MEASURING THE PERFORMANCE OF LIBRARY AND

INFORMATION SERVICES IN UNIVERSITI TENAGA NASIONAL

LIBRARY

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KUALA LUMPUR

2006

ABSTRACT

This study is an exploratory study to assess the service quality of an academic library. The objectives are to examine the nature of the users' perceived expectations with regards to the quality of information services offered by the library, to assess and measure the users' opinion on the adequacy and inadequacy of the library in providing information services, to identify the service factors deem important to clients of the library, and to identify the problem areas of information services. The survey method is employed and the instrument used is the questionnaires which is based on a modified version of SERVPERF. The sample of respondents was randomly chosen from among the undergraduate and postgraduate students of the University, who visited the Library and were available during the period of data collection. A total of 300 questionnaires were distributed, out of which 274 (91%) usable questionnaires were returned. Generally, the results indicate that the respondents were satisfied with 22 service attributes, out of the 57 attributes under study. Most of the positive responses scored 'average' performance. The library services was rated as '7' on a 10-point scale, which shows an above 'average' quality score. The respondents in this study indicate being very satisfied with the peripheral services of UNITEN Library (100%). However, the respondents pointed out that there are sixteen aspects of the services of the library that should be improved which includes the library website, the user education programme, some issues on the waiting time for services, the OPAC services, the computer printers, and the staff assistance in helping users learn how to find information. Perceptions of service dimensions indicate that the respondents have chosen the 'tangibles' as the most important dimension, and 'empathy' as the least important.

ACKNOWLEDGEMENT

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CHAPTER ONE

INTRODUCTION

1.1 Background

The subject of performance measurement in library and information services is not new. Library professionals wishing to research the topic will find an abundance of literature, dating from the late 1960s onwards. Performance measurement is an important component of a quality-oriented organizational culture. The growth of the consumer movement in the 1970s encouraged consumers of goods and services to view much more critically the quality of service they received and to complain if they were not satisfied.

Therefore, performance measurement should be an essential part of every academic library. Without assessing its performance, an academic library cannot ensure that it is using its resources to the greatest effect. Neither can it be sure that it is continuing to meet needs within the society. Pressures to develop performance measurement have often come as much from forces outside the library or parent institution as from within it. The most important and enduring argument in favour of performance measurement in any organization is quite simply that it is an essential part of good management practice.

It is important to distinguish between evaluation and performance measurement. The term 'performance measurement' is used to describe the activity of using performance

indicators. According to Abbott (1994, p.2, 9) "Performance indicators are, simply, management tools designed to assist library managers to determine how well the service is performing. They provide evidence on which to base judgments but are not substitutes for that judgment, since performance data needs to be interpreted before such assessments can be made. In considering performance indicators, we are rarely dealing with absolutes."

Performance indicators contribute to the process of evaluation but the latter is a broader term for the assessment of performance. There are different approaches to assessment. Lancaster (1993) advocates approaching evaluation from the perspective of performance measurement and uses a systematic approach. It is a method, which emphasizes technical services issues (for example, the weeding of stock), and illustrates a tension between the two main types of measure: technical services and user-oriented measures. The former have a strong quantitative emphasis and may impact on services to users (for example, the speed of cataloguing sought materials), while user orientated measures are more qualitative and might well be those which users would choose themselves.

Developing performance indicators should be linked to other aspects of management, as performance indicators are integral to the management process, informing decisions, aiding the setting of objectives and priorities, providing explanations and evidence for courses of action, and helping to give direction and focus to the work of staff at all levels.

1.2 The Importance of Performance Measurement

In times of rapid and profound societal and technological change, performance measurement is essential to preserve the viability and the visibility of academic libraries. Although most librarians would probably reject the notion that some mythical digital beast will eventually replace libraries, there are members of the public who have extensively bought into the notion of a truly paperless society and who equate libraries with the ancient traditions of print on paper (Wallace and Van Fleet, 2001). Some of those believers in the digital epoch serve as municipal administrators, members of governing boards, and university executives. Thus, performance measurement of the library and its benefits ultimately is essential to the survival of the library itself (Wallace and Van Fleet, 2001).

Performance measurement leads to enhanced efficiency and avoidance of errors. The history of libraries is rich with examples of inappropriate policies, processes, tools, and techniques that were promulgated for protracted periods of time because they were never properly evaluated, much too frequently, were never evaluated at all. Studies of library fines, for instance, have found that their impact is generally much more negative than positive, but fines remain an entrenched aspect of library practice. Such mistakes as creating catalogs that please librarians more than they serve patrons and imposing fine systems that discourage library use can be avoided through the relatively simple means of evaluating local needs, policies, and processes.

Even when performance measurement is not required for purposes of accountability, for demonstrating the need for libraries, for avoiding costly mistakes, or for planning, systematic performance measurement is desirable as an expression of the library's

concern for its public trust. Libraries are among the most service oriented and consumer-friendly of all institutions. The focus on the public that pervades all types of libraries and library services in itself suggests a need for evaluation, for exploring ways to do things better, for demonstrating that the library's administration and staff want to provide the best possible library. The desire to improve, to grow, and to provide ever better services and products, is a deeply rooted part of the librarian's philosophy (Wallace and Van Fleet, 2001).

1.3 Characteristics of Information Services

Services are interactions among people. Their eminent characteristic is that they are bundles of activities or processes. From the perspective of the user, information services are becoming more and more complex entities of physical things (tangibles) and processes (intangibles) (Snoj and Petermanec, 2001).

According to Snoj and Petermanec (2001), when managing information services, librarians must understand their basic characteristics:

- The nature of the process;
- Intangibility;
- Perishability;
- Variability;
- User involvement in the performance;
- People as part of the experience;
- That users do not obtain ownership; and
- The importance of time.

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Users have problems in the conceptualization of information services and, therefore, also in their assessment. 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. Consequently, the attributes of physical evidence, library image, and the impression made by contact employees, and the soft attributes of information service (knowledge, courtesy, friendliness, politeness, empathy, promptness, accuracy, individualized attention, ability to convey trust and confidence) turn out to be strategically important components of efficient and effective management of information services. Information services cannot be separated from those who deliver the service or from active user involvement during the time of service delivery. Such involvement of personnel and users in the operational system makes it difficult to standardize and control service variability and consequently this intensifies user sensitivity towards service quality (Snoj and Petermanec, 2001).

1.4 Benchmarking Against Standards or Institution-Centered

When organizations want to improve their performance, they benchmark. The process of benchmarking is used to identify useful business practices; innovative ideas, effective operating procedures and winning strategies that can be adopted by an organization to accelerate its own progress by ensuring quality, productivity and cost improvements (Henczel, 2002).

They compare and measure their policies, practices, philosophies and performance against high-performing organizations anywhere in the world. In other words, benchmarking involves investigating how things are done elsewhere and where they are

done differently or better, to see whether a group could adapt the processes of another organization to improve their own processes (Henczel, 2002).

Libraries have traditionally used external comparative benchmarking studies to measure themselves against others in order to justify their existence or prove their value and support their case for maintaining existing levels of staffing or funding. These studies were invariably based on statistics gathered and shared for the purposes of measuring how they rank with other libraries (Gohlke, 1998). Libraries have also employed internal benchmarking methodologies to measure the "value" they contribute to their organization and compare this against what is contributed by other departments, divisions or information providers (Henczel, 2002).

One of the primary aims of a librarian is to ensure the service they offer contributes significantly to the success of the organization and is as good as it can be. To do this, a librarian must utilize internal and external benchmarking processes to measure performance and identify possible areas of improvement (Henczel, 2002).

Henczel (2002) commented that many of the benchmarking case studies were focused on the identification of the benchmarks and the measurement and comparison process, while very few followed through to the process of adapting best practice to improve a process.

Foot (1998) defines benchmarking as the process of comparing yourself with others-measuring your service's processes and performance and systematically comparing them to the performance of others in order to seek best practice. It enables the identification of areas where improvement is possible, how it might be achieved and what benefit it might deliver. Other definitions include the implementation of best practice to improve a

process beyond the benchmark performance such as that used by Partnership Sourcing (1997).

Bogan and English (1994), Balm (1992) clarify some of the associated terms: A benchmark is a fixed point, target or standard against which you can be measured. A benchmarking partner is any group or organization that is used for comparison.

The highest performer in a benchmarking partnership is considered the best practices organization (that is, the one that has the most efficient and effective practices in place). The goal of benchmarking is to improve performance by adopting the best practices of benchmarking partners.

Performance indicators are used for measuring performance and monitoring progress against set targets.

Benchmarking can be done within an organization or externally, with other organizations. Internal benchmarking is a comparison of similar operations within an organization, while external forms of benchmarking include competitive benchmarking (a comparison with competitors) and functional benchmarking (a comparison of methods with organizations who have similar processes in a different industry) (Hinton, Francis and Holloway, 2000).

Data benchmarking measures and compares inputs and outputs of a process against a benchmark to assess performance. Process benchmarking analyzes a sequence of activities and compares them with similar functions in best practice organizations (Henczel, 2002).

1.5 Customer or Client-Centered (or Perceived) Quality Services

Neither the tangible product or service or the known market is the starting point for management. What counts is value of the offer perceived by users. This value is usually different from the one perceived by the supplier (Drucker, 2000). Therefore librarians have to understand the difference between the expected and perceived value and quality of their services. Good library performance depends on numerous external and internal factors such as the status of library in the external environment, the degree of library management autonomy in decision-making, the professional level of managers and employees, the internal quality of work life, and employee loyalty. However, it undeniably depends on the level of quality of information services as perceived by users. According to the results of numerous research projects (Parasuraman, Zeithaml and Berry, 1990; Christopher, 1992; Zeithaml and Bitner, 1996; Kandampully, 1998) customers are becoming more and more sensitive to service elements and the overall quality of organizational output. There is enormous evidence from studies that high quality enhances profitability, improves productivity, and strengthens the competitive position (Cina, 1990; Heskett, Sasser and Hart, 1990; Teboul, 1991; Whiteley, 1991; Lawrence and Early, 1992; Quinn and Humble, 1993; Anderson, Fornell and Lehmann, 1994; Iacobucci, Grayson, and Ostrom, 1994; Caruana, Pitt, and Morris, 1995; Donaldson, 1995; Zeithaml and Bitner, 1996; Kandampully, 1998). Offering a high quality service is one visible way by which an organization can distinguish itself from its competitors in building a close relationship with customers and attaining a competitive advantage (Durvasula, Lysonski and Mehta, 1999). The quest for superior quality of its offerings is one of the most important strategic priorities confronting top management in

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all kinds of organizations. Thus concepts such as perceived quality, customer satisfaction, perceived value and customer loyalty have become mainstream in managerial decisions (Grönroos, 1998. In consequence, long-term partnership relations are facilitated by this effort invested in perceived quality, customer satisfaction, perceived value and customer loyalty (Snoj and Petermanec, 2001).

These concepts serve also as operational goals for organizational effectiveness (Broady-Preston and Preston, 1999) and are well-documented pillars of the "service profit chain" (Heskett, Sasser and Schlesinger, 1997).

The construct of quality as conceptualized in the service literature centers on the concept of quality mainly from a marketing perspective. Therefore, it deals with the concept of perceived quality of service. Perceived quality is defined as the consumers' judgement about an entity's (service's) overall excellence or superiority (Rowley, 1998a).

The definition of quality is a difficult problem because, throughout history, technology has been built upon a human ability to specify, measure and control different concepts. As long as these concepts can be specified on the basis of objectively measurable phenomena like length, weight, hardness, and frequency, it is possible to set standards and develop control procedures based on these standards. The question is how should the degree of excellence, luxury and satisfaction or delight be translated into specifications and standards (Snoj and Petermanec, 2001). A comparison between the desired service and the perceived service (the perceived service superiority gap) reflects service quality (Oliver, 1996).

Customer satisfaction, on the other hand, is distinct from service quality assessments in that satisfaction results from a comparison between the predicted service (the level of service customers believe is likely to occur) and the perceived service.

Total quality in its broadest sense is couched in the customers' subjective understanding rather than in an objective understanding of quality. So, a human being makes the final judgement from a subjective point of view. However, mixed findings exist in the literature regarding the causal direction between these two constructs (Lee *et al.*, 2000).

1.6 Statement of Problem

Library services are difficult to measure because their benefits are often intangible. There is no way to quantitatively measure how important a piece of information is to a particular client. However, the need to understand whether a library has achieved some standard of quality and has satisfied its clients is important. This is an attempt to find out whether the library of Universiti Tenaga Nasional Malaysia is providing adequate information services to its clients, and whether the clients are satisfied with these services.

1.7 Objectives of the Study

This study would highlight possible solutions to improve services and subsequently satisfy clientele's needs.

The primary objectives of this study are:-

1. To study the nature of the users' perceived expectations with regards to the quality of

information services offered by the library.

2. To assess and measure the users' opinion on the adequacy and inadequacy of the library in providing information services.

3. To identify the service factors deem important to clients of the library.

4. To identify the problem areas of information services in order to target the actual service elements for improvement.

1.8 Research Questions

The present study is conducted to address the following questions:

1. What is the nature of clients' perceptions with regards to the quality of information services offered by the Library?

2. To what extent do clients perceived the adequacy of the information services provided by UNITEN Library?

3. What are the services perceived as important to clients of the Library?.

4. What are the problem areas of information services of the Library perceived by users?

1.9 Scope and Limitation of the Study

This study will cover undergraduate and postgraduate students of Universiti Tenaga Nasional. Questionnaires based on a modified version of the SERVPERF instrument will be distributed to three hundred randomly selected respondents. As such the findings of this study only reflects the opinions of the respondents from this selected institution and may not reflect the opinions of other university library patrons.

This study emphasizes on service provision due to the current trend of research on libraries nowadays which tend to focus on services, rather than on collections and things that a library possesses. By focusing on services, it is hoped that a library would improve better and there would be an ongoing relationship between users and library services.

1.10 Significance of the Study

1. The findings of the study will provide a useful contribution towards the development of performance measurement for academic libraries and add to the corpus of literature on the subject.

2. Data from the study will enable a generic set of performance indicators to be developed, which can be used as a tool for measuring the performance of information services in academic libraries.

1.11 Summary

This study is divided into five chapters. Chapter one highlights the background information of performance measurement and the characteristics of information services, followed by the objectives and the scope and limitation of the study. Chapter two includes a review of related literature on performance measurement. The method of data collection and analysis are described in chapter three. Chapter four presents the results of the statistical analysis and interpretation of the findings. Chapter five concludes this study with major findings on performance measurement calculated from the data, followed by suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is divided into three parts. The first part will quantitatively analyze all references published on the subject of performance measurement of information services in academic libraries. The second part will describe the types of performance measurement instruments and other topics related to service quality. The third part of the chapter will focus on the design of performance indicators.

2.2 The Size and Characteristics of Literature Obtained

A scan of a few major online reference sources in the field of Library and Information Science was conducted to retrieve articles in English relevant to performance measurement of information services in academic libraries. These online reference sources are as follows:-

1. Emerald Intelligence + Fulltext

2. Library Literature & Information Science Full Text Only (Wilson Web)

3. LISAnet

4. ProQuest @ Digital Dissertations (UMI)

5. ProQuest @ Education Journals

In addition to the articles retrieved through the above sources, a manual search using the online public access catalogues of Universiti Malaya and Universiti Tenaga Nasional was

used in order to trace books. The INDXDB database of Universiti Malaya was used to search for conference papers.

The overall strategy involved in the online search was using keywords: (performance measure or qualitative measure or quality or evaluation or servqual or servperf or libqual or iso or tqm) and (reference services or information services or library services or services) and (libraries or academic libraries). The results were limited to English language publications only. It is necessary to state here that, as is typical with most computer searches, there are no guarantees of retrieving "every" relevant reference available on the topic. The results retrieved in this study are no exceptions. The retrieved articles, which amounted to a total of 286 references, were then entered into a database and coded into different categories that represent broad subject areas. **Table 2.1** shows the retrieved references according to the types of sources in 10-year bands.

Table 2.1 : Types of Sources Retrieved on Performance Measurement

Types of sources	Years					Total	%
	60s	70s	80s	90s	2000		
Journal articles	2	3	26	93	37	161	56
Conference proceedings	1	-	1	17	2	21	7
Thesis	-	-	1	7	5	13	5
Books	-	1	2	47	4	54	19
Newsletters/Reports/Standards/etc	-	1	-	27	8	36	13
Audiovisual	-	-	-	1	-	1	0
TOTAL	3	5	30	192	56	286	100

From the total number of 286 references, 161 (56%) are from journals, and 54 (19%) are from books. Books on the subject were retrieved from the online public access catalogues

and from the online sources. Renowned conferences on the subject are the Northumbria International Conference on Performance Measurement in Libraries and Information Services (1997,1999), and the Congress of Southeast Asian Librarians (CONSAL; 1996, 2000).

Table 2.2 shows the frequency of journal titles that contribute articles in the area of performance measurement in Library and Information Science. There are a total of 161 journal articles contributed by 68 journal titles out of the 286 references. The highly productive journals are: Journal of Academic Librarianship (which contributed 18 articles), Library Trends (14 articles), and RQ (13 articles).

Table 2.2: Frequency of Journal Titles Contributing to Performance Measurement

Rank	Journal Title (n = 68)	Frequency (n = 161)	Cumulative total	%
1	Journal of Academic Librarianship	18	18	11.2
2	Library Trends	14	32	19.9
3	RQ	13	45	27.9
4	College & Research Libraries	9	54	33.5
5	Journal of Marketing	7	61	37.9
6	Library Journal Journal of Retailing	5	71	44.1
7	British Journal of Academic Librarianship Journal of Business Research Library and Information Science Research Library Management New Library World	4	91	56.5
8	Journal of Library Administration Library Administration & Management Portal: Libraries and the Academy	3	100	62.1

Rank	Journal Title (n = 68)	Frequency (n = 161)	Cumulative total	%
9	Australian Academic & Research Libraries IFLA Journal Information Services & Use Journal of Services Marketing J. of the Academy of Marketing Science Library Review Medical Reference Services Quarterly Public Libraries Special Libraries Total Quality Management	2	120	74.5
10	Others with only one article in each	41	161	100.0

Table 2.3 lists authors to references cited in this study. Among the prolific authors on service quality in Library and Information Science are C. Cook, Danuta A. Nitecki, and P. Hernon. Papers written by prolific authors in the area of Marketing was also used, among which were those written by V.A. Zeithaml, A.Parasuraman, and L.L.Berry.

Table 2.3: Frequency of Author Name Contributing to Performance Measurement

Rank	Author (n = 297)	Frequency (n = 424)	Cumulative total	%
1	Cook, C Nitecki, D.A. Hernon, P.	11	33	7.8
2	Zeithaml, V.A.	10	43	10.1
3	Berry, L.L. Parasuraman, A.	9	61	14.4
4	Heath, F. Thompson, B.	7	75	17.7
5	Altman, E. Calvert, P.J. Cullen, Rowena	5	90	21.2
6	Association of Research Libraries Brophy, P. Bunge, Charles	4	102	24.1

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Rank	Author (n = 297)	Frequency (n = 424)	Cumulative total	%
7	Phipps, Shelley Rasappan, Arunaselam Rowley, J. White, Marilyn Dumas	3	114	26.9
8	Abbott, C. Barnard, S.B. Blagden, J. Boekhorst, Peter Broady-Preston, J. Buchanan, Holly Shipp Caruana, A. Cronin, J.J. Hazlett, Shirley-Ann Hebert, Francoise Heskett, J.L. International Standards Organisation Jurow, S. Kappelman, L.A. Kyrillidou, Martha Lancaster, F.W. Maddox-Swan, R. Marshall, Joanne G. McClure, C. Phillip, George Prybutok, T.P. Riggs, D.E. Sasser, W.E. Shaughnessy, Thomas W. Stein, J. Stieg, Margaret F. Taylor, S.A. Teas, K.R.R. Van Dyke, T.P. Winkworth, Ian Zweizig, D.L.	2	176	41.5
9	Other author names cited only once	248	424	100.0

2.3 History

Dimensions of quality reference service have been identified in numerous, mainly

quantitative, studies. Aluri (1993) reviews the literature and presents a long and

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comprehensive list of factors that have been cited as affecting reference service. Dimensions explored by the literature, which are of particular interest to this study, are willingness, knowledge, morale, and time (Stieg, 1990). This study explicates the dimensions of quality service and emphasizes that these are not independent, disconnected dimensions, but that there is a dynamic, complex interconnectedness between them. This study also endorses the findings of Edwards and Browne (1995), who find "congruence between librarians and academics in what they view as characteristics of quality service."(Patterson and Howell, 1990).

A number of major studies have been done to assess and to improve the quality of reference service provided in libraries. Tyckoson (1992) points to the anomaly presented by two distinctly different kinds of assessment of reference service: "On the one hand unbiased research indicates that we are correctly serving only 55% of our users. On the other hand, over 90% of our users tell us that they are pleased with the service that they receive." Tyckoson (1992) notes that only 6 to 10 percent of reference works involves finding a "single, specific, verifiable answer" to a question. Reference service mostly involves providing advice rather than answers, determining the most effective source for a particular individual in a range of possible search paths (Lowenthal, 1990).

It is significant to note that major studies aimed at assessing and improving the quality of reference service do not include the component of library instruction. This omission is evident in the unobtrusive testing studies carried out by the Wisconsin-Ohio Reference Evaluation Program, and the peer review and evaluation process (Bunge, 1987a, 1987b). Yet, studies indicate the importance of the teaching/learning component of reference

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work and identify facilitating user independence as a primary function of reference service (Edwards and Browne, 1995).

Of special significance to this study is the work done by Kuhlthau (1993), who makes a distinction between a bibliographic and a process-related approach to services, recognizing the need for both (Tyckoson, 1992). The bibliographic approach is one in which "information seeking is ... portrayed as a systematic, orderly procedure" in which users are helped to locate sources. The process-related approach, which is the focus of Kuhlthau's work, acknowledges that information seeking is often an uncertain and confusing process for users (Childers, 1987). It is a process of problem solving and learning (Bunge, 1990). Kuhlthau describes information mediation as a process in which "there is no one right answer and no fixed sequence for all. The [individual] problem determines the intervention.... The user and the mediator enter into a dialogue." (Kleiner, 1991). The information professionals intervene "to address the urge to know, the will to learn, and the desire to understand".

There is a growing body of literature that points to management as equally if not more accountable than reference librarians for the provision of quality reference service. Changes were implemented at Brandeis University Library in order to improve both the quality of service and job satisfaction. The reference desk was replaced by two services: a "quick information" desk staffed by students and a "professional research consultation" office staffed by librarians (Kulthau, 1993). At Brigham Young University, where similar changes were made, a study, designed to assess the quality offered by the student reference assistants, found they answered only 36 percent of the unobtrusive test questions correctly and that the referral system worked very poorly. Professional

librarians felt that their own reference expertise and capability suffered from lack of use and reported deteriorating job satisfaction (Kulthau, 1993).

The seminal literature on performance measurement of library services has quite a long history. Cullen points out that librarians have, over the years, with varying degrees of enthusiasm, attempted to measure or demonstrate the quality of the service they provide (Broady-Preston and Preston, 1999).

Traditionally, the evaluation criteria of the Association of Research Libraries (ARL) emphasized objective descriptions of collection sizes and other expenditure-driven metrics. But more recently there has been "increasing pressure on libraries to assess the degree to which their services demonstrate criteria of quality". The emphasis on these measures of services provided to library clientele requires librarians not to equate "quality" merely with collection size. Unfortunately, relatively few measures that can be used to evaluate customer perceptions of library service have been developed. Several individual libraries have conducted independent measures of user satisfaction and characteristics of library use, but there are no systematic reporting mechanisms for the results among research libraries (Cook and Thompson, 2000).

2.4 Measurement Instruments

2.4.1 Quality Assurance

Quality assurance (QA) is defined in BS 5750 as "all those planned and systematic actions necessary to provide adequate confidence that a product or service will satisfy given requirements for quality". Quality Assurance involves the 'building in' of standards and controlling the quality of inputs, rather than quality control and reliance on inspection

of faults. The British Standard BS 5750 emphasises the new approach to quality which focuses on prevention and getting things right first time and everytime rather than the retrospective inspection to screen out faults. For QA to be effective customer requirements need to be clearly defined and there must be continuous evaluation of the adequacy of such requirements. Total Quality Management (TQM), which advocates a holistic approach to quality management, and ISO 9000, the international standard for quality systems, both embraces Quality Assurance in their operational philosophies and can be viewed as complementary. Benchmarking is also included in the series of quality initiatives (Zawiyah, 2000).

(a) Total Quality Management (TQM)

TQM is "a system of continuous improvement employing participative management and centered on the needs of customers" (Jurow and Barnard, 1993). Key components of TQM are employee involvement and training, problem-solving teams, statistical methods, long-term goals and thinking, and recognition that the system, not people, produces inefficiencies. Libraries can benefit from TQM in three ways: breaking down interdepartmental barriers; redefining the beneficiaries of library services as internal customers (staff) and external customers (patrons); and reaching a state of continuous improvement (Jurow & Barnard, 1993).

A library should focus on providing the best services possible, and be willing to change to serve its customers. To determine if changes need to be made, a library administrator might ask: What are our niche markets? What do the customers come in for? How can I look at the efficiency of my library? How do we serve the current customers that exist

today? (Total Quality Management, 1995). First learn about the customer, then solve the problems.

TQM is seen as the final or ultimate stage in quality management. TQM encompases Quality Assurance in that having a Quality Assurance system in place is one of the seven principles or pre-requisite to achieving Total Quality Management (Zawiyah, 2000). Zawiyah added that TQM goes beyond Quality Assurance in the following ways:-

Total commitment by top management, line managers and all staff over the long term;

Involves complete dedication to meeting customer requirements;

Based on teamwork and partnership to break down interdepartmental or sectional 'silos' or barriers;

Recognise that there are internal and external customers and that proper requirements is needed if external customers are to receive quality products or services;

TQM involve a long-term commitment to training and development because for all staff with TQM, quality becomes a way of life in the organization and the natural way to do things.

While TQM clearly has positive aspects, implementing it can have potential challenges as well. Jurow and Barnard (1993) identify four barriers to the adoption of TQM in libraries: (1) vocabulary: objections to terms such as "total," "quality," and "management" which imply that high standards are not already being met; (2) commitment: TQM takes several years to implement and requires a long-term commitment by library managers; (3) process: our culture tends to be impatient and we try to solve problems quickly, contrary to TQM's careful process analysis; and (4) professionalization: professional staff can be resistant to turning over their practices and services to what they perceive as the

"uninformed whims of the customer." Sirkin (1993) also notes that it is not possible to satisfy everyone's demands; choices will need to be made.

Libraries are ideal places to implement TQM. They are service organizations dedicated to their customers, the patrons. By formulating a strategic plan, and following it with a commitment to continuous quality improvement, library managers can transform and improve their organizations. Riggs (1992) summarizes the notable principles of TQM: (1) manage by fact: make library decisions after careful analysis of data gathered with tools such as checksheets, histograms, and Pareto charts; (2) eliminate rework: library work is often labor intensive--simplify it and make sure it is done properly the first time; (3) respect people and ideas: staff are the library's most valuable resources, and they should be encouraged to point out problems without fear of management; (4) empower people: trust library staff to act responsibly and give them the appropriate authority to make decisions that can improve the quality of work they do.

(b) ISO 9000

ISO 9000 (9001-9003) is an international standard for quality systems that provides a method for certifying companies that meet its requirements. Originally published in 1987 and revised in 1994 and 2000, it specifies twenty elements for a company to address to assure its customers that it provides the services and products promised. The ISO standard is customer and process oriented, and it includes criteria on identifying customer requirements and measuring customer satisfaction with the company's performance.

The ISO 9000 series does not serve to standardise quality goals. What the ISO 9000 series does standardise are the requirements of quality systems. Among the elements

which are central to the management philosophy of the ISO 9000 series are the involvement of the subject - that is, the Library and Information Science organisation - in the formulation of the requirements for which it will be certified and its ability to monitor compliance with those requirements itself.

Ellis and Norton (1996) provide a very good guide to the implementation of ISO 9000. Not every aspect of an organisation's activities need to be covered by registration and there are a number of approaches in tackling the Standard:-

i)   go alone for accreditation

ii) be part of a segmented or cluster approach within an organization

iii) be one segment of the overall organizational initiative

The approach adopted will have important implications for forward planning as well as for registration. If the library goes for it alone, it will have to cater for all those parts of the Standard's requirements, which by definition, extend beyond library operations and may include parent body policies and operations for example quality audits, management review, or sometimes referred to as corporate or macro requirements. The Library will also have to account for all those support activities which may come from other departments. The approach adopt also has important implications on the human resources required to plan, manage and implement these requirements. The Library will need to devote resources and commitment, time, and appoint a project coordinator or as designated in the Standards as, a Management Representative to coordinate, monitor, and liase on the progress of the Standards (Zawiyah, 2000).

(c) Benchmarking

Other libraries should benchmark with libraries, which have implemented ISO 9000 in order to improve quality standards in common or generic processes. These standards can be used as benchmark for best practices, as a launching pad for international or world-class benchmarking.

2.4.2 SERVQUAL

SERVQUAL is a generic instrument that has been used to gauge service quality. It was first introduced in 1988 in the field of marketing. The fifth Gap - the difference between customers' perceptions of what a service should deliver and how well that service meets idealized expectations - is the conceptual basis for SERVQUAL. Zeithaml, Parasuraman, and Berry (1990) designed SERVQUAL as a generic instrument that could be slightly modified for use in any particular service industry. It is the most popular method for the measurement of the fifth Gap.

One form of the SERVQUAL questionnaire is designed to be administered to customers of the service organization under review. It consists of twenty-two pairs of statements about factors that a service provider delivers. The first set of statements measures the customer's expectations by asking each respondent to rate how essential each factor is for an excellent service to deliver. The second set of twenty-two statements formulates the same factors into descriptions about service delivered and ascertains the respondent's perceptions of the level of service given by the institution or organization examined. For each pair of statements, the difference between the ranked perception minus the ranked expectation is calculated; the average of these Gap scores is the SERVQUAL overall

quality score. Zeithaml, Parasuraman and Berry (1990) maintained that the set of twenty-two statements encompasses five interrelated dimensions that customers most value when they evaluate service quality in a service industry:

1. tangibles (the appearance of physical facilities, equipment, personnel, and communication material);

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 inspire trust and confidence); and

5. empathy (the caring, individualized attention that a firm provides its customers)

Using factor analysis, they further contended that the twenty-two statements relate to (and define) these five dimensions.

As part of this basic version of SERVQUAL, respondents also rate the importance to achieving excellent service for each dimension by allocating 100 points among a set of descriptions of the five dimensions. These descriptions of the service quality dimensions and average point allocations among respondents in different service settings enable researchers to make comparisons among studies and service industries.

A more recent version of SERVQUAL asks respondents to comment on a series of statements from three contexts (minimum service expectations, desired service expectations, and the perception of service performance) using a nine-point scale. Parasuraman, Zeithaml, and Berry (1994) regard the three-column format as preferable for its reconceptualization of expectations into desired and minimum expectations. Expectations, it has been argued, array on a continuum, with desired and minimum ones

at either end; a zone of tolerance falls in between. That zone "represents the range of service performance a customer would consider satisfactory" (Parasuraman, Zeithaml and Berry, 1994, p. 202; see also Boulding, Kalra, Staelin and Zeithaml, 1993).

Some researchers maintain that perception scores alone explain more of the variation in service quality than the gap measures, that "questions about service expectations may be based on memory or biased by actual services received," or that the difference between expectations and service perceptions may not measure quality (see Andaleeb and Simmonds, 1998; Babakus and Boller, 1992; Cronin and Taylor, 1992, 1994; Teas, 1993). Yet other investigators (Caruana, Ewing and Ramaseshan, 2000) have shown that expectations scores have a direct effect on perception scores. Critics have questioned whether respondents can distinguish between desired and minimum expectations and about whether customers have formulated specific expectations about services (Caruana, Ewing and Ramaseshan, 2000, p. 8).

With the three-column format, respondents provide a perception score for the same statements for which they have just identified their minimum and desired expectations. As Caruana, Ewing, and Ramaseshan (2000) note: "Although it is possible for respondents to provide perception scores that are below minimum expectations, it is likely that the prior scores allocated to expectations will anchor the either-end points in the desired-minimum expectations continuum determining the scale point width with which perception scores will be obtained" (p. 3). They found that "respondents find it difficult to visualize [a] real difference between desired and minimum expectations, and the results obtained [from their experimental study] seem only to indicate the allocation of relatively lower scores to minimum expectations when this is asked in conjunction

with desired expectations" (p. 8). They further question "the diagnostic usefulness resulting from the simultaneous collection of expectations and perceptions scores. It would appear that [the] collection of data about expectations and perceptions is best done separately. The former can be conducted on a less frequent basis than the latter" (p. 8). "Asking [about] desired expectations in conjunction with minimum expectations and perceptions . . . appears to result in higher desired expectation scores than when these are asked separately. . ." (p. 8). The "addition of minimum expectations appear to have added little that is of incremental value to the measurement of service quality" (Johns, Lee-Ross and Tyas, 2000, p. 15). However, when both expectation and perception ratings are sought together, the data provide an opportunity to evaluate the relative difference between the two at the level of the twenty-two service statements (used in the basic version of SERVQUAL); when the data are collected separately, evaluation can occur only with the average rating of perceptions and expectations but not between their gap relationship.

There is disagreement over which version of SERVQUAL to use, and the instrument can only be slightly modified without having an impact on the dimensions that are probed. Although researchers often make comparisons across service industries, "the nature of services may be such that it is impossible to ask the same series of questions meaningful to customers in two different service industries" (for example, see Babakus and Boller, 1992; Bolton and Drew, 1991; Carman, 1990; Cronin and Taylor, 1992; Dabholkar, Thorpe and Rentz, 1996; Lapierre, Filiatrault and Chebat, 1999; Teas, 1988). A number of authors concur that service dimensions are service industry specific: the number of dimensions and their stability across various service industries are likely to vary (for

example, see Babakus and Boller, 1992; Carman, 1990; Van Dyke, Kapelman, and Prybutok, 1997). Parasuraman, Zeithaml and Berry (1994) have moved from five to three dimensions: reliability, tangibles and, as a single dimension, responsiveness, assurance, and empathy (p. 211). Some other studies support the consolidation and regrouping of dimensions (Dabholkar, Thorpe and Rentz, 1996).

Significantly, modifying the scale and dimensions decreases the utility of SERVQUAL for cross-industry comparisons. Nonetheless, there are some important differences in Library and Information Science, such as with the information-gathering behavior of various groups, and therefore the set of dimensions selected must better represent Library and Information Science.

2.4.3 SERVPERF

SERVPERF, a modification of SERVQUAL, was developed in 1992 by Cronin and Taylor, measures service quality based solely on performance. It looks at the same twenty-two statements-worded the same as SERVQUAL-but it does not repeat the set of statements as expectation items. SERVPERF has received significant conceptual and empirical support in services research (example Boulding at al., 1993; Brown et al., 1993; Lee et al., 2000; Teas, 1993, 1994). In a more recent study, Brady et al. (2002) replicated and extended Cronin and Taylor's (1992) work and further confirmed the superiority of SERVPERF as a more appropriate method for measuring service quality. Brady et al. (2002) specifically maintained that SERVPERF outperforms SERVQUAL in terms of capturing the variance in customers' overall perceptions of service quality and validating the conceptualization of service quality as an antecedent of customer satisfaction.

The twenty-two statements used in SERVPERF worded under the five dimensions are:-

Tangibles:
    1. Modern-looking equipment

    2. Visually appealing physical facilities

    3. Employees are neat in appearance

    4. Visually appealing materials associated with the service

Reliability:
    5. Keep promises

    6. Show sincere interest in solving customer problems

    7. Perform the service right the first time

    8. Provide their service as promised

    9. Insist on error-free records

Responsiveness:
    10. Inform exactly when services will be performed

    11. Employees give prompt service

    12. Employees are always willing to help

    13. Employees are never too busy to respond to requests

Assurance:
    14. Employee behaviour instills customer confidence

    15. Customers feel safe in their transactions

    16. Employees are consistently courteous

    17. Employees have knowledge to answer questions

Empathy:
    18. Give customers individual attention

    19. Operating hours are convenient to all customers

    20. Employees give customers individual attention

    21. Customers' best interest are at heart

    22. Employees understand the specific needs of customers

2.4.4 LibQUAL+

In October 1999, the Association of Research Libraries (ARL) approved a membership-centered effort to develop a new tool that would enable research libraries to measure service quality delivery to their constituents. The initiative was in response to rising demands for accountability in the public service sectors generally and to the Association's New Measures Program specifically. The New Measures effort represents a collective determination on the part of membership to move beyond the input measures that undergird the ARL Index and the accompanying comprehensive statistical database, the most important assessment metric heretofore available (Cook, Heath, Thompson and Thompson, 2001).

This new instrument, trademarked by the Association of Research Libraries under the name LibQUAL+, traces its origin to service marketing research and the pioneering work of Berry, Parasuraman and Zeithaml. Their SERVQUAL protocol has been accepted as a standard of service quality assessment in the business world since the mid-1980s. LibQUAL+ is a derivative of that protocol, rigorously re-grounded through both qualitative and quantitative means for research library sector in North America. It undertakes to measure library users' perceptions of service quality and identifies gaps between desired, perceived, and minimum expectations of service (Cook, Heath, Thompson and Thompson, 2001).

2.4.5 E-QUAL

The most recent development in the LibQUAL+ project is the team's adaptation of the survey to the digital library environment. This effort, called e-QUAL, is partially

supported by a grant from the National Science Foundation, National Science Digital

Library (NSF/NSDL). The overarching goal of e-QUAL is to develop a digital library

service quality assessment process that enhances student learning by permitting the

allocation of resources to areas of user-identified need. The e-QUAL project seeks to

accomplish this goal by achieving the following objectives and outcomes:

* define the dimensions of digital library service quality from the perspective of the

users;

* develop a tool for measuring user perceptions and expectations of digital library

service quality across NSDL digital library contexts;

* identify digital library "best practices" that permit generalizations across operations

and development platforms;

* enhance student learning by effectively managing user perceptions and expectations

of digital library services;

* establish a digital library service quality assessment program as an integral part of

the library service quality assessment program at ARL; and

* institutionalize continuous product and process evaluation efforts directed toward

positive and timely management of outcomes.

Many digital libraries are still in their formative stages of development so the creation of

an evaluation tool like the envisioned e-QUAL survey needs to be undertaken with care.

To avoid premature evaluation and misguided comparisons across very different digital

libraries, the e-QUAL project advocates using mixed methods to develop a digital library

assessment tool and anticipates that e-QUAL eventually will be one of several such tools

for digital libraries (Hipps and Kryrillidou, 2003).

2.5 Measurement Techniques

There are four methods commonly used for collecting data, that is:-

i) Focus group interview

A focus group interview is an inexpensive, rapid appraisal technique that can provide librarians with a wealth of qualitative information on performance of development activities, services, and products, or other issues. A facilitator guides 7 to 11 people in a discussion of their experiences, feelings, and preferences about a topic. The facilitator raises issues identified in a discussion guide and uses probing techniques to solicit views, ideas, and other information. Sessions typically last one to two hours.

ii) One-to-one customer interview

An interaction between two people in which information is gathered relative to respondent's knowledge, thoughts and feelings   about a topic.

iii) Survey / Questionnaire

A paper and pencil method for obtaining responses to statements or questions by using a form on which participants provide opinions or factual information.

iv) Effective complaint management

Complaints are an inexpensive source of market research. When properly compiled, complaint data can indicate how clients interpret company advertising, how products and services meet (or do not meet) clients' expectations, how instruction manuals and services information can be improved, and how products can be designed better.

Complaints may signal a need for better systems of quality control at the production level. They may tell management of improvements that can be made in training and supervision of service personnel.

2.6 Prerequisites for Performance Measurement in Library Services

Any library shall have to consider a few basic rules before embarking on a performance measurement programme. These are called performance measurement prerequisites. These prerequisites would help ensure that we measure the right things in the right manner for the right purposes (Rasappan, 1995). Rasappan added on that the prerequisites relate to the following core questions pertaining to the library:

a) What is its Purpose-in-Life (PiL)?

b) What are its Terms of Reference (ToR)?

c) Who are its critical clients / stakeholders, and target groups?

d) Are these clients homogenous?

e) What are the priority rankings of each set of clients?

f) What are the specific basic needs and / or problems of the clients and stakeholders?

g) What are the priorities and rankings of these needs and problems?

The above mentioned core questions are critical since they will determine in a major way as to how we assess performance of the library and what to measure. It is best for the library management to ensure that these basic questions are answered first.

2.7 Performance Indicators

Performance indicators are essential in measuring efficient service. A performance indicator is a quantified statement used to evaluate and compare the performance of a library in achieving its objectives (Chaudry, 2000). The term performance indicator is sometimes used interchangeably with performance measure or output measure (Poll and Boekhorst, 1996). Chaudry mentioned that statistics and standards were criticized for being too focused on input measures. Efforts to develop guidelines for performance measurement during a later stage highlighted the importance of output measures focusing more on services. Then, the emphasis has shifted to performance indicators that expand the scope of measurement to include operations and activities. A performance indicator should be appropriate, informative, valid, reproducible, and practical (Poll and Boekhorst, 1996).

Performance indicators would demonstrate the way a library assesses the cost effectiveness, efficiency, and effectiveness of its services in relation to its stated mission, goals, and objectives. Chaudry, 2000 suggested a few publications that may be used as reference:-

a) *Performance indicators for University libraries: a practical guide*. London. Standing Committee of National and University libraries: Advisory Committee on Performance Indicators, 1992.

b) *Library performance indicators: client satisfaction: Document delivery: availability of sought materials*. Richmond: Council of Australian University Librarians, 1995.

c) *Practical performance indicators.* Loughborough: Library and Information Statistics Unit, 1993.

d) *Performance indicators and library management models.* London: Office of the European Communities, 1995.

e) *Measuring academic library performance: a practical approach.* Chicago: American Library Association, 1990.

f) *Performance measurement in library and information services.* London: Aslib, 1994.

g) *Measuring quality: international guidelines for performance measurement in academic libraries.* Munchen: KG Saur, 1996.

h) *ISO/CD 11620.2. Information and documentation – library performance indicators,* 1995.

2.8 Designing Performance Indicators for Information Services

The following performance indicators are set under the topic of library-centered and client-centered.

2.8.1 Library-centered

(a) Information skills training

Definition and scope: The provision of individual/small group training on techniques of library use, information retrieval, and information management in support of their study/teaching/learning/research/business/leisure needs.

Performance indicators

    Market penetration: Actual users as proportion of potential users

    Effectiveness: Needs fill rate / user satisfaction with training

    percentage repeat use

    Cost-effectiveness: Cost per user (compared with extent of market

    penetration/staff time spent on this service)

    Costs: Unit cost per training session provided

    Productivity: Number of training sessions run per relevant member of

    staff

(b) Publications

Definition and scope: Provision of leaflets, guides, and handouts enabling customers to make best use of the library's services, or informing them of specific activities and services available.

Performance indicators

    Economy: Proportion of budget committed

    Market penetration: Proportion/range of customers using the publications

    Efficiency: Average preparation/production time

    Effectiveness: Turnover rate of stocks

    Cost-effectiveness: Cost per publication of different standards of

    production

    Cost: Unit cost per leaflet

(c) Inter-library loans

Definition and scope: Provision of a document supply system for obtaining items which are not held in the library, either for loan or photocopy.

Performance indicators

Economy:	Proportion of budget committed
Market penetration:	Take-up of the service
Efficiency:	Speed of supply
Effectiveness:	Timeliness of supply; Accuracy of supply
Costs:	Unit cost per item requested; Unit cost per item received
Productivity:	Items processed per relevant member of staff

(d) Issue services

Definition and scope: Provision of a system enabling registered or bona fide library users to borrow items from stock to use outside the library building/area.

Performance indicators

Market penetration:	Take-up of the service: average loans/transactions per registered user per month/year
Efficiency:	Transactions per service hour; Average waiting time
Effectiveness:	Accuracy of the service (example, incidence of mistakes)
Costs:	Cost per transaction; Cost per service hour
Productivity:	Transactions per relevant member of staff

(e) Usage of space

Definition and scope: Provision within the library building or designated library space of facilities for study, browsing, relaxation and use of services and equipment.

Performance indicators

Market penetration:	Annual number of visits per head of population
Effectiveness:	Seat occupancy: Proportion of seats/study places occupied
Cost-effectiveness:	Cost per user of different models of opening hours
Costs:	Cost per user/per visit/per opening hour of maintaining the library building/area; Cost per square metre of library space

(f) Collection development (including selection, deselection, relegation)

Definition and scope: The provision of materials to meet customers' needs/demands in the right quantities at the right time.

Performance indicators

Economy:	Proportions of library budget committed
Effectiveness:	Turnover rate: average number of issues/uses per item (by subject); Items on loan as a proportion of total stock (by subject)
Cost-effectiveness:	Cost of stock/collections per user
Costs:	Unit cost of selecting, deselecting and relegating an item; Average cost per item purchased (by subject),

compared with external indices

(g) Collection maintenance

Definition and scope: Reshelving or refiling of material returned from loan/used within the library/new material. Shelf checking and tidying; shelf guiding; stock moves.

Performance indicators

Efficiency: Proportion of service hours material is off the shelves/unavailable

Effectiveness: Accuracy of shelving, guiding ease of use (of collections)

Costs: Unit cost of shelving an item

Productivity: Items shelved per relevant member of staff

2.8.2 Client-centered

(a) Enquiry work

Definition and scope: The provision to customers of essential support in using library collections by answering/providing guidance on quick reference enquiries, assisting with catalogue searches and location of materials, providing advice on information sources and search strategies; answering reference enquiries, and providing referrals to specialist sources.

Performance indicators

Economy: Proportion of budget committed

Market penetration: Actual users as proportion of potential users

Effectiveness:	Surveys of needs fill rate (user satisfaction)
Cost-effectiveness:	Cost per user/per service hour of different profiles of service provision
Costs:	Cost per enquiry answered; Cost per service hour
Productivity:	Enquiries answered per relevant member of staff

(b) Current awareness service/SDI service

Definition and scope: Provision of tailored information to customers on new publications received/ new articles published/new information on specific topics of interest/relevance.

Performance indicators

Market penetration:	Subscribers as proportion of potential subscribers
Effectiveness:	Surveys of needs fill rate (user satisfaction)
	Percentage of repeat use
Cost-effectiveness:	Cost of service per subscriber of different standards of production
Costs:	Cost per bulletin produced
Productivity:	Bulletins produced per relevant member of staff

(c) Mediated on-line searching

Definition and scope: Search and retrieval of references/information from remote on-line databases in support of specific information needs.

Performance indicators

Economy:	Proportion of budget committed
Market penetration:	Actual users as proportion of potential users
Efficiency:	Time taken per search
Effectiveness:	Surveys of needs fill rate
	Percentage of repeat use
Cost effectiveness:	Cost per user (compared with extent of market penetration/staff time spent on this service)
	Relationship between time taken and references retrieved from different databases
Costs:	Unit cost per search
Productivity:	Number of searches conducted per relevant member of staff

All indicators mentioned are adapted from: Abbott, Christine. 1994. *Performance measurement in library and information services*. London: Aslib.

2.9 Problems and Precautions

The use of performance indicators for measuring performance of libraries is both appropriate and relevant for ensuring that libraries serve the purpose for which they were created. However, care should be exercised in the identification, selection, and use of performance indicators. Experience with performance management initiatives in other countries has shown that managers get carried away with the use of extensive

performance indicators and yet not fully achieve the goals and objectives of their organisation (Rasappan, 1996a).

We should also be aware that performance indicators are merely indicators rather than a precise measure of the performance. Performance indicators merely provide us with information about the levels of performance of an agency, programme, or activity (Engel, 1995: Rasappan, 1995). According to Rasappan, they should only be used as a basic yardstick to estimate to what extent an activity has performed and in the process provides the managers with information as to what remedial actions need to be taken in order to ensure performance is on the track with predetermined goals and objectives.

There are various dangers to using performance indicators to measure performance of libraries, as described by Rasappan:-

a) The danger of goal displacement – Goal displacement can and does happen where organizations do not get their performance measurement prerequisites in order before embarking into comprehensive measurement. In libraries, this can happen if we tend to focus much attention on the quantitative measures of outputs without due regard to ensuring that the library activities are geared towards meeting the correct requirements of the right clients and stakeholders in the best possible way.

b) Over dependence on quantitative measures – Numbers can easily be used to give the impression of extensive activities but are often used (unintentionally or otherwise) to divert attention from the non-achievement of goals and objectives. In a library, we could easily use the quantitative achievements of our materials collections to claim that our library services are very effective. The question is

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"does our role and purpose of existence" stop there or should it go beyond just providing an extensive collection of printed materials?

c) Focus on process outputs – In their efforts to provide impressive records of their achievements, managers often tend to list down and utilize a comprehensive list of all outputs produced, irrespective of whether they are process or program outputs and whether they have a material contribution to the outcomes of the library's activities.

d) Focus on outputs as a whole – Outcome identification may sometimes prove to be difficult, especially if they are intangible and long-term in nature. This often leads managers to rely more on outputs which are more tangible and readily measured. While this may be acceptable for programme outputs that overlap with client expectations, they would be unacceptable where the outputs do not provide any measure of client needs fulfillment or problem alleviation. Too much focus on outputs alone could also lead to goal displacement or too little emphasis on the outcomes.

e) Emphasis on indicators and losing sight of goals – Performance indicators are meant to provide information about the status of our performance and not become an obsession in themselves. Rassapan commented that there have been cases where agencies have gone overboard with comprehensive sets of performance indicators and not knowing how to really utilize them.

f) Obsession with outcomes – Agencies sometimes get so caught up with wanting to measure outcomes that they tend to forget or ignore the fact that, it is the processes that lead to the outputs and outcomes. This is especially critical where

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the processes and their outputs are in direct contact with the end-user clients. For example, counter services in the library for books loans or for information retrieval are very much linked with the effectiveness and efficiency aspects of the processes such as timeliness, convenience, user-friendliness, and ease of the processes. Thus, equal attention needs to be given to processes that have a direct link with the outcomes.

g) Compartmentalisation in performance measurement – This is said to be one of the most serious shortcomings in performance measurement efforts. This relates to the lack of integration and a holistic approach to performance management. The common tendency is to look at inputs, outputs, and outcomes in isolation without realizing that they are inter-related. Inputs, while not being critical in themselves, certainly be linked with results, for resources are scarce and should be used prudently to ensure maximum results. The strategic link between resource use (apportionment) and the products and services (outputs) produced through the process, normally should have a direct bearing on the outcomes derived. It thus makes sense to look at all performance components in a logical and systematic manner.

2.10 Summary

This study has gained an insight into what performance measurement means to librarians, the literature that are available, the analysis of the size and characteristics of references found, the types of library-centered and client-centered measures available, the construction of performance indicators, and the obstacles that might occur in the process

of implementing performance measurement of library and information services in academic libraries. A more-in-depth survey is needed in order to ascertain whether or not these information are effective, and for this there must be an initiative to conduct a research.

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CHAPTER THREE

METHODOLOGY

3.1 Introduction

This study has been designed to investigate the performance measurement of information services in an academic library context, in particular at the library of Universiti Tenaga Nasional Malaysia. This study presents the client focus model of perceived satisfaction and possible variables related to performance measurement of information services in libraries. The variables considered here were obtained from the literature review described in Chapter Two.

In sequence, this study will attempt to answer the following research questions:-

1. What is the nature of clients' perceptions with regards to the quality of information services offered by the Library?

2. To what extent do clients perceived the adequacy of the information services provided by UNITEN Library?

3. What are the services perceived as important to clients of the Library?

4. What are the problem areas of information services of the Library perceived by users?

3.2 Factors Related to Service Quality

The client focus model (Figure 3.1) indicates three factors, which are related to client satisfaction of perceived service quality, and the following sub-sections will describe the factors. The SERVPERF approach has been adopted as the instrument for use in this

Frontline Services
- OPAC
- Library website
- Reference service
- Current awareness
- Information search
- Dissemination of information
- User education

Core Services
- Adequacy, availability, and accessibility of materials
- Collection maintenance
- Collection development
- Professional and reliable staff assistance
- Customer feedback request
- Computing facilities
- Photocopiers
- Borrowing services
- Reservation
- Waiting time for services

Client Focus Approach: Perceived Satisfaction on:-
- Services in general
- Service factors deem important
- Problem areas of services

Peripheral Services / Facilities
- Staff personality, and appearance
- Signages
- Opening hours
- Space area
- Leisure reading magazines

Dimensions of Service Quality
- Tangibles
- Reliability
- Responsiveness
- Assurance
- Empathy

Figure 3.1: A Client-Focus Model of Variables Bearing Upon User Perceived Satisfaction With Services and Facilities

study due to time constraints and that SERVPERF is a simpler performance-based measure of service quality which is based essentially on customers' perceptions of provider's actual performance and does not include customers' expectations as required by SERVQUAL (a gap-based comparison of the expectations and performance perceptions of customers).

In sum, 60 statements comprised the tailored set of statements, instead of 22 statements as in Cronin et al.'s seminal study. The tangibles to be evaluated in this study would be the environment, space, security and safety, as mentioned in questions 1 and 10f. These statements direct the respondent to report on the more substantive aspects of the tangibles – their quality. By comparison, the original SERVPERF statements for tangibles appear to refer to more superficial aspects, such as "modern-looking", or having "visually appealing" materials and facilities. Reliability in this study (as in questions 2, 3, 5, 6, 7, 8, 9, 12, 14, 15, 16, 17, 18, 19) would be defined by the availability of reliable resources, facilities and services and by meeting scheduled service commitments. The availability of these factors are crucial determinant of service quality. The assurance dimension (questions 10a-10e in the questionnaire) focuses not only on the counter staff of the service provider, but also on the librarians. While the SERVPERF scale would likely be interpreted to refer to customer contact employees, the adaptation of this study makes explicit that the librarians' competence and attitude are to be evaluated. In library services, responsiveness can be measured by the first contact from the service provider after the customer lodge a request for an urgent matter in the service provider's system. In the final analysis, the total amount of time in getting the feedback is a crucial

determinant of responsiveness by the service provider. As touched upon in questions 20a-20c, these statements are more specific to the typical situation in library services rather than the more general SERVPERF items oriented to "not being too busy" or "giving prompt service". Finally, empathy is included in the adapted scale (as in questions 4, 11, and 13 in the questionnaire) by the service provider's willingness to help users to teach them how to find needed information, identify and retrieve needed resources, informing users of materials requested through reservations and interlibrary loans, and also on operating hours of the library. In the original SERVPERF scheme, "giving individual attention" and "having your best interests at heart" correspond to these items. Again, the SERVPERF items are more general, while the adapted items have a specific focus applicable in the context of service quality in a library setting.

Service quality dimensions as outlined by the instrument will also be described. This is an early exploratory study and therefore will be client-focused in ascertaining their perceived satisfaction with the library services, based on these categories of services / facilities:

a. Frontline services

b. Core services

c. Peripheral services / facilities

These services are inter-related, whereby any subtle changes can greatly enhance or detract from client satisfaction. Furthermore, these services should follow a continuum from frontline services to peripheral services. It is felt that particular attention is needed

at service points where staff and client interacts and where clients' opinions and expectations are formed.

3.2.1 Frontline Services

Frontline services encompass client-centered services, which relates directly to clients of the library. These includes the following services:-

- Online public access catalogue (OPAC)

- Library website

- Reference service

- Current awareness service

- Information search service

- Dissemination of information

- User education.

3.2.2 Core Services

Core services of the library are the library-centered services, which encompass the following services / facilities:-

- Materials adequacy, availability, and accessibility

- Staff assistance, professionalism, and reliability

- Customer feedback request

- Computing facilities

- Collection maintenance

- Collection development

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- Photocopiers facilities

- Borrowing service

- Reservation service

- Waiting time for service

3.2.3 Peripheral Services / Facilities

Peripheral services are components of services which are also vital to clients of the library, and comprises the following:-

- Staff personality, and appearance

- Signages

- Opening hours

- Space area

- Leisure reading magazines

The three factors of service quality as mentioned above can be placed into a simple scenario. In this scenario, the client is perhaps already aware that the library's collection should match her needs and that information she will find in the materials is accurate. So, as she prepares to visit the library, she discovers that it is easy to check that the library will be open at a time that suits her. Upon entering the library, she sees clear directional signs to collections, service points and amenities. Sufficient OPAC computers are available for her to search the library's collection, and the information on the OPAC is displayed clearly. Using accurate information from the OPAC, she then proceeds to find with ease the materials she needs on the shelves. The documents have been re-shelved

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quickly and accurately so they are available when she needs them. There is a study desk readily available, and the library environment (example temperature, ventilation, and lighting) is all adequate to her needs. Her chosen study area is quiet, and she feels comfortable and safe in the library. When she needs to question staff, they are approachable and give her accurate answers. During her visit to the library, she finds that the toilets are clean. Her study needs require use of an Internet-able computer and a photocopier, so she is pleased to find sufficient facilities available and in working order. As she leaves the library, she may well reflect on the way that the library have met her expectations of good service.

3.3 Service Quality Dimensions

A set of five dimensions as identified by Parasuraman et.al (1988) is used to measure the perceptions of clients on service quality. These dimensions are defined as follows:

Tangibles: appearance of physical facilities, equipment, personnel, and communication materials;

Reliability: ability to perform the promised service dependably and accurately;

Responsiveness: willingness to help customers and provide prompt service;

Assurance: knowledge and courtesy of employees and their ability to convey trust and confidence;

Empathy: the caring, individualized attention the organization provides its customers.

Based on the five dimensions, a survey instrument was developed to measure clients' perception of actual services delivered. The SERVPERF instrument helps service

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providers understand client perceptions of services, as well as to identify quality improvements over time and also help to target service elements requiring improvement. A brief description and background to SERVPERF is given in chapter 2, section 2.4 Measurement Instruments.

3.4 Research Design

This section describes the following research design:

Population and sample; Research instrument; Administration of the questionnaire; and Data analysis.

The research methodology was established to achieve the research objectives which is described in Chapter One, and the data collected was used to examine and fulfill the research objectives.

The study used a survey research method to collect data. The questionnaire was selected as the instrument for the investigation. Most of the questions were designed on the Lickert Scale to determine the relative intensity of different items. A scale of five-point from "1 = Strongly Disagree" to "5 = Strongly Agree" was used. A list of sixty items was used, which were developed on the basis of service quality components described in the model in Figure 3.1.

King Research Ltd., (1990) offers four basic rules of questionnaire design:

- Ask only questions which are capable of being answered.

- Ask the minimum of information required (that is, ask what is essential to know, not what would be nice to know).

- Ask only those questions which can be realistically (and truthfully) answered.

- Ask only questions which customers will be prepared to answer.

After framing the research questions and deciding upon the manageable sample, the researcher developed the instrument for gathering data and information relevant to the objectives of this study and this involves:

a. Identifying research objectives.

b. Identifying and preparing a preliminary list of research questions.

c. Selecting the most suitable method for the study.

d. Searching and analyzing the literature on selected performance measurement and library services. Studying the literature from the past 40 years to have an overview of the subject.

e. Searching and analyzing statements on performance measurement of library services.

f. Developing the questionnaire as the survey instrument.

g. Pre-testing the questionnaire.

h. Selecting the sample of respondents using a random sampling method.

i. Coordinating the personnel who are involved in the performing the task.

j. Distributing the questionnaires to respondents in the sample.

k. Collecting the data and checking the data for comprehensibility, reliability, and usability.

l. Analyzing and interpreting the results by coding the responses, tabulating the data and performing appropriate statistical computation.

m. Evaluating and presenting conclusion regarding performance measurement of information services.

The data collected was analyzed quantitatively and reported using appropriate descriptive statistics comprising frequency counts, percentage, average, central tendency, using the Statistical Package for Social Sciences (SPSS) Version 12.0 for Windows.

3.5 Population and Sample

Universiti Tenaga Nasional (UNITEN) comprises two campuses, that is the main campus which is located in Bangi and a branch campus located in Bandar Muadzam Shah, Pahang. This study focuses on the user of UNITEN Library at the Bangi campus. It explores the perception and the perceived satisfaction of UNITEN library users with the general services and facilities provided. The Library has been certified with ISO 9001:2000. Thus, it is very important to conduct performance measurement as a step to improve services and to ensure ongoing progress. This is a preliminary study on the level of client perception towards the Library services and facilities. The study is a stepping stone in the area of performance measurement of library services in UNITEN. It focuses on people who use the Library to find out whether they are satisfied with services they often use.

The sample of respondents was randomly chosen from among the undergraduate and postgraduate students of the University, who visited the Library and were available during the period of data collection. A representative sample of 300 respondents participated in the study which was carried out on the 3rd and the 4th of March 2005. The questionnaires were placed at the Library Circulation Counter, and were distributed by three staff members to students who used the library services between 9.00am and 8.00pm during the two day period.

Before the questionnaire was administered, a pilot survey was conducted by the researcher to find out whether the respondents would find any difficulty in answering the questions. The questionnaire was given to ten randomly selected students who were regular users of the library, with the aim of finding out the reliability and comprehensiveness of the instrument. The researcher's observation and the recommendation of the testing group were considered and revisions were subsequently made and checked by an experienced researcher to determine the validity of the instrument.

3.6 Research Instrument

This study made use of a six-paged questionnaire (Appendix A) as the data collecting instrument. The questionnaire was devised and based upon a modified version of the SERVPERF instrument that requires users to indicate their perceived rating of currently available services and facilities. The model of questionnaire was based on a survey done by Nitecki and Hernon, 2000, with the following differences:-

- This questionnaire uses a modified version of the SERVPERF instrument instead of the actual SERVQUAL instrument. The original version of the SERVPERF instrument comprised 22 standard statements, whereas this questionnaire uses additional and differently worded statements which covers the variables being studied.

- This questionnaire uses 60 statements instead of 40 statements used by Nitecki and Hernon in their survey.

- This questionnaire does not repeat the set of statements as expectation items.

- This questionnaire uses the five-point Lickert scale instead of the seven-point scale, for the convenience of the respondents as well as the researcher.

A cover letter introduced the respondents to the general purpose of the study and stressed the importance of each person's response. The assurance of confidentiality was also indicated in the questionnaire.

The questions were well-structured and was easy for the respondents to answer. Part A of the questionnaire explores delivery perceptions of the users. It was designed to obtain user perception of services and facilities provided by UNITEN Library. Items number one until four contains seven statements regarding the environment, space area, signages and opening hours of the Library. Twelve statements under items number five until seven are about the OPAC. Item number eight comprises eight statements regarding the Library web site. Four statements under item number nine deals with equipments in the Library. Staff personality, professionalism, appearance, and assistance are laid out under items number ten and eleven in ten statements. Ten statements under items number twelve until

sixteen were designed to obtain feedback on the adequacy of Library materials. Items number seventeen and eighteen cover the user education programmes of the Library. Statements on the overall user satisfaction may be found under items number nineteen until twenty-one. Part B of the questionnaire contains statements of the five dimensions of service quality and seeks users' perceptions of the relative importance of each dimension to their evaluation of service quality. Part C of the questionnaire seeks additional demographic information from the respondents. One question under this section requests users to rate four components of the Library services based on a scale of one to ten.

3.7 Administration of the Questionnaire

The questionnaire was administered personally by the researcher with the assistance of three library personnel of the Library Circulation Department. The first semester of the academic calendar 2005/2006 was chosen as the period of the administration of the questionnaire. It was carried out on the 3rd and the 4th of March 2005, through two days at the Library premise. The researcher was personally present to administer the questionnaire, in order to overcome any problems regarding the questionnaire, and to ensure a high return rate.

The questionnaire is essentially self-explanatory as it contains a short introductory explanation regarding the nature and purpose of the study. There was sufficient time for the students to complete the questionnaire. The questionnaire was made simple and as

clear as possible in order to ensure maximum co-operation from the respondents. It was administered without any problem to the satisfaction of the researcher.

The questionnaire was pre-tested by distributing it to 10 respondents. There were no ambiguities in the questions given and the respondents had no difficulty in answering the questions and statements. This preliminary study focused on users who use the library facilities and hence non-users are excluded.

A total of 300 questionnaires were distributed, out of which 274 usable questionnaires were returned, resulting in an overall response rate of approximately 91%.

3.8 Data Analysis

The data collected was coded and fed into the Statistical Package for Social Sciences (Version 12.0 for Windows). This study used descriptive method of analyzing the data. The data were analysed using appropriate statistics including frequency counts, average, percentage, means, standard deviation, and cross tabulations. The responses given under 1 (Strongly Disagree), 2 (Disagree), and 3 (Fairly Agree) were treated as negative responses (Nres*), whereas 4 (Agree) and 5 (Strongly Agree) were treated as positive responses (Pres*). The total positive responses were then matched with a performance scale between 0% to 100%, where:

0% - 20% = Very Poor;

21% - 40% = Poor;

41% - 60% = Average;

61% - 80% = Good;

81% - 100% = Excellent.

The study further grouped the responses according to frontline services, core services, and peripheral services, in order to categorize the individual services into three main groups of services / facilities. This is followed by abstracting from the various tables a 'retained' or master list indicating all statements that achieved overall positive ratings (Pres*) of >50%, followed by a 'factors to improve' list of statements which received positive ratings of (Pres*) of <50%.

This study then ranked the responses on the service dimensions and ratings of the library services by arranging the order of the mean (and standard deviation) from the highest to the lowest values. The final scores were the nearest whole number of the mean values.

3.9 Summary

This chapter has explained the methodology used to conduct the study in detail under the topics of research design, population and sample, the research instrument, administration of the questionnaire, and data analysis.

The data was collected from undergraduate and postgraduate students of UNITEN. The samples were randomly selected. The questionnaires were distributed to 300 students. The questions focuses on clients' perceived satisfaction of the library services. The

questions were arranged in Lickert scale and were simple, structured and easy to understand. In the following chapter, the findings of the data analysis will be presented.

4.1 Introduction

The aim of this study was to investigate the performance measurement of information services in the Universiti Qatiah National Library, Malaysia. A simple population of 414 in users (270 undergraduate, and 11 professional) took part, in order to examine the following research questions:

1. What is the patron of clients' perceptions with regards to the quality of information services offered by the Library?
2. To what extent do clients perceived the quality of the information services provided by UNITEN Library?
3. What are the patron overall service quality as offered of the Library?
4. What are the perception of information services at the Library as perceived by users?

Questionnaires were distributed to the respondents at the Library premises. The sample Probabilities were purposively made for a research and the object selected. Data The data collected were analysed using the Statistical Package for Social Sciences (SPSS) for the research.

CHAPTER FOUR

ANALYSIS OF DATA

4.1 Introduction

The aim of this study was to investigate the performance measurement of information services in the Universiti Tenaga Nasional Library, Malaysia. A sample population of 274 students (250 undergraduates, and 24 postgraduates) were used, in order to examine the following research questions:-

1. What is the nature of clients' perceptions with regards to the quality of information services offered by the Library?

2. To what extent do clients perceived the adequacy of the information services provided by UNITEN Library?

3. What are the services perceived as important to clients of the Library?

4. What are the problem areas of information services of the Library perceived by users?

Questionnaires were distributed to 300 respondents in the Library premise. 274 usable questionnaires were returned, resulting in an overall response rate of approximately 91%. The data obtained were analysed using the Statistical Package for Social Sciences (Version 12.0 for Windows).

This chapter presents the results of the study according to the following sections:-

    a.   Distribution of respondents, and the frequency of library use.

    b.   Delivery perceptions of the respondents on the information services:-

        -   Environment, space area, signages and opening hours of the library.

        -   Online public access catalogue (OPAC) service.

        -   Library website.

        -   Equipments in the library.

        -   Staff personality, professionalism, appearance, and assistance.

        -   Adequacy of library materials.

        -   User education programmes.

        -   Overall user satisfaction.

    c.   The performance of frontline services.

    d.   The performance of core services.

    e.   The performance of peripheral services.

    f.   Performance factors to maintain.

    g.   Performance factors to improve.

    h.   Percent allocation of the service dimensions.

    i.   Rating of the library services.

    j.   Other recommendations.

4.2 Distribution of Respondents, and Frequency of Library Use.

Figure 4.1 shows the distribution of the respondents according to user category for the sample of 274 students.

Figure 4.1 Distribution of the Respondents (n=274)
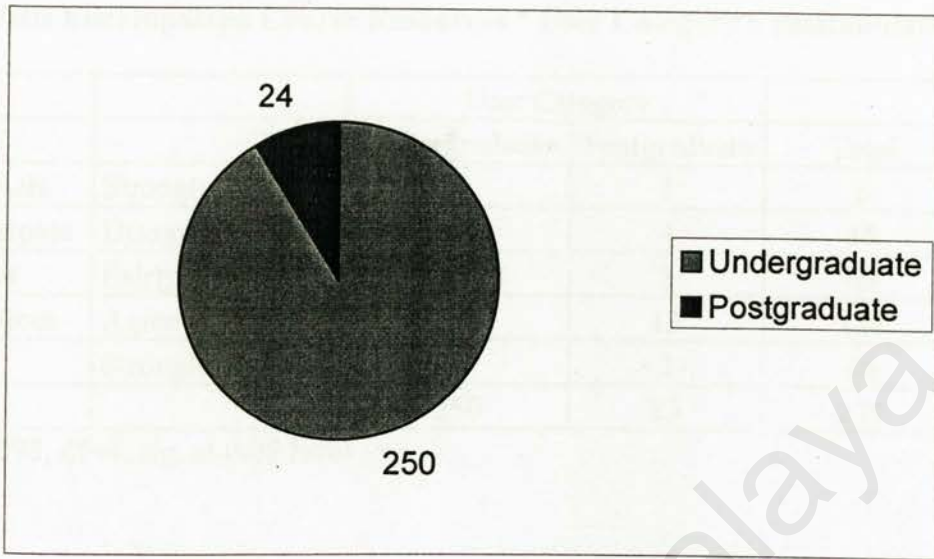
Undergraduates comprise 250 (91.2%), while postgraduates comprise 24 (8.8%) of the total sample.

Analysis of the user category against the variables used in this study indicated that there are significant differences (χ^2=9.993, df=4, p<0.05) between the perceptions of the undergraduates and the postgraduates on the library resources meeting their course/ curriculum research needs (Table 4.1). The undergraduates seem to be more agreeable or satisfied with this statement than the postgraduate students. There is very significant difference (p<0.01) in the frequency of library use with more undergraduates frequenting the library than the postgraduates (Table 4.2).

Table 4.1: User Category in Relation to Library Materials Encompassed Course Resources

Materials Encompassed Course Resources * User Category Crosstabulation

		User Category		
		Undergraduate	Postgraduate	Total
Materials	Strongly Disagree	4	1	5
Encompass	Disagree	11	4	15
Course	Fairly Agree	66	3	69
Resources	Agree	125	13	138
	Strongly Agree	44	2	46
Total		250	23	273

χ^2=9.993, df=4, sig. at 0.05 level

Table 4.2: User Category in Relation to Frequency of Library Use

		User Category		
		Undergraduate	Postgraduate	Total
Frequency of	Infrequent	32	9	41
Library Use	Frequent	165	12	177
	Very Frequent	53	3	56
Total		250	24	274

χ^2=10.607, df=2, sig. at 0.005

Figure 4.2 shows that 27 (9.9%) of the respondents use the library more than once in a day, 29 (10.6%) characterize their library use as once a day, 123 (44.9%) indicated their use was between 2 and 5 times a week, 54 (19.7%) claimed their use as once a week, and 31 (11.3%) marked as less than once a week. A small proportion (3.6%) of the respondents answered as 'Others' stated that they use the library only during the examination period.

Figure 4.2: Frequency of Library Use (n=274)
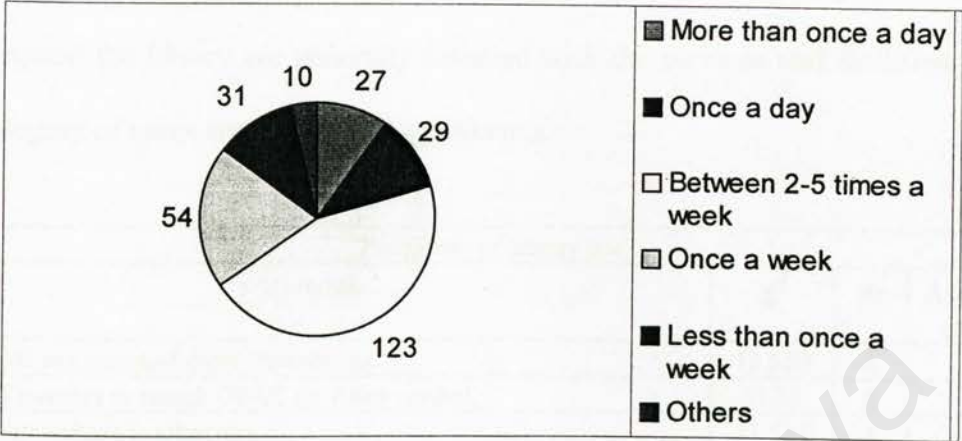
The results indicate that the majority (65%) of the respondents are frequent users of the library making at least once or more visits to the library on a weekly basis. As such it is assumed that their perception on the library facilities and services would presumably reflect those who actively make use of the library.

Cross-tabulations between the frequency of library use against the dependent variables used in this study indicate that there are significant relationships (p<0.05) between the frequency of library use and the statements on the OPAC as having an easy-to-follow instructions (χ^2=18.869, df=8, asymp. sig.=.016), users spend roughly about 3 minutes to search for needed items (χ^2=17.320, df=8, asymp. sig.=.027), the library website is attractive (χ^2=21.531, df=8, asymp. sig.=.006), the library website enables interaction with the library staff (χ^2=16.215, df=8, asymp. sig.=.039), the library staff members are courteous and polite (χ^2=17.352, df=8, asymp..sig.=.027), the library materials encompasses course/curriculum-supporting resources (χ^2=19.326, df=8, asymp.

sig.=.013), users are always informed of the status of items requested through interlibrary loan (χ^2=21.892, df=8, asymp.sig.=.005), and the users are generally satisfied with the service hours of the library (χ^2=16.561, df=8, asymp.sig.=.035). These indicate that those who frequent the library are generally satisfied with the services and facilities provided. This category of users are mainly undergraduates.

Frequency of library use			
Variable	χ^2	df	Asymp. Sig. (2 Sided)
The OPAC has easy-to-follow instructions.	18.869	8	0.016
I spend 3 minutes to search OPAC for items needed.	17.32	8	0.027
The library website is attractive.	21.531	8	0.006
The library website enables me to interact with the library staff.	16.215	8	0.039
The staff are courteous and polite.	17.352	8	0.027
Library materials encompassed course/curriculum supporting resources.	19.326	8	0.013
I am informed of the status of items requested through interlibrary loan.	21.892	8	0.005
I am satisfied with the service hours.	16.561	8	0.035

4.3 Delivery Perceptions of the Respondents on the Information Services

This section is analysed under eight subsections, as mentioned in the research instrument of chapter three.

4.3.1: Environment, Space Area, Signages, and Opening Hours of the Library

Table 4.3 shows the responses received for seven statements on the environment, space area, signages, and opening hours of the library. The responses given under 1 (Strongly Disagree), 2 (Disagree), and 3 (Fairly Agree) were treated as negative responses (Nres*), whereas 4 (Agree) and 5 (Strongly Agree) were treated as positive responses (Pres*).

Table 4.3: Responses on the Environment, Space Area, Signages, and Opening Hours of the Library (n=274)

Ra*	Statement	Agree		Strongly Agree		Pres*	Nres*	Rating
	Environment, space area, ...	F	%	F	%	%	%	
1	The library is a spacious and comfortable place.	95	35.3	144	53.5	88.8	11.2	Excellent
2	I always find a place to sit in the library.	92	33.6	127	46.4	80.0	20.0	Good
3	The library is a quiet place.	115	44.4	88	34.0	78.4	21.6	Good
4	The library is a secure and safe place.	109	42.1	90	34.7	76.8	23.2	Good
5	The library is comfortable and situated at an inviting location.	107	41.5	80	31.0	72.5	27.5	Good
6	Directional signs are clear and helpful.	111	40.5	58	21.2	61.7	38.3	Good
7	It is easy to find out, in advance, the library opening hours.	101	37.1	56	20.6	57.7	42.3	Average

Ra*=Rank   Pres*=Positive Responses   Nres*=Negative Responses

The total positive responses were then matched with a performance scale between 0% to 100%, where:

0% - 20% = Very Poor;

21% - 40% = Poor;

41% - 60% = Average;

61% - 80% = Good;

81% - 100% = Excellent.

As indicated in Table 4.3, all the statements were rated positively by the respondents. The variables that are rated as 'good' and 'excellent' (above 61%) are, the library is spacious and comfortable; it provides sufficient place to sit; it's quiet; it is secure and safe; it is situated at an inviting location; it has clear and helpful directional signs.

There is a need to evaluate current information made available to users about the library's opening hours, since it received only average rating.

4.3.2: Online Public Access Catalogue (OPAC) Services

Table 4.4 presents the statements and responses of the respondents on the OPAC services in ranked order. Based on the total performance score and total positive scores (Pres*), the results about the OPAC features are less encouraging as only 3 OPAC features such as the location of item, display of item list, and information are clear and easy to read (rank 1-3), are rated as good. The respondents rated 'average' on features such as the OPAC shows the copies available, has easy-to-follow instructions, allows the users to renew borrowed items, indicates if copies are available on the shelves, provides an accurate source of information about all materials available in the library, enables users to find books they need, and allows them to reserve items online (rank 4-10). The respondents do not agree that the OPAC are easily accessible from outside the library building and users indicate that it takes them more than 3 minutes to search for items they need (rank 12).

The last two features need to be corrected. The accessibility of the library systems from outside and response rate needed to be further investigated, in order to solve accessibility problems off campus.

Table 4.4: Responses on the OPAC Services (n=274)

Ra*	Statement OPAC ...	Agree		Strongly Agree		Pres*	Nres*	Rating
		F	%	F	%	%	%	
1	The OPAC indicates the location of item.	104	39.2	62	23.4	62.6	37.4	Good
2	The OPAC has a well display item list.	114	42.7	49	18.4	61.1	38.9	Good
3	The OPAC displays information that is clear and easy to understand.	120	44.6	44	16.4	61.0	39.0	Good
4	The OPAC indicates the number of copies available.	121	45.3	41	15.4	60.7	39.3	Average
5	The OPAC has easy-to-follow instructions.	121	45.0	42	15.6	60.6	39.4	Average
6	The OPAC allows me to renew borrowed items	100	38.0	54	20.5	58.5	41.5	Average
7	The OPAC tells me if copies are available on the shelves.	112	41.9	43	16.1	58.0	42.0	Average
8	The OPAC is an accurate source of information about all materials held by the library.	109	41.0	42	15.8	56.8	43.2	Average
9	I often use the OPAC to find books I need.	64	23.7	59	21.9	45.6	54.4	Average
10	The OPAC allows me to reserve items online.	90	34.1	30	11.4	45.5	54.5	Average
11	The OPAC is easily accessible from outside the library building.	77	29.1	32	12.1	41.2	58.8	Average
12	I spend roughly about 3 minutes to search for items I need.	64	23.7	33	12.2	35.9	64.1	Poor

Ra*=Rank   Pres*=Positive Responses   Nres*=Negative Responses

4.3.3: Library Website

The perception of the respondents on the library website is illustrated in Table 4.5. The responses on the features of the library website is less positive and should be a case for concern. Based on the total positive responses (Pres*) and using the performance score, 6 out of the 8 items received only average rating (41%-60%). None of the website features were rated as good. Features that need to be given closer attention are interactivity on online requests. Users feel the lack of interactivity features such as one that allows them to query library staff. There is also the lack of online request forms.

There is a need for the library management therefore to consider improving on the overall website features to achieve at least half of the features a score of 61% agreement (good).

Table 4.5: Responses on the Library Website (n=274)

Ra*	Statement	Agree		Strongly Agree		Pres*	Nres*	Rating
	The library website ...	F	%	F	%	%	%	
1	The library website enables me to log on easily.	106	39.8	38	14.3	54.1	45.9	Average
2	The library website enables me to log on whenever I want.	105	39.6	35	13.2	52.8	47.2	Average
3	The library website enables me to access a variety of electronic resources.	109	40.7	24	9.0	49.7	50.3	Average
4	The library website has a good layout.	96	36.1	32	12.0	48.1	51.9	Average
5	The library website is easy to navigate.	100	37.2	29	10.8	48.0	52.0	Average
6	The library website is attractive.	85	31.4	34	12.5	43.9	56.1	Average
7	The library website enables me to interact with the library staff.	78	29.2	26	9.7	38.9	61.1	Poor
8	The library website includes online request forms	72	28.5	21	8.3	36.8	63.2	Poor

Ra*=Rank   Pres*=Positive Responses   Nres*=Negative Responses

4.3.4: Equipments in the Library

Table 4.6 presents the opinion of the respondents on the equipments in the library. The total positive ratings (Pres*) indicated only average ratings for 3 of the 4 features listed. Over 50% of the respondents indicated that the photocopiers, the computer workstations, and the computers for the online catalogue use are in good working order and are available whenever needed. About 60% of the respondents are not satisfied with the working order of computer printers in the library when they need to use them.

The ratings therefore indicate attention needs to be given to improve facilities and services in these areas in order to achieve above 61% agreement (good) from users.

Table 4.6: Responses on the Equipments in the Library (n=274)

Ra*	Statement Equipments in the library …	Agree		Strongly Agree		Pres*	Nres*	Rating
		F	%	F	%	%	%	
1	Photocopiers are in good working order and are available when I need them.	104	38.8	57	21.3	60.1	39.9	Average
2	Computer workstations are in good working order and are available when I need them.	89	33.0	54	20.0	53.0	47.0	Average
3	Computers dedicated only for online catalog use are in good working order and are available when I need them.	100	37.0	42	15.6	52.6	47.4	Average
4	Computer printers are in good working order and are available when I need them.	77	29.3	26	9.9	39.2	60.8	Poor

Ra*=Rank   Pres*=Positive Responses   Nres*=Negative Responses

4.3.5: Staff Personality, Professionalism, Appearance, and Assistance

The description of the library staff on their personality, professionalism, appearance, and assistance is shown in Table 4.7. Based on the performance score of 0%-100% and total positive responses (Pres*), there is very high agreement on the neatness of library staff appearance to users. There was also agreement on items (2) to (7) out of the 10 statements listed. An above 61% agreement (good) was indicated on staff availability, approachability, friendliness, courteousness and professionalism in handling user enquiries. Between 46%-50% of users felt that the staff need to help them more in retrieving resources they need, and to help them identify relevant resources or help them learn how to find information.

The results imply that users need individual attention in identifying and learning how to find information and perhaps these issues could be looked into specifically by the user education programmes.

Table 4.7: Responses on the Staff Personality, Professionalism, Appearance and Assistance (n=274)

Ra*	Statement The library staff ...	Agree		Strongly Agree		Pres*	Nres*	Rating
		F	%	F	%	%	%	
1	The library staff are neat in appearance.	105	38.7	94	34.7	73.4	26.6	Good
2	The library staff are available when I need them.	130	47.4	59	21.5	68.9	31.1	Good
3	The library staff are approachable and welcoming	117	42.9	61	22.3	65.2	34.8	Good
4	The library staff are friendly and easy to talk to.	111	40.7	61	22.3	63.0	37.0	Good
5	The library staff are professional in finding general information.	115	42.3	55	20.2	62.5	37.5	Good
6	The library staff are courteous and polite.	105	38.6	64	23.5	62.1	37.9	Good
7	The library staff are professional in finding information related to my subject discipline.	109	40.1	57	21.0	61.1	38.9	Good
8	The library staff help me retrieve resources I need	103	37.7	42	15.4	53.1	46.9	Average
9	The library staff help me identify resources I need	98	35.9	42	15.4	51.3	48.7	Average
10	The library staff help me to learn how to find information.	91	33.2	45	16.4	49.6	50.4	Average

Ra*=Rank   Pres*=Positive Responses   Nres*=Negative Responses

4.3.6 Adequacy of the Library Materials

Table 4.8 shows the responses received for the statements on the adequacy of the library materials. The table indicate that 67.3% of the respondents agree that the library materials encompassed course/curriculum supporting resources. The respondents also support the statements on the materials being properly shelved (63.8%), meet their assignment/research needs (63.7%), and encompass leisure reading magazine (61.7%). Using the performance score, (Pres*) all the above features were categorized as 'good'. 'Average' scores were given to statements relating to the re-shelving of materials (58.1%), ease of locating materials in the library building (57.8%), finding the new books displays helpful (54.9%), and ease of browsing print collections (52.0%). When request for materials were made, they were informed of the status of items on reservation (51.3%), but only 43.3% were informed for items requested through interlibrary loans.

The results indicate the need to improve the library's communication to users regarding reservations and interlibrary loan requests.

Table 4.8: Responses on the Adequacy of the Library Materials (n=274)

Ra*	Statement Adequacy of library materials …	Agree		Strongly Agree		Pres*	Nres*	Rating
		F	%	F	%	%	%	
1	Library materials encompass course/curriculum supporting resources.	138	50.5	46	16.8	67.3	32.7	Good
2	Materials are properly arranged on the shelves.	110	40.1	65	23.7	63.8	36.2	Good
3	Library materials meet my assignment/research needs.	121	44.3	53	19.4	63.7	36.3	Good
4	Library materials encompass leisure reading magazine.	120	44.1	48	17.6	61.7	38.3	Good
5	Materials are re-shelved promptly.	99	36.4	59	21.7	58.1	41.9	Average
6	It is easy to find where materials are located in the building.	106	39.3	50	18.5	57.8	42.2	Average
7	I find that the new books displays in the library are helpful.	100	36.6	50	18.3	54.9	45.1	Average
8	It is easy to browse print collections.	107	39.5	34	12.5	52.0	48.0	Average
9	When I request materials, I am always informed of the status of items for reservation of items.	115	42.4	24	8.9	51.3	48.7	Average
10	When I request materials, I am always informed of the status of items through interlibrary loan.	83	30.7	34	12.6	43.3	56.7	Average

Ra*=Rank   Pres*=Positive Responses   Nres*=Negative Responses

4.3.7 User Education Programmes

Table 4.9 describes the results for the received responses for the statements on the user education programmes of the library. The two statements in Table 4.9 were not rated positively by the respondents. Over 50% of the respondents disagree to the statements that the Library provide effective or relevant orientation programmes and information skills programme for them. Using the performance score (Pres*) the present Library education programmes is perceived by users as 'average'.

Table 4.9: Responses on the User Education Programmes (n=274)

Ra*	Statement	Agree		Strongly Agree		Pres*	Nres*	Rating
	User education programmes ...	F	%	F	%	%	%	
1	Librarians provide orientation programmes which enable me to make more effective use of library materials and services.	83	30.5	52	19.1	49.6	50.4	Average
2	The library conducts information skills programmes relevant to my course needs.	94	34.4	36	13.2	47.6	52.4	Average

Ra*=Rank   Pres*=Positive Responses   Nres*=Negative Responses

4.3.8 Overall User Satisfaction

Table 4.10 illustrates the analysis for the overall user satisfaction on the services provided

by the library.

Table 4.10: Responses on the Overall User Satisfaction (n=274)

Ra*	Statement	Agree		Strongly Agree		Pres*	Nres*	Rating
	Overall user satisfaction ...	F	%	F	%	%	%	
1	I am generally satisfied with the services provided by the library.	125	45.8	81	29.7	75.7	24.3	Good
2	I do not have to wait more than three minutes when I borrow materials.	101	37.0	89	32.6	69.6	30.4	Good
3	I do not have to wait more than three minutes for attention when I seek assistance at the information desk.	110	40.3	61	22.3	62.6	37.4	Good
4	I am generally satisfied with the answers given by the library staff.	109	40.2	54	19.9	60.1	39.9	Average
5	I always manage to find the information I need from the library.	105	38.3	58	21.2	59.5	40.5	Average
6	I am generally satisfied with the service hours of the library.	87	32.1	54	19.9	52.0	48.0	Average
7	I do not have to wait more than three minutes when I phone the library for information.	71	26.6	51	19.1	45.7	54.3	Average

Ra*=Rank   Pres*=Positive Responses   Nres*=Negative Responses

Based on the total positive ratings (Pres*) and matching it with the performance score,

three of the statements were rated as 'good' (>61%). Users were generally satisfied with

the library service, found it fast to borrow materials and obtained quick response at the reference desk. The rest of the 4 out of 7 statements scored the performance rating of only 'average' (41%-60%). This indicate that users were fairly satisfied with answers given by the library staff. However, 40% of the respondents did not find the information they need from the Library, nearly 50% were not satisfied with the service hours of the Library and more than 50% waited more than 3 minutes when phoning the Library for information. These last three situations, therefore need to be addressed by the Library.

4.4 The Performance of Frontline Services

Responses for the fifty-seven statements used in the questionnaire were then grouped under three main categories, that is the frontline services, the core services, and the peripheral services.

Table 4.11 presents the statements and responses of respondents in the sample on the performance of frontline services of the library. Out of the fifty-seven statements, twenty four statements represent the frontline services.

According to Table 4.11, twelve statements were rated positively, while the other twelve statements were negatively rated. Over 50% of the respondents agree that the OPAC indicate the location of items, has a well display item list, displays information that are clear and easy to understand, indicates the number of copies available, has easy-to-follow instruction, allows online renewal, indicates if copies are available on the shelves, and is an accurate source of information. These respondents also agreed that they manage to

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find needed information, the new books displays are helpful, the library website enables them to log on easily and whenever they want.

Table 4.11: Responses on Frontline Services (n=274)

Ra*	Statements	Agree		Strongly Agree		Pres*	Nres*	Rating
	Frontline Services	F	%	F	%	%	%	
1	OPAC indicates location of item.	104	39.2	62	23.4	62.6	37.4	Good
2	OPAC has a well display item list.	114	42.7	49	18.4	61.1	38.9	Good
3	OPAC displays information that is clear and easy to understand.	120	44.6	44	16.4	61.0	39.0	Good
4	OPAC indicates the number of copies available.	121	45.3	41	15.4	60.7	39.3	Average
5	OPAC has easy-to-follow instruction.	121	45.0	42	15.6	60.6	39.4	Average
6	I always manage to find the information I need.	105	38.3	58	21.2	59.5	40.5	Average
7	OPAC allows me to renew borrowed items.	100	38.0	54	20.5	58.5	41.5	Average
8	OPAC tells if copies are available on the shelves.	112	41.9	43	16.1	58.0	42.0	Average
9	OPAC is an accurate source of information about all materials held by the library.	109	41.0	42	15.8	56.8	43.2	Average
10	I find that the new books displays in the library are helpful.	100	36.6	50	18.3	54.9	45.1	Average
11	The library website enables me to log on easily.	106	39.8	38	14.3	54.1	45.9	Average
12	The library website enables me to log on whenever I want.	105	39.6	35	13.2	52.8	47.2	Average
13	The library website enables me to access a variety of electronic resources.	109	40.7	24	9.0	49.7	50.3	Average
14	Librarians provide orientation programme which enable me to make more effective use of library materials and services.	83	30.5	52	19.1	49.6	50.4	Average
15	The library website has a good layout.	96	36.1	32	12.0	48.1	51.9	Average
16	The library website is easy to navigate.	100	37.2	29	10.8	48.0	52.0	Average
17	The library conducts information skills programmes relevant to my course needs.	94	34.4	36	13.2	47.6	52.4	Average
18	I often use the OPAC to find books I need.	64	23.7	59	21.9	45.6	54.4	Average
19	OPAC allows me to reserve items online.	90	34.1	30	11.4	45.5	54.5	Average
20	The library website is attractive.	85	31.4	34	12.5	43.9	56.1	Average
21	OPAC is easily accessible from outside the library building.	77	29.1	32	12.1	41.2	58.8	Average
22	The library website enables me to interact with the library staff.	78	29.2	26	9.7	38.9	61.1	Poor
23	The library website includes online request forms	72	28.5	21	8.3	36.8	63.2	Poor
24	I spend roughly about 3 minutes to search the OPAC for items I need.	64	23.7	33	12.2	35.9	64.1	Poor

Ra*=Rank   Pres*=Positive Responses   Nres*=Negative Responses

Over 50% of the respondents disagree (<50%) to the statements that the library website enables them to access a variety of electronic resources, has a good layout, easy to

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navigate, attractive, enables them to interact with the library staff, or includes online request forms. They also disagree that the library orientation programmes and information skills programmes are effective, or using the OPAC help them to find books needed, or make online reservation, or that it is easily accessible from outside the library building. They spend more than three minutes to search the OPAC for items they need.

Using the performance score of total positive ratings (Pres*), the statements were grouped into 3 categories; statement 1 to 3 are 'good'; 4-21 scored as 'average', while statements 22-24 are categorized as 'poor'. The responses indicate that for frontline services the average percentage score is indicating 'average' performance score. The overall percentage score of positive responses for the 24 statements is 51.3%. When compared with the performance score of total positive ratings (Pres*), this is equivalent to 'average' performance score. Thus, it highlights the fact that the Library management areas of frontline services need attention.

4.5 The Performance of Core Services

Table 4.12 displays the statements and responses of respondents on the performance of core services of the library. Twenty statements represent the core services of the library.

Table 4.12 indicate that sixteen statements were rated positively. Over 50% of the respondents agree that they do not have to wait more than three minutes to borrow materials, or seek for assistance at the information desk. Library materials encompass their course/curriculum supporting resources, are properly arranged on the shelves, meet

their assignment/research needs, re-shelved promptly, and easily located in the library building. The library staff are found to be professional in finding general information and information related to subject discipline, helped to retrieve needed resources, and helped to identify needed resources. Equipments such as photocopiers, computer workstations, and computers dedicated for OPAC use were in good working condition and were available when needed. Respondents prefer print collections and felt it to be easy to browse through them. In addition, when they request for materials on reservation, they were always informed of the status.

Four statements were negatively rated. Over 50% of the respondents were dissatisfied with the level of staff help received in learning and finding information. They have to wait more than three minutes for information via the phone when contacting the library or when requesting materials through the interlibrary loan. The computer printers were also not in good working order and not available when needed.

Matching the total positive ratings (Pres*) to the performance score indicated 3 groups of statements. Items 1-7 achieved a rating of 'good'; items 8-19 are 'average'; and item 20 is rated as 'poor'. The overall percentage score of positive responses for the 20 statements is 55.9%. This is equivalent to 'average' performance. The results clearly indicate the problem areas which need to be tackled by the library.

Table 4.12: Responses on Core Services (n=274)

Ra*	Statements	Agree		Strongly Agree		Pres*	Nres*	Rating
	Core Services	F	%	F	%	%	%	
1	I do not have to wait more than 3 minutes when I borrow materials.	101	37.0	89	32.6	69.6	30.4	Good
2	Library materials encompass course/ curriculum supporting resources.	138	50.5	46	16.8	67.3	32.7	Good
3	Materials are properly arranged on the shelves.	110	40.1	65	23.7	63.8	36.2	Good
4	Library materials meet my assignment/ research needs.	121	44.3	53	19.4	63.7	36.3	Good
5	I do not have to wait more than 3 minutes when I seek assistance at the information desk.	110	40.3	61	22.3	62.6	37.4	Good
6	The library staff are professional in finding general information.	115	42.3	55	20.2	62.5	37.5	Good
7	The library staff are professional in finding information related to my subject discipline.	109	40.1	57	21.0	61.1	38.9	Good
8	Photocopiers are in good working order and is available when I need it.	104	38.8	57	21.3	60.1	39.9	Average
9	Materials are re-shelved promptly.	99	36.4	59	21.7	58.1	41.9	Average
10	It is easy to find where materials are located in the building.	106	39.3	50	18.5	57.8	42.2	Average
11	The library staff help me to retrieve resources I need.	103	37.7	42	15.4	53.1	46.9	Average
12	Computer workstations are in good working order and is available when I need it.	89	33.0	54	20.0	53.0	47.0	Average
13	Computers dedicated for OPAC use are in good working order and is available when I need it.	100	37.0	42	15.6	52.6	47.4	Average
14	It is easy to browse print collections.	107	39.5	34	12.5	52.0	48.0	Average
15	When I request materials, I am always informed of the status of reservation items.	115	42.4	24	8.9	51.3	48.7	Average
16	The library staff help me to identify resources I need.	98	35.9	42	15.4	51.3	48.7	Average
17	The library staff help me to learn how to find information.	91	33.2	45	16.4	49.6	50.4	Average
18	I do not have to wait more than 3 minutes when I phone the library for information.	71	26.6	51	19.1	45.7	54.3	Average
19	When I request materials, I am always informed of the status of interlibrary loans items	83	30.7	34	12.6	43.3	56.7	Average
20	Computer printers are in good working order and is available when I need it.	77	29.3	26	9.9	39.2	60.8	Poor

Ra*=Rank   Pres*=Positive Responses   Nres*=Negative Responses

4.6 The Performance of Peripheral Services

Table 4.13 presents the statements and responses of respondents in the sample on the performance of peripheral services of the library. Thirteen statements represent the

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peripheral services of the library. According to Table 4.13, all the statements were rated positively by the respondents. Respondents agree that the library is spacious and comfortable, quiet, secure and safe, and is situated at an inviting location. They could easily find a place to sit, and could find out in advance the library opening hours. Directional signs were clear and helpful, and library materials encompassed leisure reading magazines. The library staff were neat in appearance, available when needed, approachable and welcoming, friendly, courteous and polite.

Table 4.13: Responses on Peripheral Services (n=274)

Ra*	Statements	Agree		Strongly Agree		Pres*	Nres*	Rating
	Peripheral Services	F	%	F	%	%	%	
1	The library is a spacious and comfortable place.	95	35.3	144	53.5	88.8	11.2	Excellent
2	I always find a place to sit in the library.	92	33.6	127	46.4	80.0	20.0	Good
3	The library is a space that facilitates quiet.	115	44.4	88	34.0	78.4	21.6	Good
4	The library is a secure and safe place.	109	42.1	90	34.7	76.8	23.2	Good
5	The library staff are neat in appearance.	105	38.7	94	34.7	73.4	26.6	Good
6	The library is comfortable and situated at an inviting location.	107	41.5	80	31.0	72.5	27.5	Good
7	The library staff are available when I need them.	130	47.4	59	21.5	68.9	31.1	Good
8	The library staff are approachable and welcoming	117	42.9	61	22.3	65.2	34.8	Good
9	The library staff are friendly and easy to talk to.	111	40.7	61	22.3	63.0	37.0	Good
10	The library staff are courteous and polite.	105	38.6	64	23.5	62.1	37.9	Good
11	Directional signs are clear and helpful.	111	40.5	58	21.2	61.7	38.3	Good
12	Library materials encompass leisure magazine	120	44.1	48	17.6	61.7	38.3	Good
13	It is easy to find out in advance, the library opening hours.	101	37.1	56	20.6	57.7	42.3	Average

Ra*=Rank   Pres*=Positive Responses   Nres*=Negative Responses

Comparing the total positive ratings (Pres*) to the performance, indicated three groups of performance ratings. Items 1 was 'excellent'; item 2-12 were 'good' and item 13 was only 'average'. The overall percentage score of positive responses for the 13 statements is 70.0%. This is equivalent to 'good' performance score.

4.7 Performance Factors to Maintain

Table 4.14 summarises the service factors which UNITEN should retain and which received total positive score of 61% and above. Out of the fifty-seven statements used to evaluate the frontline, core, and peripheral services of the library, twenty-two statements are identified as good and important factors to retain. Most of the statements are related to the physical build and infrastructure of the library and its staff.

Table 4.14: Factors to Retain – Maintain High Performance

Ra*	Statements	Pres*
	Frontline Services	
1	OPAC indicates the location of item.	62.6
2	OPAC has a well display item list.	61.1
3	OPAC displays information that is clear and easy to understand.	61.0
	Core Services	
1	I do not have to wait more than 3 minutes when I borrow materials.	69.6
2	Library materials encompass course/curriculum supporting resources.	67.3
3	Materials are properly arranged on the shelves.	63.8
4	Library materials meet my assignment/research needs.	63.7
5	I do not have to wait more than 3 minutes when I seek assistance at the info. desk.	62.6
6	The library staff are professional in finding general information.	62.5
7	The library staff are professional in finding information related to subject discipline.	61.1
	Peripheral Services	
1	The library is a spacious and comfortable place.	88.8
2	I always find a place to sit in the library.	80.0
3	The library is a space that facilitates quiet.	78.4
4	The library is a secure and safe place.	76.8
5	The library staff are neat in appearance.	73.4
6	The library is comfortable and situated at an inviting location.	72.5
7	The library staff are available when I need them.	68.9
8	The library staff are approachable and welcoming.	65.2
9	The library staff are friendly and easy to talk to.	63.0
10	The library staff are courteous and polite.	62.1
11	Directional signs are clear and helpful.	61.7
12	Library materials encompass leisure magazine	61.7

Ra*=Rank   Pres*=Positive Responses

4.8 Performance Factors to Improve

Table 4.15 summarises the service factors that UNITEN should improve (Pres* of 60%

Table 4.15: Factors to Improve

Ra*	Statements	Pres*(%)
	Frontline Services	
1	OPAC indicates the number of copies available.	60.7
2	OPAC has easy-to-follow instruction.	60.6
3	I always manage to find the information I need.	59.5
4	OPAC allows me to renew borrowed items.	58.5
5	OPAC tells if copies are available on the shelves.	58.0
6	OPAC is an accurate source of information about all materials held by the library.	56.8
7	I find that the new books displays in the library are helpful.	54.9
8	The library website enables me to log on easily.	54.1
9	The library website enables me to log on whenever I want.	52.8
10	The library website enables me to access a variety of electronic resources.	49.7
11	Librarians provide orientation programme which enable me to make more effective use of library materials and services.	49.6
12	The library website has a good layout.	48.1
13	The library website is easy to navigate.	48.0
14	The library conducts information skills programmes relevant to my course.	47.6
15	I often use the OPAC to find books I need.	45.6
16	OPAC allows me to reserve items online.	45.5
17	The library website is attractive.	43.9
18	OPAC is easily accessible from outside the library building.	41.2
19	The library website enables me to interact with the library staff.	38.9
20	The library website includes online request forms.	36.8
21	I spend roughly about 3 minutes to search the OPAC for items I need.	35.9
	Core Services	
1	Photocopiers are in good working order and is available when I need it.	60.1
2	Materials are re-shelved promptly.	58.1
3	It is easy to find where materials are located in the building.	57.8
4	The library staff help me to retrieve resources I need.	53.1
5	Computer workstations are in good working order and is available when I need it.	53.0
6	Computers dedicated for OPAC use are in good working order and is available.	52.6
7	It is easy to browse print collections.	52.0
8	When I request materials, I am always informed of the status of reservation items.	51.3
9	The library staff help me to identify resources I need.	51.3
10	The library staff help me to learn how to find information.	49.6
11	I do not have to wait more than 3 minutes when I phone the library for information	45.7
12	When I request materials, I am always informed of the status of interlibrary loan item.	43.3
13	Computer printers are in good working order and is available when I need it.	39.2
	Peripheral Services	
1	It is easy to find out in advance, the library opening hours.	57.7

Ra*=Rank   Pres*=Positive Responses

and below). Thirty-five statements are identified as important factors to be improved by UNITEN Library. Most of the situations that need attention relates to the Library website and OPAC.

4.9 Percent Allocation of the Service Dimensions.

Section B of the questionnaire lists the five dimensions applicable to libraries and the services they offer. The researcher queried respondents about the importance of each dimension to them when they evaluate the quality of library service. Respondents were asked to allocate 100 points among the five dimensions according to how important each one was to them.

The set of five dimensions which have been consistently ranked by readers to be most important for service quality are defined as follows:-

Tangibles: the appearance of the library's physical facilities, equipment, staff, and communication materials (relates to questions 1 and 10f in the questionnaire).

Reliability: the library's ability to perform promised services dependably and accurately (relates to questions 2, 3, 5, 6, 7, 8, 9, 12, 14, 15, 16, 17, 18, and 19 in the questionnaire).

Responsiveness: the library's willingness to help readers and provide prompt services (relates to question 20 in the questionnaire).

Assurance: the knowledge and courtesy of the library staff and their ability to inspire trust and confidence (relates to questions 10a –10e in the questionnaire).

Empathy: the caring, individualized attention the library provides to its readers (relates to questions 4, 11, and 13 in the questionnaire).

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The purpose of this analysis is to measure clients' perceptions of the services, to identify quality improvements over time, and to target service elements requiring improvement.

Table 4.16 displays the results. Interestingly, "tangibles" received the largest percentage allocation and "empathy" the least.

Table 4.16: Perception of Service Dimensions

Dimension	Percent Allocation of 100 Points	Mean (Standard Deviation)	Number
Tangibles	23	23.41 (10.87)	273
Reliability	20	19.67 (6.39)	273
Responsiveness	19	19.15 (5.56)	274
Assurance	19	19.06 (6.61)	274
Empathy	19	18.85 (6.65)	273

4.10 Rating of the Library Services

In section C of the questionnaire, the respondents were asked to rate, on a 10-point scale on four components of the current library services. Table 4.17 displays the results.

Table 4.17: Rating of the Library Services

Components	Rating on 10-Point Scale	Mean (Standard Deviation)	Number
Current Readers Services	7	6.78 (2.15)	274
Current Materials Adequacy	7	6.84 (2.01)	274
Current Facilities	7	7.46 (1.94)	274
Current Staff Professionalism	7	6.95 (2.25)	274

The ranking of '7' given by the respondents shows a good merit on the quality of services provided by the library. Majority of the written comments (12.04 %) focused on the need for the extension of the library opening hours due to the examination week, the need for a proper prayer room, suggestion for the 24-hours reading area to be opened everyday, and complaints on the library staff of being impolite and unfriendly.

4.11 Other Recommendations Indicated by the Respondents.

When asked if there were other recommendations that they consider important through the open ended section of the questionnaire, only 79 respondents (28.8%) responded and listed one or more service attributes.

Table 4.18 shows the frequency and percentage of 'other recommendations' indicated by the respondents. The responses were categorized into 5 groups: opening hours, library materials, facilities, library staff and rules and regulations. These are areas and comments which the library need to scrutinize closely in order to ascertain areas for improvements.

The main recommendation indicated is the extension of the library opening hours (12.04%). Other recommendations which shows high percentages include extension of the opening hours of the 24-hours reading area (1.46%), provision of more copies of text books (1.46%), improving the condition of the prayer room (2.19%), and suggestions to have a cafeteria in the library building (1.09%).

Table 4.18: Other Recommendations Indicated by the Respondents (n=274)

No.	Statement	Frequency	Percentage
	Opening Hours (39)		
1	Extend the library opening hours.	33	12.04
2	Leave the 24-hours reading area opened everyday.	4	1.46
3	Open the library on Friday during prayer time.	1	0.36
4	Increase opening hours of the 'thesis' section.	1	0.36
	Library Materials (24)		
1	Should have more leisure reading materials,story books.	4	1.46
2	Provide more copies of recommended text books.	4	1.46
3	Purchase new books, as most of the books are outdated.	2	0.73
4	Place the magazines at the ground floor.	2	0.73
5	Add more books on the shelves.	2	0.73
6	Lack books on Islam.	2	0.73
7	Add civil engineering journals.	1	0.36
8	Books other than technology is lacking.	1	0.36
9	Purchase books in languages other than English and Bahasa Malaysia.	1	0.36
10	Have more Chinese newspapers like Sin Chew.	1	0.36
11	Add more students' favourite magazines.	1	0.36
12	Engineering/technical magazines are inadequate.	1	0.36
13	Theses reference are too limited.	1	0.36
14	Label the past years question papers as 'mid term' or 'final'.	1	0.36
	Facilities (19)		
1	The condition of the prayer rooms should be improvised.	6	2.19
2	There should be a cafeteria in the library building.	3	1.09
3	The air-condition in the library is too cold.	2	0.73
4	Switch-on the air-conditioning during examination.	2	0.73
5	Add more seats in the library.	1	0.36
6	Lift condition should be improved.	1	0.36
7	The environment is great.	1	0.36
8	Most computers are not functioning well.	1	0.36
9	Replace/repair creaky chairs and tables on the 4th floor.	1	0.36
10	Internet connection are sometimes very slow.	1	0.36
	Library Staff (5)		
1	Some staff are not friendly and are impolite.	4	1.46
2	The staff lack knowledge in various language especially English language.	1	0.36
	Rules and Regulations (2)		
1	Less strict in attire.	1	0.36
2	Law enforcement on maintaining quietness, and use of handphone.	1	0.36

There were also some repetitions with the attributes previously mentioned in the questionnaire, such as those covering equipment in good working order, impoliteness of

the library staff, inadequacy of leisure reading materials or magazine, and addition of seats in the library.

One respondent compliments the library for having a great environment.

Figure 4.3: A Summary of Other Recommendations Indicated by the Respondents
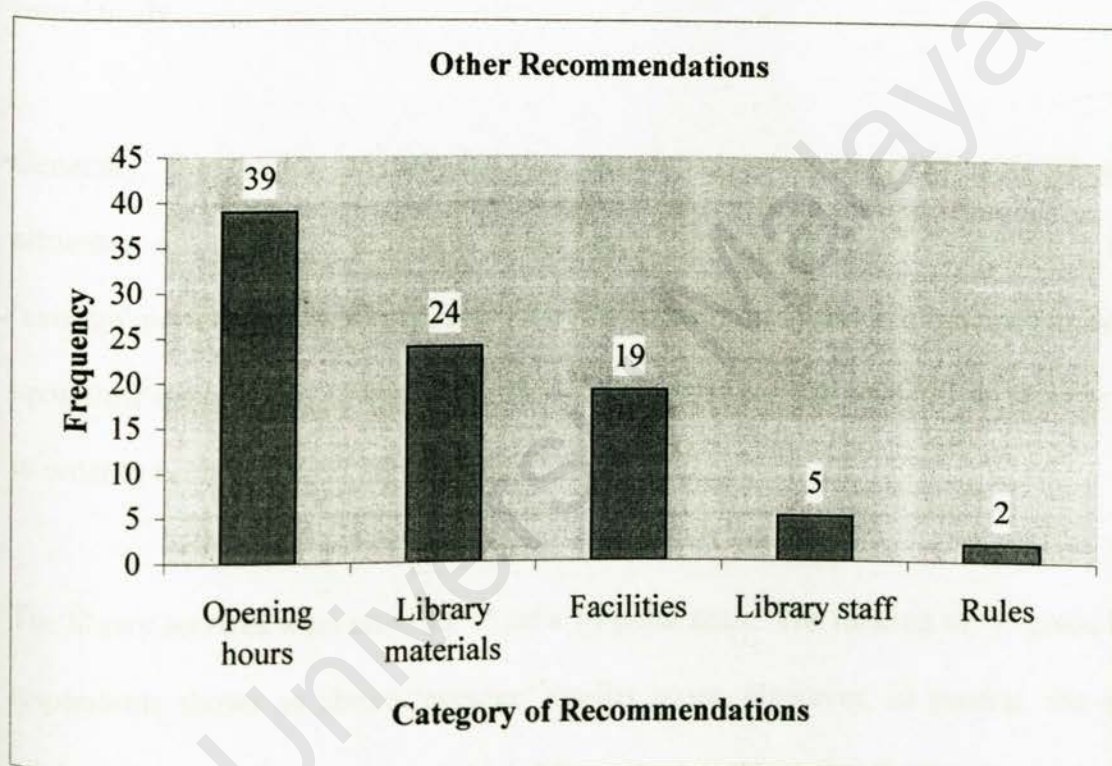
4.12 Summary

This chapter has analysed the responses received for the questionnaires collected from 274 undergraduate and postgraduate students of Universiti Tenaga Nasional who have used the facilities and services provided by the main library of the University.

The data was discussed under sections of delivery perceptions of respondents on the environment, space area, signages and opening hours of the library; online public access catalogue (OPAC) service; library website; equipments in the library; staff personality, professionalism, appearance, and assistance; adequacy of library materials; user education programmes; overall user satisfaction; the performance of frontline services; the performance of core services; the performance of peripheral services; percent allocation of the service dimensions; and other recommendations on the library services respectively.

Generally, the results indicate that the respondents were satisfied with 22 service attributes, out of the 57 attributes under study. Most of the positive responses scored 'average' performance. As such, the library may retain these services but need to improve upon their quality. The Library will also have to study on the other 35 services in detail in order to further analyse the problems.

The library services were rated as '7' on a 10-point scale. The ranking of '7' given by the respondents shows an above 'average' quality score. However, in general, the library might strive to achieve a mean of at least 8 to convey a sense that the service expectations were surpassed and not merely met. Not many respondents point out problems or provide suggestions. Only 79 respondents (28.8%) wrote comments in the open-ended section of the questionnaires. Eighty-nine recommendations were made. Majority of the recommendations (12.04%) request the library to extend its opening hours. Perhaps an in-

depth interview with randomly selected users would help obtain a clearer picture of the library's performance.

Perceptions of service dimensions indicate that the respondents have chosen 'tangibles' as the most important dimension, and 'empathy' as the least important.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary and discussion of the findings, conclusions, as well as recommendations for further research in the area of measurement of the performance of the library information services.

The objectives of the study are based on examining the nature of clients' perceptions with regards to the quality of information services offered by the UNITEN Library, the extent to which the clients perceived the adequacy of the library information services, the services perceived as important to clients of the library, and the problem areas of information services as perceived by the users.

The analysis of the study is based on responses received from 274 respondents comprising the undergraduate and postgraduate students of UNITEN. The questionnaire is used as the instrument of data collection. A modified version of SERVPERF framework is used to design the questions.

5.2 Summary and Discussion of the Findings

This section discusses the main findings of the study by answering the main research questions listed in Chapter One.

5.2.1 What is the nature of clients' perceptions with regards to the quality of information services offered by the Library?

The perceptions among the respondents of how well the library deliver each service attribute ranged, on average, between 3.13 and 4.36 on the 5-point scale. In absolute terms, these rankings of performance are all above the scale's mid point. This implies that the library is performing at an above average level.

When analysed based on the total positive responses for all the services, the results indicate that out of the 57 service attributes, 2 attributes fell into the category of 'excellent performance', 20 attributes fell under 'good performance', 31 attributes under 'average performance', and 4 attributes fell into the category of 'poor performance'. The details are depicted in Figure 5.1, Figure 5.2 and Figure 5.3, together with the action plans and the feedback to the clients of the Library.

The first component studied was on the statements under the aspects of the environment, space area, signage, and opening hours of the library. The results were remarkably good, whereby two services were rated as 'excellent' by the respondents. The responses received a high score of 88.8% for the statement on the library being a spacious and comfortable place, and 80.0% for the statement on the library having adequate number of seats. These two areas present strengths, and therefore the library should retain its quality of service in these areas. To maintain the area as an area of strength, it should be closely monitored by periodic check of student enrolment numbers. The library should ensure

that the floor space per student remains within the specified international standards. This could then be used in future building plans.

The respondents perceived the library as performing 'good' in providing a quiet environment (78.4%), secure and safe (76.8%), and situated at an inviting location (72.5%). The directional signs were clear and helpful in helping them to find their way around the library building (61.7%). These environment again must be monitored periodically so that the library is able to cope with future inconsistency in enrolments.

Positive responses were also indicated by the respondents on the statements pertaining the adequacy of the library materials, whereby four statements were rated as 'good' performance. The respondents perceive that the library materials encompass course/curriculum supporting resources (67.3%), materials are properly arranged on the shelves (63.8%), library materials meet their assignment/research needs (63.7%), and the library materials encompass leisure reading magazines (61.7%).

The respondents perceive the OPAC as performing 'good' in indicating the location of items (62.6%), has a well display item list (61.1%), and display clear and understandable information (61.0%).

The services show a 'good' performance, whereby the respondents do not have to wait more than three minutes when borrowing materials (69.6%), or when seeking assistance at the information desk (62.6%).

The results also indicate that the perceptions of the respondents on the library staff were 'good'. Out of ten statements, seven statements gained ratings of 'good' performance.

Features	Action Plan	Feedback/Inform client
Excellent (81-100%) <u>Building/Facilities</u> - Space and comfort - Sitting area	1. Periodic check/evaluate. 2. To maintain excellence. 3. Benchmark against standard.	1. Disseminate information in Library Bulletin. 2. Publish results in library website.
Good (61-80%) <u>Building/Facilities</u> - Quiet environment - Secure and safe - Inviting location <u>Signage</u> - Clear and helpful <u>Materials</u> - Encompass course resources - Properly arranged on shelves - Meet research needs - Encompass leisure magazine <u>OPAC</u> - Indicates location of item - Has a well display item list - Displays clear information <u>Services</u> - < 3 min. to borrow materials - < 3 min. for assistance at information desk <u>Staff</u> - Neat appearance - Available when needed - Approachable and welcoming - Friendly and easy to talk to - Professional in finding general information - Courteous and polite - Professional in finding subject related information	1. To plan and initiate activities for further improvement. - Evaluate the services. - Maximize the effectiveness of the services. - Eliminate errors. 2. To motivate staff and to send staff for courses. 3. To implement time studies for counter services. 4. To offer 'self-sufficient' courses for users. 5. Benchmark against standard.	1. Disseminate information in Library Bulletin. 2. Publish results in library website.

Figure 5.1: A Model of Total Positive Responses for Excellent and Good Services

Features　　　　　　　　　　　　　**Action Plan**　　**Feedback/Inform client**

Average (41-60%)

Building/Facilities
- Photocopiers in good order
- Computer workstations in good order
- OPAC computers are in good order

Materials
- Re-shelved promptly
- Easy to find location of materials
- Easy to browse print collections

OPAC
- Indicates no. of copies available
- Has easy-to-follow instruction
- Allows online renewal
- Indicates copies available on shelves
- An accurate source of information
- Regular use of OPAC to find books
- Allows online reservation
- Accessible from outside the library

Website
- Can be logged on easily
- Can be logged on whenever I want
- Access a variety of electronic resources
- Has a good layout
- Easy to navigate
- Attractive

Services
- Always find needed information
- Easy to find out library opening hours
- New books displays are helpful
- Always inform status of reservation
- Effective orientation programme
- Relevant information skills programme
- <3 minutes for information via phone
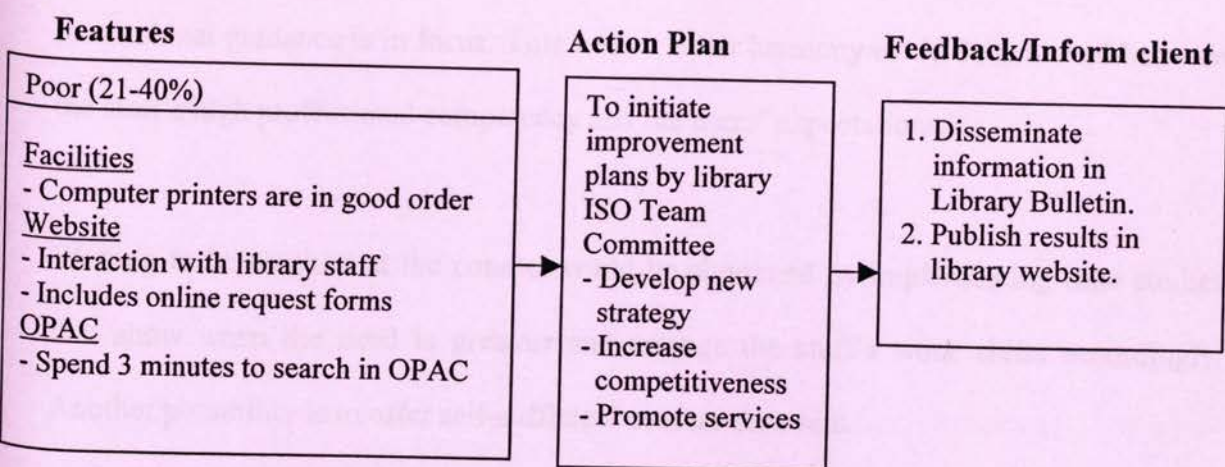- Always inform status of ILL items

Staff
- Help retrieve needed resources
- Help identify needed resources
- Help to learn how to find information

Action Plan box:
1. To plan and initiate activities for further improvement.
   - Evaluate the services.
   - Maximise the effectiveness of the services.
   - Eliminate errors.
2. To motivate staff and to send staff for courses.
3. To implement time studies for counter services.
4. To offer 'self-sufficient' courses for users.

Feedback/Inform client box:
1. Disseminate information in Library Bulletin.
2. Publish results in library website.

Figure 5.2: A Model of Total Positive Responses for Average Services

Features	Action Plan	Feedback/Inform client
Poor (21-40%) Facilities - Computer printers are in good order Website - Interaction with library staff - Includes online request forms OPAC - Spend 3 minutes to search in OPAC	To initiate improvement plans by library ISO Team Committee - Develop new strategy - Increase competitiveness - Promote services	1. Disseminate information in Library Bulletin. 2. Publish results in library website.

Figure 5.3: A Model of Total Positive Responses for Poor Services

The library staff are viewed as neat in appearance (73.4%), available when needed (68.9%), approachable and welcoming (65.2%), friendly and easy to talk to (63.0%), and the staff are courteous and polite (62.1%). Respondents also feel that the library staff were professional in finding general information (62.5%) and in finding information related to their subject discipline (61.1%).

These services represent areas for improvement which must be strengthened in the future to become areas of strength to the library. Management needs to be skilled in motivating the staff to provide professionally competent guidance to the users, to be accommodating when the users need help, and to try to minimize waiting time at the lending counter. In order to make staff do their best in these situations, it is necessary for them to be satisfied with their job and to demonstrate a high level of loyalty to the library. The management could also consider sending the staff to courses where the pedagogical element of

professional guidance is in focus. This way, a better harmony could be achieved between the staff's high professional competency and the users' expectations.

Waiting to be serviced at the counter could be shortened by implementing time studies that show when the need is greatest and arrange the staff's work shifts accordingly. Another possibility is to offer self-sufficient courses for users.

'Average' performance are areas that may be perceived as areas of possibility to be improved and should thus be monitored closely in the future. The library should concentrate its effort here, plan and initiate activities that may improve these services. However, four service attributes were rated as 'poor' performance which showed ratings of 21.0% to 40.0%. These include the computer printers being inefficient or unavailable when needed, the library website not enabling them to interact with the library staff, not finding the online request forms, and they experiencing waiting more than 3 minutes to search for needed items on the OPAC.

These areas may be seen as weaknesses in providing satisfactory services to the users. The management could consider solving the problems by upgrading the adequacy and capabilities of the printers, the website, and the OPAC.

As a comparison, from a study done at Yale University's libraries, it was also pointed out that service attributes related to computers printers not in good working order and unavailable when needed, and the website not enabling interaction with the library staff,

were indicated as services which did not meet the users' expectations and thus command further exploration (Nitecki and Hernon, 2000).

5.2.2 To what extent do clients perceived the adequacy of the library information services provided by UNITEN Library?

The results on the adequacy of the library information services are presented in terms of the performance of the frontline services, core services, and the peripheral services.

The results indicate that out of the twenty-four statements of frontline services, twelve statements were positively rated. This implies that 50% of the frontline services was perceived as adequate by the respondents. These included perceptions of the respondents on the OPAC services, the books displays, two statements on the library website, and also finding needed information. Generally, the library website enabled them to log on easily, and it also enabled them to log on whenever they want.

The results also indicate that sixteen statements out of the twenty statements on the core services were perceived as adequate by the respondents. Respondents find that the library materials are adequate and they do not have to wait long for the service. The respondents, especially the undergraduates find that the library materials do support their course/curriculum needs, especially in providing materials they need for their assignments. They could easily locate and browse materials on the shelves and could receive prompt feedback on materials they have reserved. They find that the library staff

are professional and helpful in finding general information and information related to their subject discipline, and help them identify and retrieve needed resources.

Respondents however had reservations about the adequacy of photocopiers, the availability of workstation when they need them, and the queueing time when loaning materials.

The respondents in this study indicate being very satisfied with the peripheral services of UNITEN Library (100%). They perceived the library as a spacious and comfortable place, quiet, secure and safe, have clear and helpful directional signs, and situated at an inviting location. They could always find a place to sit in the library, and could always find out in advance the library opening hours. The materials encompass leisure reading magazines. The staff were neat in appearance, were available when needed, were approachable and welcoming, were friendly and easy to talk to, and were courteous and polite.

5.2.3   What are the services perceived as important to clients of the Library?

The results indicate that the respondents' ranking of the relative importance of the five services quality dimensions is as follows: tangibles, reliability, responsiveness, assurance, and empathy.

The respondents perceived the "tangibles" as the most important dimension for measuring quality. Tangibles relate to the appearance of the library physical facilities, equipments, and the communication materials.

Perceptions of the library's performance were also indicated by the respondents in the recommendations part of the questionnaire. Majority of them who responded to this section made recommendations which relate to the "tangibles" such as the opening hours, the library materials, and the facilities.

The 'tangibles' such as the 'library environment' can be perceived as an area of strength for the UNITEN Library when it comes to creating satisfied users. Users generally find that it is very important for a library to be set up well, to have a nice atmosphere, that the opening hours are suitable and that the library adequately informs people about its services. In general, users find that this is the case at the UNITEN Library, as the 'library environment' achieved a 'good' and 'excellence' performance. It is not surprising that 'library environment' represents an area of strength for the UNITEN Library. UNITEN is a newly built campus with buildings of large space areas, and the Library forms a natural part of this spacious building.

However, these findings are unique. Other studies have shown that 'reliability' is the most important contributor to service quality and 'tangible' is the least important, but these findings prove otherwise. Comparing percentage allocation among various studies can provide a better insight. The comparisons are displayed in Table 5.1.

Table 5.1: Comparison of Percent Allocation of 100 Points to the Five Service Dimensions in Different Studies

Study	Service Setting	N	Tangibles	Reliability	Responsive	Assurance	Empathy
Zeithmal et. al. (1990)	Multiple industries (non-library)	1,936	11	32	22	19	16
Hebert (1994)	Public library (interlibrary loan)	130	12	35	20	20	14
White (1994)	Special libraries	n/a	12	34	23	18	13
Edwards & Browne (1995)	Academic library	80	9	36	23	17	15
Nitecki (1995)	Academic library (interlibrary loan)	140	9	39	23	17	13
Nitecki (1995)	Academic library (reference)	95	10	26	25	22	18
Nitecki (1995)	Academic library (reserve collection)	101	9	35	24	19	13
Coleman et.al. (1997)	Academic library	198	16	27	24	19	15
Nitecki (1998)	Academic library (reference)	90	10	31	23	24	16
Stein (1998)	Academic library (interlibrary loan)	246	8	41	24	16	11
Nitecki & Hernon (2000)	Academic library	221	18	32	22	16	12
Roslah Johari (2005)	Academic library	274	23	20	19	19	19

The figures in the table above was adapted from Nitecki, Danuta A., and Hernon, Peter. 2000. Measuring service quality at Yale University's libraries. *Journal of Academic Librarianship*, 26(4): 259-73.

5.2.4 What are the problem areas of information services perceived by users?

The results indicate that 16 service attributes out of 60 attributes under study have problems and these areas need to be improved. The main problem stressed were regarding the library website, and the user education programme. Other areas marked as inadequate were some issues on the waiting time for services, the OPAC services, the computer printers, and the staff help for users to learn how to find information.

The library website have problems in enabling users to access a variety of electronic resources, the layout, the navigation process, the attractiveness, the enabling of users to interact with the library staff, and also the inclusion of the online request forms.

Students seem to indicate that the library orientation programme has not enabled users to make effective use of the library materials and services. Students also found that the information skill programmes were not relevant to their course needs.

Respondents have problems in making online reservations, accessing OPAC from outside the library building, and indicated that the search time for items in the OPAC exceeds 3 minutes.

Respondents also implied that the computers were not in good working order and unavailable when they are most needed. Some users did not perceive staff as helpful in teaching them how to learn to find information, provide information via the phone, and informing them on the status of the interlibrary loan items when requests were made.

Respondents highlight their dissatisfaction on the library opening hours and opening of the 24-hours reading area during the examination period, the addition of leisure reading materials, additional copies of recommended text books, and the need for a proper prayer room in the library.

Below 1 % of the respondents request to have a cafeteria in or near the library, complained that the air-condition is too cold while some claimed that the air-condition was not switched-on at the examination hall, the books were outdated, there was lack of books on Islam, and a request to place the magazines on the ground floor.

Other problems included the opening of the library during Friday lunch hours, the increase of the opening hours of the thesis (special collection) section, the purchase of materials in other languages other than English and Bahasa Malaysia, the replacement of creaky chairs, the Internet connections which were sometimes slow, and the poor law enforcement on maintaining silence in the library and on the use of handphone in the library.

5.3 Conclusions

This study is an initial exploratory study to assess the service quality of an academic library. For managers of the UNITEN Library, the results do provide some useful insights to ascertain user satisfaction with the current services provided by the Library. This helps the Library to develop some basis to work on to rectify services that need immediate attention. Because of the unavailability of an official statement of quality indicators used by UNITEN Library for its frontline services, core services, and peripheral services, the results of this study are of particular importance. It is evident from the results that the quality of academic library services is a dynamic concept that should be continuously monitored, with special attention given to the assessment of the perceived quality of library services for identified components of services.

The continuous assessment of perceived quality is one of the necessities confronting management in all types of organization. However, in so doing there exists a crucial difference between profit-oriented organizations and libraries. Whilst the goal of the quality assessment in the case of for-profit organizations is to attain the highest profit possible, the goal of libraries in such assessment is to prove their social usefulness.

The empirical part of the study did not intend to use an exact, statistically sophisticated approach in data description. Instead, it tried to synthesize the results in a manner that can be easily comprehended by librarians:

- The researcher proposes the use of a combination of quantitative and qualitative methods in order to get better result in measuring the complex, subjective grounded concept of perceived service quality.

- The relatively low level of perceived quality should be an early warning signal for changes in library management. Library managers should introduce changes with prudence.

- Library managers should strive to deploy a user-focused attitude in their employees through their own example. Librarians should capitalize on the use of feedback information.

- After an analysis of the assessment of library performance, results have to be submitted in the best possible way to library personnel, to the users of library services, and to the management of the wider organization of which the library is a part.

- Librarians should be innovative and forego traditional ways of approaching professional problems and instead be prepared to take the risk of making changes.

A similar satisfaction survey may be conducted for the service provider itself, as well as the library staff, in order to find gaps and understand the situation as a whole.

A culture of service quality assessment provides the opportunities to demonstrate to customers how what the staff learns about customers' expectations and perceptions helps to shape the service that libraries provide and the commitments that librarians make to their customers. Such opportunities should not be ignored.

5.4 Recommendations for Further Studies

There are many potential directions for further research.

Future research should explore the use of other instruments such as the SERVQUAL to measure the expectations and perceptions of users towards the library services.

The involvement of other groups of users such as the administrative staff, the academicians, and external members of the library should also be explored .

The various methods of data collection such as the interview and the observation method should also be considered.

How receptive are library services staff and managers to utilize data gathered from this study?

What are the barriers to incorporating data on customer perceptions in improving service quality in academic libraries?

5.5 Summary

Chapter Five has summarized the findings of this study. Conclusions and implications are derived from the results drawn from this study.

From the results of this study, it shows that all the respondents would hold that all the 60 attributes are important in providing quality services to the users. The mean scores rated by the respondents in their perceptions of the service quality were between 3.13 and 4.36 on the 5-point Lickert Scale. This implies that the service quality as perceived by the respondents did fulfill their expectations.

From the feedback of the respondents, they pointed out that there are sixteen aspects of the services of the library that should be improved. These included the library website, the user education programme, some issues on the waiting time for services, the OPAC services, the computer printers, and the staff assistance in helping users learn how to find information.

Due to the fact that the service industry is a dynamic environment, all the variables are changing from time to time. Therefore, future possible developments of further researches should be done periodically in order to obtain up-to-date information about the expectations and perceptions of the users and to provide quality services that fulfill their needs.

Appendix A

A QUESTIONNAIRE FOR MEASURING THE PERFORMANCE OF LIBRARY AND INFORMATION SERVICES IN THE UNIVERSITI TENAGA NASIONAL LIBRARY

The purpose of this survey is to identify the current performance of library and information services at Universiti Tenaga Nasional (UNITEN) Library. Your participation in this survey will be useful in helping us to identify your perceptions of the actual services delivered by the UNITEN Library. The results will be used in establishing a direction for our future library and information services.

Section A: My Perceptions of Service Quality
Instruction:

Based on your experiences as a user of UNITEN Library, please indicate the extent to which you think the Library have the features described by the statement, and circle the appropriate value.

Your responses will be strictly anonymous and will have no personal effect on any of your future service transactions or visits to the Library.

Scale

Strongly Disagree	Disagree	Fairly Agree	Agree	Strongly Agree
1	2	3	4	5

1. The Library is:
   a. A spacious and comfortable place   1 2 3 4 5
   b. A secure and safe place   1 2 3 4 5
   c. A space that facilitates quiet   1 2 3 4 5
   d. Comfortable and situated at an inviting location   1 2 3 4 5

2. I always find a place to sit in the Library.   1 2 3 4 5

3. Directional signs are clear and helpful.   1 2 3 4 5

4. It is easy to find out, in advance, the Library opening hours.   1 2 3 4 5

5. The online public access catalogue (OPAC):
   a. Displays information that is clear and easy to understand   1 2 3 4 5
   b. Has easy-to-follow instructions   1 2 3 4 5
   c. Indicates the number of copies available   1 2 3 4 5
   d. Tells me if copies are available on the shelves   1 2 3 4 5
   e. Is an accurate source of information about all materials held by
      the Library   1 2 3 4 5
   f. Is easily accessible from outside the Library building   1 2 3 4 5
   g. Allows me to reserve items online   1 2 3 4 5
   h. Allows me to renew borrowed items   1 2 3 4 5
   i. Has a well display item list   1 2 3 4 5
   j. Indicates location of item   1 2 3 4 5

6. I often use the OPAC to find books I need.   1 2 3 4 5

7. I spend roughly about 3 minutes to search the OPAC for items I need.   1 2 3 4 5

Scale

Strongly Disagree	Disagree	Fairly Agree	Agree	Strongly Agree
1	2	3	4	5

8. The Library Web site:

    a. Is attractive   1 2 3 4 5

    b. Has a good layout   1 2 3 4 5

    c. Is easy to navigate   1 2 3 4 5

    d. Enables me to:

        * Access a variety of electronic resources   1 2 3 4 5

        * Interact with the Library staff   1 2 3 4 5

        * Log on easily   1 2 3 4 5

        * Log on whenever I want   1 2 3 4 5

    e. Includes online request forms (purchase of books

       and interlibrary loan)   1 2 3 4 5

9. These equipment are in good working order and is available when I need it:

    a. Computer dedicated only for online catalog use   1 2 3 4 5

    b. Computer printers   1 2 3 4 5

    c. Computer workstations (e.g., for access to the web, and electronic

       texts and journals)   1 2 3 4 5

    d. Photocopiers   1 2 3 4 5

10. The Library staffs are:

    a. Approachable and welcoming   1 2 3 4 5

    b. Available when I need them   1 2 3 4 5

    c. Courteous and polite   1 2 3 4 5

    d. Professional in:

        * Finding general information   1 2 3 4 5

        * Finding information related to my subject discipline   1 2 3 4 5

    e. Friendly and easy to talk to   1 2 3 4 5

    f. Neat in appearance   1 2 3 4 5

Scale

Strongly Disagree	Disagree	Fairly Agree	Agree	Strongly Agree
1	2	3	4	5

11. The Library staffs help me to:
    a. Learn how to find information   1 2 3 4 5
    b. Identify resources I need   1 2 3 4 5
    c. Retrieve resources I need   1 2 3 4 5

12. Library materials:
    a. Encompass course/curriculum-supporting resources   1 2 3 4 5
    b. Encompass leisure reading magazine   1 2 3 4 5
    c. Meet my assignment/research needs   1 2 3 4 5

13. When I request materials, I am always informed of the status of items:
    a. For reservation of items   1 2 3 4 5
    b. Through interlibrary loan   1 2 3 4 5

14. Materials are:
    a. Properly arranged on the shelves   1 2 3 4 5
    b. Re-shelved promptly   1 2 3 4 5

15. It is easy to:
    a. Browse print collections   1 2 3 4 5
    b. Find where materials are located in the building   1 2 3 4 5

16. I find that the new books displays in the Library are helpful.   1 2 3 4 5

17. Librarians provide orientation programmes which enable me to make more effective use of library materials and services.   1 2 3 4 5

18. The Library conducts information skills programmes relevant to my course needs.   1 2 3 4 5

Scale

Strongly Disagree	Disagree	Fairly Agree	Agree	Strongly Agree
1	2	3	4	5

19. I always manage to find the information I need from the Library. 1 2 3 4 5

20. I do not have to wait more than three minutes:
   - a. When I borrow materials 1 2 3 4 5
   - b. When I phone the Library for information 1 2 3 4 5
   - c. For attention when I seek assistance at the
     information desk 1 2 3 4 5

21. I am generally satisfied with:
   - a. The services provided by the Library 1 2 3 4 5
   - b. The service hours of the Library 1 2 3 4 5
   - c. The answers given by the Library staff 1 2 3 4 5

22. Any other recommendations which you consider important:
   - a. 1 2 3 4 5
   - b. 1 2 3 4 5

Section B: My Perception of Service Dimensions

Instruction:

Listed below are five features pertaining to the services offered by the Library. We would like to know how important each of these features is to you when you evaluate a library's quality of service. Please allocate a total of <u>100 points among the five features</u> according to how important each feature is to you--the more important a feature is to you, the more points you should allocate to it. Please be sure that the points you allocate to the five features add up to 100.

1. The appearance of the library's physical facilities, equipment, and communication materials (pamphlets, guidebooks, brochures, flyers, etc.)

   _____ points

2. The library's ability to perform promised services dependably and accurately.

   _____ points

3. The library's willingness to help readers and provide prompt services.

   _____ points

4. The knowledge and courtesy of the library staff and their ability to inspire trust and confidence.

   _____ points

5. The caring, individualized attention the library provides to its users.

   _____ points

TOTAL POINTS ALLOCATED 100

Section C: Additional Information

What is your current status of user category?

Undergraduate Student	☐
Postgraduate Student	☐

On the average, how often do you use the Library?

More than once a day	☐
Approximately once a day	☐
Between 2 and 5 times a week	☐
Approximately once a week	☐

Less than once a week   □

Others (Please state ....)   □

Based on a scale of 1 – 10, please rate the Library on the following components:-

Current readers services   ___ points

Current materials adequacy   ___ points

Current facilities   ___ points

Current staff professionalism   ___ points

Thank you very much for your cooperation, time, and effort.

Please return the completed questionnaire to:

Roslah binti Johari

The Library,

Universiti Tenaga Nasional.

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