

UNIVERSITY OF KWAZULU-NATAL

**USER PERCEPTIONS OF SERVICE QUALITY AND THE
LEVEL OF USER SATISFACTION AT THE MANGOSUTHU
UNIVERSITY OF TECHNOLOGY LIBRARY, UMLAZI,
DURBAN**

YEGISTHREE NAIDU

2009

**USER PERCEPTIONS OF SERVICE QUALITY AND
THE LEVEL OF USER SATISFACTION AT THE
MANGOSUTHU UNIVERSITY OF TECHNOLOGY
LIBRARY, UMLAZI, DURBAN**

By

**YEGISTHREE NAIDU
B.A.(UDW), B.A. HONS. (UNISA),
HDLS (UNP), UHDE.(UNISA)**

**Submitted in fulfilment of the requirements
for the degree of**

MASTER OF INFORMATION STUDIES (MIS)

**In the School of Sociology and Social Studies of the University of
KwaZulu-Natal,
Pietermaritzburg, South Africa.**

AUGUST 2009

DECLARATION

I, Mrs Y Naidu declare that:

- (i) The research reported in this dissertation, except where otherwise indicated, is my original work.
- (ii) This dissertation/thesis has not been submitted for any degree or examination at any other university
- (iii) This dissertation/thesis does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
- (iv) This dissertation/thesis does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers. Where other written sources have been quoted, then:
 - (a) Their words have been re-written but the general information attributed to them has been referenced;
 - (b) Where their exact words have been used, their writing has been placed inside quotations marks and referenced.

- (v) Where I have reproduced a publication of which I am an author, co-author or editor, I have indicated in detail which part of the publication was actually written by myself alone and have fully referenced such publications.

- (vi) This dissertation/thesis does not contain text, graphics or tables copied and pasted from the Internet, unless specifically acknowledged, and the source being detailed in the dissertation and in the References sections.

Signed: -----

Date: -----

DEDICATION

This dissertation is dedicated to:

My Mum, Mrs M. Chetty and

My late Dad, Mr Rajoo Chetty

For their unconditional love, encouragement and understanding.

ACKNOWLEDGEMENTS

I wish to express my sincere thanks and appreciation to the following people for their assistance and contribution to this study:

- The Almighty God for granting me the wisdom, understanding and patience to undertake and complete this study.
- Mr. Athol Leach and Mr. Patrick Maxwell for their expert guidance and assistance.
- The administration of MUT for granting me permission to undertake this research project as well as all the respondents for their time in completing the questionnaire.
- Mrs. L. E. Ndaki and Ms. H.G. Msimango for their support and encouragement.
- My Colleagues: Mr. L. Nzama, Mrs. D. Mqadi, Mr. S. Mthembu, Mr. P. Ndlovu and other staff members of the MUT Library.
- Professor A. Lana, Dr D. Coertze and Dr A. Mienie for their support and assistance.
- My spouse Dr N. Naidu, and my daughters Miss N. Naidu and Miss D. Naidu for their continued support and encouragement.
- My mum Mrs M. Chetty, my brother Mr Y. Chetty , my sister Mrs Y. Chetty and her family for their encouragement.

ABSTRACT

This study examined the quality of service provided by the Mangosuthu University of Technology (MUT) Library from the perspective of the users of the library. It determined the gaps between users' expectations and perceptions of service quality and it indicated the level of user satisfaction at the library.

The identification of the gaps in the library services and the assessment results can improve service delivery. The intention of the study was to measure the users' perceptions of the quality of the collections, personal services and facilities. The results will be used for service improvements and to make informed decisions concerning the quality of service that is offered at the MUT Library.

The LibQUAL+™ instrument is being used by many libraries all over the world and is currently being used in South African libraries too. It helps librarians assess and improve library services, change organisational structure and market the library. The questionnaire is used to measure the gap between customer expectations for excellence and their perceptions of the actual services delivered by the library.

The LibQUAL+™ instrument in this study was modified and simplified to identify these gaps. The instrument consisted of both open-ended and closed questions although the latter predominated. The three dimensions of service quality, that is, access to information, staff service and library facilities formed the core of the instrument.

The research method used for this study was the descriptive survey. The population of the study consisted of both undergraduate and postgraduate students as well as academic and administrative staff. All faculties were represented. The stratified proportional sampling method was used and a sample of 1823 respondents were surveyed. Results were analysed using SPSS to determine the frequency of responses. The results are displayed using tables and graphs. The study yielded a return rate of 70.8% for students and 52.9% return rate for staff. An overall response rate of 69.5% was sufficient for data analysis.

The results from this study indicate that there is definitely a huge gap between users' expectations and perceptions of service quality at MUT Library. The extent of the gap varies depending on the individual services. All user categories had higher expectations than perceptions for most library services. The users' expectations were not in keeping with their actual experiences at the library. Further, the findings of the survey indicated that the most problematic to users were library space, library facilities (for example, printing, photocopying and Internet access) and the inadequate and outdated book collection. Several insights gained from this study showed that users' expectations were not met and many users had low perceptions of certain library services. The level of satisfaction varied among the different user categories. The staff affirmed that the overall quality of services were good while the majority of students affirmed that their satisfaction with the overall quality of library services was poor.

Based on the findings, recommendations are presented to improve service quality and increase the level of user satisfaction at the MUT Library.

TABLE OF CONTENTS

Declaration	i
Dedication	iii
Acknowledgements	iv
Abstract	v
List of tables	xvi
List of graphs	xviii
List of figures	xix
List of abbreviations and acronyms	xx
Chapter 1: Introduction	1
1.1 Rationale	4
1.2 Problem statement	6
1.3 Research questions	8
1.4 Initial literature review	8
1.5 Definition of terms	11
1.5.1 Perception	11
1.5.2 Quality	12
1.5.3 Service quality	12
1.5.4 Users	12

1.5.5	User satisfaction	13
1.6	Theoretical framework	14
1.7	Research methodology and methods	16
1.7.1	Introduction	16
1.7.2	Population	16
1.7.3	Sample size	17
1.7.4	Validity and reliability	17
1.7.5	Data analysis	17
1.8	Limitations	18
1.9	Structure of the study	18
1.10	Summary	19
Chapter 2: Background of the study		20
2.1	Brief history of Mangosuthu University of Technology (Overview)	20
2.2	Mission statement of MUT	21
2.2.1	Core purpose	21
2.2.2	Core values	21
2.2.3	The vision	22
2.2.4	The mission	22
2.2.5	Underlying values and philosophy	22
2.3	Location	23
2.4	MUT academic structure and student enrolment	24

2.5	Brief history of the MUT Library	25
2.6	The mission statement of the MUT Library	25
2.7	Library staff	26
2.8	Library collection	26
2.8.1	General Lending and Short Loan Services/Reserve collection	26
2.8.2	Periodicals collection	27
2.8.3	Video Library collection	27
2.9	Library services	28
2.9.1	Borrowing and Lending conditions	28
2.9.2	Reference services	28
2.9.3	Subject Librarians	28
2.9.4	Interlibrary-loans	29
2.9.5	Library website and electronic facilities/databases	29
2.9.6	iLink (online catalogue)	30
2.9.7	Auxiliary services	30
2.10	Summary	31
	Chapter 3: Literature review	32
3.1	Service quality assessment in academic libraries	32
3.1.1	Conceptual definition	33
3.1.2	Validation for service quality assessment	36

3.1.3	Defining user satisfaction	39
3.1.4	Historical perspectives of service quality assessment	43
3.1.5	Academic library service quality assessment perspectives	46
3.2	Theories and challenges of library service quality assessment	49
3.2.1	Balanced Scorecard Model (BSC)	49
3.2.2	European Foundation for Quality Management (EFQM) Model	52
3.2.3	SERVQUAL	56
3.2.4	LibQUAL +™ Instrument	60
3.2.5	Important concerns of SERVQUAL and LibQUAL+™	63
3.3	Service quality assessments and methodological approaches	66
3.3.1	University of Washington	66
3.3.2	Miami University	67
3.3.3	Iringa University College	69
3.3.4	Jawaharlal Nehru University (JNU)	69
3.3.5	Rhodes University	71
3.3.6	Texas A&M University (TAMU)	72
3.4	Impact and challenges of assessment models	73
3.5	Conclusion	76
3.6	Summary	77

Chapter 4: Research methodology and methods	78
4.1 Research design	78
4.2 Sampling	80
4.2.1 Population	81
4.2.2 Sample size	82
4.2.3 Sampling frames	82
4.3 Data collection instruments and procedures	83
4.3.1 The instruments	83
4.3.2 The questionnaire	84
4.3.3 Forms of questions	85
4.3.3.1 Open-ended questions	85
4.3.3.2 Closed-ended questions	86
4.3.4 Peer review and pre-testing the questionnaire	87
4.3.5 Validity and reliability of the instrument	88
4.3.6 Administration and distribution of the questionnaire	89
4.3.6.1 Distribution to students	90
4.3.6.2 Distribution to staff	91
4.3.7 Response rates	92
4.4 Methods of data analysis	93
4.5 Summary	94

Chapter 5: Research results	95
5.1 Questionnaire results	95
5.1.1 Demographics	95
5.1.2 Library usage patterns	99
5.1.2.1 Frequency of use of resources in the library	99
5.1.2.2 Frequency of use of computer catalogue (iLink) and the Internet	100
5.1.3 Users' expectations and perceptions of service quality	101
5.1.3.1 Users' expectations of service quality	102
5.1.3.1.1 Library staff	102
5.1.3.1.2 Access to information	104
5.1.3.1.3 Library facilities	105
5.1.3.1.4 Research and teaching	106
5.1.3.2 Users' perceptions of service quality	107
5.1.3.2.1 Library staff	107
5.1.4 Users' comments about MUT Library services	111
5.1.5 Level of user satisfaction	118
5.1.5.1 Satisfaction with staff services	119
5.1.5.2 Satisfaction with access to information	121
5.1.5.3 Satisfaction with library facilities	123
5.1.5.4 Satisfaction with overall quality of library services	125
5.2 The gap between users' expectations and perceptions	126
5.3 Summary	131

Chapter 6: Discussion of the results	133
6.1 Demographic data of respondents	134
6.1.1 Gender, description, age and faculty	134
6.2 Library usage pattern	134
6.2.1 Frequency of use of library resources	134
6.2.2 Frequency of use of computer catalogue (iLink) and use of Internet	135
6.3 Staff service	135
6.3.1 Discussion of closed-ended questions relating to staff services	136
6.3.2 Discussion of open-ended questions relating to staff services	136
6.3.3 Gap difference relating to staff services	138
6.4 Library collection and access to information	139
6.4.1 Discussion of closed-ended questions relating to access to information	139
6.4.2 Discussion of open-ended questions relating to access to information	140
6.4.3 Gap difference relating to access to information	142
6.5 Library as place	143
6.5.1 Discussion of closed-ended questions relating to library as place	143
6.5.2 Discussion of open-ended questions relating to library as place	143
6.5.3 Gap difference relating to library as place	145

6.6	Library facilities	145
6.6.1	Discussion of closed-ended questions relating to library facilities	146
6.6.2	Discussion of open-ended questions relating to library facilities	146
6.6.3	Gap difference relating to library facilities	147
6.7	Services pertaining to research and teaching	147
6.7.1	Discussion of closed-ended questions relating to research and teaching	148
6.7.2	Discussion of open-ended questions relating to research and teaching	149
6.7.3	Gap difference relating to research and teaching	149
6.8	User satisfaction with library services	149
6.8.1	User satisfaction with staff services	150
6.8.2	User satisfaction with access to information	150
6.8.3	User satisfaction with library facilities	151
6.9	Overall quality of services provided by the library	152
6.10	Assessment of the instrument in measuring service quality in academic libraries	153
6.11	Summary	153
Chapter 7: Summary, findings, conclusions and recommendations		155
7.1	Summary of thesis	155
7.2	Overview of findings	157

7.3.1	Conclusions	158
7.3.1	Users' expectations	159
7.3.2	Users' perceptions	159
7.3.3	Gap between users' expectations and perceptions	160
7.3.4	Level of satisfaction	160
7.4	Recommendations	161
7.4.1	Library collection	161
7.4.2	Library staffing	162
7.4.3	Information retrieval	163
7.4.4	Access to electronic resources	164
7.4.5	Library facilities	164
7.4.6	Access to information	165
7.5	Suggestions for further research	166
	List of works cited	168
	Appendices	
	Appendix 1: Covering letter for the questionnaire	184
	Appendix 2: Survey to determine user perceptions of service quality and the level of user satisfaction at the Mangosuthu University of Technology Library, Umlazi, Durban	186

LIST OF TABLES

Table 1:	Population and sample size of students and staff	83
Table 2:	Gender	96
Table 3:	User categories	96
Table 4:	Description of undergraduate students by year of study	97
Table 5:	Description of respondents by age group	98
Table 6:	Description of respondents by faculties/departments	98
Table 7:	Overall frequency of use of library resources by user categories	99
Table 8:	Frequency of use of library computer catalogue (iLink) by user category	100
Table 9:	Internet usage for information searching by age group of users	101
Table 10:	Users' expectations of library staff	103
Table 11:	Users' expectations of access to information	104
Table 12:	Users' expectations of facilities and library as place	105
Table 13:	General expectations regarding the academic field, research and teaching	106
Table 14:	Users' perceptions of library staff	108
Table 15:	Users' perceptions of access to information	109
Table 16:	Users' perceptions of library facilities and library as place	110
Table 17:	Users' perceptions regarding the academic field, research and teaching	111

Table 18a:	Summary of respondents' comments by user category	113
Table 18b:	Respondents' comments on staff services	114
Table 18c:	Respondents' comments on access to information	115
Table 18d:	Respondents' comments on library collection	116
Table 18e:	Respondents' comments on library as place	116
Table 18f:	Respondents' comments on library facilities	117
Table 18g:	Respondents' comments on other services	118
Table 19:	Satisfaction with staff services by user category	120
Table 20:	User satisfaction with access to information by user category	122
Table 21:	Satisfaction with library facilities by user categories	124
Table 22:	Overall quality of the services provided by the library by user category	126
Table 23:	The gap between users' expectations and perceptions	128

LIST OF GRAPHS

Graph 1:	Satisfaction with staff services	119
Graph 2:	Satisfaction with access to information	121
Graph 3:	Satisfaction with library facilities	123
Graph 4:	Satisfaction with overall quality of library services	125

LIST OF FIGURES

Figure 1:	Balanced Scorecard Model	52
Figure 2:	EFQM Excellence Model	56
Figure 3:	Gaps Model	60

LIST OF ABBREVIATIONS AND ACRONYMS

ACSAHL	Assessment of Customer Service in Academic Health Care Libraries
ARL	Association of Research Libraries
BSC	Balanced Score-card
BTECH	Bachelor of Technology
CHELSA	Committee for Higher Education Libraries in South Africa
DUT	Durban University of Technology
DVD	Digital versatile disk
ECSI	European Customer Satisfaction Model
EFQM	European Foundation for Quality Management
ESATI	Eastern Seaboard Association of Tertiary Institutions
FIPSE	Fund for the Improvement of Post – Secondary Education
HEMIS	Higher Education Management Information System
HEQC	Higher Education Quality Committee
ISO	International Standards Organisation
LIS	Library and Information Science
LISM	Library and Information Sector Model
MUT	Mangosuthu University of Technology
N	Number of responses
NR	Nil response
SABINET	South African Bibliographic Information Network
SALDRU	South African Labour and Development Research Unit
TAMU	Texas A and M University
TQM	Total Quality Management
UKZN	University of KwaZulu-Natal
UNIZULU	University of Zululand

CHAPTER 1

INTRODUCTION

One of the greatest challenges for libraries today is to re-establish themselves as one of the “first and foremost gateways” to which users turn for assistance in navigating their way through the vast amount of information that is available in a variety of formats. A key to success will be a focus on users, the proactive assessing of their needs and responding with high quality service that meets those needs (Helman and Horowitz 2001:207). Providing quality service means being able to view services from the users’ point of view and then to meet the users’ expectations for service because users define value (Quinn 1997:359). In addition one can argue that the library also defines value. Whittaker (1993:28) mentions that “undoubtedly any library that aims at reaching the highest level of service, that is, to provide for the needs of users as individuals is attempting to be user-centred”. Therefore a user-centred approach will be the approach adopted in the proposed study.

In various sectors of the economy, organisations are increasingly evaluated in terms of their service quality. Service quality, as perceived by customers, is a function of what customers expect and how well the organisation performs in providing the service. In this information age, the services that libraries offer are undeniably important (Whittaker 1993:1). The core function of the academic library is to contribute to the intellectual and social development of students and the staff (North West Academic Libraries 2007) although it could be argued that the library’s intellectual mandate and the users’ preferences will sometimes be in conflict.

The intellectual and social development of students and staff can be facilitated through:

- Collecting relevant material and information.
- Establishing the conditions that enable immediate access to the collection.
- Encouraging the effective use of material available in the library as well as material found in remote sources (North West Academic Libraries 2007).

Nitecki (1997) states that the primary focus of a library is “service”. The tendency to measure the quality of an academic library in quantifiable terms regarding its collection and use, does not adequately address the community’s demands for information. Librarians therefore require new and innovative ways to measure quality in libraries.

This study will therefore attempt to identify users’ expectations of service excellence and their perceptions of service delivery with reference to one site, the Mangosuthu University of Technology Library. Performance measurement of libraries and information services is used to evaluate whether they are operating effectively and efficiently (Willemse 1989:261).

The researcher agrees with Nicholas (in Majid, Anwar and Eisenschitz 2001:176) who argues that the traditional measures of library evaluation such as the number of books and serials on the shelves in relation to the number served are no longer sufficient. Nicholas contends that the yardstick had to be changed since the success or effectiveness of a library can be measured through user satisfaction although, as Cullen (2001:663) points out, “the relationship between service quality and user satisfaction is a complex one”. According to Niyonsenga and Bizimana (1996:225) “the library user is the object of study and his or her opinions provide the measure of user

satisfaction which is indirectly measured using a certain number of indicators that determine the level of library performance”.

Despite the progress made over the last decade in emphasizing the user perspective, Shelley Phipps (in Kyrillidou and Hipps 2001:9) writes that libraries are still far from being user driven operations; instead they are largely internally focused. This means that factors such as collection size, circulation statistics and the number of users entering the library are taken into account. Systematic efforts are thus needed to help libraries to “listen to their users”.

Mangosuthu University of Technology (MUT) is situated in Umlazi, south of Ethekwini. MUT originated when the Chief Minister of KwaZulu first put forward the idea of establishing a tertiary educational institution specializing in technical subjects in 1974 at a meeting with the Chairpersons of Anglo American and De Beers Consolidated Mines. Research was commissioned to investigate the potential in South Africa for the training and employment of more technicians, and was undertaken by the South African Labour and Development Research Unit (SALDRU) of the University of Cape Town. The idea culminated in the establishment of an institution with the appropriate staff that offer technical subjects. Teaching began in 1979. (*2008 General Information and Regulations for Students Booklet*). There are currently 90 academic staff members (lecturers), 100 administrative and support staff, 4812 second, third and fourth year registered students and 90 BTech students at MUT (Figures supplied by the MUT Department of Higher Education Management Information System - HEMIS 2008). New students do not get automatic access to library registration. They have to participate in the library orientation and then register to use the library.

The library was established in 1985 and since then it has grown in terms of collection, staff and borrowers. The vision of the library is “Strive towards

service excellence by providing resources and information services to suit the needs of students, staff, researchers and the community” (MUT Website). The library currently has a collection of approximately 60 000 books, journals and multimedia items (Unicorn Library System 2008).

The core services offered by the library are circulation, short loan, reference, subject specialist services, periodicals, and a multimedia collection. The auxiliary services include photocopying, discussion rooms and an Internet laboratory. There are 27 staff members and 4514 borrowers at the MUT Library.

Since its inception as Mangosuthu Technikon, the Library has never assessed the quality of its service from the users’ perspective. The proposed study through the implementation of LibQUAL +™ , a survey instrument designed to measure the quality of library services based on the perceptions of students and staff, will be used to solicit, monitor and understand users’ opinions of the service quality and user satisfaction at the MUT Library.

1.1 Rationale

According to Quinn (1997:361) as more people ask “What are libraries good for?”, “libraries are [being] subjected to increasing scrutiny and accountability”. He further mentions that “libraries, like academic institutions themselves, are being called upon to demonstrate their contribution as never before and by providing a perspective of people as customers, the service quality model offers a new concept of libraries”. Hence the primary purpose of this study is to assess the quality of services provided by the MUT Library in relation to the users’ perceptions and determine its influence on user satisfaction.

The intention of the proposed research is to measure library users’ perceptions of the quality of the collections, personal service and facilities

and use the data for service improvements and to make informed decisions concerning the quality of service that is offered at the MUT Library. Could the MUT Library, as a result of the proposed study, be more responsive to users' needs and provide services that are better aligned to their needs? If so, in this way, it could move towards an outcome-based assessment, instead of relying merely on input, output, or resource metrics (LibQUAL+™ 2007). These outcome measures may show how well the MUT Library as an organisation serves its users and demonstrates the organisation's efficiency and effectiveness.

The proposed study will use a model which is designed specifically to measure the library users' perceptions of service quality and identify gaps between users' expectations and users' perceptions of library service, namely LibQUAL+™. This approach will identify whether the services meet, do not meet, or indeed exceed expectations of the users. It will also assist in determining which dimensions of the services need improvement in the eyes of library users.

Gozo (2005) describes quality assurance as "the processes of ensuring that specified standards or requirements have been achieved". Recent projects for library managers include quality assurance and it is anticipated that library managers will play a vital role in establishing quality assurance policies and principles for the library. The proposed study must be seen in the context of broader national initiatives which focus on quality assurance in academic libraries such as the Higher Education Quality Committee (HEQC), "a body responsible for quality assurance of higher education programmes established under the Higher Education Act of 1997" (Engineering Council of South Africa 2007).

As part of the task of building an effective national quality assurance system, the HEQC has established a committee to include capacity development and

training as a critical component of its programme of activities. The Committee for Higher Education Libraries in South Africa (CHELSA) is also working with HEQC for input regarding quality management of libraries. CHELSA is working closely with HEQC to formulate a common set of quality assurance / performance measures for all university libraries (CHE Institutional Audit Framework 2004). It is hoped that these measures will assist libraries with self-audits and also provide benchmarks against which to measure their performance.

Results of the proposed study will be used to identify possible sources of failure or inefficiency in the service at the MUT Library with a view to sustaining a high level of performance in the future and “it will play a critical role in supporting the transition to a user-centred library” (Hiller 2001:605). Lancaster (1993:1) points out that the results will also be used as a “tool for future improvements regarding differing needs of different user categories and it will be used as an internal control mechanism to ensure that the resources are used efficiently and effectively”.

1.2 Problem statement

The MUT Library aims to provide high quality library and information services to users and it needs to determine whether it is reaching its aims and objectives. One way in which this can be achieved is through assessment and according to Ebbinghouse (1999:20) “few libraries exist in a vacuum, accountable only to themselves. There is thus always a larger context for assessing library quality, that is, what and how well does the library contribute to achieving the overall goals of the parent constituencies?”

The goal of the MUT Library is to provide service excellence and a quality service to all its customers. The library is the “heart” of the institution and is expected to fulfil its role as a service provider in terms of education, training, research, community service and recreation. In order to meet its objectives,

the library needs to satisfy its users' needs and provide user satisfaction. In this way it will be satisfying the needs of the institution and meeting the strategic goals and objectives. The library is a support service to the University community and it plays a pivotal role in meeting the institutional goals which are education, training, and research. Further, the library contributes to the vision, mission and goals of MUT. This means that the library needs to demonstrate how well it is doing and the extent to which users benefit from the library services (De Jager 2002:140). As Quinn (1997: 359) states "the means by which the library can justify its contribution is by delivering excellent user services".

The role of the librarians in an academic enterprise should be dedicated to maintaining the importance and relevance of the library as a place of intellectual stimulation and a centre of activity on campus (Hisle 2002:715). Paris (1996:8) writes that "librarians are challenged to move beyond quantity to quality". The library can determine the quality of service it offers by using various approaches in its assessment. In previous years, the usual norm in libraries was to analyse services in quantitative terms.

Many studies on service quality using the LibQUAL+™ approach have been done at an international level, for example, University of Washington Library (Kyrillidou and Higgs 2001:9) and University of Thammasat Library (Nimsomboon and Nagata 2003). In South Africa, five libraries (arguably relatively few) have used LibQUAL+™, that is, Rhodes University, Pretoria University, University of Cape Town, Stellenbosch (Rhodes University Library 2007) and Durban University of Technology. It could be postulated that there is a reluctance to involve users in evaluating library services. It is against this background of the absence of research on user perceptions at the MUT Library that the proposed study needs to be seen. The proposed study therefore attempts to investigate the perceptions of end-users regarding

service quality and the level of user satisfaction. It will explore the connection between service quality and satisfaction (Calvert and Herson 1997:408).

1.3 Research Questions

The proposed study will attempt to answer the following five questions.

- What are the users' expectations of the MUT Library service?
- What are the perceptions of users regarding the quality of the MUT Library service?
- Are users satisfied with the service they receive?
- What are the gaps between user expectations and user perceptions?
- What recommendations can be made based on the findings of the study?

1.4 Initial Literature Review

According to Nitecki (1997) "the primary focus of a library is service and service quality is the most studied topic in marketing research". Service quality is a function of what customers expect and how well the institution performs in providing the service. A customer-based approach for conceptualizing and measuring service quality offers an alternative for defining the quality of library services. It emphasizes the service nature of libraries where the traditional collection-based criteria of quality may be part of, but not the entire component of excellence. "Service quality contributes to value experienced by customers and value becomes an outcome of excellent service" (Nitecki 1997).

The adaptation of mechanisms such as LibQUAL+™ has become an educational imperative emanating from the technological advances experienced globally (Paris 1996:6). The dynamic nature of information generation, management and use as well as the proliferation of publications,

force the library environment to either adapt or not. It is therefore necessary to measure library service quality in order to make the relevant improvements and survive in a highly competitive environment.

This information explosion has impacted on information access. The need for access by users to local and international databases and networks has made it necessary for librarians to take a closer look at user-centred needs. This has become crucial in an institution such as MUT where many students come from economically disadvantaged communities and this impacts on their needs and the quality of service they receive. The quality of services offered and user satisfaction is an important reason for assessment of services.

Among the most popular assessment tools of service quality is SERVQUAL, an instrument designed by the marketing research team of Berry, Parasuraman, and Zeithaml (Nitecki 1996:182). This tool was introduced in 1988 and provides an outcome measure for managers to gauge their service (Franklin and Nitecki 1999). SERVQUAL is a popular measuring tool for assessing service quality in the private sector grounded in the "Gap Theory of Service Quality".

The researchers used the survey instrument to measure the gap between customer expectations for excellence and their perception of actual service delivered. The SERVQUAL instrument helps service providers understand both customer expectations and perceptions of specific services, as well as quality improvements over time. It may also help target specific service elements requiring improvement, and training opportunities for staff. Nitecki and Hernon (2000:260) writes that "although its appeal to libraries is growing, SERVQUAL's standardized statement of service attributes as the basis for judging service quality in libraries limits its applicability for improving specific local services". This limitation led to the Association of Research Libraries

(ARL) in partnership with the Texas A & M University Libraries to develop, test and refine a tool that would serve the particular requirements of libraries. “This resulted in a modified model – LibQUAL+™, which enables a library to identify those attributes of greatest local importance for service improvement” (LibQUAL+™ 2007).

The LibQUAL+™ instrument helps librarians assess and improve library services, change organisational structure, and market the library. It has gained substantial results and contributed significantly to the improvement of service quality in various libraries. Majid, Anwar and Eisenschitz (2001:177) and Calvert and Herson (1997:408) indicate that a user-orientated approach such as LibQUAL +™ was considered more suitable for measuring library effectiveness than a collection orientated approach.

The LibQUAL+™ questionnaire aims to understand how users think about and evaluate library service quality. It is based on the idea that, if we want to improve libraries, we need to build upon a framework of users’ perceptions and expectations (Kyrillidou and Hipps 2001:9). The main purpose of the LibQUAL+™ tool is to provide libraries with a standardized, effective method to measure the quality of library services based on the perceptions of faculty, students and staff. LibQUAL+™ measures library users’ perceptions of service quality and it addresses three service quality dimensions that have been found to be valid in previous assessments of library services:

- Effect of service - Human dimension of service quality.
- Library as place - Library as centre of intellectual activity and physical facilities.
- Information control - Interaction with modern library; digital personalisation and navigation and web presence (LibQUAL+™ 2007).

Each dimension has three parts that ask respondents to indicate:

- The minimum service level they will accept.
- The desired service level they expect.
- The perceived level of service currently provided. This design will permit analysis of gaps between expectations, perception, and minimum acceptance level of service.

The goals of LibQUAL+™ are to:

- Foster a culture of excellence in providing library service.
- Help libraries better understand user perceptions of library service quality.
- Collect and interpret library user feedback systematically over time.
- Provide libraries with comparable assessment information from peer institutions.
- Identify best practices in library service.
- Enhance library staff members' analytical skills for interpreting and acting on data.

1.5 Definition of Terms

1.5.1 Perception

Stevenson (1997:113) defines a perception as “an opinion about someone or something”. In the context of this study, perceptions will mean how the users interpret the library services as a result of their interaction with the library staff, its services and resources.

1.5.2 Quality

Stevenson (1997:125) refers to quality as “a measure of how good or bad something is” and the American Society for Quality defines "quality" as "a subjective term for which each person has his or her own definition". In technical usage, quality can have two meanings:

- The characteristics of a product or service that bear on its ability to satisfy stated or implied needs.
- A product or service free of deficiencies (American Society for Quality 2007).

1.5.3 Service quality

The concept of service quality in the context of a library can be defined as the “difference between users’ expectations and perceptions of service performance and the reality of the service” (Sahu 2007:235). The author goes on further to explain that service quality means being able to view services from the customers’ point of view and then meeting the customers’ expectation for service.

1.5.4 Users

“Users” refer to “the organisation(s) or persons within those organisation(s) who will operate and/or use the system for its intended purpose” (Collin 2007).

According to Hernon and Altman (1998:3) in the library context, “users” are “the recipients of the library service”. In this study users are students (postgraduate and undergraduate), academic staff members and administrative/support staff. Other potential recipients are secondary. Students and staff have to register at the library in order to become library members so that they can borrow library material.

1.5.5 User satisfaction

Different writers define the concept of “user satisfaction” in various ways. Applegate (in Franklin and Nitecki 1999:1) defines “user satisfaction” as a personal emotional reaction to a library service or product”. Dalton (1994:2) writes that “user satisfaction” is a subjective output measure which reflects the quality dimension of the library service being provided”. Dalton (1994:2) further explains that operationally, “the level of satisfaction is derived by taking the difference between the average scores of both the actual performance and expectations as indicated by the user responses in the survey instrument sent to the sample population”. It consists of service encounter satisfaction which is based on the consumer’s dis/satisfaction with a discrete service encounter, and overall service satisfaction.

Hernon and Altman (in Cullen 2001:663) cite a definition of satisfaction derived from a number of marketing experts as "the emotional reaction to a specific transaction or service encounter", but they go on to indicate that "satisfaction may or may not be directly related to the performance of the library on a specific occasion". As they explain, "a customer can receive an answer to a query but be unsatisfied because of an upsetting or angry encounter. Conversely, although the query might remain unanswered, another customer might feel satisfied because the encounter was pleasant, and the helper interested and polite" (Hernon and Altman 1998:8). In the proposed study “user satisfaction” may mean that the users of the library are receiving a good quality service and the services rendered meet their expectations. When expectations are unrealistic, disappointment cannot be avoided. However, if the unrealistic expectations can be made realistic, then it is possible to provide a service which satisfies the expectations (Ojasalo 2001:205).

1.6 Theoretical Framework

According to Quinn (1997) the SERVQUAL model is a comprehensive measure because it measures both customer expectations and perceptions and it has been extensively tested across a wide variety of service settings. He argues that in a library context, the model could be adapted to reference, access services and collection development. SERVQUAL is commonly used in the world of business when corporations are losing market share to competitors. In the library environment these issues may or may not apply. The intended study, as noted, will be based on the modified SERVQUAL model namely, the LibQUAL+™ model.

The literature (for example Parasuraman, Zeithaml and Berry (1988), Nitecki (1996) and Association for Research Libraries (ARL) (2000)) reflects that various theories of service quality evaluation and user perceptions have been used in the past.

Library service is based upon a set of core functions that have remained valid since the earliest days of the public library movement. Inherent in those functions is a set of core values, including accuracy, thoroughness, timeliness, instruction, access, individualisation, and knowledge. Models of reference service that emphasise different aspects of those values take very different forms. In determining the best model for a specific library, the values of the community that the library serves must be taken into account (Tyckoson 2001). “In this way a user-centred approach is considered more suitable for measuring library effectiveness” (Majid, Anwar and Eisenschitz 2001:177).

Nitecki and Hernon (2000:259) points out that the SERVQUAL survey instrument based on the “Gaps Model of Service Quality” uses a set of five gaps showing the discrepancy between:

1. Customers' expectations and management's perceptions of these expectations.
2. Management's perceptions of customers' expectations and service quality specifications.
3. Service quality specifications and actual service delivery.
4. Actual service delivery and what is communicated about it.
5. Customers' expected services and perceived service delivered.

Of the five gaps leading to dissatisfaction with service organisations, the fifth gap is emphasized in this study. "The quality that a consumer perceives in a service is a function of the magnitude and direction of the gap between expected service and perceived service" (Cook and Heath 2001:548). The fifth gap is the basis of a customer-oriented definition of service quality; it is the discrepancy between customers' expectations for excellence and their perceptions of actual service delivered (Nitecki and Hernon 2000:259).

Research has shown that institutions use various models for service quality assessment namely; SERVQUAL, SERVPERF (Service Performance Model), EFQM (European Foundation for Quality Management – a business excellence model), TQM (Total quality management), Balanced scorecard model, LISM (Library and Information sector model) LibQUAL+™ and the HEQC (Higher Education Quality Committee). In addition to the above is the "European Customer Satisfaction Model (ECSI) which is a user satisfaction and loyalty model which was based on literature studies and qualitative research" (Martensen and Gronhold 2003:140). The models, which are similar in nature, have advantages and disadvantages which will not be discussed in this chapter. SERVQUAL and more specifically LibQUAL+™ is the chosen model because it provides a more reliable survey in terms of

measuring the gap between user expectations and user perceptions (Marnane 2004).

1.7 Research Methodology and Methods

1.7.1 Introduction

In research, methodological paradigms (for instance, quantitative, qualitative and participatory action paradigms) are not merely collections of research methods and techniques but also include certain assumptions and values regarding their use under specific circumstances (Mouton 1996:36-37). The proposed study fell largely within a quantitative paradigm. Quantitative analysis measures phenomena using numbers in combination with statistical procedures to process data and summarize results (Bertram 2004:59; Bless and Higson-Smith 2000:37).

Since the study sought to describe users' perceptions of the quality of services, a descriptive survey design was used, using the LibQUAL+™ survey instrument. This instrument was used as a source of survey data for the service evaluation at the MUT Library. According to Frankfort-Nachmias and Nachmias (1992:234), the survey method is one of the most important data collection methods in the social sciences and is used extensively to collect information on numerous subjects in research.

The primary data collection instrument that is used in collecting both quantitative and qualitative data is the questionnaire (Busha and Harter 1980:61). Both open-ended and closed-ended questions were asked.

1.7.2 Population

The population of the study constituted undergraduate students, BTech students and academic and support staff. The support staff also formed part of the sample since they formed an important component of the library user

group. The sample was not restricted to registered library users only, instead it included registered students of the University.

Second year, Third year, Fourth year and BTech students (see 1.8 below for the reason for not including first year students) were selected and they came from the three faculties, namely Engineering, Management sciences and Natural sciences (main campus only). The researcher did not study all students and to this end a stratified proportional sampling technique was used. Bouma (2000:18) described this procedure as “basically a type of quota sampling where members of each quota group within, or stratum of, the sample are selected randomly”.

1.7.3 Sample size

Several basic issues need to be considered in determining sample size. The size depends on the purpose of the study, data collection methods, and the research style. For the survey design, the sample size required with a heterogeneous population is relatively large (Bertram 2004: 64). The sample size for this study was 1823 (35.8%) which included students and staff.

1.7.4 Validity and Reliability

In this study the researcher adapted an existing instrument (Hernon and Altman 1998:105; Ntseane 2005). This instrument has been thoroughly tested and its reliability and validity is well established, that is, it measures what it is supposed to measure and can be replicated and yield the same results (Williams 2003).

1.7.5 Data analysis

Data analysis includes both qualitative analysis which includes processes such as thematic and content analysis, and quantitative or statistical analysis (Mouton 1996:67). Quantitative analysis was employed in the proposed

study. Statistical analysis using SPSS was used to analyse and interpret study findings (Babbie and Mouton 2001:411).

1.8 Limitations

The following are likely factors that may have influenced the reliability of the questionnaire:

The investigation was confined only to academic staff, administrative and support staff, second year, third year and postgraduate students. Other potential library users such as first year students, executive management, cleaning staff, craftsmen and tradesmen, as well as external school learners were excluded. This was due to time limitations and the fact that the academic staff, support staff, second year, third year and postgraduate students are arguably the major users of the library. This is evident from an analysis of the circulation usage statistics.

Nitecki (1996:182) identified five gaps but the proposed study only focused on gap five which refers to the discrepancy between users' expectations of service quality and their perceptions of the actual service delivered which are the basis of a user-centred definition of service quality and a conceptual basis for the SERVQUAL model.

1.9 Structure of the Study

Having outlined the research problem, the rationale and the limitations of the study, the next chapter will provide background for the study examining, among other things a brief history of the MUT Library, the mission statement of the library, services, staff and resources. The literature regarding user perceptions and expectations is reviewed in Chapter 3, the research methodology used by the researcher is explained in Chapter 4 and the results of the study are described in Chapter 5. The discussions of the results will be highlighted in Chapter 6 and the final chapter encompasses the

findings, conclusions and recommendations. The appendices follow after the bibliography.

1.10 Summary

In this chapter various components of the study were introduced. The rationale, problem statement, research questions, initial literature review, definitions, theoretical framework and the research methodology was introduced. The main concern of the chapter was to demonstrate the importance of service quality regarding users' expectations and perceptions and the route that the entire study would follow.

CHAPTER 2

BACKGROUND OF THE STUDY

In this chapter crucial aspects of the environment are examined in order to provide the context for the study. This chapter focuses on the following aspects: a brief history of Mangosuthu University of Technology (MUT) and the MUT Library, the mission statement, services offered, consortia and security issues of MUT. Information for this Chapter is gathered from the 2008 *General Information and Regulations for Students Booklet*, Higher Education Management System (HEMIS), MUT website and library policy manuals.

2.1 Brief history of Mangosuthu University of Technology (Overview)

The history of MUT originated when the Chief Minister of KwaZulu first put forward the idea of establishing a tertiary educational institution specializing in technical subjects in 1974 at a meeting with the Chairpersons of Anglo American and De Beers Consolidated Mines. Research was commissioned to investigate the potential in South Africa for the training and employment of more technicians, and was undertaken by the South African Labour and Development Research Unit (SALDRU) of the University of Cape Town.

As the study showed that there was an immediate need and demand for more technicians, the Anglo American and De Beers Groups Chairperson's Fund decided to provide R5 million to build the necessary facilities, and at a later stage companies like Mobil Oil, AECI, S.A. Sugar Association, the Rembrandt and Distillers Corporation, LTA Limited, Sasol and other sponsors provided more funds to establish the schools for Chemical Engineering and Building, Mechanical Engineering, Electrical Engineering, Civil Engineering and Building, and Business and Secretarial Studies (2008 *General Information and Regulations for Students Booklet*). In mid 1977 the

go-ahead was given for the project to begin, and it was decided by the KwaZulu Cabinet to develop the Technikon on the site in Umlazi which, while part of KwaZulu, is also part of the Durban Metropolitan area.

Given the urgency of the demand for technicians, and the speed to build up the institution in an orderly fashion, it was decided to open its doors as soon as possible. Hence preliminary but permanent buildings were designed and built, and teaching began in 1979. The Technikon moved into its main buildings on their completion in September 1981 (2008 *General Information and Regulations for Students Booklet*). In November 2007, Mangosuthu Technikon was renamed Mangosuthu University of Technology.

2.2 Mission statement of MUT

2.2.1 Core purpose

The purpose of the institution outlines the main goal that it is striving towards and this means “to contribute to the advancement of vocation-based education and training that will enhance the country’s skills and competitiveness for the development of humanity” (2008 *General Information and Regulations for Students Booklet*).

2.2.2 Core values

The fundamental values of the University play an integral role in achieving excellence. “A successful strategic planning process defines the common purposes that bring and hold together the many elements of the University community. The commitment to academic excellence drives the three parts of the University mission: teaching, research and community service and development. By stressing excellence in the academic standards and the teaching, research and service it fosters; by supporting and celebrating the diversity of our community; by emphasising the importance of teaching and by encouraging a shared sense of responsibility, we will be able to realise

our collective obligation to use our resources wisely and creatively in accomplishing our vision and mission” (2008 *General Information and Regulations for Students Booklet*).

2.2.3 The vision

“MUT will be a leader amongst institutions of technology whose management, students, staff and alumni are committed to the advancement and application of knowledge through teaching and research. By engaging in community service and development, the University envisages the creation of a more prosperous and self-sufficient society for South Africa in particular and for other SADC countries in general” (2008 *General Information and Regulations for Students Booklet*).

2.2.4 The mission

“The mission of MUT, as an institution of science and technology, is to provide superior quality, technologically advanced programmes and services in the fields of Engineering, Natural and Management sciences which contribute to eradicating inequalities in higher education” (2008 *General Information and Regulations for Students Booklet*). This mission is distinctive since it has a positive impact upon the expected performance of the library and information services that are provided. The library supports the operational goals of the University by ensuring that it provides adequate resources for teaching, learning and research.

2.2.5 Underlying values and philosophy

“The founding spirit of MUT was vocational education and training for disadvantaged students in engineering, natural sciences and management sciences. While remaining committed to that spirit, MUT now pursues the ideal of providing equal opportunity to all students. It also focuses on the

application and creation of meaningful new ideas, methods and opportunities.

MUT values its staff as its key asset. It recruits staff of the highest calibre and motivation, who display a commitment to academic excellence and support and application of knowledge.

MUT seeks and nurtures students with motivation and ability and prepares them for lifelong learning and leadership in a world that is increasingly dependent on technology.

MUT imbues its staff with a professional value system to provide education and training. It supports a culture of teaching, learning and research commensurate with responsibility and accountability.

MUT strives to be a centre for the advancement of science and technology that continually seeks opportunities to realise the socio-economic development of the people of Southern Africa.

MUT strives to sustain mutually beneficial relationships with the public and private sectors.

MUT pursues its vision with the highest respect for individual rights and academic freedom. From each individual member of its community, the University expects ethical conduct and commitment to excellence. The vision, mission, values and philosophy are designed to contribute significantly to the advancement of the Southern African region” (2008 *General Regulations for Students Booklet*).

2.3 Location

MUT is situated on the KwaZulu-Natal (KZN) south coast, on the outskirts of Durban and overlooks the Indian Ocean. There is a satellite campus

situated opposite the main MUT campus. This satellite campus provides lectures to students studying courses linked to the Faculty of Natural sciences and the Institute for Rural and Development Studies. These programmes started in 2006.

2.4 MUT academic structure and student enrolment

The structure comprises three faculties with various departments:

- Engineering
- Management sciences
- Natural sciences

Each faculty is made up of a number of different departments. MUT offers degrees and National Diplomas/Certificates courses. The National Diploma can be completed in three years of study. The Programmes are offered on an annual or semester basis. Courses are offered at first, second and third year levels in order to qualify for a National Diploma. A further year of study is required to qualify for a Btech Degree. The University also offers non-diploma courses such as:

- Basic motor vehicle repair work skills.
- Computer power programme.
- Cooking, baking and catering project.
- Tina sewing and fashion design.

There were approximately 8198 students in total enrolled at MUT for the academic year 2008. Students come from various areas in KZN, other provinces in South Africa and places outside South Africa such as Swaziland and Lesotho. The BTech students make up 90 of the 8198 students. There are 95 lecturing staff, including fulltime and part time contract lecturers at the main campus.

2.5 Brief history of the MUT Library

The first library was established in 1982 which housed approximately 600 books in a single room. It had only two staff members. At this stage it had approximately 200 users. Thereafter in 1987 the library moved to the current building and had 13 staff members with a bookstock of approximately 6000 volumes. As new faculties, such as Management sciences and Natural sciences came into being, the library collection and staff also began to grow. The current library collection comprises of books, newspapers, journals and multimedia. The library seating can accommodate approximately 500 students. There are three floors to the MUT Library. The Technical services department is on the ground floor, the short loan and periodicals sections are on the first floor and the Main library is on the second floor. (2005 Library guide).

The library committee plays a vital role in decision making and policy making in the library. Regular meetings are held to discuss issues of importance and library staff representatives as well as the library management and academics are part of this committee. The Chairperson of this Committee is the Vice-Principal: Academic. The library Senior Director implements the committee decisions and oversees, manages and coordinates all library operations.

2.6 The mission statement of the MUT Library

“The library strives towards service excellence by providing resources and information services to suit the needs of students, staff, researchers and the community” (Library strategic plan: 2007). The library mission is in keeping with the University’s mission seeing that it strives towards providing superior quality education which contributes to higher standards of education.

2. 7 Library staff

The library staff consists of 27 members. There are professional, semi-professional and non-professional staff members. The library management consists of a Senior Director and Deputy Director and two Senior librarians. The Senior Director, Deputy Director, and one Senior Librarian have a Masters Degree in Information Science. The Senior librarians manage the user services department and the systems department. There are five other professional librarians, that is the circulation librarian, periodicals librarian, and three subject librarians. The other professional librarians have Honours Degrees in Information science and Library science diplomas. The library staff further comprises of principal library assistants, senior library assistants and library assistants. The longest serving library staff has been at the MUT Library for 25 years.

2.8 Library collection

This section deals with the different collections housed in the library . The library collection is made up of books, periodicals, multimedia and electronic resources. There are approximately 61 000 items in the catalogue.

2.8.1 General Lending and Short Loan Services/ Reserve collection

The General lending collection is housed on the Main library floor and makes up the majority of the library's collection. There are approximately 53 000 books in the collection. Some of these books were donated by the European Union to balance the collection. All books have the Dewey Decimal Classification numbers on their spines and special coloured stickers for special collections.

The storeroom collection was part of the main lending collection and comprises of weeded items which have the same borrowing and lending rules as the main lending collection. The books in the storeroom collection

encompass subject areas of the three faculties of the University which are Engineering, Management sciences and Natural sciences. These books have blue labels on their spines to differentiate them from the rest so that filing is made easier.

The Short loan collection is only for registered staff and students. Lecturers and Subject librarians place books that are in high demand in this section of the library. Students have to produce their student cards at the time of request and may borrow books for an hour or as an overnight loan. Fines are charged for overdue material.

2.8.2 Periodicals collection

The library currently subscribes to eighty-eight print journal titles. These are local and international titles that have been requested through subject librarians and lecturers for their respective departments. This section also has approximately 400 non-current print journal titles. The library subscribes to three electronic databases, namely Sabinet, Ebscohost and Science Direct.

2.8.3 Video Library collection

The video library collection consists of videos and DVDs but only some have been catalogued and appear on the online catalogue. There are approximately 4000 videos in the collection. This collection encompasses a wide range of subjects, for example history, geography, human resource management, project management, science and technology. There are four teachmasters that are used to play the videos and DVDs and earphones are available to students. There is one television and students are welcome to make a booking to watch educational movies and the news.

2.9 Library services

These services comprise of Lending or Circulation, Reference, Online databases, Online catalogue, Internet service, Photocopying and Discussion rooms. The library is open from 08h30-21h00 during non-exam times from Monday to Thursday. On Fridays the library is open from 08h30-18h00. The library is open on Saturdays from 08h00-16h00. The normal hours are extended during examination periods.

2.9.1 Borrowing and Lending conditions

The library provides a lending service to staff, students and certain school learners and educators. All registered students and staff may borrow library material on condition they have not defaulted. The normal loan period for books is two weeks for students and 4 weeks for staff. Staff and students may ask for special return dates on request only (MUT website). Short loan items are loaned for one hour only. Videos are not allowed out and are loaned for one hour only and are used in the video library. Periodicals are lent to students for in-house use only. Fines are charged for late returns and this rule is applicable to staff and students although the rates differ.

2.9.2 Reference services

The reference collection comprises of material such as dictionaries, encyclopedias, indexes and abstracts. This collection is not allowed out on loan. However staff and students are allowed to use this material in the library. The reference collection is situated on the Main library floor close to the subject librarians' offices.

2.9.3 Subject Librarians

There are two subject librarians in the Main Library and one subject librarian on the satellite campus – Natural sciences Library. Subject librarians play an integral role in the library especially in areas of collection development,

information retrieval, library orientation, selective dissemination of information and end-user training (MUT website). Students and staff use the services offered by subject librarians for research, teaching and educational purposes.

2.9.4 Interlibrary-loans

This service is extended to MUT staff only and not to students. Interlibrary-loans are done when the library does not have stock of a particular item. The item is requested from another library by the interlibrary-loans librarian. Items borrowed on interlibrary-loans are subjected to the cost and loan regulations governing the inter-library loans network and the ESATI agreement (2008 *General Information and Regulations for Students Booklet*).

The Eastern Seaboard Association of Tertiary Institutions (esATI) Agreement exists among the libraries of Durban University of Technology (DUT), MUT, University of Zululand (UNIZULU) and University of KwaZulu-Natal (UKZN).

2.9.5 Library website and electronic facilities/databases

The library website is part of the MUT website. There are links to the library catalogue, library services and electronic databases from the library website. The free access database is Jstor. Users can also access Sabinet and Ebscohost from remote computers with a user ID and password.

All staff members with the exception of shelf attendants have computers. All service points in the library have computers and the Unicorn Library System is being used. Staff also have access to the email programme which is Pegasus Mail.

There is also a drop-in Internet laboratory for MUT students. This laboratory was established in 2001 and it can accommodate up to 50 students. The

computers in the laboratory were donated by the European Union and the Department of Education. It has the same opening hours as the library. Library staff and student assistants monitor the use of the computers in this laboratory. The laboratory gives students access to the Internet and it is the only drop-in facility for students. In addition to this laboratory, students also have access to approximately 50 computers for word processing. There is always a high demand for these laboratories.

2.9.6 iLink (online catalogue)

This new online public access catalogue came into operation in November 2005 when the library purchased a new operating system called Unicorn. It is called iLink. The records in iLink have information regarding the bibliographic record, the location of the item, the class number and the status of the item, for example on the shelf, out on loan or reserved. There are three online catalogues in the main library. Users of the library require online catalogues for bibliographic information especially classification numbers of books. The cataloguing of items is done on the Unicorn Library System by using the cataloguing module.

2.9.7 Auxiliary services

- **Discussion rooms**

There are two rooms available for student groups which must not exceed twenty students at a time. A student may book to use a room by providing his student card to a staff member at the issue desk. Discussion rooms are in high demand all the time.

- **Photocopying and printing**

The library has five card operated photocopying machines, which are located in different sections of the library. There are two machines on the main library floor, one in Short loans and the other in the

Periodicals section of the library. The size of the copy and related costs are as follows: A4 size = 25 cents and A3 size = 50 cents each. These machines are maintained by the service provider, that is Nashua. Problems and faults are reported to the circulation librarian who communicates with the service provider.

There are no printing facilities for students in the library. In most instances students have to go outside the University to print their assignments and other documents.

2.10 Summary

In this chapter, a brief history and description of MUT and the library was given. This comprised of the mission statement, academic structure, student enrolment, the staff structure, brief history of the library, collection and services. It is against this background that an understanding of the research will be attained.

CHAPTER 3

LITERATURE REVIEW

According to Kaniki (in Terre Blanche and Durrheim 1999:17) “a literature review involves the identification and analysis of literature related to one’s research project. This process includes identifying potentially relevant sources, an initial assessment of these sources, thorough analysis of selected sources and the construction of an account integrating and explaining relevant sources”.

It is not enough merely to show what others in the field have discovered. The “aim of a literature review is to show that the writer has studied existing works in the field with insight” (Haywood and Wragg 1982). The definition of a literature review can be further explained by Caulley (1992) as an

exploration of an area, which at best will provide a definition and a framework for a piece of research. Most students are not experts in their chosen field before they start their reading. The idea of the literature review is to develop a good working knowledge of the research in a particular area. The final written review should reflect the results of this preliminary research. Therefore, a good literature review raises questions and identifies areas to be explored. The review should give an idea of the work that has been carried out in the subject area, preparing the reader for the study that is to follow.

In addition to this, related studies on service quality assessment in the library context and methodologies and findings of these are identified and discussed. In this chapter the concept of service quality and relevant models commonly used in service quality assessment are explained.

3.1 Service quality assessment in academic libraries

This section discusses the conceptual definitions of service quality and user satisfaction, and the different perspectives (including the historical

perspectives) of service quality assessment. In addition, the justification for service quality assessment in the academic library context is explained. "One meaning of quality is customer satisfaction through product or service" (Begum 2003).

3.1.1 Conceptual definition

Quality is the basic requirement of any library service and all libraries strive to deliver the highest quality of service. "A quality service is one that fully meets the expectations and requirements of the users. If a library provides appropriate information to the right user at the right time and in the required form, then it could be argued to be maintaining quality" (Sahu 2007:234). This means satisfying the query of each and every user accurately and exhaustively.

The reviewed literature indicates that there has been a historical evolution in conceptualizing "service quality" in the academic library. Reeves and Bednar (in Herson, Nitecki and Altman 1999:9) mention that there is no single, unequivocally accepted definition of service quality but the concept has been perceived from several perspectives.

Nitecki and Herson (2000:259) state that "for years, researchers in library and information science (LIS) have examined information needs, user wants, and user perceptions about the value of library services". They have also looked at the elusive concept – quality, in terms of collections (size, titles held, and breadth of subject coverage) and the effectiveness (extent to which goals and objectives are set and met) of library services. Thong and Yap (in Majid, Anwar and Eisenschitz 2001:176) indicate that factors such as size, relevance and currency of collections can also be used for measuring the effectiveness of a library but Nicholas (in Majid, Anwar and Eisenschitz 2001:176) disagrees with this and says that the traditional methods are no

longer valid. The literature has shown that service quality has shifted its emphasis for achieving excellence from product specifications towards development of relationships with customers. In other words the focus has shifted from measuring outputs (circulation) to measuring outcomes (quality and satisfaction).

“Library service quality is a concept that is becoming less elusive and increasingly recognizable and actionable” (Kyrillidou and Hipps 2001:10). “Service quality, developed over time, relates to customer expectations” (Hernon, Nitecki and Altman 1999:10). It also relates to the customer’s developed attitude towards a service and focuses on user expectations. Hence it is a major area of concern whether libraries and librarians are embracing service quality in their libraries.

According to Hernon and Altman (1998:8-9) “every organization’s service has a quality dimension, ranging from wonderful to awful and service and quality cannot be disconnected. Quality is the manner [and substance] in which the service is delivered, or, in some cases, not delivered”. The most common definition is the notion that views quality as “the customer's perception of service excellence”. That is to say, quality is defined by the customer's impression of the service provided (Berry, Parasuraman, and Zeithaml 1988; Parasuraman, Zeithaml, and Berry 1985). The assumption behind this definition is that customers form the perception of service quality according to the service performance they experience and on their past experiences. It is therefore the customer’s perception that categorizes service quality.

Hernon and Nitecki (2001:687) further explain that “as libraries embraced total quality management (TQM), a number of them increased their commitment to support user-orientation and to have library users who are satisfied with the service provided”. Customer service encourages retail and other organisations to meet or exceed those customers expectations central

to their mission, vision, goals and objectives. In other words the organisation's vision of its service role ultimately guides what services are provided and how they are offered. Service quality, in effect, draws on TQM and customer service as well as on marketing research. Fundamental to service quality is the belief that an organisation exists to serve its customers. The onus is upon the organisation to embrace change, identify best practices, learn from one another and improve library operations and current practice.

Researchers have drawn on marketing and other literature to focus attention on expectations and an alternative view of quality, one representing the user's or customer's perspective on the services used. Those researchers who have examined quality from that perspective agree with their peers in marketing that "only customers judge quality; all other judgments are essentially irrelevant" (Nitecki and Hernon 2000:259). As Zeithaml, Parasuraman, and Berry (in Nitecki and Hernon 2000:259) emphasised, "service quality perceptions stem from how well a provider performs, in relation to the customers' expectations about how the provider should perform". As a result, the research tends to define service quality in terms of meeting or exceeding customer expectations, or, more precisely, as the difference or gap between customer perceptions and expectations from two coequal and probably interrelated concepts (Nitecki and Hernon 2000: 259).

To further explain the concept of quality, an interesting survey by Osman, Goon and Aris (1998) was undertaken among the Malaysian University, public and special libraries. To the question, "what is meant by 'quality?' from the perspective of library staff and how do you define *quality* in your library services?" respondents gave the following definitions: access to well-developed collections, prompt, efficient and courteous service, fulfillment of users/clients' information needs, conducive environment and facilities. Given a list of 16 characteristics but asked to choose five, the respondents selected

the following: accessibility, courtesy, effectiveness, efficiency, and promptness/timeliness (Osman, Goon and Aris 1998:426). This shows that emphasis was placed on service outcomes rather than on physical resources. It is interesting to note that the common factors of the various definitions of the concept of service quality focus on user expectations, needs and customer satisfaction and this applies to various service industries.

The reviewed literature emphasises the fact that a “good quality information service is about helping users to define and satisfy their information needs, building their confidence in using information retrieval systems, and making the whole activity of working with library staff a pleasurable experience” (Kumar 2007:234).

3.1.2 Validation for service quality assessment

Library users, our customers, are the focus point of the library service. As centres of information and innovation, libraries play a vital role in lifelong learning. Therefore, it is important that libraries incorporate high standards of customer care (Miao and Bassham 2007:53).

There are many reasons why academic libraries are interested in service quality. Andaleeb and Simmonds (1998:156) and Cullen (2001:662) mention that there is increasing competition and a global digital environment. The quality of services rendered to customers must improve in order to survive in a volatile competitive environment and assessing the effectiveness of the service programs is necessary. Bamigboye (2007:152) writes that “the evaluation of library service is an important aspect of library administration for establishing library goals and policies”. He goes on further to say that the library must not “operate in total isolation from its patron characteristics and their demands”.

Calvert and Herson (1997:408) mention that there is a need to reduce the gap between customer expectations and the actual service provided. Increased pressure from funding authorities and accreditation agencies have encouraged academic institutions and their libraries to move towards a more outcomes-based assessment (Blixrud 2002 and Chapman and Ragsdale 2002:8). The library needs both to satisfy its users and to prove to its funding and accrediting bodies that it is a worthy investment.

“As the service sector has become an increasingly large component of modern economies, researchers have focused more attention on the construct of service” (Thompson, Cook and Heath 2003:456). The parent body makes a commitment to be accountable to customers and compete for their loyalty; therefore libraries too may have an externally imposed requirement to implement service quality principles. It is crucial that libraries attract and retain their customers through programs designed to produce loyalty.

The following is a useful summary of the reasons for improving service quality (Nitecki and Herson 2000: 259-260):

Some libraries have recognized that the managerial approach that service quality implies is a way to improve their ability to meet their mission of serving users regardless of external pressures. Service providers deliver services to benefit their customers and perhaps to attract new ones. Improvement of service requires an understanding of the benefit, the customers, and the actions of the service provider, and then using that knowledge for planning purposes. The application of service quality concepts encourages service improvement.

Customers who share information about their expectations offer an opportunity for that library or other service provider to establish a closer personal contact with them. This relationship should result in libraries providing (and customers receiving) better service; after all, library staff are more knowledgeable about their expectations and how to translate that knowledge into services that delight customers and create loyalty.

External pressures from parent institutions call for accountability and the use of basic business practices by libraries. Fundamental to service quality is the need for cyclic review of service goals and objectives in relation to customer expectations. Viewing service quality, libraries can identify areas for improvement that are central to their mission, goals, and objectives. Attention to service quality enables an organisation to develop a partnership with its customers to gain a competitive edge.

A library like any service organisation must have a motivated staff committed to the provision of excellent service and empowered to work directly with customers to deliver such services on a continuous basis. The focus is no longer on collections and things that a library possesses; rather, the core activity of a library should centre on service provision and improvement and on building an ongoing relationship between users and library services.

The onset of the information explosion has also sparked an interest in service quality assessment. In a library such as MUT, many users come from previously disadvantaged schools and in some cases one has to deal with computer literacy initially before the introduction of online information systems. Librarians have to adopt the user-centred approach and put the user first and determine the needs of the user. The MUT Library presently has adopted informal mechanisms to get user feedback. A suggestion box is placed at the issue counter and users are most welcome to drop in their comments and submit feedback about service quality and user services in general. The information gathered from this feedback helps library managers and the library staff to identify areas of failure and improve service delivery. In this way the library managers are improving their consumer knowledge as well as their performance in providing services as a means to satisfy library users (Ladhari and Morales 2008:352). The suggestion box is well used at the MUT Library. Students deposit useful comments and suggestions which are analysed by the librarians. The comments have a beneficial effect on service management and delivery.

There is an abundance of literature available that spells out the reasons for service quality assessment. This assessment is critical for libraries if they want to provide excellent services. In order for the academic library to grow and become the heart of the institution, it needs to provide excellent resources for its current users and prospective users and this assessment must take place on a continuous basis. Service quality assessment should not be a once off activity. A library which offers a world class service is excelling in satisfying the operational and strategic goals of the institution.

3.1.3 Defining user satisfaction

According to Quinn (1997:363) “recipients of service are commonly referred to as customers, but the use of the word ‘customer’ has been criticised for implying that the user is a passive consumer of information, rather than being actively engaged in the learning process”. In the context of this study the term user and customer are used interchangeably.

In recent years, “user satisfaction has become an important indicator of the library’s impact, with an increasing number of libraries, both public and academic, conducting user satisfaction surveys and even publicising the results” (Chua, Mentol and Kua 2004). Some examples of these libraries are; the National Library of Australia which conducted a major survey of users in May 2002, and the Brantford Public Library system, Canada, Ontario, which seems to have had high satisfaction ratings in all areas of service in the year 2000 (Chua, Mentol and Kua 2004).

Libraries today need to be customer focused to remain relevant to their users. Singh (2003:34) characterises the present time as being "the age of the information customer", for at no time in the history of librarianship and information services has the authority of the customer been so recognized.

As gate counts and loan statistics fall and budgets are slashed (in some cases quite drastically), libraries are seriously listening to what their users are saying about the services provided to find ways of remaining relevant, thus retaining existing customers as well as reaching out to win non-customers (Chua, Mentol and Kua 2004). User satisfaction/dissatisfaction feedback is typically obtained by conducting surveys. Some public libraries analyse the survey findings according to the percentage of the different ratings given by the number of respondents, while academic libraries, such as Monash University Library, use a customer satisfaction index, followed by conducting a performance gap analysis.

Chua, Mentol and Kua (2004) explain that there is a strong correlation between the concept of service quality and satisfaction. "Satisfaction levels from a number of transactions or encounters that an individual experiences with a particular organisation fuse to form an impression of service quality for that person. The collective experiences of many persons create an organisation's reputation for service quality" (Hernon and Altman, 1998:9).

"A system of services with standards, boundaries, and inherent flexibility will help libraries emerge more customer service-effective than ever" (Schorer 2003). The adoption of service standards prevents staff from over-delivering to one customer at the expense of others, or burning out from the pressure of working with no boundaries. On the other hand, customers acquire a realistic expectation of service delivery and are assured of receiving a consistent level of service at all times.

The customer in the academic library is the user, the reader, and the student. "The customer is not an outsider but part of the academic community. In a service organisation, customer satisfaction means fulfilling expectations and librarians must find out what readers want and concentrate upon providing it" (Begum 2003:1). It is important to also help readers to understand that what

they want can be enforced, refined or changed. The academic library has been described as the “heart of the learning community, providing a place for students and staff to do their research and advance their knowledge. Library staff provides numerous services to these users, addressing their diverse needs, characteristics and interests” (Simmonds and Andaleeb 2001:626).

Attention to customers and the services they want and receive are of utmost importance. The library needs to ensure that its “services both meet customer needs and customer expectations to the highest degree. This means that the library needs to compete both in terms of service quality and customer satisfaction” (Cullen 2001:662).

“The concept of user satisfaction in the library literature has evolved to encompass a broader focus on the user’s perspective of the library” (Franklin and Nitecki 1999). User satisfaction, defined by (Dalton 1994:2) is “a subjective output measure which reflects the quality dimension of the library services”. She goes on further to explain that “user satisfaction is the difference between a user’s expectation about an anticipated service and the actual performance of the service outputs as perceived by that user”.

Satisfaction may be defined in various ways. Applegate (in Franklin and Nitecki 1999) defines user satisfaction “as a personal, emotional, intellectual reaction to a library service or product”. Satisfaction, defined by (Franklin and Nitecki 1999) is often a short-term measure but service quality evolves over time and relates to the customer’s developed attitude towards a service”. According to (Cullen 2001) satisfaction may involve long-term as well as short-term perceptions, and a personal reaction to service built up over a number of transactions of varying quality.

Cullen (2001) goes on further to explain:

...it would seem that, in the complex interchange of customer expectations and perceptions across the services delivered by an organisation, customer satisfaction at the micro level concerning an individual service will contribute to the dimensions of service quality (tangibles, reliability, responsiveness, assurance and empathy). A global view of quality of service derived from all the services with which the customer has interacted and integrating the five dimensions of service quality, will contribute to their overall satisfaction with the organisation.

Cullen (2001) mentions that the relationship between service quality and customer satisfaction is a complex one. This is further illustrated by the explanation that Hernon and Altman provide (in Cullen 2001) who explain that “a customer can receive an answer to a query but be unsatisfied because of an upsetting or angry encounter. Conversely, although the query might remain unanswered, another customer might feel satisfied because the encounter was pleasant and the helper interested and polite”. However it is noted by Hernon and Altman (in Cullen 2001) that service quality is probably “an antecedent of customer satisfaction”.

One would assume that the overall user experience will include some sense of satisfaction. Niyonsenga’s and Bizimana’s study (1996) on the libraries of the National University of Rwanda is an excellent example of how library use and user satisfaction was measured. The library user and library performance were the two constructs for measurement. In the first instance, the library user was the object of study and his or her opinions provided the measure of user satisfaction. In the second instance, user satisfaction was indirectly measured using a certain number of indicators that determine the level of library performance.

The authors mention that “the degree of user satisfaction was then assumed to be proportional to the level of library performance. The results of this

survey showed a low degree of satisfaction for the library patrons which was related to the poor library performance in terms of explaining user satisfaction” (Niyonsenga and Bizimana 1996:236). This clearly illustrates that there is a distinct relationship between the quality of service offered and the level of satisfaction reached by customers.

“Satisfaction ratings can reveal possible structural strengths and deficits relative to other libraries” (Mundt 2003:38). This is evident when satisfaction ratings are compared with corresponding statistical data or performance measures. Hiller (2001) explains the results from his study on assessing user satisfaction at the University of Washington libraries. The results revealed significant variation within and between groups concerning library satisfaction, user priorities and importance.

3.1.4 Historical perspectives of service quality assessment

Libraries have been recognised for succeeding in measuring themselves in terms of input (number of transactions), and more recently in terms of output (circulation) measures (De Jager 2002:140).

Traditional forms of library evaluation do not involve users directly and are therefore internal. Dervin and Nilan (in Nicholson 2004) say that early forms of library evaluation started with measurements based on library staff, processes, or systems, statistics and not the user. These tools were employed to improve library procedures and make the library more efficient. A library that does not function effectively and efficiently will not be able to succeed; however, these measures alone are not sufficient.

Another form of traditional library evaluation is one that is based on the measurement of the success of an information retrieval system or service. According to Nicholson (2004:164) the Cranfield studies, best known for the

development of precision and recall measures, did not involve user evaluations; instead, the “relevance” decisions were made by researchers. These methods may provide a convenient way to quickly judge the success of a system and can inspire future studies, but are all based on an internal view of the library system (Nicholson 2004:182).

- **Shift in library assessment**

Although the traditional methods of evaluation proved to be significant in measuring library effectiveness, a concern for assessment in terms of outcomes is presently the focus. According to Griffiths (2003:503) a movement began to study library users and library use in the academic library environment. She goes on further to say that “only since the 1980’s has there been a concerted effort on the part of librarians and library organisations to formalize the process of performance evaluation”.

- **Input data**

The first form of traditional assessment includes irregular collection of statistics such as circulation counts, number of reference queries answered, number of study cubicles and number of books ordered and catalogued. Turk (2007:177) writes that libraries collected statistical data but argues that before 1990 they did not ask themselves about the validity, usefulness and the benefit of collecting that data.

- **Systems and processes**

The next form of assessment is based on processes and systems and does not include the user perspective. An example of process measurement is the total time spent on ordering and receiving a book using online library systems or the time spent on issuing and

discharging library materials at the circulation issue desk. The ultimate aim in this type of assessment is to improve library operations so that the library is more effective. These forms of assessment are only effective holistically if they are combined with other forms of assessment.

- **Output measures**

The work by Poll (2003) illustrates a transition from input to output measures. This transition occurred in the mid to late 1970's. Traditional forms of assessment - input measures, that is income and expenditure, collection size and development, staff statistics, study cubicles and user space shifted to output measures, such as loans, reference queries, interlibrary-loans and document delivery, end user training and events attendance.

- **User centred approach**

Griffiths (in Simba 2006:30) asserts that a similar change from output to outcome (user-centred) assessments occurred in the early 1990's. It is at this point that both academics and practitioners in the field of library and information science increasingly recognized the significance of assessing library services (Shi and Levy 2005).

According to Kyrillidou (2002:45-46) only in the last few years have librarians engaged in the measurement of quality from the user's perspective. Turk (2007:177) mentions that the new approach to measurement is the most relevant assessment seeing that it takes the user's perspective into consideration and focuses on outcomes. The best one can currently do is examine local efforts regarding the measurement of outcomes in libraries and develop the ground work

that will give birth to renewed understanding in this area over the next few years.

- **Information technology**

In addition to the above developments, Covey (2002:156) mentions that the World Wide Web has made a dramatic change to library collections and services. This rapid development in information and communication technology and the changes in needs and expectations of users means changing roles for libraries and librarians. This rapid change has enabled Higher education institutions and library personnel to understand the importance of assessment in improving the quality of library services and meeting the needs and expectations of users. This means supporting the mission and vision of the university and coping with the significant challenges in a changed information landscape.

- **Current forms of assessment techniques**

For libraries to accomplish their resourcefulness, it is necessary that they become more user-centered than ever before. The literature has shown that the traditional forms of measurement and statistics alone are insufficient for assessing library services therefore library users must be involved in the assessment process. This is achieved by conducting questionnaire based surveys, focus group interviews and user protocols.

3.1.5 Academic library service quality assessment perspectives

Libraries approach assessment or performance in different ways. This may include librarians or library staff, users of the services provided by the library and/or funders of the library (Griffiths 2003:504). The user's perspectives and the librarian's perspectives are the most common in academic libraries.

There seems to be a discrepancy as to which perspective is the most appropriate for the academic library in assessing service quality.

“Many librarians maintain that only they, the professionals, have the expertise to assess the quality of library service. They assert that users cannot judge quality, users do not know what they want or need, and professional hegemony will be undermined if they bow down to users” (Altman and Hernon 1998:53).

Customers (present, potential, and former ones) believe that the library’s reason for being open is to meet their needs. “Each customer evaluates the quality of service received and decides when (or if) there will be further interaction with that organization” (Altman and Hernon 1998:54). Zeithaml, Parasuraman, and Berry (1990) also support the fact that within service-quality models “only customers judge quality; all other judgements are essentially irrelevant”. According to Cook and Heath (2001:548) “service marketing has identified the customer or user as the most critical voice in assessing service quality”. The quality of library services and the perceptions of the library users impact on the image of the library, its parent institution and the society.

The service marketing literature clearly illustrates the user perspective in assessing library services. The various case studies have shown that users are the best judges of service quality since services are aimed at customers (Kavulya 2004). According to Quinn (1997:362) librarians should not equate the quality of services offered with the accuracy of answers provided. The manner in which librarians treat users and their behaviour in communication style may be as important to users as accuracy of answers given. Librarians are striving to integrate the institution’s goals and missions together with the user’s perceptions of the library service.

In the process of achieving the institution's goals and objectives, the library aims to provide excellent service quality and take into account the users' considerations as indicated by Snoj and Petermanec (2001:316). They write that users have difficulties in their assessment of library services. "Usually they assess the value and the quality of services on the basis of those attributes upon which they feel they have the capability for assessment, and they need tangible clues to do this". The attributes refer to physical evidence, library image, impression made by contact employees and soft attributes (knowledge, courtesy, friendliness, politeness, empathy, promptness, accuracy, individualized attention, ability to convey trust and confidence). These are important components for efficient and effective management of library services (Snoj and Petermanec 2001:317).

The other perspective of service quality assessment is explained by Phipps (2001:637-638). He acknowledges both trained professional and users' perspectives of service quality as they contribute to future libraries and the future users. However he stresses the need for cultural transformation within libraries that takes into account the following four aspects:

1. Listening to the voices of customers by developing cooperative partnerships with them, e.g. use LibQual+™.
2. Listening to the voices of staff by creating systems that support staff performance.
3. Listening to the voice of process by learning continuous improvement of methodologies to identify whether work processes are effective and efficient.
4. Listening to the voice of the organisation by turning libraries into organisations focussed on creating the desired future and maximizing the capacity to achieve it (Phipps 2001:637-638).

In essence, both the user's perspective and the librarian's perspective of assessment are valid, provided the aim is to uplift service quality in libraries.

Irrespective of the approach of assessment, the users of the library service are the key determinants. It is vital that their needs and demands are taken into account. However, the user perspective and the library staff /organisation perspectives are critical to improve library services and meet user expectations, thereby bridging the gap between expectations and perceptions of service quality (Derfert-Wolf, Gorski and Marcinek 2005).

The chosen perspective in the current study is the user perspective and in this context users comprise the students, lecturing staff, administrative and support staff of the university.

3.2 Theories and challenges of library service quality assessment

The library and information sector has been implementing various service quality assessment models. These include: the Balanced Scorecard Model (BSC), European Foundation for Quality Management (EFQM Model), Library and Information Sector Improvement Model (LISM Model), the LibQUAL+™ instrument, SERVQUAL Model, SERVPERF Model and Total Quality Management Model (TQM Model).

In this section only the models that have been extensively used in assessing library services are discussed. The fact that these models are widely used in assessing academic library service quality and the availability of literature dealing with these models are the reasons for a detailed discussion. Each model will be discussed below.

3.2.1 Balanced Scorecard Model (BSC)

In an effort to develop a culture of assessment, a management system was developed by Robert S. Kaplan and David P. Norton (1996). According to Ceynowa (2000:159) the BSC was “originally developed for the private sector but had to be adapted for the activities of the public service – the university”.

This tool was used by libraries such as the German University and state libraries in 1999 and the University of Virginia Library in 2001.

The Balanced Scorecard is an “instrument which provides a framework for concentrating on a small number of carefully selected measurements. These measures are closely aligned with the organisation’s mission and strategies” (Self 2003:57). The literature shows that the BSC was initially used for private businesses but it is increasingly being used by governmental and non-profit organisations including libraries. Self (2003:58) writes that “balanced scorecard is an attempt to get control of a statistical operation”. According to Ceynowa (2000:159), an organisation should be viewed from four perspectives in order to produce a balanced overall assessment of the library:

1. User.
2. Finance.
3. Internal business processes.
4. Learning and the future.

The challenge that one notes with the model is its applicability in the academic library context, particularly to assess library users’ expectations of service quality and thereby meet their needs. Retief (2005:61) points out that the BSC has been implemented in academic libraries in Germany, USA and other countries. Retief’s study reveals that the model is useful in the support of the University’s strategic plans, improving statistical data collection, clarifying organizational values and ensuring the focus remains on library assessment.

According to Retief (2005:61) there are various reasons for the implementation of a Balanced Scorecard:

- Improve organizational performance by measuring what matters.
- Align organizational strategy with the work people do on a day-to-day basis.
- Focus on the drivers of future performance.
- Improve communication of the organization's vision and strategy (Retief 2005:61).

Ceynowa (2000: 159) explains that:

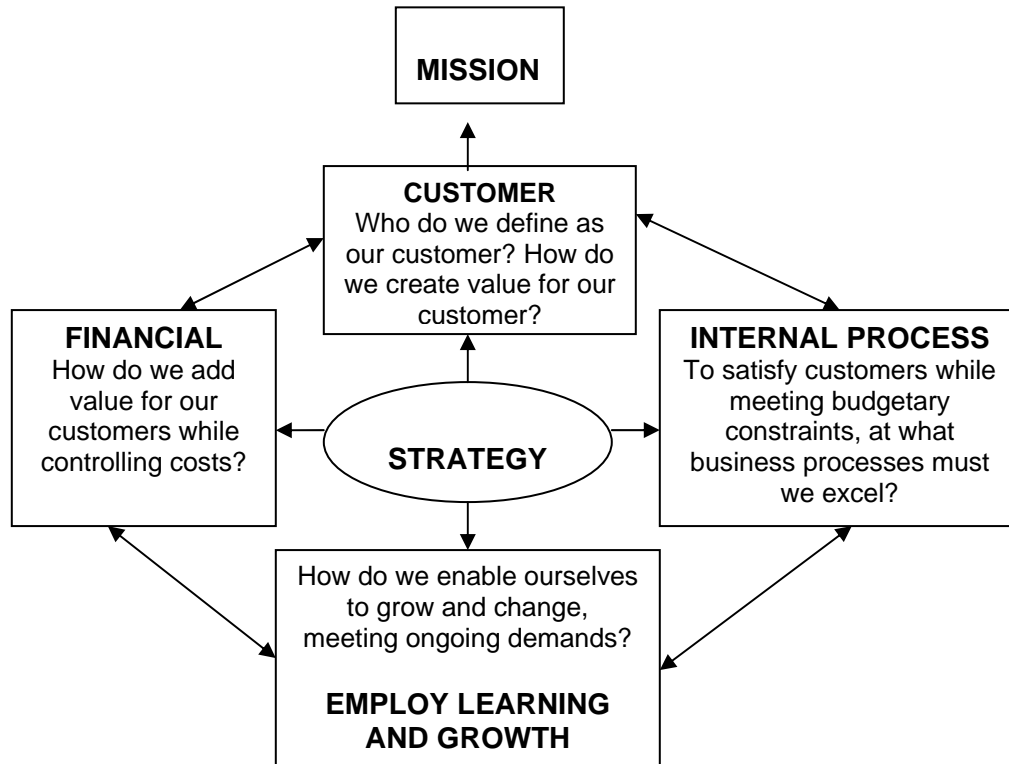
the prioritised perspective is much rather that of the users of the information resources provided by the academic libraries. In keeping with the central question in this perspective, "How can we fulfil user expectations?" a strategic objective is set, which is focused on achieving as many members as possible in the primary user group (students and academic personnel) through the facilities and services offered by the library. The information requirement should also be met to a large extent immediately, through directly available media; in the case of electronic services, as far as possible it should be met by direct access from academics' workstations. As a means of evaluating these objectives, the following performance indicators are being implemented in the project libraries:

- Percentage of target group attained (proportion of registered users in the primary user group).
- User satisfaction quota.
- Ratio of opening hours to demand.
- Incidence of use per member of the primary user group.
- Availability quota (proportion of immediate loans to total loans).

Another explanation is given by Poll (2001:712-714) who states that the BSC model which has been implemented in academic libraries in Germany deviates from the original model. The adapted BSC model for academic libraries places more emphasis on user's perspectives than on finances. The indicators for assessment in this adapted model seem to stress input and output measures which Poll (2003) in her later work suggests are not visible in assessing service quality in the academic library. For this reason other measures that incorporate outcome and impact to assess service quality are

needed (Poll 2003). Figure 1 illustrates the balanced perspectives of the BSC which measures organizational performance.

Figure 1: Balanced Scorecard model



Source: Business intelligence website 2007

3.2.2 European Foundation For Quality Management (EFQM) Model

Self-assessment and quality management systems are important in organisations. Ever since 1992, the European Foundation for Quality management, a non-profit foundation, has given a quality award to businesses that successfully implement this model (Akyuz 2005). The EFQM, an "excellence model", is a practical, evaluation tool that managers use to determine whether or not they are improving the areas of excellence

and also use the tool to determine the areas that require improvement. This means that the EFQM model is a fruitful and functional tool that is used for enriching the quality systems in the library (Di Domenico 2004).

The EFQM Excellence Model, originally called the European Model for Business Excellence, was introduced in 1991. From its inception, the adoption of total quality management (TQM) principles has been at the heart of the EFQM vision (Hides, Davies and Jackson 2004). The EFQM excellence model is based on the principles of self-assessment, continuous improvement, learning and innovation, teamwork and a culture totally focused on the customer.

EFQM came to the forefront as an alternative to traditional management practices, and offers a modern, effective management approach characterized by continual improvement (Akyuz 2005). This model enables all employees to understand the business excellence agenda. It allows for benchmarking internally within business divisions and across countries (EFQM 2006). This model is a practical tool that can be used in a number of ways (EFQM 2006):

- As a tool for self-assessment.
- As a way to benchmark with other organisations.
- As a guide to identify areas for improvement.
- As the basis for a common vocabulary and a way of thinking.
- As a structure for the organisation's management system.

The reviewed literature indicated that the EFQM Excellence Model has been deployed in academic libraries to assess service quality. The libraries in Andalusia, in Spain and University of Switzerland library used this model for library service quality assessment and received good results. Archival and

academic libraries in Portugal have also implemented this model during the service quality assessment and they received satisfactory results. (Retief 2005:54-55).

According to Herget and Hierl (2007:526) the following explanation constitutes an excellent library:

The identification of the factors which lead to excellence and that can keep them at a high standard are customer orientation and satisfaction, diversity of media on offer, number of users, lending frequency per item, personnel development, communication with the stakeholders (for example clients, communities, sponsors), quality management, economic performance record, application of new media and other mostly one-dimensional proposals. The various factors cannot be optimized in isolation but must be incorporated together to produce the concept of an excellent library.

The implementation of an evaluation process to increase library excellence can be presented in the following eight steps:

1. Planning of the self-assessment process.
2. Team building and training of excellence teams.
3. Self-assessment.
4. External assessment.
5. Results analysis.
6. Developing an improvement concept.
7. Realisation of improvements.
8. Monitoring progress.

Jackson (1999:244) explains that “the EFQM excellence model is based on nine criteria, of which five are enablers (how things are done in the organisation) and four results (what is achieved by the organization or the enablers). The belief is that excellent results with respect to performance, customers, people and society are achieved through leadership driving policy

and strategy, people, partnerships, resources and processes" (EFQM Website 2008).

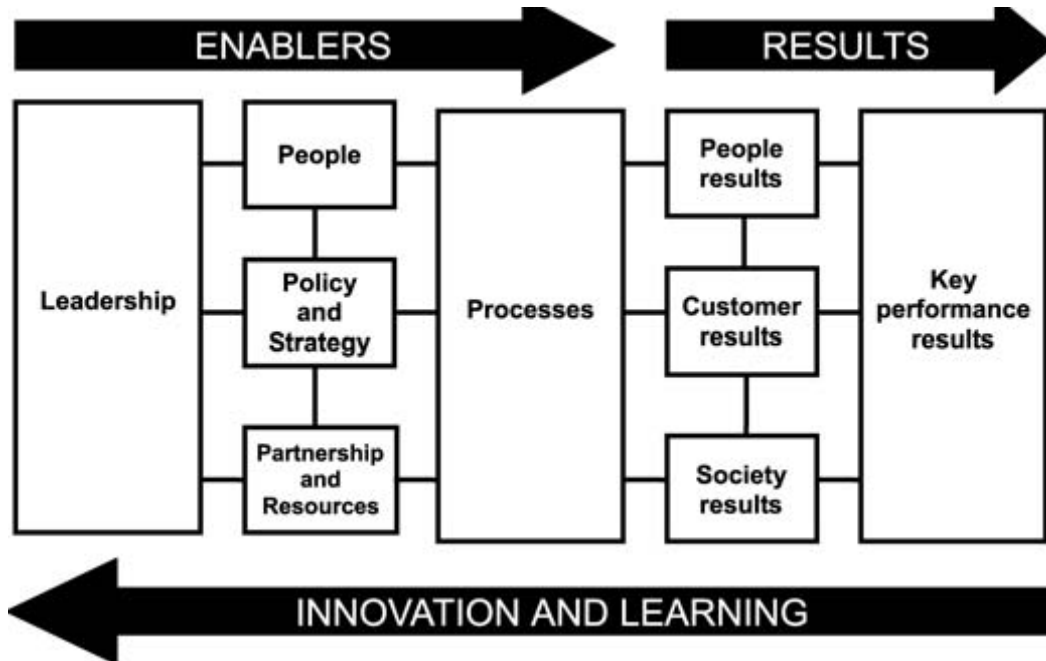
Some inconsistencies and discrepancies have also been identified by both Poll (2003) and Blixrud (2002) at least to some extent, when comparing different assessment tools. They have found that the biggest challenge generally does not lie in the quantitative evaluation of a library (for example output data or the compliance with standards such as the ISO 11620 Library performance indicators) but in measuring the efficiency, effectiveness and qualitative aspects. Evaluation or measurement is therefore a complex process.

The results from the EFQM implementation in the Spanish university libraries indicated that the weaknesses and strengths were identified. The applied assessment process worked as an eye opener to the library management. Within the limited efforts of conducting the evaluation, many different aspects were surveyed in a very detailed way and the whole staff, for the first time, had the chance to develop thoughts on improving the overall performance of the library in a structured and conclusive manner. Hence, the masterminded approach was an important benefit and helped the management to identify unique selling propositions as well as room for improvement and a structured and purposeful library development.

The reviewed literature shows how the adapted EFQM Model can be successfully applied for analysing the status quo as well as identifying the strengths and weaknesses of a library. Hence it facilitates the goal-oriented management of existing improvement potential, as well as formulating a follow-on action plan. The success of this approach and a subsequently improved excellence can be expected (Herget and Hierl 2007: 526). Figure 2

illustrates the EFQM excellence model. It shows the enablers and results for innovation and learning.

Figure 2: EFQM EXCELLENCE MODEL



Source: EFQM website 2006

3.2.3 SERVQUAL

The concept of service quality originated from the marketing discipline in the early 1980's. Researchers, academics and librarians recognized the importance of user needs and user perceptions of service quality and devised methods to implement assessment of service quality. One of the most frequently used approaches to discuss and measure service quality is the gaps model and its SERVQUAL instrument (Sahu 2007:234). It has been introduced explicitly to the library field through several empirical studies undertaken in public, special and academic libraries as well as through

descriptive articles and conference presentations. It was designed by the marketing research team of Parasuraman, Zeithaml and Berry as an instrument for assessing customer perceptions of service quality in service and retailing organisations (Parasuraman, Zeithaml and Berry 1988).

Zeithaml and Bitner (2003) indicate that the SERVQUAL model is a:

sound measure of service quality that can identify the aspects of service needing performance improvement, assessing the extent to which each aspect of service needs improvement and evaluating the impact of improvement efforts.

A consensus was reached by these researchers that quality could be viewed in relation to the gap between perceived service and expected service. Their work finally resulted in the Gap theory of service quality (Cook and Thompson 2000:248). The SERVQUAL model, based on the idea of user-centred assessment, identifies five potential gaps between expectations and perceptions, both internal and external, of service delivery. Parasuraman (in Cullen 2001:663) defines five gaps from their research data :

1. The discrepancy between customers and managements' perceptions of these expectations.
2. The discrepancy between managements' perceptions of customers' expectations and service quality specifications.
3. The discrepancy between service quality specifications and actual service delivery.
4. The discrepancy between actual service delivery and what is communicated to customers about it.
5. The discrepancy between customers' expected services and perceived service delivered.

Gap five is the main focus in library research (Cullen 2001: 663) and it is the most user-focused, customer-oriented definition of service quality - a

conceptual basis for the SERVQUAL instrument (Nitecki 1996:182). The current study focuses on this gap.

According to Carrilat, Jaramillo and Mulki (2007:66) consumers evaluated service quality using ten dimensions. These are tangibles, reliability, responsiveness, communication, credibility, security, competence, understanding customers, courtesy and access. Through numerous qualitative studies, there evolved a set of five dimensions which have been consistently ranked by customers to be most important for service quality, regardless of service industry. (Nitecki and Hernon 2000:260). These dimensions are defined as follows:

1. Tangibles: appearance of physical facilities, equipment, personnel, and communication materials.
2. Reliability: ability to perform the promised service dependably and accurately.
3. Responsiveness: willingness to help customers and provide prompt service.
4. Assurance: knowledge and courtesy of employees and their ability to convey trust and confidence.
5. Empathy: the caring, individualized attention the firm provides its customers.

Parasuraman, Zeithaml and Berry's customer based approach for conceptualizing and measuring service quality offers an alternative for defining the quality of library services. It emphasizes the service nature of libraries, in which the traditional collection-based criteria of quality may be part of, but not the entire component of, excellence. Service quality contributes to value experienced by customers. Value becomes an outcome of excellent service. The SERVQUAL instrument, modified for use in library service settings, provides an outcome measure for managers to gauge their service activities. It should not be a measure of comparison among libraries:

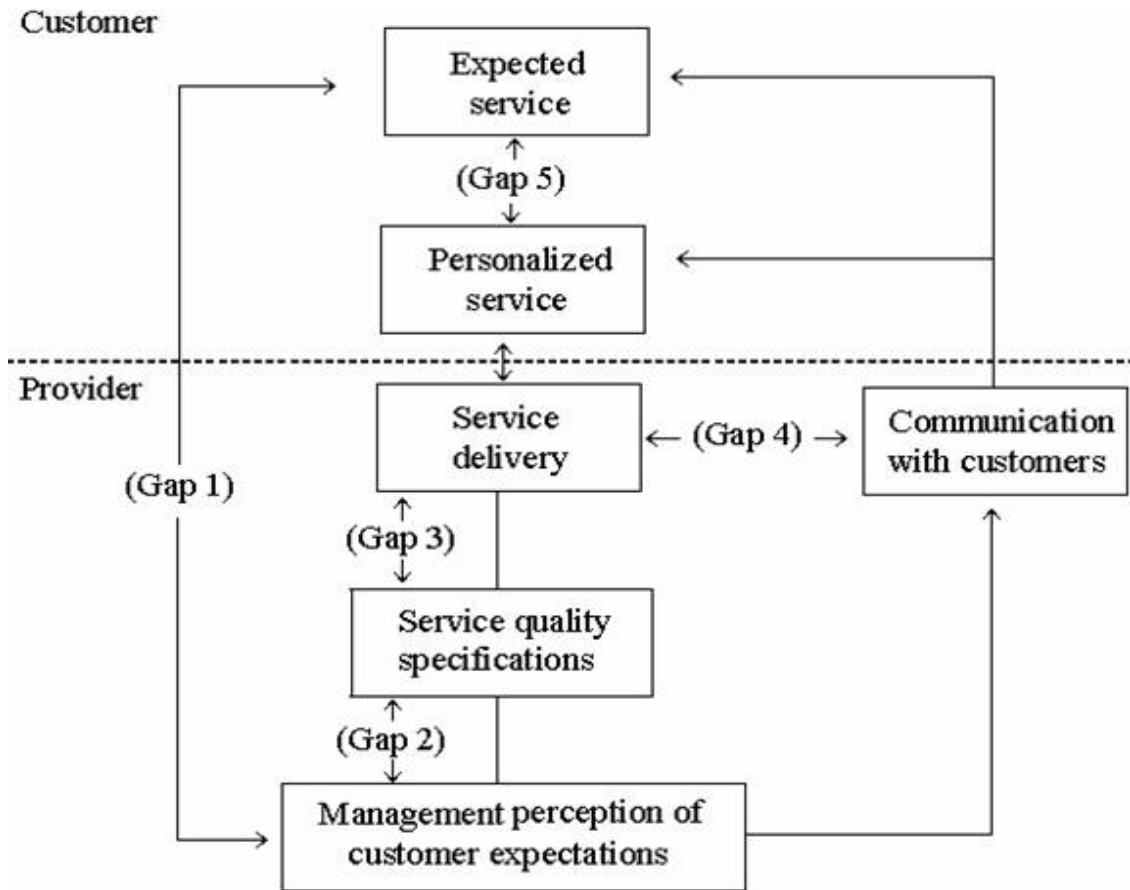
there are no normative data nor is the instrument designed for ranking different service settings. Its usefulness to improve service management in academic libraries is only beginning to be discovered.

The SERVQUAL questionnaire integrates all these dimensions to measure user expectations and perceptions of service delivered. The evaluation of service quality is done by measuring the gaps between expectation and perception scores. The comparison between the expectations and the perceptions determines whether the service is good or problematic. The service is considered to be good if the perceptions meet or exceed the expectations and problematic if perceptions fall below expectations.

The literature has revealed that the SERVQUAL model was originally designed for retail, industrial and commercial environments and adapted for a library environment and had certain shortcomings in the questionnaire. The SERVQUAL model could be adapted to various areas within the academic library which are access services, reference services, and collection development (Quinn 1997).

Newman's article (2001) also mentions that the questions used in SERVQUAL require rephrasing to make them more manageable and valuable. According to Nagata, Satoh and Kyatomaki (2004:53) the questionnaire items of SERVQUAL focus mainly on the service process (service encounter) while outcomes (contents) obtained through the service are hardly taken into consideration. "Academic criticism of the validity and feasibility of SERVQUAL has been accompanied by proposals for alternative service quality measures" (Newman 2001:126), hence the birth of LibQUAL+™. Figure 3 shows the "GAP" model of service quality from Parasuraman, Zeithaml and Berry (1985).

Figure 3: Gaps model



Source: Inverhills College Website 2008

3.2.4 LibQUAL+™ instrument

The LibQUAL+™ survey instrument evolved from a conceptual model based on the SERVQUAL instrument, a popular tool for assessing service quality in the private sector (LibQUAL+™ 2008). The Texas A&M University Libraries and other libraries used SERVQUAL for several years. According to Lincoln (2002:3) the adaptation of the SERVQUAL instrument to LibQUAL+™, a web-based instrument grounded in actual users' perspectives extracted from qualitative data, did not occur until the year 2000. The application of

SERVQUAL revealed some limitations and the need for a new instrument that would serve the particular requirements of assessing libraries; thus LibQUAL+™ was born. The LibQUAL+™ project was supported in part by a three-year grant from the U.S. Department of Education's Fund for the Improvement of Post -Secondary Education (FIPSE).

According to Ladhari and Morales (2008:355) LibQUAL+™ evolved from eight dimensions (LibQUAL+™ 2000) to three dimensions (LibQUAL+™ 2004). This instrument was developed, tested and refined by Texas A&M University in partnership with ARL (ARL 2004). The three dimensions are:

1. Affect of service – how well users are served and treated by library staff.
2. Information control – the ability to navigate the information universe.
3. Library as place – how well the library meets the individual needs of users who look for a place to do research and study.

The LibQUAL+™ instrument helps libraries assess and improve library services, change organisational culture, and market the library. Since 2003, more than 400 institutions have participated in LibQUAL+™, including universities and colleges, health sciences libraries, law libraries, and public libraries, through various consortia or as individual participants. The growing community of participants and its extensive data set are rich resources for improving library services (LibQUAL+™ : 2008). According to Sales (2006) LibQual+™ is designed to measure library users' perceptions of the quality of collections, personal service and facilities.

Kyrillidou and Hipps (2001:9) state that “LibQUAL+™ aims to understand how users think about and evaluate libraries”. She continues by saying that it is built on the idea that, if librarians want to improve libraries, there is a

need to build upon a framework of users' perceptions and expectations. Kyrillidou (2001) further explains that one of the key issues that LibQUAL+™ addresses is the need for a balance between a global understanding of user's needs and a local understanding related to specific services, locations, or user groups. LibQUAL+™ attempts to develop a protocol that is scalable and yet is also useful for local planning and decision planning (Kyrillidou and Hipps 2001:9).

Following years of revision involving data collection from more than 200,000 library users, LibQUAL+™ has evolved into a protocol consisting of "22 items and a box" whereby the 22 items measure user perceptions of affect of service, library as place, and information control. The box secures open-ended comments from users regarding their concerns and suggestions. These comments are an integral part of LibQUAL+™.

LibQUAL+™ is a protocol that is useful for local planning and decision making (Kyrillidou and Hipps 2001:10). In the context of the MUT Library, the results of the survey will be used for future improvements regarding service delivery. It will assist the library management to revisit the background of users and determine whether librarians are meeting users' expectations or not. The LibQUAL+™ results will also assist the library management to adopt a pro-active approach to maintaining service excellence in the library. The focus group in this study is undergraduate students, post graduate students, the lecturers and the support staff of MUT. It is critical that library staff understand the impact of culture on the perceived service quality which allows them to adapt their services to a market that is becoming more multicultural and multiethnic (Ladhari and Morales 2008:364). ARL (2008) mentions that the goals of LibQUAL+™ are to:

- Foster a culture of excellence in providing library service.

- Help libraries better understand user perceptions of library service quality.
- Collect and interpret library user feedback systematically over time.
- Provide libraries with comparable assessment information from peer institutions.
- Identify best practices in library service.
- Enhance library staff members' analytical skills for interpreting and acting on data.

LibQUAL+™ is a flexible tool in that it has further benefits for the participating institutions. (LibQUAL+™ 2008):

- Institutional data and reports enable one to assess whether the library services are meeting user expectations.
- Aggregate data and reports allow library administrators to compare library performance to that of peer institutions.
- It is an opportunity to become part of a community interested in developing excellence in library services.

The LibQUAL+™ instrument benefits library users to a large extent as well. It gives the user a chance to tell the library staff where their services need improvement so that the library staff can respond to and better meet the expectations of the user. The library management can develop services that meet expectations to a higher degree by comparing library data with that of peer institutions and examine the practices of those libraries that are evaluated highly by their users.

3.2.5 Important concerns of SERVQUAL and LibQUAL+™

After much research some researchers have raised concerns about SERVQUAL and LibQUAL+™. Much of the literature which critically

evaluates the models has focused on either the coverage of the items, principles of measurement or issues in administration (Newman 2001:136). Despite its growing popularity and widespread application, SERVQUAL has been subjected to a number of practical (Newman 2001) and theoretical criticisms (Buttle 1996) which are detailed below. Practical criticisms as outlined by Newman (2001:136) are:

- In terms of administration, fundamental questions have been raised about the sample composition and its insensitivity to customer, product ownership and service encounter.
- The use of an unweighted SERVQUAL measure fails to gauge customer's priorities across the five quality dimensions let alone their associated items.
- The third issue is of retrospection caused by both the construction of the questions and the length of time it takes to collect, process and analyze the data and disseminate the information.

Buttle (1996:8-9) explains the theoretical criticisms:

- Process orientation – SERVQUAL focuses on the process of service delivery, not the outcomes of the service encounter.
- SERVQUAL fails to draw on established economic, statistical and psychological theory.

Quinn (1997), for example, identifies certain limitations and possibilities in the models and suggests various possibilities for overcoming the limitations for academic libraries. As noted by Quinn (1997), libraries need to monitor customer expectations continuously in an effort to reduce any gap that may exist between expectations and perceptions. Gaps between customer expectations and perceptions may stem from librarians inaccurately perceiving the expectations of customers, from library service standards not

reflecting expectations, from the library over promising its services, or from the actual services falling short of customer expectations.

Even with adequate customer feedback, it can sometimes be difficult to interpret data, because customers' expectations and perceptions are inherently subjective and can be contradictory and naïve. Bicknell in Quinn (1997:359) points out that “librarians need to stop equating quality reference service with the accuracy of answers provided to users’ questions. The manner in which librarians treat users, and their behaviour and communication style, may be as important to users as the accuracy of the answers they are given”.

Quinn (1997) explains that pure service quality tenets that insist that the customer is the sole judge of service or that satisfying customer wants is the key to quality service do not seem to fit readily with the academic library environment. The goals and methods of academic libraries and the relation of staff to customers, are more complex than in the business and manufacturing settings from which SERVQUAL concepts developed. Furthermore he argues that there is very little allowance for the fact that the educational setting is different from the corporate one.

Walters (2003) recognizes the significance of LibQUAL+™ and its progenitor SERVQUAL in assessing the perceptions of the library users to determine service quality. However, like Quinn, he is not fully convinced regarding the central concept of the two models that “only customers judge the quality; all other judgments are essentially irrelevant”. Referring to the academic library context where students are users of the library services, Walters (2003:98) states:

the assessment of library service quality requires both expertise and objectivity. Undergraduate students are neither expert nor objective, and assessment models

that rely heavily on students' perceptions are likely to be inadequate in several respects. Students' needs are not necessarily consistent with their preferences, for example, and the limited experiences of most undergraduates give them only a partial understanding of library collections and services. Although user surveys provide valuable information about patrons' perceptions, that information is no substitute for objective standards based on professional knowledge.

The role of academic libraries is to address users' needs and satisfy their requests and expectations. It must be understood that needs and expectations change over a period of time and this is a great challenge for academic librarians together with the changes in a digital environment and increasing competition (Cullen 2001).

This study is constructed on the modified SERVQUAL model and the theory that supports it. This is due to the fact that LibQUAL+™, the modified SERVQUAL model, provides a more reliable survey in terms of measuring the gap between user expectations and perceptions (Marnane 2004) and is more flexible and allows for local understanding of user needs.

3.3 Service quality assessments and methodological approaches

The literature has shown that many studies are concerned with users' perceptions of service quality and user satisfaction in academic libraries. The reasons for choosing these particular six studies were to identify relevant case studies on service quality and user satisfaction, identify the methodology and results used in assessing service quality and user satisfaction, benchmark their findings, and to use this as a guide in interpreting the results of the current study.

3.3.1 University of Washington

Hiller's (2001) study on "assessing user needs, satisfaction, and library performance at the University of Washington Libraries" used the web-based

LibQUAL+™ survey instrument. It included the following dimensions of service: accountability, assurance, reliability, responsiveness, tangibles, access to collections and the library as place. Other areas concentrated on behavioural questions, frequency of library use, and an overall service quality questionnaire and demographic data.

A random sample of faculty, graduate and undergraduate students was chosen. According to Hiller (2001) the survey results showed significant variations within and between groups concerning library satisfaction and use. Although there were variations in expectations and perceptions, there was an overall satisfaction with the services provided. The survey results also showed a shift towards remote use and increased importance of electronic resources and continuing importance of libraries as places for students (Hiller 2001). The main areas of concern that showed negative results were a lack of quiet study areas and an inadequate number of full-text databases. Although the tool has been designed solely for the production of local benchmarks, it is possible for university libraries to compare their benchmarks with those of similar libraries – ones sharing similar service priorities.

3.3.2 Miami University

An interesting study done by Sessions, Schenck and Shrimplin (2002) implemented LibQUAL+™ at Miami University. The Miami University Libraries comprised of four libraries and each one performed differently with regard to providing quality service. The sample groups were undergraduate students, graduate students and faculty. The LibQUAL data was analyzed by using the statistical software package (SPSS). The author indicates that SPSS was used to investigate the relationship between user groups and academic discipline. This is very similar to the intentions of the current study which will also investigate the relationship between the different user groups.

Miami's University LibQUAL+™ results showed that customers cared most about the dimension of personal control for which they gave the highest desired expectation. The two most valued items for both user groups were the library web site and the modern equipment for easy access. User groups at different library facilities had different opinions about the most important services. Reports from the data indicate that a relatively weak area for Miami University is library as place (Sessions, Schenck and Shrimplin 2002:62). This dimension included the only question in the entire survey where the customer's expectations were not met. The author has concluded that Miami libraries have much to offer and much to learn from larger research institutions with regard to service affect and personal control practices.

Although there is much progress to be made in order to meet the users desired level of expectations regarding library as place, LibQUAL+™ did provide some gratifying results.

Sessions, Schenck and Shrimplin (2002:66) mention that the following was done to improve the situation:

- A multi-phase renovation to the library.
- Creation of a multi-media lab with state of the art technology.
- Dozens of computers set up.
- New study rooms.
- Improved signage.
- New help desk prominently situated.

On a very positive note Sessions, Schenck and Shrimplin (2002:67) indicate that Miami libraries learnt a great deal from their involvement in the LibQUAL+™ project and look forward to participating again. The author further explains that the survey generates useful data for library planners to the extent that every library wants to provide its customers with the best

information access, library environment, personal control and service affect. In this way academic libraries will excel among the various information service providers available to their users. Academic librarians must accept the role of experts in information management and not just meet client expectations. Librarians must anticipate customer's needs and help define those expectations (Sessions, Schenck and Shrimplin 2002: 67).

3.3.3 Iringa University College

Simba's (2006) study on user perceptions of the quality of service at Iringa University College library in Tanzania used the adapted LibQUAL+™ questionnaire. According to Simba (2006) a sample of 294 undergraduate students, 131 postgraduate students, and 50 academic staff were surveyed.

The results were analyzed using SPSS to determine the frequency of responses. The results showed a gap between the expectations and perceptions of service quality at Iringa University College Library. The services that showed a relatively large gap involved electronic journals, photocopying, interlibrary loan, electronic databases, library web page and a quiet library environment. The services that showed a smaller gap included prompt re-shelving of books, library opening hours meeting user needs, staff are readily available to respond to user queries, staff are willing to help users and the library environment has sufficient lighting. The academic staff have higher expectations and lower perceptions in comparison to the students.

3.3.4 Jawaharlal Nehru University (JNU)

Sahu's (2007) Indian case study measures service quality in an academic library in India by using the SERVQUAL instrument. The aim of the study was to measure the perceptions of the Jawaharlal Nehru University (JNU) users. The research was carried out among students and faculty members of JNU. A random selection of users was selected from users of the library.

The study received a total of 100 questionnaires from 130 questionnaires issued. Faculty members completed 30 and students completed 70 questionnaires. The five point Likert scale was used for all closed-ended questions. According to Sahu (2007:237), both qualitative and quantitative data were collected. The survey instrument consisted of open and closed-ended questions. The questionnaire covered three main sections of the library, that is, aspects relating to the physical facilities, technical facilities, such as computer facilities, and the attitude and competence of staff.

The results would appear to indicate that the JNU library is not lacking in quality service, however it was noted that quality information service was about helping users to define and satisfy their information needs, building their self confidence and in using information retrieval systems and making the whole experience of working with library staff a pleasurable experience. There were significant differences in the perceptions of students and faculty. Sahu (2007:242) points to a crucial fact that library users should be treated equally, irrespective of their statuses. This is an important point to bear in mind at the MUT library since it needs to develop user satisfaction and provide better services to all users.

The study revealed that the users of the JNU library are largely satisfied with various aspects of the service quality except responsiveness and communication. Publicity is also an area that needs attention at the JNU University. The largest number of students suggested that the library should provide the latest publications and that books should be re-shelved every day.

Sahu (2007:243) sums up the definition of quality in an excellent way by writing that "Quality service is a symbiotic relationship where the user

prescribes the needs and the service provider capitulates to them within available capabilities and resources”.

3.3.5 Rhodes University

Rhodes University Library in which Moon (2007) focused on LibQual+™ as a survey instrument was one of the first South African Universities to implement LibQUAL+™. The purpose of the survey was to benchmark the quality of its service against other university libraries in South Africa. The entire university population was surveyed because of the small size of the population. Although the response rate of 10 percent was low, it was representative of the different user groups and disciplines on the campus (Moon 2007:75). The population consisted of undergraduate students, postgraduate students, academics, administrative and support staff.

The author mentions some of the problems encountered and lessons learnt: Some of the comments from the questionnaires indicated that the questions were too vague, especially those relating to the respondents' perceptions of library staff. The results showed that the undergraduate students were the most frequent on-site users of the library but staff tend to have a high usage of remote access through the library web page. The satisfaction scores were higher for academics, support and administrative staff than for undergraduate students. Users mentioned the need for access to more databases and back issues of electronic journals (Moon 2007:75).

Student e-mail lists were usually limited to students who obtained and regularly used campus e-mail accounts, as many inactive accounts could not be maintained. Survey invitations sent to them by e-mail would not have reached them. Many students had their private emails through Yahoo and Google and they did not use the campus email facility. A large proportion of the negative comments related to the library building. Lack of space for group

study was also a concern for some students and this seems to be quite a common problem at the MUT library as well. Students at MUT have a group study area but it is insufficient. Regarding the service at Rhodes University, it seems as if there were some negative comments about issue counter and circulation staff and student assistants. The library management arranged a customer services workshop for the relevant staff to attend to overcome the problems.

According to Moon (2007:86) “the use of the LibQUAL+™ survey at Rhodes University has been most valuable”. The author also mentions that LibQUAL+™ was going to fulfill an important function in evaluating the impact of implemented strategies and innovations. The survey was an ideal opportunity for the librarians to listen to what their customers had to say and respond to their comments.

3.3.6 Texas A&M University (TAMU)

The study by Crowley and Gilreath (2002) used focus group interviews to probe user perceptions of service quality. The authors mention that focus groups are frequently used as a follow-up tool to better understand results gathered through quantitative means such as formalized surveys (Crowley and Gilreath 2002:79). The study was done at the Texas A&M University (TAMU) libraries.

The SERVQUAL and LibQUAL+™ instruments were initially used for identifying key areas of strengths or weaknesses in service programs but the standardized responses cannot provide insight into the many facets of the service experience. Qualitative tools such as focus groups used in this study are necessary to probe those aspects of service. The focus groups were used to gather user reactions to and perceptions of a broad range of issues.

The authors go on further to explain that exploring the SERVQUAL and LibQUAL+™ results through focus groups allows participants to add their thoughts and opinions, as it were, permitting the dynamics of the situation to be explored more fully. In essence this means that survey instruments assist managers by identifying what general areas of service delivery are potential problem areas to be addressed, while qualitative tools such as focus groups help in identifying specific problems and suggesting a course of action to address the problems.

Results at TAMU University indicated that there was a meaningful gap between user expectations and perceptions of service quality with regard to assurance. The researchers discovered that the users generally perceived reference librarians and staff to be friendly and patient, but not always helpful, and very wary of student workers. Unwillingness by staff and students to help was another major factor. “All these findings illustrate that the library service points were providing an inconsistent quality of service and steps were taken by the library administration to better manage the barriers” (Crowley and Gilreath 2002:84).

The above studies indicate that in order to understand and provide a quality service to library users, assessment of the library service from the users' perspective is vital. It is important to note that other models of assessment must not be neglected. However LibQUAL+™, SERVQUAL and other questionnaire based instruments are the common assessment techniques that most researchers use.

3.4 Impact and challenges of assessment models

The various assessment models which have developed over time to assess service quality in academic libraries have merits and demerits. The models explained are Balanced Scorecard Model, EFQM, LibQUAL+™ and

SERVQUAL, and they have “lifted service quality measurement to a new level of library management and ensured relevant and accurate accountability towards all library stakeholders” (Retief 2005:64). These assessment models brought new insights into the academic library. A new paradigm shift took place from traditional assessment methods to a new way of service quality assessment where the emphasis is on the users. Although the literature shows how beneficial the models are, some impacts and challenges are also experienced.

A pilot study in 1996 at University of Texas by Crossno et al. (2001), revealed that a number of negative comments came from respondents regarding both the length and the apparent redundancy of the SERVQUAL survey. The survey presented twenty-two questions each for the expectations and perceptions sections with only slight differences in wording between the two sets. The authors mention that the majority of negative comments focused on these “survey problems” rather than on the library delivery service itself. In an effort to respond to this criticism of the SERVQUAL instrument, SERVQUAL was used as a basis for a modified survey instrument, which was named the Assessment of Customer Service in Academic Health Care Libraries (ACSAHL) (Crossno et al. 2001:172).

Saunders (2008) explains that LibQUAL+™ is not without its defects and the instrument also poses some challenges. Patrons complain that it is too long (thirty-nine questions), or that all questions have to be answered before the survey will be accepted. There is tension between the need for local information and the standardized information provided by the survey. Many libraries would like to tailor the questionnaire to find out information that is specific to their library clientele or local problems. The present study actually modifies some of the questions so that it is more user friendly to the

respondents. In some cases, the same questions were asked but in different ways.

According to Waller and Hipps (2002:10) the greatest challenges libraries experience in using LibQUAL+™ are:

a dearth of in-house statistical skills for understanding the survey methodology and working with the data; a lack of organizational culture that encourages assessment; concern about low sample sizes as compared to print surveys (although the LibQUAL+™ response rates are high for a Web survey); negative feedback from faculty about the survey, lack of time and money to work with the results; and the need for more documentation accompanying the data. ARL is working to remove the barriers over which it has some control.

Although some institutions experienced shortcomings, LibQUAL+™ has brought new positive challenges to the academic library environment. Librarians have abandoned the traditional way of assessing library quality and implemented a new method that advocates user focus and involvement. This means a shift from a collection-centered approach to a user-centered approach.

The literature has shown that there are various ways of assessing service quality in libraries but librarians should use a combination of traditional and non-traditional methods of assessments to provide a useful evaluation of library service quality in academic libraries. This will provide a quality assessment tool for local planning and contribute to the overall quality of service of the library.

The results and experiences from the above libraries serve to validate the staffing, managerial and time investment decisions (Sessions et al. 2002: 67). Therefore the LibQual+™ survey in the present study will encourage the library administration to continue rewarding service quality efforts by offering

users the appropriate products, services, and staff resources. The data gained from the surveys indicates that library planners will try their utmost to provide its customers with information access, library environment, personal control and service effect. Walters (2003:101) points out that “LibQUAL+™ is fundamentally a gauge of patrons’ perceptions”.

The LibQUAL+™ surveys in the abovementioned case studies definitely have a positive impact on the present study because it makes librarians realise that communication with users about library services is critical in order to better inform them and manage their expectations. This will inspire the library administration’s and faculty’s confidence in the validity and reliability of assessment.

3.5 Conclusion

Developing a culture of assessment within libraries is a crucial step towards establishing the importance of assessment tools and projects such as LibQUAL+™ and changing traditional paradigms of assessment measures (Waller and Hipps 2002). The fundamental step is that action must be taken within libraries to promote such change. This means that the SERVQUAL and LibQUAL+™ instruments may prove to be effective assessment tools but it will take the committed efforts of the library community to actively enhance library service quality.

The assessment models of LibQUAL+™ and SERVQUAL have shown that user focus and user involvement have created an interactive, dynamic environment that has facilitated overall quality improvement in academic libraries. According to Sessions, Schenck and Shrimplin (2002:59) “LibQUAL+™ presents a wonderful opportunity for us to listen to what our clients have to say, and respond to their comments, while simultaneously informing them about our services”. It is important to bear in mind that the user focus is very important, but other considerations also count.

3.6 Summary

This chapter discussed the concept of service quality in more detail. The most important and relevant models that were commonly used in service quality assessment, the related studies on service quality in the academic library context and the methodologies and findings of these studies were identified and discussed. Several libraries have found it necessary to adjust features of the instruments used by SERVQUAL and LibQUAL+™. Some regional examples included Simba's Tanzanian study, Niyonsenga's and Bizimana's study on the libraries of the National University of Rwanda, Sahu's study on Jawaharlal Nehru University, and Moon's study on Rhodes University Library. The chapter ended with a brief discussion on the impact and challenges of library assessment models.

CHAPTER 4

RESEARCH METHODOLOGY AND METHODS

This chapter discusses the research method and procedures used in the study. The design, data collection instruments and procedures, validity and reliability, sampling techniques and methods of data analysis are discussed.

4.1 Research Design

According to Terre Blanche and Durrheim (1999:29) “research design is a strategic framework for action that serves as a bridge between research questions and the execution or implementation of the research. The designs are plans that guide the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure”.

There are two basic paradigms in research methodology which are qualitative and quantitative. Both these approaches are essential to the research process but Bouma (2000:175) points out that “they require some common and some different skills”. The use of the preferred method depends on the research topic and the appropriateness of the questions asked. Each approach has its own rules of practice.

The approach that the researcher undertook falls largely within a quantitative paradigm. “Quantitative analysis measures phenomena using numbers in combination with statistical procedures to process data and summarize results” (Bertram 2004:59).

Creswell, Glazier and Powell (in Ngulube 2003) explain that “qualitative research is conducted in a natural setting and it is concerned with viewing experiences from the perspective of those involved and attempts to understand why individuals react or behave as they do”. This means that the

“variables are usually not controlled because it is the freedom and natural development of action and representation that the researcher needs to capture” (Henning, Van Rensburg and Smit 2004:3). On the other hand, the quantitative approach generalizes and predicts findings based on the use of formal instruments such as questionnaires.

Since the study seeks to describe users’ perceptions of the quality of services, a cross-sectional, descriptive survey design was used (Babbie and Mouton 2001:92). According to Powell (1997:64) the most straightforward type of survey research is descriptive and it is designed to ensure that the sample is reasonably representative of the population for which the researcher wishes to generalise, and that the relevant characteristics of the population have been accurately measured.

There were various reasons for the choice of survey design:

- Survey design is popularly used for studies on users’ perceptions and many such studies have illustrated this. Majid, Anwar and Eisenschitz (2001), Cook and Heath (2001) and Hiller (2001) all used survey design.
- “Survey research techniques can save time and money without sacrificing efficiency, accuracy and information adequacy in the research process” (Busha and Harter 1980:54). This is an important consideration for the proposed study in that there are financial constraints and time is of the essence.
- The speed of gaining information and the fact that it allowed for gathering data within a relatively short span of time was advantageous.

4.2 Sampling

In this section the population of the study and sampling frames are explained and the sample size and characteristics of the sample are described.

Powell (1997:66-67) explains that sampling is often one of the most crucial steps in survey research and he defines a sample as “a selection of units from the total population to be studied”. Second year, Third year, Fourth year and postgraduate (BTech) students were selected. They were drawn from the three faculties that comprise MUT, namely Engineering, Management sciences and Natural sciences.

As mentioned earlier, other potential library users such as first year students, cleaning staff, craftsmen, tradesmen, and external school learners were excluded. This is due to time limitations and the fact that the academic and support staff, second year, third year and postgraduate students are arguably the major users of the library.

Given the numbers involved (see below), the researcher did not study all undergraduate and postgraduate (BTech) students and to this end a stratified proportional sampling technique was used by dividing the population into different groups. Bouma (2000:18) described this procedure as “basically a type of quota sampling where members of each quota group within, or stratum of the sample, are selected randomly”. This technique was chosen for the purposes of representativeness of the sample and subsequent generalization of the research findings (Babbie and Mouton 2001:169-173) and it removes the possibility of bias on the part of the researcher with respect to the choice of respondents.

4.2.1 Population

Aaker, Kumar and Day as cited (in Zimu 2005:34) mention that sampling is intended to gain information about a population, thus it is critical at the outset to identify the population properly and accurately. The population represents a group that the researcher wishes to generalize the research findings to. A population is described as “an aggregate of all cases that conform to some designated set of specifications” (Frankfort-Nachmias and Nachmias 1992:179). Similarly, Roscoe (in Mouton 1996:134) defines a population as “a collection of objects, events or individuals having some common characteristic that the researcher is interested in studying”. Trochin (2000) mentions that “before gathering your sample, it is important to find out as much as possible about your population. It is vital to know some of the overall demographics; age, sex and class about your population”.

Powell (1997: 66-67) explains that “selection of the population must be done carefully with regard to the selection criteria, desired size, and the parameters of the survey population. It is also important to consider costs, in terms of time and money, when selecting a population”. Another important factor to consider is that the members of the population must be readily accessible to the researcher otherwise it will be difficult, if not impossible for the researcher to collect the data.

The common characteristics of the population under study were that they belonged to the MUT community by virtue of being students and staff, although some of them were users of the library and others were not users of the library. The population of the study from which the sample was drawn consisted of academic staff, administrative staff and students, except first year students (see Table 1 below regarding population size).

4.2.2 Sample size

“A very important issue in sampling is to determine the most adequate size of the sample” (Bless and Higson-Smith 2000:96). The major criterion to use when deciding on sample size is the extent to which the sample is representative of the population.

The size depends on the purpose of the study, data collection methods, and the research style. For the survey design, the sample size required with a heterogeneous population is relatively large (Bertram 2004:64). Since the population constituted a heterogeneous population of students and was relatively large (see numbers in Table 1 below), the researcher decided to take a sample and to this end a probability sampling technique was used. Using the table provided by Powell (1997:81) that gives the sample size for a given size of population as a guide, a sample of 1687 undergraduate students, that is 687 second year students, 663 third year students and 245 fourth year students, was drawn from a population of 4812 undergraduate students. A sample of 73 postgraduate (BTech) students was drawn from a total of 90 students. The sample of students and staff were drawn exclusively from the Main Campus only.

Similarly a sample of 75 lecturing staff was drawn from a total of 95. In terms of administrative/support staff, a sample of 80 was drawn from a total of 100. Thus a total sample of 1823 students and staff formed the sample under study as indicated in Table 1 below.

4.2.3 Sampling frames

“The key concept in sampling is representativeness” (Mouton 1996:136). When the data serving as the basis for generalisations is comprised of a subset of the population, that subset is called a sample. According to Bless and Higson-Smith (2000:88) the use of a complete and correct sampling

frame is essential. A sampling frame is the list of all units from which the sample is to be drawn”. In this study the sampling frame is derived from the database of registered students and staff. The sample for students is 1668 and the sample for staff is 155 making a total sample of 1823. Table 1 below illustrates the population and sample size of students and staff by faculties and departments.

Table 1
Population and sample size of students and staff

Faculty	2 nd yr	Sam- ple	3 rd yr	Sam- ple	4 th yr	Sam- ple	B TECH	Sam- ple	Lec- turers Total	Sam- ple	Admin/ support staff Total	Sam- ple
Natural science	214	136	186	125	Nil	Nil						
Manage- ment science	1183	291	870	269	Nil	Nil						
Engineer- ing	829	260	881	269	649	245						
TOTAL	2226	687	1937	663	649	245	90	73	95	75	100	80

Source: MUT Department of Higher Education Management Information System (HEMIS)

4.3 Data collection instruments and procedures

This section describes the following:

The instrument used to collect the data, forms of questions asked, peer review and pre-testing of the questionnaire, validity and reliability of the instrument, administration of the questionnaire and the response rates.

4.3.1 The instruments

According to Powell (1997:89) “there are three frequently used data collection techniques, that is, the questionnaire, the interview and observation. They are data collection techniques or instruments, not research

methodologies and they can be used with more than one methodology”. The instrument that the researcher used in collecting both qualitative and quantitative data was the self-administered questionnaire.

The questionnaire technique was chosen as the most appropriate tool for data collection as a rich and reliable source of research data. Sudman and Bradburn as cited by Ngulube (2003) explain that self-administered questionnaires also permit the respondents to consult with other persons and records before responding. This is a great advantage where statistical and numerical data about an institution are required. Thus, questionnaires give privacy in responding as well as affording the respondents the opportunity or time to look up information in cases where they are not sure of the answers. “The major attraction of the questionnaire, when compared with other data collection tools, is that it is relatively inexpensive and it allows a large number of respondents to be surveyed in a relatively short period even if the respondents are widely distributed geographically” (Burns 2000:581). In addition, questionnaires allow respondents to answer questions at times that are convenient to them. A further advantage of the self-administered questionnaire is that it is “economical and lacks interview bias” (Babbie and Mouton 2001:266).

4.3.2 The questionnaire

Powell (1997:90) mentions that the questionnaire, defined according to *Webster’s New Collegiate Dictionary*, is “a set of questions for submission to a number of persons to get data...”. The researcher constructed a six page questionnaire consisting of nine sections. The LibQual+™ based survey questions (Marnane 2004; Ntseane 2005; Hernon and Altman 1998:105; HSLIC 2003) were adapted to the MUT Library context.

Question one of the questionnaire comprised of demographic data on the participants. The aim of this was to gather data that would assist in determining response sets and allow for the generation of reports for specific subgroups in order to compare the responses from these different groups. Question 2 had 26 statements and respondents were asked to rate on a scale from 1 – 5 (that is strongly agree, agree, neutral, disagree and strongly disagree) their expectations of service quality. Two open-ended questions followed in questions 3 and 4 which asked respondents to add comments about existing services or add comments about services they expect. Question five questions were similar to questions in section 2, but in this section the respondents were asked, by using the same scale, to rate their perceptions of library services currently provided by the MUT Library. Sections 6 and 7 had open questions as in sections 3 and 4. Questions 8 and 9 had statements on user satisfaction and respondents had to indicate whether they were very satisfied, satisfied, neutral, dissatisfied or very dissatisfied with the services. The questionnaire ended with an open-ended question in question 10.

4.3.3 Forms of questions

According to Terre Blanche and Durrheim (1999:292) the compilation of questions is a crucial aspect of developing any assessment instrument. The researcher used factual questions, open-ended questions and structured or closed-ended questions. The factual questions asked for objective information about the respondents' personal data such as age and sex.

4.3.3.1 Open-ended questions

In the case of open-ended questions, the respondent is asked to provide his or her own answer to the question (Babbie and Mouton 2001:233). Open-ended questions are advantageous in that they allow respondents to answer in their own choice of words and they provide the most beneficial and

surprising suggestions (see list of respondents' comments in Chapter 5). Simba (2006:56) points out that open-ended questions are also disadvantageous because they require more thought and time by the respondent to answer. Open-ended questions, in some instances, were therefore omitted by some respondents as was the case in the present study. Open-ended questions were time consuming to tabulate and analyse. It was essential that the researcher interpreted the meaning of the responses before they were transferred onto the computer format. The danger was that some respondents gave irrelevant answers to the researchers intent. There were six open-ended questions in total in the questionnaire.

4.3.3.2 Closed-ended questions

In the case of structured questions or closed-ended questions, "the respondent was asked to select an answer from among a list provided by the researcher" (Babbie and Mouton 2001:233).

The questionnaire consisted of "scaled questions and statements were followed by a rating scale in which the respondent indicated the degree to which they agreed or disagreed with the item" (Terre Blanche and Durrheim 1999:296). These authors go further to explain that the scaled questions are useful for measuring attitudes and they can capture opinions and perceptions. There are a number of different kinds of rating scale formats such as nominal, ordinal and matrix questions.

Simba (2006:56) explains that first come the nominal scaled questions forced options that asked about respondents' gender, position, age, year of study and faculty/department. Second, ordinal scaled questions asked the respondents to rate the degree of agreement or disagreement with a particular statement. This kind of format usually has a mid point undecided, neutral or not sure to give an option to respondents who do not agree or

disagree with the statement. (See the questionnaire in Appendix 2). The format is commonly referred to as the Likert scale. The third one is the matrix questions which asked several questions that have the same set of answer categories.

Closed-ended questions were both easier and faster for respondents to complete than the open-ended questions (Fitzgibbons 2003). These questions are extremely popular and they have a great advantage of being simple to record and score and they allow for an easy comparison and quantification of the results (Frankfort-Nachmias and Nachmias 1992:258).

4.3.4 Peer review and pre-testing the questionnaire

“After obtaining an informal evaluation of the questionnaire, it should be pre-tested fully” (Powell 1997:105). This pre-test is sometimes referred to as a pilot study. It gives the researcher an opportunity to identify questionnaire items that tend to be misunderstood by the participants and it allows respondents to point out problem questions, poor instructions and unnecessary or missing questions. “Amendments to the pilot survey helped to maximise the response rate and minimised the error rate on answers” (Burgess 2001).

A clear and precise questionnaire is important for the respondents to understand what the researcher is asking them (Bertram 2004:83). In terms of the present study selected people from the Library Services Department reviewed the questionnaire. In addition and subsequent to the peer-review, the researcher pre-tested the questionnaire before administering it to the respondents.

The comments made from peers referred to the long and confusing statements in the questionnaire. They recommended that the questions be rephrased and be more user friendly. They also indicated that the length of the questionnaire was too long and that many questions were repetitive.

The questionnaire was pre-tested on seven people consisting of four students and three staff from the designated population to be studied. This exercise assisted the researcher to check the following: clarity and layout of questions, spelling, ambiguous and unclear questions, omission of relevant questions, difficult questions for respondents, and comments from respondents (Saunders, Lewis and Thornhill 2000:306). The respondents experienced a few difficulties in completing the questionnaire and subsequent comments were made in terms of this. Certain terms in the questionnaire needed further clarity and there was repetition of questions. This exercise was thus successful and a few changes were made to the original questionnaire. After the peer evaluation was done, it was necessary to reframe certain questions and omit certain questions to make the questionnaire user friendly.

4.3.5 Validity and reliability of the instrument

According to Bouma (2000:85) validity is crucial in the construction of questionnaires to measure a person's attitudes, beliefs or values. "Validity is concerned with the question "am I measuring what I intend to measure? The problem of validity arises because measurement in the social sciences is, with very few exceptions, indirect" (Frankfort-Nachmias and Nachmias 1992:165). For a questionnaire to be valid, it should "examine the full scope of the research question in a balanced way" (Williams 2003:245). There are many different types of validity. Bless and Higson-Smith (2000:136) mentions the important types which are content validity; criterion-related validity; construct validity and face validity.

Content validation tests the relevance of the content of the test to the characteristic being measured (Bernard 2000:50). Pre-testing the questionnaire was used as a tool for content validation.

In this study the researcher adapted the existing LibQual+™ instrument (Hernon and Altman 1998:105; Ntseane 2005). "This instrument has been thoroughly tested and its validity is well established. It measures what it is supposed to measure and can be replicated and yield the same results" (Simba 2006: 57).

The concept of validity is different from the concept of reliability. Reliability is the degree to which a test consistently measures what it sets out to measure while at the same time yielding the same results (Babbie and Mouton 2001:119) and the crucial point here is that the "measurement device employed should provide the same results when repeated". This is called "test-retest reliability" (Bouma 2000:86). Factors such as respondent's momentary distraction when completing a questionnaire, ambiguous instructions, and technical difficulties may cause the introduction of variable measurement errors. Each measurement, then, consists of two components: a true component and an error component. Reliability can therefore be defined as the ratio of the true score variance to the total variance in the scores as measured (Frankfort-Nachmias and Nachmias 1992:170-171).

4.3.6 Administration and distribution of the questionnaire

Systematic administration of the questionnaire is vital to ensure that the process is a smooth transition for data collection. Each questionnaire is numbered with a unique number to preserve anonymity (Burgess 2001). Researchers have the option of distributing questionnaires to the respondents by various means including personal hand delivery, post, e-mail

attachments or via publishing on a web site for interactive completion (Burgess 2001).

In this instance, the researcher chose to use personal hand delivery to ensure that the target sample definitely received and handed back the questionnaire. It was vital to identify the respondents and keep track of the status of questionnaire distribution, i.e. when questionnaires were delivered and to whom.

The sample of 1823 is relatively large and assistance from library colleagues and student representatives was needed. The questionnaires and covering letters were photocopied and stapled internally. Five colleagues and five students assisted in distributing the questionnaires to the student and staff population. Telephone calls were made to the various staff members requesting them to permit the researcher and/or assistants to distribute questionnaires to students during or after the lectures.

The researcher did a briefing session with the assistants before they distributed the questionnaires. This was done to ensure that they understood the questionnaire themselves so that they could attend to anything that needed clarification. Each research assistant was given the required number of respondents for each department (see Table 1) to whom they had to distribute the questionnaire. The researcher gained permission from Deans and Departmental Heads before the distribution of questionnaires. An appropriate time to get the majority of students was after a lecture session whilst they were still in the lecture hall.

4.3.6.1. Distribution to students

Library colleagues and student assistants distributed the questionnaires to the students. Most of the lecturers were very supportive and permitted the

students to complete the questionnaire and hand back during the lecture time. Other lecturers handed the questionnaires to the students and asked them to complete after the lecture session. After completion of the questionnaires the assistants collected the questionnaires and handed them back to the researcher.

Those respondents who were unable to complete the questionnaires during or after the lecture session were asked to return them later on the same day. Many BTech students did not attend lectures because they were part time students who worked during the day and they requested that the questionnaires to be emailed. Although their request was adhered to, the majority of them did not complete the questionnaire. A student representative assisted with sending email reminders to his colleagues but they still did not respond.

4.3.6.2 Distribution to staff

The questionnaire was administered to academic staff in three ways:

- The researcher and/or assistants personally hand delivered the questionnaire to the staff member's office and specified a time for the collection on the same day. For those who could not complete it on the same day, they were given additional time and a follow up was done to ensure completion and collection.
- Questionnaires were handed to the departmental secretaries for those staff members who were not in their offices. A follow up was done to confirm receipt of the questionnaires.
- An email was sent to departmental heads to forward to staff members and questionnaires were also sent and received through email.

The response rate for staff was initially very poor but after three email reminders and three telephonic reminders, more staff showed an interest and completed the questionnaires. The questionnaires were then collected by the assistants and the researcher.

4.3.7 Response rates

Punch (2003:42) mentions that response rates “means the proportion of the selected sample who complete the questionnaire. If questionnaires are distributed to 300 people and responses are received from 100 of these, the response rate is 33%. A low response rate raises the additional question of whether the responses received are representative of the sample chosen or are in some way biased. Clearly, higher response rates are better and researchers should strive for a response rate of at least 60%”.

According to Babbie and Mouton (2001:261) a questionnaire return rate of 50% is adequate for data analysis and reporting. A return rate of 60% is good and 70% is regarded as very good. These authors go on further to mention that the overall response rate is a guide to the representativeness of the sample respondents. Williams (in Simba 2006:59) argues that “a response rate of 20% for a self-administered questionnaire based survey is sufficient to report the results”.

This study yielded a return rate of 1247 (70.8%) for students and 82 (52.9%) return rate for staff. The response rate for staff was poor in comparison to the good response rate for students but it was adequate for data analysis.

The overall response rate of 1329 (69.5%) was good and sufficient for data analysis and reporting. A high response rate means that there is less chance of significant response bias than in a low rate (Babbie and Mouton 2001: 261). Conversely a low response rate is a danger signal, because the non-respondents are likely to differ.

4.4 Methods of data analysis

The information collected during survey fieldwork is called raw data. Nichols (1991:89) mentions the following four stages of processing and analysis:

1. Checking through the forms and correcting errors.
2. Coding.
3. Preparing data tables.
4. Making sense of the data. This includes preparing summaries, measures, and using them to test ideas about the target population.

Data analysis includes both qualitative analysis which includes processes such as thematical and content analysis, and quantitative or statistical analysis (Mouton 1996:67). Quantitative analysis was employed in this study. Statistical analysis using SPSS was used to analyse and interpret the study findings (Babbie and Mouton 2001:411). Before analyzing the raw data, each completed questionnaire was checked for missing data, ambiguity, omissions and errors. The questionnaire responses were then coded and entered into the computer for analysis using SPSS (Williams 2003).

The open-ended questions or qualitative data were analysed and interpreted using content analysis. The first step in content analysis entailed the construction of categories. Content analysis was useful for the data reduction process for the open-ended questions.

Sarantakos as cited (in Ngulube 2005) describes a category as “a set of criteria which are integrated around a theme”. The categories for this study included access to information, staff services, library facilities and library as place, research and teaching. The analysis involved quantifying and identifying the presence of a concept. Thus, after identifying the categories, data was coded. The coded data offered some evidence about the main

categories and trends. The response to these questions by students was exceptionally good and students expressed themselves very succinctly regarding the library services.

4.5 Summary

In this chapter the research methods and procedures that were used in the study were presented. The research design of the study, chosen population, sampling techniques, instrumentation, data collection and methods of data analysis were also described and discussed.

CHAPTER 5

RESEARCH RESULTS

This chapter discusses the results of the survey of the sample population of users of MUT Library. The survey was conducted by means of a self-administered questionnaire. The validation for each section of the questionnaire is submitted and the results are discussed. The number of responses (N) and the number of non-responses (NR) are indicated. This study yielded a return rate of 1247 or 70.8% for students and 82 or 52.9 % return rate for staff. The response rate for staff was satisfactory in comparison to the good response rate for students and was considered adequate for data analysis and reporting, as was the overall response rate of 1331 or 69.5%.

5.1 Questionnaire results

5.1.1 Demographics

This section of the questionnaire asked for the background information of the respondents. Demographic information was essential for correlation of the response sets between the different categories of library users. This information was necessary to determine whether the responses were consistent across the different categories. Questions 1.1, 1.2, 1.3, and 1.4 determined respondents' gender, user category, undergraduate year of study, age and faculty. The biographical data of the respondents are shown in Table 2.

Table 2 (Question 1.1)

Gender

N = 1331

Gender	Count	Percentage
Male	695	52.2
Female	636	47.8
TOTAL	1331	100

In general there was a very small difference between the number of male and female respondents. However there were more male respondents, 695 (52.2 %) than female respondents, 636 (47.8 %). Table 3 shows the respondents by user category.

Table 3 (Question 1.2)

User categories

N = 1329; NR = 2

N=No. of responses

NR= No. of non-responses

User category	Count	Percent
Postgraduate student	18	1.4
Academic staff	47	3.5
Admin/support staff	35	2.6
Undergraduate student	1229	92.3
NR	2	0.2
TOTAL	1331	100

The majority of the respondents, 1229 (92.5%) were undergraduate students. The smallest group, 18 (1.4%) were postgraduate students. Table 4 indicates the description of undergraduate students by year of study.

Table 4 (Question 1.2.1)

Description of undergraduate students by year of study

N = 1215; NR = 14

Year of study	Count	Percent
2 nd yr	628	51
3 rd yr	465	38
4 th yr	122	10
NR	14	1
TOTAL	1229	100

The second year students formed the majority of the undergraduate student respondents. Table 4 indicates that the number of undergraduate respondents were 1215 and almost half of them 628 (51%) were second year students. The minority of undergraduate respondents were the fourth year students, 122 (10%). Table 5 shows the users by age groups.

Table 5 (Question 1.3)

Description of respondents by age group

N = 1328; NR = 3

Age group	Count	Percent
20 and younger	444	33.4
21-30	803	60.3
31-40	40	3
41-50	22	1.7
Over 50	19	1.4
NR	3	0.2
TOTAL	1331	100

The most common age group to which most of the respondents belonged was within the age group of 21-30 years. Table 5 shows that the “majority”, 803 (60.3%) of respondents were within the age group of 21-30 years. There were 19 (1.4%) respondents over the age of 50 years. Table 6 shows the respondents by faculties/departments.

Table 6 (Question 1.4)

Description of respondents by faculties/departments

N=1331

Faculties/Departments	Count
Natural sciences	218
Management sciences	523
Engineering	555
Admin/ support	35
TOTAL	1331

The department from which the highest number of respondents belonged to was the Engineering Department. Table 6 shows that almost half of the respondents, 555 (41.7%) belonged to the Engineering Department, followed by 523 (39.2%) respondents from the Management sciences Department. A small number of 218 (16.4%) respondents belonged to the Natural Sciences Department and 35 (2.7%) belonged to the administrative and/or support departments. The response rate for the largest category of respondents (Engineering faculty) was 71.6%.

5.1.2 Library usage patterns

This section determined how often respondents used the resources in the library. It also examined the usage patterns between different categories of users in order to determine the value of the library between these categories in terms of the usage patterns.

5.1.2.1 Frequency of use of resources in the library

The usage patterns of the library and its resources are shown in Tables 7 and 8 below.

Table 7 (Question 1.5)

Overall frequency of use of library resources by user category

N=1322; NR = 9

User category	Daily		Weekly		Monthly		Quarterly		Never		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Postgraduate	3	16.7	7	38.9	6	33.3	1	5.6	1	5.6	18	100%
Academic staff	0	0	14	29.8	16	34.0	13	27.7	4	8.5	47	100%
Admin/support staff	9	26.5	4	11.8	10	29.4	10	29.4	1	2.95	34	100%
Undergraduate student	252	20.65	553	45.2	243	19.9	129	10.55	46	3.8	1223	100%
TOTAL	264	20.0	578	43.7	275	20.8	153	11.6	52	3.9	1322	100%

Generally, library resources were used more often on a weekly basis with almost half of the respondents, 578 (43.7%) doing so. It was interesting to note that there were 52 (3.9%) respondents who never used the library resources. The user category that used the library resources most often on a daily basis was the undergraduate students (252 out of a total of 264 respondents).

5.1.2.2 Frequency of use of computer catalogue (iLink) and the Internet

Questions 1.7 and 1.8 asked how often respondents used the computer catalogue (iLink) and the Internet respectively to access library resources and search for information.

Table 8 (Question 1.7)

Frequency of use of library computer catalogue (iLink) by user category

N=1294; NR = 7

User category	Daily		Weekly		Monthly		Quarterly		Never		Total	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Postgraduate	2	0.2	7	0.5	3	0.2	2	0.2	3	0.2	17	1.3
Academic staff	1	0.1	9	0.7	7	0.5	10	0.8	18	1.4	45	3.5
Admin/support staff	10	0.8	8	0.6	1	0.1	8	0.6	8	0.6	35	2.7
Undergraduate student	63	4.9	357	27.6	271	20.9	134	10.4	372	28.7	1197	92.5
TOTAL	76	5.9	381	29.4	282	21.8	154	11.9	401	31.0	1294	100

The response illustrated that many respondents, 401 (31.0 %) never used iLink to access library resources and the user category with the highest response rate for non-use was undergraduate students, 372 (28.7%). The highest proportion of respondents who used iLink, 381 (29.4%) used it on a

weekly basis. A small minority of respondents, 76 (5.9 %) used iLink on a daily basis. The respondents in all groups used iLink either on a weekly or monthly basis.

Table 9 (Question 1.8)

Internet usage for information searching by age group of users

N = 1298; NR = 3

User category	Daily		Weekly		Monthly		Quarterly		Never	
	Count	%	Count	%	Count	%	Count	%	Count	%
20 and younger	53	4.1	149	11.5	103	7.9	61	4.7	68	5.2
21-30	144	11.1	285	22.0	160	12.3	77	5.9	118	9.1
31-40	20	1.5	8	0.6	6	0.5	3	0.2	3	0.2
41-50	16	1.2	4	0.3	1	0.1	1	0.1	0	0
Over 50	5	1.6	7	0.5	1	0.1	2	0.2	3	0.2
TOTAL	238	18.3	453	34.9	271	20.9	144	11.1	192	14.8

In general, the frequency with the highest usage was “weekly”. A number of respondents, 453 (34.9%) used the Internet on a weekly basis followed by 271 (20.9%) that used it on a monthly basis. It was surprising to note that 192 (14.8%) never used the Internet to search for information. There were 666 (51.3%) users within the age group of 21-30 who used the Internet more often than the other age groups. Those 15 (2.4%) respondents who used the Internet less frequently, were over the age of 50.

5.1.3 Users’ expectations and perceptions of service quality

Questions two and five encompassed the vital questions of the study, which were directly related to the research objectives. These questions were asked in order to determine users’ expectations and perceptions of the quality of

library service thereby answering the research questions and identifying the gap between expectations and perceptions, which is the focal point of the study.

5.1.3.1 Users' expectations of service quality

Question 2 had 26 statements regarding users' expectations of service quality. The respondents were asked to rate the statements (on a scale of 1= strongly agree; 2 = agree; 3 = neutral; 4 = disagree; and 5 = strongly disagree) by indicating the number that best described their expectations of the service quality that the library provides. The statements are divided into four categories. The categories and respondents' expectations are reflected below.

5.1.3.1.1 Library staff

The respondents' expectations of service quality in respect of the first category, library staff, are reflected in Table 10 below.

Table 10 (Question 2.1)

Users' expectations of the library staff

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Staff who instil confidence in users	613	46.1	411	31.2	245	18.6	31	2.4	18	1.4
Staff who give users individual attention	588	44.6	401	30.4	247	18.8	44	3.3	37	2.8
Subject librarians who improve users' research skills	718	54.6	373	28.3	166	12.6	35	2.7	24	1.8
Staff who are knowledgeable to answer users' questions	776	59.0	353	26.8	135	10.3	26	2.0	26	2.0
Staff who are knowledgeable to answer service problems	718	54.6	396	30.1	158	12.0	18	1.4	26	2.0
Staff who are willing to help users	830	63.0	307	23.3	125	9.5	30	2.3	24	1.8
Staff who deal with users in a caring fashion	584	44.3	346	26.3	267	20.3	79	6.0	42	3.2
Staff who provide users with the information skills needed for work or study	753	57.1	349	26.5	156	11.8	32	2.4	29	2.2

In general the majority of respondents strongly agreed that they expect the library staff to instil confidence, give individual attention, improve users research skills, be knowledgeable to answer service problems, be willing to help users, deal with users in a caring fashion and provide users with appropriate information skills. The highest number of respondents, 830 (63%) strongly agreed that they expect staff to be willing to help users. The least number of respondents, 18 (1.4%) strongly disagreed with the statement that they expected staff to instil confidence in users.

5.1.3.1.2 Access to information

The statements reflected in this category are tabled below. The respondents' expectations of service quality in respect of the second category are reflected in Table 11.

Table 11 (Question 2.2)

Users' expectations of access to information

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Timeous interlibrary loan	754	57.2	351	26.6	149	11.3	26	2.0	37	2.8
Web site which enables location of information	742	56.3	344	26.1	168	12.7	34	2.6	31	2.4
Adequate printed library materials	728	55.2	362	27.5	159	12.1	33	2.5	35	2.7
Adequate print journal collection	549	41.6	446	33.8	247	18.7	41	3.1	36	2.7
Electronic journals that are easily available	687	52.1	393	29.8	179	13.6	31	2.4	28	2.1
Easy access to electronic databases	775	58.8	337	25.6	133	10.1	38	2.9	35	2.7

In general, few respondents either disagreed, 38 (2.9%) or strongly disagreed, 35 (2.7%) with the statements under access to information. The following number of respondents strongly agreed to the following: expectations of easy access to electronic information, 775 (58.8%), timeous interlibrary-loans, 754 (57.2%) and a website which enables location of information independently, 742 (56.3%). It is interesting to see that 247 (18.7%) were neutral to an adequate print journal collection.

5.1.3.1.3 Library facilities

The statements included in this category are tabled below. The respondents' expectations of service quality in this category are reflected in Table 12.

Table 12 (Question 2.3)

Users' expectations of facilities and library as place

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Library space which inspires study and learning	927	70.3	263	20.0	76	5.8	21	1.6	26	2.0
Adequate number of computer workstations	946	71.8	229	17.4	90	6.8	16	1.2	37	2.8
Computers that work well in the library	998	75.8	200	15.2	63	4.8	28	2.1	27	2.1
Adequate photocopying facilities	943	71.6	247	18.8	65	4.9	30	2.3	32	2.4
Adequate printing facilities	909	69.0	255	19.3	68	5.2	32	2.4	52	3.9
Quiet and comfortable space for individual activities	848	64.4	316	24.0	97	7.4	26	2.0	26	2.0
Sufficient space for group learning and group study	873	66.4	276	21.0	94	7.1	37	2.8	35	2.7
Adequate hours of service	780	59.1	343	26.0	132	10.0	29	2.2	35	2.7

Generally, most of the respondents had high expectations of the library facilities and library as place. A high percentage of respondents strongly agreed that they expect the library to provide the facilities as tabled above. The majority of the respondents, 998 (75.8%) strongly agreed that they expect computers to work well in the library and a further 946 (71.8%) strongly agreed that they expect an adequate number of computer

workstations. An average of 27 (2%) and 20 (1.5%) respectively, disagreed with the statements in Table 12 above.

5.1.3.1.4 Research and teaching

The statements included in this category are tabled below. The respondents' expectations of service quality in this category are reflected in Table 13.

Table 13 (Question 2.4)

General expectations regarding the academic field, research and teaching.

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
The library helps me stay abreast of developments in my field of study	435	33.0	447	33.9	306	23.2	71	5.4	58	4.4
...Helps me to advance in my academic field	533	40.5	436	33.1	226	17.2	72	5.5	50	3.8
...helps me with my research needs	588	44.6	389	29.5	190	14.4	85	6.5	65	4.9
...helps me with my teaching needs	351	26.7	401	30.5	351	26.7	116	8.8	94	7.2

Table 13 indicates that the “majority” of the respondents in this category strongly agreed with the statements above. Almost half of the respondents, 588 (44.6%) strongly agreed that they expected help with their research needs. A small number, 58 (4.4%) strongly disagreed that they expected the library to help them stay abreast of developments in their field of study.

5.1.3.2 Users' perceptions of service quality

Question 5 had 26 statements on service quality. The statements in Question 2 referred to user expectations and the statements in question 5 referred to user perceptions. The respondents were asked to rate the statements (on a scale of 1=strongly agree; 2=agree; 3=neutral; 4=disagree; and 5=strongly disagree) by indicating the number that best described their perceptions of the service quality that the library provides. The statements are divided into four categories. The categories and respondents' perceptions are illustrated below.

5.1.3.2.1 Library staff

The statements reflected in this category are tabled below. The respondents' perceptions of service quality in this category are reflected in Table 14.

Table 14 (Question 5.1)
Users' perceptions of library staff

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Staff who instil confidence in users	252	19.9	336	26.6	391	30.9	156	12.3	129	10.2
Staff who give users individual attention	85	6.4	245	19.4	317	25.1	314	24.9	301	23.9
Subject librarians who improve users' research skills	272	21.6	320	25.4	359	28.5	196	15.6	113	9.0
Staff who are knowledgeable to answer users' questions	84	6.7	217	17.2	341	27.1	305	24.2	312	24.8
Staff who are knowledgeable to answer service problems	194	15.4	246	19.6	346	27.5	259	20.6	213	16.9
Staff who are willing to help users	160	12.7	263	20.9	316	25.1	241	19.1	281	22.3
Staff who deal with users in a caring fashion	214	17.0	308	24.5	368	29.3	196	15.6	172	13.7
Staff who provide users with the information skills needed for work or study	90	7.2	297	23.6	317	25.2	210	16.7	344	27.3

Generally many respondents were neutral to perceptions of library staff. However a total of 272 (21.6%) respondents strongly agreed that the subject librarians improve users' research skills and 336 (26.6%) agreed that staff instil confidence in users. It was interesting to see that there were

disagreements as a number of respondents, 314 (24.9%) disagreed that staff give users individual attention and 344 (27.3%) strongly disagreed that staff provide users with information skills needed for work or study. This might indicate that the questions were interpreted quite differently.

Table 15 (Question 5.2)
Users' perceptions of access to information

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Timeous interlibrary loan	264	22.1	264	22.1	331	27.7	181	15.2	153	12.8
Web site which enables location of information	145	12.2	273	22.9	301	25.3	290	24.3	183	15.4
Adequate printed library materials	122	10.3	102	8.6	298	25.0	382	32.1	286	24.0
Adequate print journal collection	232	19.5	290	24.4	327	27.5	208	17.5	133	11.2
Electronic journals that are easily available	234	19.7	245	20.6	346	29.1	225	18.9	140	11.8
Easy access to electronic databases	159	13.4	165	13.9	296	24.9	301	25.3	269	22.6

In general, many of the respondents indicated neutrality in terms of their perceptions regarding access to information. The highest proportion of respondents, 382 (32.1%) disagreed that the library has adequate printed library materials available and a further 346 respondents (29.1%) were neutral concerning electronic journals being easily available.

Table 16 (Question 5.3)

Users' perceptions of library facilities and library as place

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
Library space which inspires study and learning	216	18.2	234	19.7	262	22.1	325	27.4	148	12.5
Adequate number of computer workstations	63	5.3	13	1.1	230	19.4	447	37.7	432	36.5
Computers that work well in the library	78	6.6	110	8.3	249	21.0	328	27.7	418	35.3
Adequate photocopying facilities	141	11.9	170	14.3	237	20.0	329	27.7	310	26.1
Adequate printing facilities	95	8.0	118	9.9	208	17.4	299	25.1	473	39.6
Quiet and comfortable space for individual activities	306	25.9	313	26.5	257	21.7	153	12.9	153	12.9
Sufficient space for group learning and group study	72	6.1	49	4.1	240	20.3	416	35.2	406	34.3
Adequate hours of service	202	17.1	202	17.1	250	21.2	248	21.0	279	23.6

In general the respondents had low perceptions of the library facilities and the library as a place. The highest number of respondents, 473 (39.6%) strongly disagreed that there are adequate printing facilities. A further 447 (37.7%) disagreed and 432 (36.5%) strongly disagreed that there is an adequate number of computer workstations. Only 13 (1.1%) agreed that there was an adequate number of computer workstations and 49 (4.1%) agreed that there is sufficient space for group learning and group study. Just

over a quarter of the respondents, 306 (25.9%) strongly agreed that the library is a quiet and comfortable space for individual activities.

Table 17 (Question 5.4)

Users' perceptions regarding the academic field, research and teaching

Statements	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	Count	%	Count	%	Count	%	Count	%	Count	%
The library helps me stay abreast of developments in my field of study	243	20.6	362	30.7	350	29.6	124	10.5	102	8.6
...helps me to advance in my academic field	251	21.3	386	32.7	322	27.3	129	10.9	91	7.7
...helps me with my research needs	267	22.6	363	30.8	315	26.7	143	12.1	91	7.7
...helps me with my teaching needs	208	17.7	287	24.4	387	32.9	168	14.3	127	10.8

In general almost half of the respondents had high perceptions towards the services in the academic field relating to research and teaching, however some respondents, 387 (32.9%) were neutral that the library helps them with teaching needs and 350 (29.6%) were also neutral that the library helps them stay abreast of developments in their fields of study. The smallest proportion of respondents, 91 (7.7%) strongly disagreed that the library helps them to advance in their academic field and helps them with their research needs.

5.1.4 Users' comments about MUT Library services

The six open-ended questions used in the questionnaire elicited qualitative data. The questions were more thought provoking and many of the respondents gave input (see below). The questions were designed to give respondents an opportunity to voice their views/sentiments about the nature

of the library services. The users were exceedingly outspoken in their comments relating to library services.

Question 1.6 asked for reasons if the respondent indicated that he/she never used the library. Questions 3, 4, 7, 8 and 10 asked the respondents to add any comments about the services listed or add comments about any further services they expect from the library. The results of these questions are combined together because the comments are related.

A total of 2564 comments resulted from the open-ended questions. Of the 1229 undergraduate students, 795 (64.6%) provided comments.

The 795 provided comments for different categories of services provided by the library. Only 6 (33%) out of 18 postgraduate students added comments. In addition, 20 (57.1%) of the 35 administrative/support staff provided comments and 22 (46.8%) of the 47 academic staff added comments.

Table 18a

Summary of respondents' comments by user category

User category	No. of comments	Percentage
Postgraduate	22	0.9
Academic	57	2.2
Admin/ support	75	2.92
Undergraduate	2410	94
Total	2564	100

Table 18a illustrates that of the total number of comments and suggestions 2410 (94%) were offered by the undergraduate students. Respondents offered comments and suggestions to the open-ended questions with regard to questions 3, 4, 6, 7 and 10 in the questionnaire. Tables 18b to 18g illustrates respondents' comments and suggestions grouped according to the broad categories of services under investigation. The percentages for each service category was calculated from the total number of comments from all service categories.

Table 18b**Respondents' comments on staff services**

Description: Staff services	No. of respondents
Staff need to be friendly and welcoming, staff to be approachable when students seek help; some are not.	154
Securities are cheeky and ill mannered, disturb students, they need training on customer care.	25
Staff to be more accurate at issue counter, students should not pay fines if system is down.	15
Need professional staff to help with user queries, projects and research needs.	15
Have professional staff to assist in Internet lab.	14
Staff not committed to their work especially when students need help with iLink.	12
Improve services in library.	10
Employ and train student assistants, especially to update user details properly.	10
Need a suggestion box.	7
Library assistants should assist by speaking English, not Zulu, be humble.	6
Train service providers to be more patient and friendly, self motivated.	6
When computers are offline, issues and returns are inconsistent.	5
Trained librarians are preferred to student assistants.	5
Staff not to talk about students in front of other students.	4
During latter part of the day, staff are tired, rotate staff.	4
Staff keep students waiting in long queues at issue counter.	3
TOTAL	295 or 11.5%

In this category of comments the majority of the users indicated that staff need to be friendly, welcoming and approachable. They also commented on the security's cheeky attitude towards them. Another area of concern was the issue counter service.

Table 18c**Respondents' comments on access to information**

Description: Access to information	No. of respondents
Professional librarians must focus on information retrieval and access to information.	23
Orientation is needed each year and must be compulsory.	11
Students should be allowed to search the Internet at anytime because Internet is down too often.	9
Book requisitions for purchase have seldom been satisfied.	8
Encourage students to read for pleasure; competitions, book reviews, prizes.	8
Hard copies of past year question papers and answers must be accessible.	6
Circulation and returns must be improved, due date for books, holidays fines are charged.	6
Subject librarians to orientate academic staff with regard to teaching aids and facilities.	5
Current awareness to be improved.	5
High fines for late books discourages library use by staff, especially for research.	5
Send email reminders timeously to individuals for late books.	5
Improve library website, it is complicated and boring.	4
Books in demand should not be reserved but placed in short loan.	4
Borrowing of books should be permissible if orientation was not done.	4
Make electronic databases easily available.	4
Improve services with regard to accessing information.	4
Access to other library's catalogues.	4
Return slips needed as proof of returns.	3
Improve process of registration, don't send students away.	3
Assistance required in the book isles because few iLink computers are available.	3
Allow interlibrary-loans to get the appropriate information.	3
TOTAL	127 or 5%

The majority of the comments for this section focussed on need for professional librarians to focus on information retrieval. The other area of concern was poor access to the internet and electronic resources.

Table 18d
Respondents' comments on library collection

Description: Library collection	No. of respondents
Library to provide more updated and relevant books, including textbooks/ prescribed books for each department.	319
Need more journals.	62
Provide more DVD'S, videos specific to course content/departments.	16
Library must provide more local newspapers.	14
Repair damaged books.	8
TOTAL	419 or 16.3%

Many of the respondents commented on the outdated and irrelevant book collection. The respondents also suggested the need for additional journal titles and audio-visual material.

Table 18e
Respondents' comments on library as place

Description: Library as place	No. of respondents
Extend the library, too small for too many students.	78
Opening and closing times to be adjusted, (tests and exams), cater for evening students.	56
Air conditioner is too cold and students can't concentrate.	50
Library is too noisy because discussion desks are too close to individual study carrels.	35
Allow cell phones on vibrate to see time.	23
Staff too noisy, disturb users, especially at issue counter.	18
Adjust ring tones of counter telephones.	16

24 hr studying facility and 24 hr Internet access needed	8
Library must be neat and tidy.	8
Library not suitable for paraplegics, not user friendly.	7
Library should be improved as soon as possible.	6
Library is not serving any purpose.	4
Get students to join library committee.	3
TOTAL	312 or 12.2%%

Many comments were made about the size of the library, that it is too small for so many students. The unsuitability of the opening and closing times was another area of concern. The high noise level and the inappropriate temperature of the air-conditioner were also commented on.

Table 18f
Respondents' comments on library facilities

Description: Library Facilities	No. of respondents
More Internet labs needed with up to date computers, presently too slow, has viruses, long queues to get access.	544
Too few reliable photocopiers, very often out of order.	262
Printing facilities are needed desperately.	208
More discussion rooms needed for group learning, must regulate these rooms, filthy condition.	175
Internet lab, flash disks and headsets must be allowed, time allocation for usage is limited.	56
Improve video library with latest video/DVD'S, and DVD players.	23
Wall clocks needed.	11
Add computers at different locations in the university for easy access.	8
Fax machine needed.	4
Inadequate AV resources for lecturers to show students.	4
TOTAL	1295 or 50.5%

The students biggest concern about the library facilities focused on the lack of internet facilities, the inadequate number of photocopiers and printing facilities in the library.

Table 18g
Respondents' comments on other services

Description: Other	No. of respondents
Need a water dispenser.	34
Reduce rates for fines.	25
Interlibrary-loans are very good.	25
Librarians must keep up the good work and keep us smiling when dealing with problems.	24
Library is always clean.	6
Compile a policy on how academics could contribute to provisioning the library.	2
TOTAL	116 or 4.5%

Just above half of the total number of comments were concerned with the library facilities, 1295 (50.5%), followed by library collection, 419 (33%), then by library as place, 312 (24.6%). Thereafter staff services, 295 (23.2%), access to information which had 127 (10%) and the “other” category had 116 (9.1%) comments.

In this category of comments, students were concerned about the absence of the water dispenser and the high fine rates, however positive comments were made regarding interlibrary-loans and the cleanliness of the library.

5.1.5 Level of user satisfaction

This section comprised four closed-ended questions which investigated the users' satisfaction with staff services, access to information, facilities and overall quality of library services. For questions 8.1 to 8.3, respondents were

asked to indicate their level of satisfaction and question 9 asked respondents to rate the overall quality of the services offered by the library. The graphs show the number of respondents and the percentages next to them. The tables indicate the level of user satisfaction by user category.

5.1.5.1 Satisfaction with staff services

N = 1221 ; NR = 110

Graph 1



The majority of respondents, 493 (40.4%) were neutral (undecided) regarding their satisfaction with staff services offered by the library. Only 66 (5.4%) were very dissatisfied with the staff services while 419 (34.3%) were satisfied with the staff services offered by the library. Table 19 further illustrates users' satisfaction with staff services by user category.

Table 19 (Question 8.1)

Satisfaction with staff services by user category.

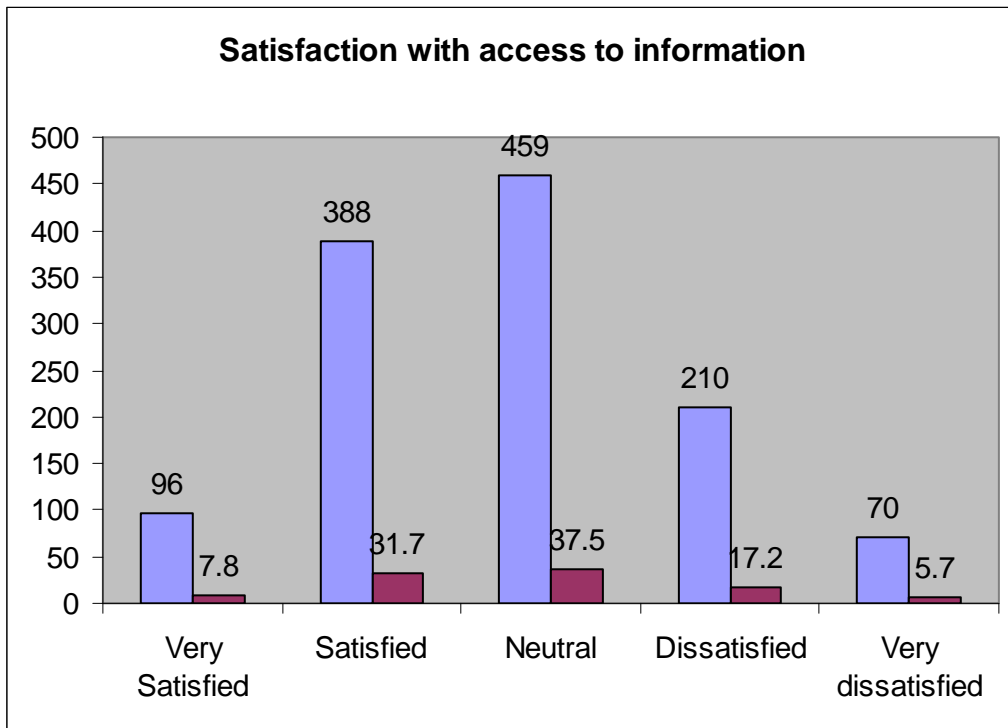
Description	Undergraduate		Postgraduate		Admin/support staff		Academic staff		TOTAL	
	Count	%	Count	%	Count	%	Count	%	Count	%
Very satisfied	78	7.0	2	11.8	7	20.0	7	15.6	94	7.7
Satisfied	374	33.3	3	17.6	18	51.4	24	53.3	419	34.4
Neutral	468	41.7	6	35.3	8	22.9	10	22.2	492	40.4
Dissatisfied	140	12.5	4	23.5	2	5.7	2	4.4	148	12.1
Very dissatisfied	62	5.5	2	11.8	0	0	2	4.4	66	5.4
Total	1122	100	17	100	35	100	45	100	1219	100

Almost half of the academic staff, 24 (53.3 %) and 18 (51.4%) administrative staff were satisfied with the staff services. Two (4.4%) of the academic staff members and two (5.7%) of the administrative/support staff were also very dissatisfied with the staff services. Almost one third of the postgraduate students, 6 (35.3%) were neutral concerning staff services. A number of undergraduate students, 468 (41.7%) were neutral regarding the staff services while only 62 (5.5%) of them were very dissatisfied with staff services.

5.1.5.2 Satisfaction with access to information

N = 1223; NR = 108

Graph 2



A small percentage, 5.7% (70) indicated that they were very dissatisfied with access to information while the majority of respondents, 459 (37.5%) were neutral regarding access to information. Although some respondents, 388 (31.7%) were satisfied with access to information, others, 210 (17.2%) showed dissatisfaction regarding access to information. Table 20 indicates user satisfaction to access to information by user category.

Table 20 (Question 8.2)

User satisfaction with access to information by user category

Description	Undergraduate		Postgraduate		Admin/support staff		Academic staff		TOTAL	
	Count	%	Count	%	Count	%	Count	%	Count	%
Very satisfied	84	7.5	1	5.9	4	11.4	6	13.3	95	7.8
Satisfied	346	30.8	3	17.6	17	48.6	22	48.9	388	31.8
Neutral	430	38.3	7	41.2	10	28.6	11	24.4	458	37.5
Dissatisfied	198	17.6	5	29.4	3	8.6	4	8.9	210	17.2
Very dissatisfied	66	5.9	1	5.9	1	2.9	2	4.4	70	5.7
Total	1124	100	17	100	35	100	45	100	1221	100

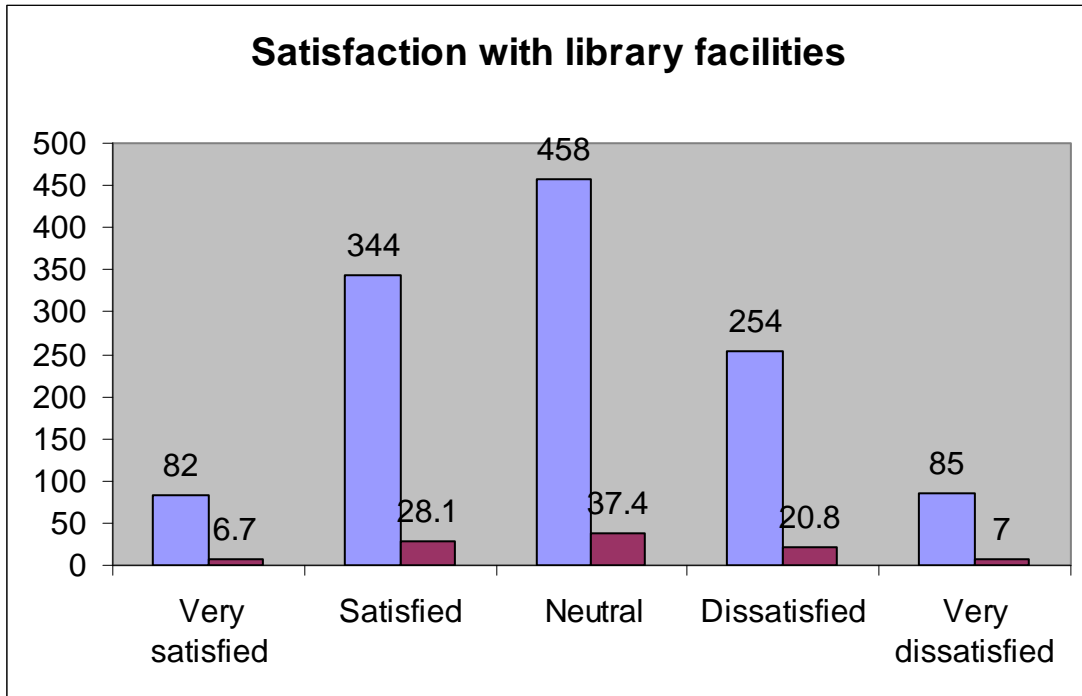
Table 20 shows that 430 (38.3%) undergraduates were neutral to access to information while 66 (5.9%) were very dissatisfied with access to information. It seems that the undergraduates indicated neutral because they were either undecided or they could not comment.

Almost half, 22 (48.9%) of the academic staff and 17 (48.6%) of the administrative/support staff were satisfied with access to information. Only one (5.9%) postgraduate student was very satisfied and one postgraduate (5.9%) was very dissatisfied with access to information.

5.1.5.3 Satisfaction with library facilities

N = 1223 ; *NR* = 108

Graph 3



A number of respondents, 458 (37.4%) were neutral regarding library facilities. Some respondents, 254 (20.8) indicated dissatisfaction with the library facilities. A number of respondents, 82 (6.7%) and 85 (7.0%) were very satisfied and very dissatisfied respectively with library facilities. Table 21 illustrates user satisfaction of library facilities by user categories.

Table 21 (Question 8.3)

Satisfaction with library facilities by user categories

Description	Undergraduate		Postgraduate		Admin/support staff		Academic staff		TOTAL	
	Count	%	Count	%	Count	%	Count	%	Count	%
Very satisfied	2	6.7	2	11.8	3	5.7	3	6.7	75	6.7
Satisfied	309	27.5	2	11.8	9	25.7	23	51.1	343	28.1
Neutral	428	38.1	8	47.1	13	37.1	8	17.8	457	37.4
Dissatisfied	236	21.0	3	17.6	9	25.7	6	13.3	254	20.8
Very dissatisfied	76	6.8	2	11.8	2	5.7	5	11.1	85	7.0
Total	1124	100	17	100	35	100	45	100	1221	100

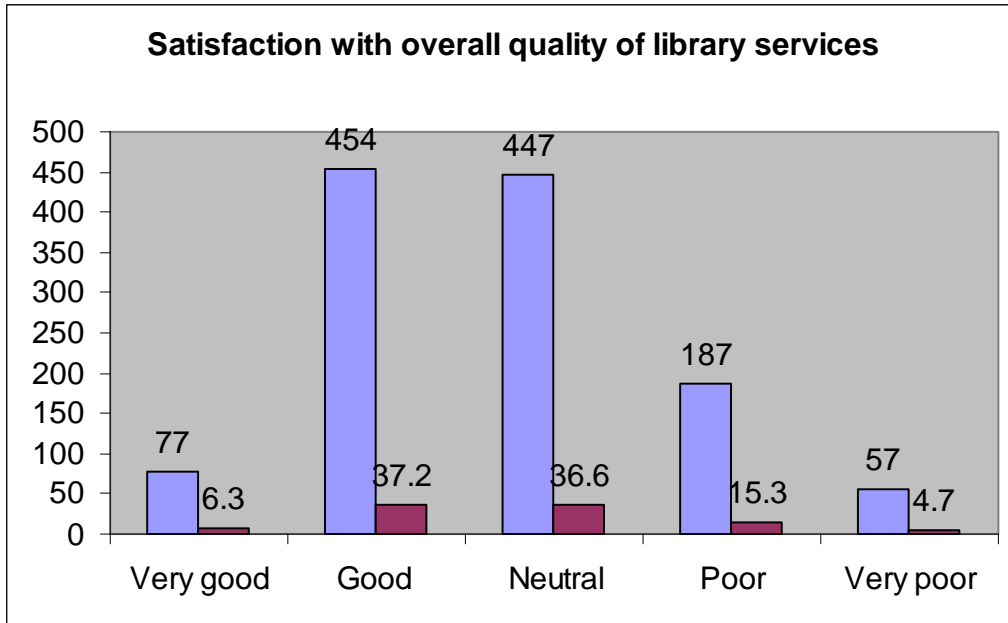
Table 21 illustrates that 457 (38.1%) of the undergraduate respondents were neutral, whilst 343 (27.5%) were satisfied with regard to the library facilities.

Almost half, 8 (47.1%) of the postgraduate students were neutral about library facilities while only two (11.8%) were very dissatisfied with the library facilities. Three (6.7%) academic staff were very satisfied with library facilities, while 5 (11.1%) indicated their dissatisfaction with library facilities. Two (5.7%) administrative/support staff were very dissatisfied with library facilities.

5.1.5.4 Satisfaction with overall quality of library services

N = 1222; NR = 109

Graph 4



Almost one third of the respondents, 454 (37.2%) indicated that the overall quality of the services provided by the library was good. A number of respondents, 447 (36.6%) were neutral with the overall quality of the services provided by the library. However 187 (15.3%) rated the overall quality as poor and 57 (4.7%) indicated that the quality of the services provided by the library was very poor. Table 22 shows the overall quality of the services provided by the library by user category.

Table 22 (Question 9)

Overall quality of the services provided by the library by user category

Description	Undergraduate		Postgraduate		Admin/support staff		Academic staff		TOTAL	
	Count	%	Count	%	Count	%	Count	%	Count	%
Very satisfied	69	6.1	1	5.9	3	8.6	4	8.9	77	6.3
Satisfied	414	36.9	3	17.6	15	42.9	22	48.9	454	37.2
Neutral	411	36.6	10	58.8	11	31.4	13	28.9	445	36.5
Dissatisfied	177	15.8	2	11.8	4	11.4	4	8.9	187	15.3
Very dissatisfied	52	4.6	1	5.9	2	5.7	2	4.4	57	4.7
Total	1123	100	17	100	35	100	45	100	1220	100

Almost half, 22 (48.9%) of the academic staff and almost half, 15 (42.9%) of the administrative/support staff indicated that the overall services were good. A small number, 52 (4.6%) of undergraduate students indicated that the overall services of the library were very poor.

Only one (5.9%) postgraduate student indicated that the overall quality of the services provided by the library was very poor but one (5.9%) also indicated that the services were very good.

5.2 The gap between users' expectations and perceptions

The aim of the study was to establish the gap between users' expectations and perceptions of service quality delivered to them by the MUT Library and thereafter identify the strengths and weaknesses of the existing library services. According to Ladhari and Morales (2008:366) for each item, a so-called "gap score" is calculated as the difference between the raw "expectations score" and the raw "perceptions score".

In this section users' expectations and perceptions of service quality are numerically reported. This study uses the methodology as in Simba's (2006) study at the Iringa University College Library. This is a simplified method of measuring the gap in comparison to other studies for example, Niagara University Library, TAMU Libraries, Rhodes University Library and the University of Washington Libraries.

"An adequacy gap was reached by measuring the gap between the minimum level of service and the perceived level of service. This is almost always a positive number. A superiority gap is a numerical gap between desired level of service and the perceived level of service. This number is almost always negative, as in many aspects of life, we usually desire more than we get" (Niagara University Library website).

The positive and negative responses, namely, strongly agree and agree, strongly disagree and disagree, were combined together respectively to form one positive (agree) and one negative (disagree) response. The percentages were combined thus creating three sets of percentages for the three response categories, namely agree, neutral and disagree for expectations and perceptions respectively.

In order to determine the difference in percentage between the expectations and perceptions categories, the following procedure was applied: the "agree" percentage of perceptions was subtracted from the "agree" percentage of expectations.

According to Simba (2006:89) the reason for this is to enable easier tabulation, comparison and clarity. In Table 23 users' expectations and perceptions and the gap between them are illustrated. In the *agree* column in the difference column, the larger the number the bigger the gap. In the *neutral* and *disagree* column, in the *difference* column, the smaller the

number the smaller the gap. The present methodology was used in the study by Simba (2006).

Table 23

The gap between users' expectations and perceptions

Service	Expectations			Perceptions			Difference		
	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree
Staff Services	8516	1499	531	3583	2702	3742	4933	-1443	-2767
Instils confidence in users	1024	245	49	588	391	285	436	-146	-236
Give users individual attention	989	247	81	330	317	615	659	-70	-534
Improve users' research skills	1091	166	59	592	359	309	499	-193	-250
Knowledgeable to answer users' questions	1129	135	52	301	341	617	828	-206	-565
Knowledgeable to answer service problems	1114	158	54	440	346	472	674	-188	-418
Willing to help users	1137	125	54	423	263	522	714	-138	-468
Deal with users in a caring fashion	930	267	121	522	368	368	408	-341	-247
Provide users with the information skills needed for work or study	1102	156	61	387	317	554	715	-161	-493

Service	Expectations			Perceptions			Difference		
	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree
Access to information	6468	1035	405	2495	1899	2751	3973	-864	-2346
Timeous interlibrary loan	1105	149	63	528	331	334	577	-182	-271
Web site which enables location of information	1086	168	65	418	301	473	668	-133	-408
Adequate printed library materials	1090	159	68	224	298	668	866	-139	-600
Adequate print journal collection	995	247	77	522	327	341	473	-80	-264
Electronic journals that are easily available	1080	179	59	479	346	365	601	-167	-306
Easy access to electronic databases	1112	133	73	324	296	570	788	-163	-497
Library Facilities	9353	685	489	2382	1933	5164	6971	-1248	-4675
Inspires study and learning	1190	76	47	450	262	473	740	-186	-426
Adequate number of computer workstations	1175	90	53	76	230	879	1099	-140	-826
Computers that work well in the library	1198	63	55	188	249	746	1010	-186	-691
Adequate photocopying facilities	1190	65	62	311	237	639	879	-172	-577

Service	Expectations			Perceptions			Difference		
	Agree	Neutral	Disagree	Agree	Neutral	Disagree	Agree	Neutral	Disagree
Adequate printing facilities	1164	68	84	213	208	772	951	-140	-688
Quiet and comfortable space for individual activities	1164	97	52	619	257	306	545	-160	-254
Sufficient space for group learning and group study	1149	94	72	121	240	822	1020	-146	-750
Adequate hours Of service	1123	132	64	404	250	527	719	-118	-463
Research and teaching	3580	1015	611	367	1374	995	1207	-299	-384
The library helps me to stay abreast of developments in my field of study.	882	308	129	605	350	246	276	-42	-117
...helps me to advance in my academic field	969	226	122	637	322	220	337	-96	-98
...helps me with my research needs	977	190	150	630	315	234	347	-125	-84
...helps me with my teaching needs	752	351	210	495	387	295	257	-36	-85
TOTAL	27917	4234	2036	10827	7908	12652	17094	-3854	-6172

Services that have a relatively big gap (difference between agree for expectations and perceptions) are:

- Adequate number of computer workstations, 1099 (82.8%).
- Sufficient space for group learning and group studying, 1020 (77.2%).
- Adequate printed library materials, 866 (63.8%).
- Staff who are knowledgeable to answer users' questions, difference is 828 (61.9%).
- Easy access to electronic databases, 788 (57.1%).
- Staff who provide users with information skills needed for work or study, 715 (52.85%).

Services that have a smaller gap include:

- Quiet and comfortable space for individual activities, 545 (36%).
- Adequate print journal collection, 473 (31.5%).
- Staff who deal with users in a caring fashion, 408 (29.1%).
- The library helps with teaching needs, 257 (6.7%).

It was observed that in all service categories the perceptions exceeded the expectations for the response category 'disagree' as reflected in Table 23, thus leading to all negative scores. This means that the respondents' expectations of the services were not met.

5.3 Summary

In this chapter the validation for each section of the questionnaire has been given and the results of the survey of the sample population of users of MUT Library, which was conducted by means of a self-administered questionnaire, have been reported. There was a better response rate from students than from staff. The research results were clearly tabulated and further

explanations were expanded below each table. The tables had clear descriptions, counts and percentages.

The research results pertaining to the following elements were discussed:

- Library usage patterns
- Users' expectations and perceptions of service quality
- Users' comments about MUT Library services
- Level of user-satisfaction
- Gap between users' expectations and perceptions

CHAPTER 6

DISCUSSION OF THE RESULTS

This chapter discusses the findings of the study in the light of the research problem, objectives and the reviewed literature. The purpose of this study was to determine users' perceptions of the quality of library service they receive at the MUT Library and their level of satisfaction regarding service delivery. The response numbers for academic staff, administrative staff and postgraduate students were lower than the other respondent categories. The first section of the questionnaire elicited demographic information from the respondents. Subsequent sections included more closed-ended than open-ended questions and concentrated on the objectives of the study. These objectives were to establish the extent and nature of service quality and user satisfaction at the MUT Library. They are as follows:

- To determine users' expectations of the quality of the MUT Library services.
- To determine users' perceptions of the quality of the MUT Library services.
- To establish the gaps between users' expectations, and perceptions.
- To determine users' satisfaction levels regarding service quality.
- To make recommendations based on the findings of the study.

This chapter discusses the information collated from the self-administered questionnaire that was presented in the previous chapter. The different library services which encompass the majority of questions are grouped into five categories. These categories refer to staff services, access to information, library as place, library facilities, and research and teaching needs. In each category, the services are discussed in the light of the first

three objectives of the research. The gap between users' expectations and users' perceptions of service quality is then discussed. The level of satisfaction is also an important component of this study and the results will be discussed hereunder.

In terms of this introduction, the discussion below is based on the results the researcher considered significant. Finally the usefulness of the survey instrument and the approach to service quality assessment are commented on.

6.1 Demographic data of respondents

This section describes the profile of the respondents with regard to demographic attributes, namely, gender, description, age, and faculty/department.

6.1.1 Gender, description, age and faculty

There was an almost even distribution regarding gender with 639 (52%) males and 636 (48%) females. The majority of respondents were between the ages of 21-30 years old. The largest group of respondents were undergraduate students, 1229 (92.5%), of which 555 (41.7%) came from the Faculty of Engineering.

6.2 Library usage pattern

This section described the findings related to the usage frequency of the library resources, computer catalogue and the Internet.

6.2.1 Frequency of use of library resources

The library, as stated earlier, is the heart of the institution and it needs to provide excellent resources for its current users and prospective users (see Chapter one, page 5). The core activity of the MUT Library should centre on

service provision and improvement and on building an ongoing relationship between users and library services. In general, most users are aware of the facilities and resources although there are variations in terms of how often they use the library resources.

Almost half of the respondents, 580 (43.6%) used library resources on a weekly basis. It was interesting to see that only 52 (3.9%) respondents indicated that they never used the library resources.

6.2.2 Frequency of use of computer catalogue (iLink) and use of

Internet

A significant number of MUT Library users are not frequent users of the computer catalogue (iLink) proven by the response that 401 (31.0%) never used iLink. The largest number of users, 453 (34.9%) used the Internet on a weekly basis. The respondents who used the Internet to a larger extent than the others were those, 784 (60.4%) who were within the age group of 21-30 years. This illustrates that the Internet is more popular among the “younger” respondents than the “older” respondents.

6.3 Staff services

An academic library needs staff that are passionate about customer care, who are loyal, and dedicated to their users. In addition, the staff must be professional in the execution of their duties; as Nixon (2008) writes “users wanted not just assistance, but competent, professional assistance”. It is of the utmost importance to take heed of the words by Simmonds and Andaleeb (2001: 626) who state that “library staff provide numerous services to these users, addressing their diverse needs, characteristics and interests”. It is therefore critical that staff are committed and willing to assist their users.

6.3.1 Discussion of closed-ended questions relating to staff services

The study focused on the attention staff gave to users, staff's knowledge to answer users' queries, willingness to help users, and the ability of staff to handle service problems. The results from the survey showed that respondents had high expectations concerning staff. According to the survey many respondents, 1137 (86.3%) agreed that they expected staff to be willing to help users and 1129 (85.8%) expected staff to be knowledgeable to answer users' questions.

Contrary to the expectations, respondents' perceptions or actual experiences of staff services were lower for all services in this category. For example, only 301 (23.9%) respondents perceived that staff are knowledgeable to answer users' questions; 387 (30.8%) perceived that staff provide users with the information skills needed for work or study and 423 (33.6%) perceived that staff are willing to help.

6.3.2 Discussion of open-ended questions relating to staff services

The results of the open-ended questions revealed that a total of 295 (23.3%) comments to this category of service were offered. The statistics revealed that 183 (62%) comments related to the communication skills, helpfulness, competence, and professionalism of staff towards users. The comments of the respondents showed that staff need to develop their customer care and communication skills. As one respondent put it, "staff need training on customer care, people skills, front desk skills, and communication skills". The respondents in this category, 25 (8.5%), suggested a customer care workshop for all library staff which is in fact, at the time of writing this thesis, underway at the MUT Library.

The function of the front line staff or circulation staff as Begum (2003) writes "play a critical role in an academic library because they represent the library".

In general many respondents commented about the front desk service and the need for professional assistance. The comments from MUT were similar to those of TAMU University. Crowley and Gilreath (2002:84) explain that the attitude of library staff in terms of friendliness, helpfulness and willingness to assist were critical in satisfying users' needs. Numerous comments from TAMU respondents illustrated this point, for example "not always helpful but friendly to me". Typical comments from MUT include: "Staff need to be friendly and welcoming, staff to be approachable when students seek help; staff need to be more patient and friendly".

Another similarity to the MUT situation is Rhodes University; as Moon (2007) explains "it seems as if there were some negative comments about issue counter and circulation staff and student assistants". The MUT results show that 15 (5%) respondents mentioned that staff must be more accurate at the issue counter. Three (1%) respondents indicated that "staff keep students waiting in long queues at the issue counter". One student wrote "train student assistants, especially to update user details properly".

In addition to this, the comments from the "staff services" category emphasised the need for additional professional expertise in different service points in the library; as one respondent said "we need professional staff to help with user queries, projects and research needs"; "have professional staff to assist in Internet lab".

The comments about professional "staff services" links very closely to Quinn's study (1997:362) which explains that librarians should not equate the quality of services offered with the accuracy of answers provided. The manner in which librarians treat users and their behaviour in communicating may be as important to users as accuracy of answers given.

6.3.3 Gap difference relating to staff services

The research showed that the users of the MUT Library had very high expectations of the staff services but low perceptions of staff services rendered at the MUT Library.

This study shows that there is a huge gap regarding staff services. The respondents' expectations are higher than their perceptions. This means that the staff are not delivering the services in a satisfactory manner. The comparison between expectations and perceptions indicated a large gap in staff who are knowledgeable to answer users' questions 828 (61.9%), and staff who provide users with the information skills needed for work and study 715 (52.8%). In view of this, there is a need for library management to focus on services that have a significant gap as stated above.

The other services in this category have a small gap, for example, the difference between expectations and perceptions regarding staff who instil confidence in users, 436 (30.8%), subject librarians who improve users' research skills, 499 (35.9%), and staff who deal with users in a caring fashion, 408 (29.1%).

The MUT Library is short of professional librarians and timeous employment of these librarians is a real challenge. This scenario makes effectiveness and efficiency in the different library operations extremely difficult. The overall quality of services depends ultimately on the quality and number of personnel responsible for library operations. Similarly in the Tanzanian context, Simba (2006:102) writes that "qualified and highly motivated professional staff, adequately supported by technical and clerical staff, is critical if the library is to deliver a quality library service".

6.4 Library collection and access to information

The library collection plays a vital role in support of the institution's mission and vision. Therefore "every library must manage collections dynamically in line with policies which support the primary aim of providing access to appropriate information, resources to support the teaching, learning, research and administrative needs of the parent institution" (James Hardiman Library website 2008). Therefore a balanced library collection plays a significant role in terms of service quality in an academic library.

Nitecki & Herson (2000:259) looked at the elusive concept – quality, in terms of collections (size, titles held, and breadth of subject coverage) while Thong and Yap (in Majid, Anwar and Eisenschitz 2001:176) indicated that factors such as size, relevance and currency of collections can also be used for measuring the effectiveness of a library. Thus the concepts of quality and effectiveness are interrelated and therefore quality plays a significant role in determining whether an effective service is provided or not. The respondents in this study were very concerned about the lack of suitable books in their subject areas.

6.4.1 Discussion of closed-ended questions relating to access to information

The statements in this category referred to timeous interlibrary-loans, accessible website, adequate book and periodical collection, and easily accessible electronic resources. Many respondents, 319 (76%) required the latest edition of books and more relevant books in their subject areas. This was emphasised by one of the respondents who stated that "the library has insufficient, inappropriate books". A similar situation exists at Jawaharlal Nehru University (JNU) and according to Sahu (2007:234), "the largest number of students suggested that the library should provide the latest publications".

In the context of this study, the expectations were higher for each service in this category than the perceptions. The study revealed that the users at MUT Library had very high expectations of the library collection. The high expectations related to easy access to electronic databases, 1112 (84.4%) and adequate printed library material, 1090 (82.7%).

Unfortunately, the users' perceptions showed that the collection was not adequate for them to access information. A few respondents, 224 (18.9%) perceived that there were adequate printed library materials and only 324 (27.3%) perceived that they had easy access to electronic databases. This illustrates the respondents' dissatisfaction with the library collection and access to electronic databases. The respondents' perceptions with the actual library services provided to them showed that all of the services in this category were poorly provided.

6.4.2 Discussion of open-ended questions relating to access to information

The results of the open-ended questions showed that 127 (5%) comments were given for access to information and 419 (33%) were given for library collection. In terms of the latter, the majority of the 419 respondents, 319 (76.1%) commented on providing a relevant, current collection of printed library books. The comments depicted the need for the library to develop and improve its collection in all subject fields offered at the University. This means that the MUT Library is not adhering to the University's mission. The respondents also mentioned the need for collection development of the reference books. One comment linked to this was "add more English dictionaries, encyclopaedias and bursary registers".

One of the main reasons for the inadequate book collection could be attributed to financial constraints; as Chua, Mentol and Kua (2004) explain in the literature review, budgets are slashed (in some cases quite drastically), and libraries are seriously listening to what their users are saying about the services. In the present study, as many as 319 (11.7%) students made suggestions that more books were required in the different subject areas. The budget for books in particular has been reduced significantly and this impacts negatively on the book collection. Print and electronic media are expensive but arguably the University has a responsibility to ensure that such media are purchased since the users (both students and staff) are a priority.

With reference to access to information, the comments showed that students stressed a need for more assistance with retrieving relevant information sources for their information needs and they needed more professional expertise with regard to their research queries. The other comments generally referred to “poor Internet access” and “inaccessible electronic databases” as one respondent put it “make electronic databases easily available”. It is evident that there was a “large” gap between user expectations and perceptions of service quality in terms of library collection and access to information.

As noted, the academic library is expected to fulfil its role as a service provider in terms of education, training, research, community service and recreation. This means that a crucial objective of the academic library is to provide a balanced, comprehensive collection to meet the needs of the different users. In addition to this, the information resources must be organised in a manner that ensures that they are easily accessible. Professional assistance must be rendered to the users at all times. As Andaleeb and Simmonds (1998:158) write, “users want the staff to be knowledgeable and to be able to assist them in locating needed materials

and information quickly and efficiently”. This would ultimately lead to greater satisfaction with the services.

The MUT Library users expect these services to be available and professional guidance and skills must be offered in order to retrieve the appropriate sources of information. Similarly, this is clearly illustrated in the reviewed literature by Paris (1996:7) who mentions that “librarians need to learn to facilitate the learning environment of disadvantaged students even if it means teaching them step-by-step how to use the technology in its basic forms e.g. OPACS and databases through Information Literacy Programmes”. A user’s comment that relates to this statement is that “professional librarians must assist with searching skills and locating information”. It has been observed that many students at MUT are not computer literate and they do not ask for assistance unless a librarian approaches them.

The high number of comments and suggestions for this service category illustrated that the lack of relevant and recently published books is an indication that the users were very dissatisfied with the outdated and unbalanced collection which did not assist them in their learning, research and teaching needs.

6.4.3 Gap difference relating to access to information

The gap difference between users’ expectations and perceptions of service quality in this category was significant for adequate printed library materials, 866 (63.8%) and 788 (57.1%) for easy access to electronic databases. This large gap implies that the library has not met the needs of its users in terms of providing a balanced collection of library materials and easy access to electronic databases, hence not providing a quality service to the users.

The services that showed a small gap were timeous interlibrary-loans, 577 (39.6%) and adequate print journal collection, 473 (31.5%) hence respondents seemed to be less dissatisfied in these areas.

6.5 Library as place

It was anticipated that concerns would surface with “library as place”, as the MUT Library very often lacks seating space for users. Ladhari and Morales (2008:363) mention that “library as place” considers “how well a library meets the individual needs of users who research and study on site”.

6.5.1 Discussion of closed-ended questions relating to library as place

In this study, the library as place category refers to the library environment which inspires study and learning, a quiet and comfortable space for individual activities, sufficient space for group learning and group study and finally, adequate hours of service.

The views expressed by the respondents as they interact with these actual services revealed that the respondents were dissatisfied with the library as place. A high number of respondents, 822 (61.7%) were dissatisfied with space for group learning and group activity and 527 (39.65%) were dissatisfied with the inadequate hours of service.

6.5.2 Discussion of open-ended questions relating to library as place

The seating space is inadequate and the study space cannot accommodate the number of registered students especially during tests and examinations. The comments reflect this and as one of the students wrote, “more space is required for group learning especially during test and exam time; more rooms are needed for individual study where there is no disturbance and add more discussion rooms”.

The reviewed literature by Osman, Goon and Aris (1998) explains that a conducive environment means good service quality, however it is not the case at the MUT Library. The study space, tables for discussion and the facilities should be spacious enough and adequate in number to accommodate all users but this is not the case at the MUT Library. During tests and examinations, students find it very difficult to find seating since the library can only accommodate approximately 500 students.

This gives a poor impression of the library and it also de-motivates users. As some users commented “extend the library, too small for too many users”. (See Table 18e).

Other important comments that were raised referred to the high noise levels in the library. Just below half of the respondents in this category, 56 (41%) mentioned that the library was too noisy because the tables for discussion were too close to the individual study carrells. The respondents added that staff were also very noisy especially those at the issue counter. In addition to this the telephone was a major disturbance to them. An appeal was made by students to adjust ring tones of the telephones especially at the issue counter.

Another valid point which the respondents commented on was on the inadequate service hours as 56 (18%) students expressed a need for the extension of library hours in the mornings and evenings. The part-time students in particular felt a need for extended hours especially during weekends; as students put it “cater for evening students”.

6.5.3 Gap difference relating to library as place

The study revealed that there was a huge gap between the expectations and perceptions in this service category. The users' expectations of the services within this category were very high but their actual experiences (perceptions) were very low. A huge gap exists in the following services, for example, library space which inspires study and learning, 740 (62.4%) and sufficient space for group learning and group study, 822 (77.2%). This means that library as place is not measuring up to the users' expectations. A moderate gap existed for quiet and comfortable space for individual activities, 545 (36%).

Other academic institutions experienced the same situation as Moon (2007:80) writes "Rhodes performed very poorly in this service dimension. A negative gap was noted between the minimum perceived levels of service in the overall results". Library as place was a "relatively weak area for Miami University where the clients' minimum expectations were not met" (Sessions Schenck, and Shrimplin 2002:62).

The situation at MUT Library is similar to that of the Miami University Library as Sessions, Schenck, and Shrimplin (2002:62) report that the data from their study indicates that a relatively weak area for the University is library as place. The authors mention that as a result of their study and in order to aspire to the users' desired level of expectations regarding library as place, a multi-phase renovation of the library which included the creation of a multi-media lab with state of the art technology, dozens of computers, and new study rooms had been built.

6.6 Library facilities

The library facilities play a critical role in satisfying users' needs. Library users do not expect to get only relevant resources for their work but they

require good facilities as well. The absence of such facilities means that the library is not equipped adequately to help users to accomplish their tasks.

6.6.1 Discussion of closed-ended questions relating to library facilities

In this study library facilities referred to adequate number of computer workstations, computers that work well in the library, adequate photocopying facilities and adequate printing facilities. The presence of sufficient and reliable equipment should facilitate easy access to information. The facilities above were expected to be available in sufficient numbers and were also expected to be in good working order to accommodate the large number of users at the University. The survey results show otherwise as discussed below.

Only 76 (6.4%) perceived that there were adequate number of computer work stations; and 188 (14.9%) perceived that computers worked well. Users' comments in the open-ended questions showed that approximately half of the respondents' comments, 1295 (50.5%) were concerned with the lack of library facilities and non-functioning of library equipment like photocopiers, printers, and Internet lab computers.

6.6.2 Discussion of open-ended questions relating to library facilities

Library facilities play an integral role in meeting users' expectations. This category received the largest number, 1295 (50.5%) of comments in comparison to the other categories. Respondents provided extremely insightful information in this category.

The comments by the respondents in this category showed an urgent need for printing facilities because the library and the University do not have sufficient printing facilities. This is evident from the comments made by students who stated "printing facilities are needed desperately". In this

category, 262 (20.2%) referred to the inadequate number of reliable photocopiers. As a student commented, “Too few reliable photocopiers, very often out of order”.

According to Dole (2002:93), students at Washburn University (USA) “complained that the hardware in the computer lab located in the library were inadequate”. A similar situation exists at the MUT Internet laboratory and the lack of proper hardware and software makes it very difficult for students to utilise such facilities for their research needs. One student wrote “we need more up to date computers, present ones are too slow and has viruses”.

The literature reviewed indicated that library equipment in similar studies was either inadequate or not in good working condition (Moon 2007; Nitecki and Herson 2000). In view of this it does appear that the situation at MUT is not unique, but is something experienced by other tertiary institutions. Moon’s study at Rhodes University Library showed that about 4.9% of the comments related to photocopying and printing facilities.

6.6.3 Gap difference relating to library facilities

The facilities in this category which showed a large gap were adequate number of computer workstations, 1099 (82.8%) and computers that work well in the library, 1010 (76.1%). In this service category all gaps were relatively large and there were no small gaps. This means that all services in this category were unsatisfactory to the respondents since large gaps were identified for each service.

6.7 Services pertaining to research and teaching

The library plays an integral role in fulfilling the research and teaching needs of users at the University. This is parallel to the statement made by Begum (2003) that “the primary purpose of the academic library is to support the teaching, research and other academic programs of its parent organization”.

6.7.1 Discussion of closed-ended questions relating to research and teaching

The study revealed that the respondents had high expectations of the services in this category, for example, 977 (74.1%) agreed that they expected the library to help with their research needs and 969 (73.6%) agreed that they expected the library to help them to advance in their academic field.

The perceptions of the services in this category varied to a small extent only. The services which had the highest perceptions were the “library helps me to advance in the academic field”, 637 (54%) and the “library helps me with my research needs”, 630 (53.4%). There was no significant gap between expectations and perceptions for the services in this category. Nevertheless it is worth mentioning that the largest gap was for the “library helps me with my research needs”, 347 (21.3%), and the smallest gap was for the “library helps me with my teaching needs”, 257 (15.1%).

As Covey (2002:156) mentions, “the library is a marketplace penetrated by technology and free and easy access to information on the web serves great purposes for higher education”. Users therefore need reliable access to Internet for online journals and databases and reliable access to the online catalogue (iLink) for bibliographic information.

The postgraduate students seemed to have communication problems in the library. Most of them had evening lectures and did not have access to subject librarians after hours. This poses a huge problem for them since they did not have access to professional expertise regarding information retrieval skills hence poor assistance or no assistance at all with research needs. This is revealed by comments such as “need professional staff to help with user queries, projects and research needs” (see Table 23a).

6.7.2 Discussion of open-ended questions relating to research and teaching

The administrative and support staff do not have a specific librarian allocated to train and guide these users with their research needs. This was revealed by the comments such as “professional librarians must assist with searching skills and locating relevant information”.

6.7.3 Gap difference relating to research and teaching

In this category there were only small gaps that were identified, ranging from: “the library helps me to advance in my academic field”, 337 (19.6%), and “the library helps me with my teaching needs”, 257 (15.1%). This shows that there were no large gaps in this service category.

6.8 User satisfaction with library services

This section investigated the users’ level of satisfaction with staff services, access to information, facilities and overall quality of library services. The reviewed literature by (Chua, Mentol and Kua: 2004) explains that there is a strong correlation between the concept of service quality and satisfaction.

“Satisfaction levels from a number of transactions or encounters that an individual experiences with a particular organisation fuse to form an impression of service quality for that person”. Attention to customers and the services they want and receive are of utmost importance. The library needs to ensure that its “services both meet customer needs and customer expectations to the highest degree. This means that the library needs to compete both in terms of service quality and customer satisfaction” (Cullen 2001: 662). The results for user satisfaction are discussed below.

6.8.1 User satisfaction with staff services

In general, just below half of the respondents, 493 (40.4%) indicated neutral and 419 (34.3%) indicated that they were satisfied with staff services offered by the library. A minority, 215 (17.6%) expressed their dissatisfaction with the staff services. This means that there is still room for improvement in this category as there are some respondents who have indicated their dissatisfaction regarding staff services.

The results show variations within user groups regarding satisfaction with staff services. The general satisfaction of staff services by user category showed that the administrative/support staff, 25 (71.4%) had a fairly high satisfaction level. The user group who expressed the most dissatisfaction with staff services was the postgraduate students, 6 (35.3%).

In the comments section (see table 23a) many respondents freely expressed their dissatisfaction with the staff services, for example “we are not satisfied at all” but on the other hand some expressed their gratitude towards staff (see Table 23f). For example “fair service received from library staff who are trying their best and library staff are doing a great job”.

6.8.2 User satisfaction with access to information

In general, below half of the respondents, 484 (38.8%) indicated that they were satisfied with access to information. A small number of respondents, 280 (22.9%) expressed that they were dissatisfied with the access to information. The results show variations within user groups regarding satisfaction with access to information.

The user category that expressed a high level of satisfaction with access to information was the academic staff, 28 (62.2%). The user category that was dissatisfied with access to information was the postgraduates, 6 (35.3%). This means that the staff are accessing information easily in comparison to

the students. Staff members have easier access to electronic databases, ebooks and the Internet in comparison to students. There are various barriers which are preventing students from accessing information easily, as a student suggested, “make electronic databases easily available”.

6.8.3 User satisfaction with library facilities

A number of respondents, 458 (37.4%) indicated that their satisfaction levels were neutral regarding library facilities. Some respondents, 339 (27.8%) were dissatisfied with the library facilities. This is in keeping with the comments made, for example “Internet lab must have more personal computers; long queues to get access; printing facilities are needed desperately; more space required for group learning especially during tests and exams time”.

The results showed variations within user groups regarding satisfaction with library facilities. The general satisfaction with library facilities by user category showed that the academic staff, 26 (57.8%) expressed a high level of satisfaction with this service. The user categories which expressed the most dissatisfaction with this service were the administrative/support staff, 11(31.4%) and the undergraduate students, 312 (27.8%).

This means that the academic staff were more satisfied with the library facilities than the students. Obviously staff did not have the same needs as students, for example, staff had access to printers and computers with Internet access at their workstations. The students on the other hand were desperate for such facilities because the library and the University had insufficient facilities or did not have such facilities at all. Most of the students complained about the inefficient photocopiers in the library and said, “Too few reliable photocopiers”. Students were forced to use other libraries due to

the lack of insufficient facilities and this has a negative impact on service quality.

6.9 Overall quality of services provided by the library

The findings revealed that the majority of the respondents rated the overall quality of the services of the library as good yet the findings for the individual services reflected contradictory results. Almost half of the respondents, 531 (43.5%) indicated that the overall quality of library services was good. A small number of respondents, 244 (20%) indicated that the overall quality of library services were poor. This means that there are still services in the various categories that respondents are not satisfied with.

The results showed variations within user groups regarding satisfaction with the overall quality of library services. The satisfaction with overall quality of library services by user category showed that the user category that expressed a high level of satisfaction to this service was the academic staff, 26 (57.8%).

This means that the majority of the staff indicated that the overall quality was good. The user category that expressed a low level of satisfaction with the overall quality of services provided by the library was the undergraduate students. The 244 (20.4%) students with the low satisfaction level indicated the overall quality was poor.

The results revealed that the library is not excelling in the provision of all services rendered and there are many areas that still need attention or improvement. This is contrary to the literature reviewed in which most of the studies demonstrated the overall quality of the libraries to be good (Hiller 2001; Nitecki and Hernon 2000).

6.10 Assessment of the instrument in measuring service quality in academic libraries

The survey methodology was utilised in this study. The questionnaire, adapted from LibQUAL+™ (Marnane 2004; Herson and Altman 1998:105; Ntseane 2005), was used to collect data from the respondents from the different user categories. The results from the study illustrate that not all respondents answered the open-ended questions. However those who did answer the open-ended questions mentioned very interesting and practical comments for library improvement. The closed-ended questions were answered by most respondents but some respondents did not answer certain closed-ended questions.

The survey was useful for collecting and interpreting users' feedback in a systematic manner. The questionnaire was both vital and a great success especially in soliciting users' expectations and perceptions and identifying the levels of satisfaction regarding service quality at the MUT Library. The research instrument was designed appropriately and was capable of determining the gap between users' expectations of service quality and their perceptions of the actual services delivered to them by the MUT Library. In this way the strengths and weaknesses of the MUT Library were identified, keeping in mind that an excellent service must be rendered in order to exceed the expectations of users and not just meet their expectations. As a result the data that was collated was essential to answer the research questions posed.

6.11 Summary

This chapter discussed the library usage patterns, users' expectations and perceptions of library service quality and the teaching and research needs of users. It also discussed the level of user satisfaction regarding library

support, the overall quality of service provided by the library and the significance of the instrument used in this study.

The users used the library and its resources on a fairly regular basis despite some of the shortcomings. In general the expectations were high in comparison to the perceptions. The area of great concern by majority of the users was the library facilities, especially, unreliable photocopiers, insufficient number of computers, absence of printers and the inadequate book collection. Given the shortcomings and lack of certain resources in the library, the overall quality of services needs attention or improvement.

CHAPTER 7

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The main emphasis of this study was to determine whether there is a gap between users' expectations and perceptions of service quality and to establish the level of user satisfaction offered to them by the MUT Library. In order to achieve this goal, the research undertook the following objectives:

- To determine users' expectations of the MUT Library service.
- To determine users' perceptions of the quality of the MUT Library service.
- To find out whether there is a gap between the expectations and perceptions of the users.
- To establish the level of satisfaction of users of the library.

The study was imperative in order to identify the strengths and weaknesses of the current library services and therefore make recommendations to the library management based on the findings of the study. This chapter presents the summary of the thesis and conclusions are made. The recommendations based on the findings are also outlined. Some useful suggestions on areas of further research on this particular area of concern are also presented.

7.1 Summary of thesis

The purpose of this study was to determine user perceptions of service quality and the level of user satisfaction at the MUT Library, therefore it was essential to identify the gaps between the users' expectations and their perceptions (actual experiences). "Understanding perceived service value is of utmost importance for managers as a means to develop long lasting

relationships with customers. The benefits of these relationships are connected to customer loyalty” (Ladhari and Morales 2007:362). This contributes to the fulfilment of their mission, which usually includes providing outstanding materials and services to satisfy the informational, educational, cultural, and recreational needs of the community they serve.

Chapter one outlined the research problem, purpose and objectives of the study, rationale, scope and limitations. The definitions of key terms used in the study were also explained.

In Chapter two, the researcher elaborated on the *Background of the study*, which comprised important elements of the environment in which the study is located. It gave a brief historic overview of MUT and the library. This chapter also highlighted the mission and vision statement, staff, services, library collection, academic structure and student enrolment.

Chapter three, *Literature review*, discussed the concepts of service quality and user satisfaction to a greater extent. It also explored the relevant models that were used in service quality assessment, the related studies on service quality in academic libraries and the methodologies and findings of these studies. This chapter concluded with a brief discussion on the impact and challenges of library assessment models.

In Chapter 4, *Research methodology*, the researcher discussed the research methods and procedures. The design of the study, population, sampling techniques, instrumentation, data collection and the methods of data collection analysis were presented in this chapter.

Chapter 5, *Research results*, elaborated on the results from the survey using the sample population from MUT which was conducted by means of a self-administered questionnaire.

In Chapter 6, *Discussion of the results*, the research results regarding the usage patterns, users' expectations, users' perceptions of library service quality, research and teaching were discussed. The significance of the instrument is briefly discussed in this chapter as well.

7.2 Overview of findings

The results of the survey support the usefulness of LibQUAL +™ used in this study and its relevance in the academic library service context. In essence the respondents' expectations exceeded their perceptions. A "significant" gap exists between the users' expectations and their perceptions. Their actual experiences of the library services were not in keeping with their high expectations and this resulted in gaps in service delivery and hence service quality.

The results would appear to indicate that the MUT Library is lacking in quality service to a certain extent; and it should be noted that quality information service is about helping users to define and satisfy their information needs, building their confidence in using information retrieval systems and making the whole activity of working in a conducive environment a pleasurable experience. To achieve total quality in the information service the MUT Library should provide a comprehensive book collection, a spacious library and reliable and adequate library facilities.

7.3 Conclusions

Based on the findings of this research it is evident that there is a significant gap between users' expectations and users' perceptions of service quality offered at the MUT Library.

The study illustrated that there were significant variations within the different user categories of respondents, namely, postgraduate students, academic staff, administrative/support staff and undergraduate students, concerning library usage, perceptions and level of satisfaction of service quality at the MUT Library. The variations are a result of the levels of study, different user needs and priorities of the different users within these groups.

The study has shown that certain services were not operating as they are supposed to and this in turn had a negative impact on users' rating of their perceptions. The problematic services include: a lack of staff competent to answer users' questions, inadequate printed library material, insufficient and unreliable library facilities and difficult access to electronic databases. An important component of the study showed the strengths and weaknesses of the library in terms of delivering a quality service to users and suggested areas that need improvement and addition of new services.

The users of the MUT Library had high expectations for all services in each category for example, staff services, access to information and library facilities. Their perceptions, however differed from their expectations in many instances. This shows that their actual experiences of some of the services offered by the library were not to their satisfaction. From the users' perspective, this means that their perceptions were lower in comparison to their expectations of service quality at MUT.

7.3.1 Users' expectations

The first objective of the study was to determine users' expectations of service quality. The study revealed that the users had high expectations of library service quality. They expected staff who are knowledgeable to answer their questions, staff to give them individual attention, staff who are willing to assist them and train them and guide them adequately to acquire relevant information sources. They also expected adequate and up to date information resources such as books and electronic databases.

Users further expected adequate library facilities such as more discussion rooms, more reliable photocopiers, printing facilities and more space for group learning and group study. In essence, the users of the library expected excellent services and facilities in order to meet their learning, studying, teaching and research needs. The majority of students had negative comments about the library environment and the library facilities.

7.3.2 Users' perceptions

The second objective of the study was to determine users' perceptions of the quality of library service. The study showed that the MUT Library users perceptions were high for certain services and low for others. Services with fairly high perceptions include: staff who instil confidence in users and adequate print journal collection. Services with low perceptions included: library facilities and library as place, some staff services, clear web page and the library collection, especially books.

The majority of users' actual experiences with the library facilities revealed that they were extremely dissatisfied with this service. Many students commented about the inadequate book collection and mentioned that they visit other libraries in order to do their projects. Their biggest concern was the

lack of computers with Internet access for research purposes and the lack of printers in the library.

7.3.3 Gap between users' expectations and perceptions

The third objective of the study was to establish whether there is a gap between the users' expectations and their perceptions of the services offered at the library. It is evident from the above discussion that only a few services met the service quality expectations of the users while other services did not. This means that the users expectations exceeded their perceptions. Their actual experiences of service quality was satisfactory in certain service categories only.

7.3.4 Level of satisfaction

The fourth objective was to determine the level of satisfaction of users of the MUT Library. The majority of the users who were the students rated the overall quality as poor. Most of them were concerned with the library environment and facilities and this had a negative impact on their rating of the overall quality of services offered by the MUT Library. A minority of users indicated that the overall quality of services were good at the MUT Library. This minority was the administrative, support and the academic staff.

There are various reasons for the library not meeting the expectations of its users. Some of these reasons are: financial constraints, staffing issues and inadequate facilities.

The study has shown that the staff and students had very high expectations of the library service quality but the rate of perceptions differed significantly. The undergraduate and postgraduate students had the lowest perceptions of service quality but the academic and administrative staff had higher

perceptions of the service quality. It is important to bear in mind that assessment is a long term process and there are no quick fixes.

7.4 Recommendations

The fourth objective of this study was to make recommendations to the MUT Library based on the findings and conclusions of the study. In view of this, the following recommendations are proposed to the library and the library management:

The study has shown that it is imperative for libraries to assess and improve their services. Evaluation of library service is an important aspect of library administration for establishing library goals and policies. In order to do this they need to track and understand users' expectations and actual needs by using assessment tools to gain feedback.

An important recommendation for library management is continuous assessment in order to listen to the voices of users, library personnel and the University community. The feedback from such studies will assist managers in understanding the expectations and needs of the users. It is crucial that managers have proper mechanisms in place to implement the strategic and operational plans of the department. In order to improve service quality, they should have excellent mechanisms in place to monitor and sustain the improvement over appropriate time frames.

7.4.1 Library collection

In this study users have expressed their need for appropriate and up-to-date reading material such as books and newspapers. The MUT Library does not provide users with suitable books for learning, teaching and research within their specific areas of discipline. There are too few newspapers and users

want more local titles. Users have expressed their dissatisfaction with the outdated book collection.

A recommendation to this area is to review the collection development policy with the relevant stakeholders and address the critical needs of the users. Priorities need to be revisited, for example, managers should embark on an information needs assessment in order to establish what type of material is in demand. Outdated books must be weeded and subject librarians must inform management concerning the gaps in the collection and the need for the latest publications.

Acquisition of books through the publishers directly is another mechanism to get more value from the funds available. Librarians must keep abreast with the curriculum changes in faculties in order to make the appropriate recommendations to the acquisitions department. Financial constraints are a barrier but careful budgeting and planning can make it possible to improve the current book collection which is a dismal failure in the eyes of the users.

7.4.2 Library staffing

The study has indicated that staffing issues are a challenge at the MUT Library. The lack of professional librarians especially after hours poses a problem to staff and students. It is strongly recommended that the library recruits additional professional librarians. In the mean time, the library staff should attend communications skills workshops, customer care workshops and people skills workshops. Users expressed their dissatisfaction with staff services especially that staff were not helpful and friendly.

Another recommendation is staff rotation. It provides staff with an opportunity to develop different skills, offering challenges and motivates achievements.

Staff training and development is critical to empower them to perform better and assist users to the best of their abilities and hence exceed service quality expectations. It is highly recommended that staff performance appraisal is executed at the library. This will encourage staff to perform better and it will also motivate them to exceed in service excellence. A positive staff morale enhances service delivery to users.

7.4.3 Information retrieval

Many users have expressed their concern regarding information retrieval. They needed help with retrieving the appropriate sources of information and were totally lost in the library. They were not well equipped to search the iLink which is simply a bibliographic tool. Users do not have sufficient information skills to achieve their results independently.

It is highly recommended that the library liaises with the academic registrar to endorse the information literacy programme as credit bearing. This compulsory programme will train users on searching skills, retrieving and evaluating print and electronic media and will ultimately encourage users to maximise the resources of the library. Librarians will have to keep abreast of the current teaching and learning methodologies and focus on skills transfer in a structured platform.

Another recommendation in line with the above is that librarians must be more visible or transparent and not office bound. Many users seem to ask for assistance only when the librarian is not office bound. In other words users need to feel the presence of librarians when they enter the library and not feel obligated to ask for assistance.

It has been recommended by students that library orientation should not be restricted to new students only. The senior students must be orientated

annually as there are new technologies and new developments in the information arena and they need to keep abreast of these developments.

7.4.4 Access to electronic resources

The study has revealed that the electronic databases were not easily accessible. Most of the current databases are available through the library website, but some are not.

It is recommended that professional librarians investigate this critical area of concern since it is vital that users are able to easily navigate their way to locate information for their research in the simplest and most efficient way. Training sessions for staff and students must be done on a regular basis to ensure that the proper skills are acquired by those that are in need.

7.4.5 Library facilities

The results of the survey revealed the importance of the library facilities and the environment which had the greatest impact on the users. Library space and facilities is a critical concern. The library space is insufficient to accommodate the enrolled number of students at MUT. The small space increases the noise levels especially during tests and examinations.

It is highly recommended that library managers and the University administration embark on a practical project to resolve the space problem and make better use of the existing space in the library. It is important to take into account that the number of users is growing each year and the library has to provide sufficient resources, space and a conducive environment to accommodate the users. Users need more space for individual and group activity.

It is further recommended that the layout of study carrels and desks be revisited because discussion desks are too close to study carrels and this disturbs those users who need a silent environment to study.

The study has shown that certain services such as library equipment are in high demand but the library is failing to meet the expectations of the users. A major area of concern is the lack of printing facilities, insufficient number of Internet labs and computers with Internet access for research purposes and an inadequate number of reliable photocopiers. Users have expressed their dissatisfaction regarding this and are desperate for more computer workstations and printing facilities in particular.

The issue counter or front desk staff play a pivotal role in creating the correct impression for the library. The circulation operations at the issue counter must be efficient and staff must be accurate at all times. The results have shown that incorrect information was given to users especially when the library system was offline.

It is highly recommended that the library makes return slips available to students and this will eradicate the problem of users' uncertainty when they have returned their books. Staff need to be extra cautious when the system is down and the circulation librarian needs to develop a reliable mechanism in order to mitigate human error at the issue desk.

7.4.6 Access to information

Access to information is critical to users and the library resources must be accessible to users for their convenience. The results of the study indicated that the library opening and closing times be reviewed. Many users felt very strongly that the MUT Library opens too late in the mornings and the students wait a long time before they get access to the resources.

It is also recommended that the library times during weekends be reviewed as well.

Students must be heard and their views are important for the library to evaluate its services.

It is recommended that a student representative/s must be part of the library committee meetings. In this way, more comments, suggestions and needs will reach the library for the overall improvement and success of a user-centred library service.

7.5 Suggestions for further research

There are various niche areas which are imperative for further investigation.

- New mechanisms of library assessment that instil the users' views of service quality and level of satisfaction, library staff, budget, mission, library processes, policies and procedures must be studied.
- Obstacles to the delivery of quality library services and end-user satisfaction in academic libraries in developing countries need to be researched.
- A critical area of research is the responsibility of library staff in implementing changes to customer care and to satisfy users that come from previously disadvantaged institutions.
- The research instrument is integral to gaining precise information for respondents. Research using focus group interviews is suggested and one user category must be interviewed at a particular time.

There is an urgency regarding the service quality and the level of user satisfaction at the MUT Library. It is very clear that an improvement in many

service areas is needed. The recommendations are made in light of the availability of sufficient funding for the implementation of all the remedies. Sessions, Schenck and Shrimplin (2002:67) explain that academic librarians need to accept their role as experts in information management and not just meet users' expectations, but anticipate client needs and help define those expectations.

LIST OF WORKS CITED

Akyuz, A. 2005. *Application of EFQM excellence model to the Sabanci University IC*. Available at: <<http://research.sabanciuniv.edu/8416>>. Accessed 21 May 2008.

Altman, E. and Hernon P. 1998. Service quality and customer satisfaction do matter. *American Libraries*, 29(7):53-54.

American Society for Quality. 2007. *Quality*. Available at: <http://en.wikipedia.org/wiki/American_Society_for_Quality>. Accessed 26 April 2007.

Andaleeb, S.S. and Simmonds, P. L. 1998. Explaining user satisfaction with academic libraries: strategic implications. *College and Research Libraries*, 59(2): 156-167.

ARL. 2000. *The new culture of assessment in academic libraries: measuring service quality symposium*, October 20-21, 2000 held at Jury's Hotel, Washington, DC. Available at: <<http://www.arl.org/LibQUAL/index.html>>. Accessed 12 March 2007.

ARL. 2004. *Sample LibQUAL+™ institutions*. LibQUAL+™ Spring 2004 Survey. Available at: <<http://www.libQUAL+™.org>>. Accessed 10 August 2007.

ARL 2008. *LibQUAL+™: charting library service quality*. Available at: <<http://www.libqual.org/>>. Accessed 30 March 2007.

Babbie, E. and Mouton, J. 2001. *The practice of social research: an introduction to reading research*. South African ed. Oxford: Oxford University Press.

Bamigboye, O.B. 2007. Evaluation of library services delivery in Olabisi Onabanjo University, Ago-iwoye, Nigeria. *Library Management*, 28(3), 152-162.

Begum, S.S.N. 2003. *Total quality management in the academic library*. Available at: <http://www.webpages.uidaho.edu/~mbolin/begum-tqm.html>. Accessed 21 September 2008.

Bernard, H.R. 2000. *Social research methods: qualitative and quantitative approaches*. Thousand Oaks, Calif: Sage.

Berry, L.L., Parasuraman, A. and Zeithaml, V. A. 1988. The service-quality puzzle. *Business Horizon*, 31(5): 35-43.

Bertram, C. 2004. *Understanding research: an introduction to reading research*. 2nd ed. Pietermaritzburg: School of Education, Training, and Development, University of KwaZulu-Natal.

Bless, C. and Higson - Smith, C. 2000. *Fundamentals of social research methods: an African perspective*. 3rd ed. Lansdowne: Juta.

Blixrud, J. C. 2002. *Evaluating library service quality: use of LibQual+™*: IATU proceedings.12(1). Available at: <http://firstsearch.oclc.org.za>. Accessed 15 March 2008.

Bouma, G.D. 2000. *The research process*. 4th ed. New York. Oxford University Press.

Burgess, T.F. 2001. *A general introduction to the design of questionnaires for survey research*. Available at :<<http://www.leeds.ac.uk/documentation>>.

Accessed 25 May 2008.

Burns, R. B. 2000. *Introduction to research methods*. 4th ed. London: Sage.

Busha, C. H. and Harter, P. 1980. *Research methods in librarianship*. San Diego. California: Academic Press.

Business Intelligence Website. 2007.

Available at:<<http://businessintelligence.com/article.asp?id=33>>. Accessed 12 March 2008.

Buttle, F.1996. SERVQUAL: review, critique, research agenda. *European Journal of Marketing*, 30(1): 8-32.

Calvert, P. J. and Hernon, P. 1997. Surveying service quality within university libraries. *Journal of Academic Librarianship*, (23): 408-415.

Carrilat, F.A., Jaramillo, F. and Mulki, P. 2007. The validity of the SERVQUAL and SERVPERF scales: a meta-analytic view of 17 years of research across five continents. *International Journal of Service Industry Management*, 18(5): 472-490.

Caulley, D.N. 1992. Conducting a literature review. Available at: <<http://www.lib.unimelb.edu.au/psotgrad/litreview/gettingstarted.html>>.

Accessed 17 February 2007.

Ceynowa, K. 2000. Managing academic information provision with the balanced scorecard: a project of the German Research Association. *Performance Measurement and Metrics*, 1(3): 157-164.

Chapman, K. and Ragsdale, K. 2002. Improving service quality with a library service assessment programme. *Library Administration and Management*, 16(1): 8-15.

(CHE) Council on Higher Education (South Africa). Higher Education Quality Committee. 2004.

Criteria for institutional audits. Available at: <www.che.ac.za>. Accessed 23 September 2007.

Chua, J., Mentol, R. and Kua L. 2004. Customer satisfaction in libraries. Available at: <<http://www.consal.org.sg>>. Accessed 15 May 2008.

Collin, P. *Library services*. Stellenbosch University website. 2007. Available at: <<http://www.ie.sun.ac.za/03.%20About%20IE/5.%20Glossary.php>>. Accessed 12 July 2007.

Cook, C. and Heath, F. M. 2001. Users' perceptions of library service quality: a LibQUAL+™ qualitative study. *Library Trends*, 49(4):548-584.

Cook, C. and Thompson, B. 2000. Reliability and validity of SERVQUAL scores used to evaluate perceptions of library service quality. *Journal of Academic Librarianship*, 26 (4): 248-58.

Covey, D. 2002. Academic library assessment: new duties and dilemmas. *New Library World*, 103(4/5): 156-164.

Crossno, J.E. et al. 2001. Assessment of customer service in academic health care libraries (ACSAHL): an instrument for measuring customer service. *Bulletin of the Medical Library Association*, 89(2): 170-176.

Crowley, G.H. and Gilreath, C.L. 2002. Probing user perceptions of service quality: using focus groups to enhance qualitative surveys. *Performance Measurement and Metrics*, 3(2): 78-84.

Cullen, R. 2001. *Perspectives on user satisfaction surveys*. Papers presented at the ARL Measuring Service Quality Symposium. Jurys Hotel, Washington, DC, 20-21 Oct.2000.

Available at:<<http://www.arl.org/libqual/index.html>>. Accessed 21 November 2007.

Dalton, G. 1994. User satisfaction: a quantitative approach to evaluating library services. *Meta-info Bulletin*, 3(2): 1- 4.

De Jager, K. 2002. Successful students: does the library make a difference? *Performance Measurement and Metrics*, 3(3): 140-144.

Derfert-Wolf, L., Gorski, M. and Marcinek, M. 2005. *Quality of academic libraries-funding bodies, librarians and users perspectives: a common project of Polish research libraries on comparable measures*. Paper presented at the World Library and Information Congress, 71 IFLA General Conference and Council, Oslo, Norway, 14-18 August 2005.

Di Domenico, G. 2004. Self assessment, skill, excellence: the EFQM model in the library. Available at:<<http://www.aib.it/aib/boll/2004/0404443.htm>>. Accessed 21 May 2008.

Ebbinghouse, C. 1999. Library standards: evidence of library effectiveness and accreditation. *Searcher: The Magazine for Database Professionals*, 7(8): 20-26.

EFQM Website. 2006. Available at:<<http://www.efqm.org>>. Accessed 21 May 2007.

Engineering Council of South Africa. 2007. Available at:
<<http://www.ecsa.co.za/?x=transformation>>. Accessed 3 January 2008.

Fitzgibbons, P. 2003. *Survey questionnaire construction*.
Available at:<<http://www.tele.sunyit.edu>>. Accessed 28 October 2008.

Frankfort-Nachmias, C. and Nachmias, D. 1992. *Research methods in the social sciences*. London: Edward Arnold.

Franklin, B. and Nitecki, D.A. 1999. ARL new measures: user satisfaction whitepaper. Available at:
<<http://www.arl/libQUAL+TMgeninfo/usersatisfaction.pdf>>. Accessed 13 February 2007.

Gozo, A. J. 2005. *Reflections of a pilot quality audit at the Vaal University of Technology Library: implications for higher education libraries in South Africa*. Available at:<<http://lib.sun.ac.za>>. Accessed 25 November 2007.

Griffiths, J. 2003. Performance measurement in libraries. In Feather, J and P. Sturges (eds). *International encyclopedia of information and library science*. 2nd ed. London:Routledge, 503.

Haywood, P. and Wragg, E. C, 1982. *Conducting a Literature Review*. Available at:
<<http://www.lib.unimelb.edu.au/postgrad/litreview/gettingstarted.html>>. Accessed 17 February 2008.

- Helman, D. and Horowitz, L. R. 2001. Focusing on the user for improved service quality. *Science and Technology Libraries*, 19(3-4): 207-219.
- Henning, E., Van Rensburg, W. and Smit, B. 2004. *Finding your way in qualitative research*. Pretoria: Van Schaik.
- Herget, J. and Hierl S. 2007. Excellence in libraries: a systematic and integrated approach. *New Library World*, 108 (526-544).
- Hernon, P. and Altman, E. 1998. *Assessing service quality: satisfying the expectations of library customers*. American Library Association: Chicago.
- Hernon, P. and Nitecki, D.A. 2001. Service quality: a concept not fully explored. *Library Trends*, 49(4): 687-708.
- Hernon, P., Nitecki, D.A. and Altman, E. 1999. Service quality and customer satisfaction: an assessment and future directions. *Journal of Academic Librarianship*, 25(1): 9-17.
- Hides, M., Davies, J. and Jackson, S. 2004. Implementation of EFQM Excellence model self assessment in the UK higher education sector: lessons learnt from others sectors. *The TQM Magazine*, 16(3): 194-201. Available at: <http://www.emeralinsight.com>. Accessed 12 July 2007.
- Hiller, S. 2001. Assessing user needs, satisfaction, and library performance at the University of Washington Libraries. *Library Trends*, 49(4): 605-625.
- Hisle, W. L. 2002. Top issues facing academic libraries: a report of the focus on the future task force. *College and Research Library News*, 63(10): 714-717.
- HSLIC. 2003. LibQUAL+™: defining and promoting library service quality: New Mexico: University of New Mexico School of Medicine. Available at:

http://hsc.unm.edu/library/libinfo/libQUAL_Survey.pdf>. Accessed 21 June 2008.

InverHills College website. 2008. Available at:

http://faculty.inverhills.edu/rmitche/Marketing/chap11and12_files/image002.jpg>. Accessed 12 July 2008.

Jackson, S. 1999. Exploring the possible reasons why the UK Government commended the EFQM excellence model as the framework for delivering governance in the new NHS. *International Journal of Health Care Quality Assurance*, 12(6): 244-253.

James Hardiman website 2008. Available at:

http://www.library.nuigalway.ie/resources/other/collection_management.html>. Accessed on 17 Nov 2008.

Kaplan, R. and Norton, D. 1996. *The Balanced Scorecard*, Boston: Harvard Business School.

Kavulya, J.M. 2004. Marketing of library services: a case study of selected university libraries in Kenya. *Library Management*, 25(3): 118-126.

Kumar, S.A. 2007. Measuring service quality in an academic library: an Indian case study. *Library Review*, 56(3): 234-243.

Kyrillidou, M. 2002. From input and output measures to quality and outcome measures, or, from the user in the life of the library to the library in the life of the user. *Journal of Academic Librarianship*, 28(1): 42-46.

Kyrillidou, M. and Hipps, K. 2001. Symposium on measuring library service quality. *ARL: Bimonthly Report on Research Library Issues and Actions*, 215: 9-11.

Ladhari, R. and Morales, M. 2008. Perceived service quality, perceived value and recommendation: a study among Canadian public library users. *Library Management*, 29(4-5): 352-366.

Lancaster, F.W. 1993. *If you want to evaluate your library*. Illinois: University of Illinois. Washington: Information Resources.

LibQUAL+™ website. 2007. Available at: <[http://Library.ups.edu/LIBQUAL+/LibQUAL+FAQ.htm#What Is LIBQUAL+™](http://Library.ups.edu/LIBQUAL+/LibQUAL+FAQ.htm#What%20Is%20LIBQUAL+TM)>. Accessed 13 January 2007.

Lincoln, Y.S. 2002. Insights into library services and users from qualitative research. *Library & Information Science Research*, 24(1):3-16.

Majid, S. Anwar, M. A. and Eisenschitz, T.S. 2001. User perceptions of library effectiveness in Malaysian agricultural libraries. *Library Review*, 50(4): 176-186.

Mangosuthu University of Technology. 2008. *General information and regulations booklet for students*. Ethekwini.

Mangosuthu University of Technology Library. 2007. *Strategic Plan*. Ethekwini.

Marnane, B. 2004. *UTS report comparing the UTS experience with client surveys using Rodski in 2003 and the LibQUAL+™ surveys in 2004 for CAUL*. 2004, Sydney, Australia. Available at: <<http://www.caul.edu/best-practice>>. Accessed 12 June 2007.

Martensen, A. and Gronhold, L. 2003. Improving library users' perceived quality, satisfaction and loyalty: an integrated measurement and management system. *Journal of Academic Librarianship*, 29(3): 140-147.

Miao, H. and Bassham, M. W. 2007. Embracing customer service in libraries. *Library Management*, 28(1-2): 53-61.

Moon, A. 2007. LibQUAL+™ at Rhodes University Library: an overview of the first South African implementation. *Performance Measurement*, 8(2): 72-87.

Mouton, J. 1996. *Understanding social research*. Pretoria: Van Schaik.

Mundt, S. 2003. Benchmarking user satisfaction in academic libraries – a case study. *Library and Information Research*, 27(87): 38-46.

MUT website 2007. Available at: <<http://www.mut.ac.za>>. Accessed 12 February 2007.

Nagata, H. Y., Satoh, S. G. and Kyatomaki P. 2004. The dimensions that construct the evaluation of service quality in academic libraries. *Performance Measurement and Metrics*, 5(2):53-65.

Niagara University Library: summary results of the 2003 LibQUAL survey. Available at: <www.niagara.edu/library/libqual2003.html>. Accessed 1 November 2008.

Newman, K. 2001. Interrogating SERVQUAL: a critical assessment of service quality measurement in a high street retail bank. *International Journal of Bank Marketing*, 19(3): 126-139.

Ngulube, P. 2003. *Preservation and Access to Public Records and Archives in South Africa*. PhD Dissertation. Pietermaritzburg: University of Natal.

Available at:<<http://www.infs.ukzn.ac.za/links.htm>>. Accessed 22 October 2008.

Ngulube, P. 2005. The research procedures used by Master of Information Studies Students at the University of Natal in the period 1982 to 2002 with special references to their sampling techniques and survey response rates: a methodological discourse. *International Information and Library Review*, 37(2): 127-143.

Nicholson, S. 2004. A theoretical framework for the holistic evaluation of digital library services. *Journal of Documentation*, 60(2): 164-182. Available at:< <http://dlist.sir.arizona.edu/724>>. Accessed 21 May 2008.

Nimsomboon, N. and Nagata, H. 2003. *Assessment of library service quality at Thammasata University library system*. Thammasata, Thailand: Thammasata University Library System. Available at: <http://www.libqual.org/documents/admin/nagata_reports0403.pdf>. Accessed 8 August 2008.

Nitecki, D.A. 1996. Changing the concept and measures of service quality in academic libraries. *Journal of Academic Librarianship*, 22(3): 181-190.

Nitecki, D.A. 1997. SERVQUAL: measuring service quality in academic libraries. Available at :<<http://www.arl.org/newsletter/191/servqual.html>>. Accessed 16 April 2006.

Nitecki, D.A. and Hernon, P. 2000. *Journal of Academic Librarianship*. Measuring service quality at Yale University's libraries, 26(4): 259-273.

Nixon, J.M. 2008. *The LibQUAL phenomenon: who judges quality*. Available at:<<http://rusq.org/2008/01/06/the-libqual-phenomenon-who-judges-quality/>>. Accessed 12 July 2008.

Niyonsenga, T. and Bizimana, B. 1996. Measures of library use and user satisfaction with academic library services. *Library and Information Science Research*, 18: 225-240.

North West Academic Libraries. 2007. *Academic libraries*. Available at:<<http://www.nowal.ac.uk>>. Accessed 5 June 2007.

Ntseane, R.K. 2005. *Service provision satisfaction of undergraduate and postgraduate students at the medical school library of the University of Cape Town*. MBIBL Thesis. Cape Town: University of Cape Town.

Ojasalo, J. 2001. Managing customer expectations in professional services. *Managing Service Quality*, 11(3): 200-212.

Osman, Z., Goon, C. A. and Aris, W. H. W. 1998. Quality services: policies and practices in Malaysia. *Library Management*, 19 (7):426-433.

Parasuraman, A., Zeithaml, V. A. and Berry, L. L. 1985. A conceptual model of service quality and its implications for future research, *Journal of Marketing*, 49(Fall): 41-50.

Parasuraman, A., Zeithaml, V. A. and Berry, L. L. 1988. SERVQUAL: a multi-item scale for measuring customer perceptions of service quality. *Journal of Retailing*, 64: 12-40.

Paris, J. D. 1996. The need to train librarians in data related issues. *IASSIST Quarterly*, Summer, 20: 6-9.

- Phipps, S. 2001. Beyond measuring service quality: learning from voices of customers, the staff, the process, and the organisation. *Library Trends*, 49(4): 635-661.
- Poll, R. 2001. Performance, process and costs: managing quality with the Balanced Scorecard. *Library Trends*, 49(4): 709-717.
- Poll, R. 2003. Measuring impact and outcome of libraries. *Performance Measurement and Metrics*, (1): 5-12.
- Powell, R. 1997. *Basic research methods for librarians*, 3rd ed. England: Ablex Publishing.
- Punch, K. 2003. *Survey research: the basics*. London: Thousand Oaks: Calif. Sage.
- Quinn, B. 1997. Adapting service quality concepts to academic libraries. *Journal of Academic Librarianship*, 23(5): 359-369.
- Retief, E. 2005. *The role of inventory control in service quality in a South African Academic Library*. MIS Thesis. Pretoria: UNISA.
- Rhodes University Library. 2007. Available at: <<http://www.ru.ac.za/library/LibQUAL/faqs.html>>. Accessed 14 March 2007.
- Sahu, A.K. 2007. Measuring service quality in an academic library: an Indian case study. *Library Review*, 56(3): 234-243.
- Sales, D. 2006. *LibQUAL+™ in South Africa: a view from the south*. Available at: <http://eprints.rclis.org/8583/1/Sales_Libqual-pdf>. Accessed 20 October 2008.

- Saunders, E.S. 2008. *The LibQUAL+ phenomenon: who judge quality?* Available at: <<http://rusq.org/2008/01/06/the-libqual-phenomenon-who-judges-quality>>. Accessed 4 June 2008.
- Saunders, M., Lewis, P and Thornhill, A. 2000. *Research methods for business students*. Harlow: Financial times/Prentice Hall.
- Schorer, W.J. 2003. *Too much customer service?* Available at: <<http://libraryjournal.com/article/CA317639.html>>. Accessed 15 July 2008.
- Self, J. 2003. From values to metrics: implementation of the Balanced Scorecard at a university library. *Performance Measurement and Metrics*, 4(2): 57-63.
- Sessions, J.A., Schenck, A. and Shrimplin, A.K. 2002. LibQUAL+™ at Miami University: a look from outside ARL. *Performance Measurement and Metrics*, 3(2): 59-67.
- Shi, X. and Levy, S. 2005. A theory-guided approach to library services assessment. *College and Research Libraries Journal*, 66(3). Available at: <<http://www.ala.org/ala/acrl/acrlpubs/crljournal/>>. Accessed 23 July 2007.
- Simba, C. 2006. *User perceptions of the quality of service at Iringa University College Library*, MIS Thesis. Tanzania: Tumaini University.
- Simmonds, P.L. and Andaleeb, S.S. 2001. Usage of academic libraries: the role of service quality, resources, and user characteristics. *Library Trends*, 49(4): 626-634.
- Singh, R. 2003. Developing relationship marketing with customers: a Scandinavian perspective. *Library Management*, 24(1): 34-43.

Snoj, B. and Petermanec, Z. 2001. Let users judge the quality of faculty library services. *New Library World*, 102(9): 314-324.

Stevenson, J. 1997. *Dictionary of library and information management*. Middlesex: Peter Collin Publishing.

Terre Blanche, M. and Durrheim, K.(eds) 1999. *Research in practice: applied methods for the social sciences*. Cape Town. University of Cape Town Press.

Thompson, B., Cook, C. and Heath, M. 2003. Structure of perceptions of service quality in libraries: a LibQUAL+™ study. *Structural Equation Modelling*, 10(3):456-464.

Trochin, W. 2000. *The research methods knowledge base*. 2nd ed. Available at:<<http://trochin.human.cornell.edu/>>. Accessed 4 October 2007.

Turk, N. 2007. Building a culture of quality assurance in the libraries of the University of Ljubljana. *New Library World* (3 - 4): 177-182.

Tyckoson, D.A. 2001. *What is the best model of reference service?* Available at:<<http://www.allbusiness.com/information/information-services-libraries-archives/1170745-1.html>>. Accessed 20 February 2007.

Waller, C.A. and Hipps, K. 2002. Using LibQUAL+™ and developing a culture of assessment in libraries. *ARL Bimonthly Report*, 221: 10-11.

Walters, W. 2003. Expertise and evidence in the assessment of library service quality. *Performance Measurement and Metrics*, 4(3): 98-102.

Whittaker, K. 1993. *The basics of library-based user service*. London: Library Association.

Willemse, J. 1989. Library effectiveness - the need for measurement. *South African Journal of Library and Information Science*, 57(3): 261-266.

Williams, A. 2003. How to write and analyse a questionnaire. *Journal of Orthodontics*, 30(3): 245-252.

Zeithalm, V.A. and Bitner, M. 2003. *Services marketing: integrating customer focus across the firm*. 3rd ed. Boston: McGraw-Hill.

Zeithaml, V.A., Parasuraman, A. and Berry, L.L. 1990, *Delivering quality service: balancing customer perceptions and expectations*. Free Press: New York.

Zimu, A.N. 2005. *Assessment of information literacy skills of first-year students at Mangosuthu Technikon at a pre-library orientation and instruction phase*. MIS Thesis. Pietermaritzburg: University of KwaZulu-Natal.

APPENDICES

Appendix 1

Covering letter for the Questionnaire

05 May 2008

Dear Respondent

Questionnaire to assess user perceptions of service quality and the level of user satisfaction at the Mangosuthu University of Technology Library.

I am a registered student for the Master of Information Studies Degree (MIS) at the University of KwaZulu-Natal, Pietermaritzburg. As part of the requirements for the MIS degree, I am doing a study entitled **“User perceptions of service quality and the level of user satisfaction at the Mangosuthu University of Technology library”**. In terms of the study I am currently conducting a survey called **LibQual**. This survey helps libraries to assess and improve the library services provided on campus. The survey consists of 3 themes:

- Staff service
- Access to information
- Library facilities

The aim of the study is to identify users' expectations of service quality and their perceptions of the service delivery with reference to the Mangosuthu University of Technology library. Measurement of the performance of libraries as well as information services is used to evaluate whether the library is operating effectively and efficiently. The findings of the survey, which is directed at both staff and students, will be used to identify whether the services meet, do not meet, or indeed exceed expectations of the users. It will also assist in determining which dimensions of the services need improvement in the eyes of library users. The survey will enable comparison of the service quality with that of peer institutions in an effort to develop benchmarks and gain an understanding of best practices across institutions. Your participation is thus important.

Please note that while you are under no obligation to participate in this survey, I would be most grateful if you could dedicate approximately 10 minutes to completing the questionnaire without revealing your identity. All information gathered from the questionnaire will be treated with the strictest confidence. Results of the survey will be made available upon personal request.

After completing the questionnaire, please return it to me at the Periodicals Section of the library or send it online before the 09 May 2008.

Thank you

Yours sincerely

Y. Naidu (Mrs)

Periodicals Librarian

Tel: 031-9077442

Fax: 0865144974

Email: yegis@mut.ac.za

Appendix 2

Survey to determine user perceptions of service quality and the level of user satisfaction at the Mangosuthu University of Technology Library, Umlazi, Durban

PLEASE COMPLETE THE SURVEY BELOW. ALL RESPONSES WILL BE CONFIDENTIAL.

1. Questions about yourself: Please put a cross [X] next to your choice

1.1 Please indicate your gender

Male

Female

1.2 Please select the option that best describes you

Postgraduate student

Academic staff

Admin/support staff

Undergraduate student.

If undergraduate please indicate your year of study

1.3 Please indicate your age

20 and younger

21-30

31-40

41-50

Over 50

1.4 Faculty /Administration department

- Natural science
- Management science
- Engineering
- Administration/support department

1.5 How often do you use the resources in the library?

- Daily
- Weekly
- Monthly
- Quarterly
- Never

1.6 If your answer to 1.5 is never, please give a reason/s and then answer questions 2- 4 (ignore all the other questions).

1.7 How often do you access library resources through the library computer catalogue (ilink)?

- Daily
- Weekly
- Monthly
- Quarterly
- Never

1.8 How often do you use the Internet to search for information?

- Daily
- Weekly
- Monthly
- Quarterly
- Never

2. Please put a cross [X] in the table below the number that best describes your “EXPECTATIONS” (Expectations refer to what you personally want) of the service in the library.

1 = Strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

2.1 Staff service

	I expect the library to provide...	1	2	3	4	5
2.1.1	Staff who instill confidence in users					
2.1.2	Staff who give users individual attention					
2.1.3	Subject librarians who improve users' research skills					
2.1.4	Staff who are knowledgeable to answer users' questions					
2.1.5	Staff who are knowledgeable to answer service problems					
2.1.6	Staff who are willing to help users					
2.1.7	Staff who deal with users in a caring fashion					
2.1.8	Staff who provide users with the information skills needed for work or study					

2.2 Access to information

	I expect the library to provide....	1	2	3	4	5
2.2.1	Timeous Interlibrary-loans (books from other libraries)					
2.2.2	A web site which enables me to locate information on my own					
2.2.3	Adequate printed library materials (books)					
2.2.4	An adequate print journal (periodical) collection					
2.2.5	Electronic journals that are easily accessible					
2.2.6	Easy access to electronic databases					

2.3 Facilities

	I expect ...	1	2	3	4	5
2.3.1	Library space which inspires study and learning					
2.3.2	An adequate number of computer workstations					
2.3.3	Computers that work well in the library					
2.3.4	Adequate photocopying facilities					
2.3.5	Adequate printing facilities					
2.3.6	Quiet and comfortable space for individual activities					
2.3.7	Sufficient space for group learning and group study					
2.3.8	Adequate hours of service					

2.4 General

	The library ...	1	2	3	4	5
2.4.1	Helps me stay abreast of developments in my field(s) of interest					
2.4.2	Helps me to advance in my academic field					
2.4.3	Helps me with my research needs					
2.4.4	Helps me with my teaching needs					

3. If you would like to add any comments about any of the services mentioned in question 2.1 to question 2.4, please do so.

4. If you would like to add comments about any further services you expect from the library, please do so.

5. Please put a cross [X] in the table below the number that best describes your “PERCEPTIONS” (your actual experiences) of the services the library currently provides.

1 = Strongly Agree; 2 = Agree; 3 = Neutral; 4 = Disagree; 5 = Strongly Disagree

5.1 Staff service

	The library currently provides...	1	2	3	4	5
5.1.1	Staff who instill confidence in users					
5.1.2	Staff who give users individual attention					
5.1.3	Subject librarians who improve users' research skills					
5.1.4	Staff who are knowledgeable to answer users' questions					
5.1.5	Staff who are knowledgeable to answer service problems					
5.1.6	Staff who are willing to help users					
5.1.7	Staff who deal with users in a caring fashion					
5.1.8	Staff who provide users with the information skills needed for work or study					

5.2 Access to information

	The library currently provides....	1	2	3	4	5
5.2.1	Timeous Interlibrary-loans (books from other libraries)					
5.2.2	A web site which enables me to locate information on my own					
5.2.3	Adequate printed library materials (books)					
5.2.4	An adequate print journal (periodical) collection					
5.2.5	Electronic journals that are easily accessible					
5.2.6	Easy access to electronic databases					

5.3 Library facilities

	The library currently provides...	1	2	3	4	5
5.3.1	Library space which inspires study and learning					
5.3.2	An adequate number of computer workstations					
5.3.3	Computers that work well in the library					
5.3.4	Adequate photocopying facilities					
5.3.5	Adequate printing facilities					
5.3.6	Quiet and comfortable space for individual activities					
5.3.7	Sufficient space for group learning and group study					
5.3.8	Hours of service that are adequate					

5.4 General

	The library ...	1	2	3	4	5
5.4.1	Helps me stay abreast of developments in my field(s) of interest					
5.4.2	Helps me to advance in my academic field					
5.4.3	Helps me with my research needs					
5.4.4	Helps me with my teaching needs					

6. If you would like to add any comments about any of the services mentioned in question 5.1 to question 5.4, please do so.

7. If you would like to add comments about any further services of the library, please do so.

8. User satisfaction

Please put a cross [X] in ONE box only.

8.1 In general, how satisfied are you with the staff services offered by the library?

- Very satisfied
- Satisfied
- Neutral
- Dissatisfied
- Very dissatisfied

8.2 In general, how satisfied are you with access to information?

- Very satisfied
- Satisfied
- Neutral
- Dissatisfied
- Very dissatisfied

8.3 In general, how satisfied are you with library facilities?

- Very satisfied
- Satisfied
- Neutral
- Dissatisfied
- Very dissatisfied

**9. How would you rate the overall quality of the services provided by the library?
Put a cross [X] in ONE box only.**

- Very good
- Good
- Neutral
- Poor
- Very Poor

10. If you have any further comments and/or suggestions to make about Mangosuthu University of Technology Library, please do so below.

Thank you for your participation.

Please return the completed questionnaire to me at the Periodicals Section of the Library or email it to me at Yegis@mut.ac.za.

Should you need clarification, please contact me using the following contact details:

Yegis Naidu: Periodicals Librarian
Tel: 031-9077442 (w)
Fax: 0865144974
Cell: 0845105538

