Lichtenstein, A. 1996. Library anxiety: characteristics of at-risk college students. *Library and Information Science Research*, 18: 151-163.
- Jubb, M & Green, R. 2007. Researcher's use of academic libraries and their services. <http://www.rin.ac.uk/systems/files/researchers-libraries-services-report.pdf> (Accessed 2 May 2010).
- Jungwirth, H. 1991. Interaction and gender: findings of a micro-ethnographical approach to classroom discourse. *Educational Studies in Mathematics*, 22: 263-84.
- Kakoma, AK. 1991. The school library: why it should be an integral part of every Zambian school. *Information Trends*, 4 (1): 3-16.
- Keefer, JA. 1993. The hungry rat syndrome: library anxiety, information literacy and the reference process. *Reference Quarterly*, 32:333-339.
- Kerelse, C. 2000. INFOLIT: a South African experience of promoting quality education, in Information literacy around the world: advances in programs and research. Edited by CS Bruce and PC Candy, Waga Waga, NSW. Charles Sturt University: 37-60. Also available: <http://ifla.queenslibrary.org/IV/ifla62/62-karc.htm> (Accessed 6th March 2010)

- Kim, J. & Little, RD. 1987. *Public Library uses: a market research handbook*. London: Scarecrow Press.
- Knapp, PB. 1959. *College teaching and library*. ACRL. Monograph Number 23. Chicago: American Library Association.
- Knapp, PB. 1966. *The Monteith college library experiment*. New York: Scarecrow Press.
- Martell, C. 2008. The absent user: physical use of academic library collections and services continue to decline 1995-2006. *Journal of Academic Librarianship*, 34(5): 400-407.
- Maslow, A. 1998. *Maslow on management*. New York: John Wiley & Sons
- Mason, M. 2010. Myths associated with undergraduate use of academic library. <http://www.moyak.com/papers/academic-library-anxiety.html> (Accessed 31 May, 2010).
- Maughan, DP. 2001a. Assessing information literacy among undergraduates: a discussion of literature and the University at California – Berkeley Assessment Experience. *College and Research Libraries*, 62(1), 71-82.
- Maughan, DP. 2001b. Library resources and services: a cross disciplinary survey of faculty and students use and satisfaction. *Journal of Academic Librarianship*, 24(8):354-366.
- Metzger, AJB. 1997. Teacher education and school libraries in Botswana, in *Improving education quality for effective learning: the teacher's dilemma*, edited by FF O'Mara. Papers presented at the 3rd Biennial Conference on Teacher Education 26-29 August. Gaborone, Ministry of Education: 112-121.
- Middleton, A. 2005. Northumbria University: impact on improving students' confidence and competence in information and information technology (IT) skills. *Library and Information Research*, 29 (91):12-15.
- Miles, MB. & Huberman, AM. 1996. *Qualitative data analysis: an expanded sourcebook*. Thousand Oaks: Sage Publishers.
- Nametsegang, N. 1997. *Attitudes of administration towards librarians and library service: a survey of Botswana senior secondary schools*. Masters degree dissertation. University of Botswana: Gaborone.
- Oladukun, OS & Fidzani, BT, 2002. The provision of library support service in colleges of education Botswana, *African Journal of Archives and Information Science* 12(1):47-57.

- Olën, SI. 1993. Utilization and perception of the school library media centre. *South African Journal of Library and Information Science*, 61 (1):35-42.
- Olën, S. 1994. Academic Success and Library Use. *Libraries Worldwide*, (1):69-79.
- Onwueghazie A, Jiao, QG & Bostick, S. 2004. Library anxiety: theory, research and applications. *Research in Library and Information Studies*, 27 (1.): 121-127.
- Oppenheim, AN. 1962. Reading habits of students: a survey of students at the London School of Economics. *Journal of Documentation*, 18:42-57. E
- Patten, MC. 2005. Understanding research methods: an overview of the essentials. Los Angeles, CA: Pyrczak.
- Rasfte, ET. 2002 'From bud to bosom – how to become an information literate person'. Paper presented at the 68th IFLA Council and General Conference, August 18-24, 2002. The Hague.
- Revised national policy on education (RNPE) 1994 ... see Botswana. (Republic). Ministry of Education.
- Sayed, T & De Jager, K. 1997. Towards an investigation of information literacy in South African students. *South African Journal of Library and Information Science*, 65 (1):5-12.
- September, PE 1993. Promoting information literacy in developing countries: the case of South Africa. *African Journal of Librarianship, Archives and Information Science*, 3 (1): 11-22.
- Singer, E.1996. Espoused teaching paradigms of college faculty, *Research in Higher Education*, 37(6):659-679.
- Snider, JR. 1965. The relationship of library ability to performance in college. Unpublished Dissertation. University of Urbana-Champaign.
- Stanger, K. 2009. Implementing information literacy in higher education: a perspective on the role of librarians and disciplinary faculty. *Library and Information Science Research Journal*, 19 (1): 1-5.
Also available http://libres.curtin.edu.au/libres19n1/Stanger_EssOp.pdf
(Accessed 12 October 2010)

- Strydom, H, 1998. Ethical aspects of research in the caring professions. in: *Research at grassroots: a primer for the caring profession*, edited by De Vos, AS. Pretoria: Van Schawik: 23-36.
- Taole, J & Chakalisa, P. 1995. Implications of the National Commission on Education for Mathematics Education, *Mosenodi*, 3(1& 2):12-15.
- Tawete, F. 1991. The plight of educational libraries in Africa. *Information Trends and News Magazine*, 4 (3):53-164.
- Toda, A & Nagata, H. 2007. Students' library use and their learning outcomes: a study on outcome assessment in colleges and university library. *Journal of Library and Information Science*, 53(1):17-34.
- Town, JS. 2002. Information literacy and information society, in *Challenge and change in the information society*, edited by S, Hornsby & Z, Clarke. London. Facet: 83-103.
- Tyckoson, D. 1997. What we do: re-affirming the founding principles of reference services. *The Reference Librarian*, 59:10-13.
- Trochin, W. 2006. *Research methods: the concise knowledge base*. Cincinnati: Atomic Dog.
- Tustin, DH, Ligthelen, AA, Martins, JH, Van Wyk, HJ. 2005. *Marketing research practice*. Pretoria: Unisa Press.
- Valentine, B. 1993. Undergraduate research behavior: using focus groups to generate theory. *Journal of Academic Librarianship*, 19(5):300-304.
- Valentine, P & Brain, N. 1988. *Sneaky teaching: the role of the school librarian*. London: British Library (Library and Information Research Report, 63).
- Wang, L. 2007. Socio-cultural learning theories and information literacy teaching activities in higher education. *Reference and User Services Quarterly*, 47 (2) 149-158.
- Webber, S & Johnston, B. 2000. Conceptions of information literacy: new perspectives and implications. *Journal of Information Science*, 26(6):381-397.
- Werner, S. 2010. Information literacy a neglected core competency. *Educause Quarterly*, 23(1):2-4.

- Whitmire, E. 2006. A longitudinal study of undergraduate academic library experience, *Journal of Academic Librarianship*, 27 (5) 379-385.
- Williams, AP. 1995. Conceptualizing academic library use: results of a survey of continuing students in a small Canadian undergraduate university. *Journal of Higher Education*. Xxv (3):31-47.
- Wilson, TD. 1995. Information needs and uses: fifty years of progress. In *Fifty years of information progress*. Edited by BC Vicker. *Journal of Documentation review*. London: Aslib: 15- 51.
- Wilson, TD. 1999. Models in information behavior research. *Journal of Documentation*. 55(2):249-270.
- Woolfolk, A. 2004. Educational psychology. 7th edition. Toronto: Allyn & Bacon.
- Yusuf, F & Iwu, J. 2010. Use of academic library: case study of Covenant University, Nigeria. *Chinese Librarianship: an International Electronic Journal*.
<http://www.white-clouds.com/iclc/cliej/cl30YI.htm>. (Accessed 24 August, 2010).
- Zinn, S. 1997. Teachers and libraries, a low priority relationship. *Cape librarian*, 4 (4):46-47.
- Zurkowski, P.1974. The information service environment: relationships and priorities. Washington DC: National Commission on Libraries and Information Services. ERIC ED 100 391.