A study on the perceptions of library services and usage in selected higher education institutions in Malaysia

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A STUDY ON THE PERCEPTIONS OF LIBRARY SERVICES AND USAGE IN SELECTED HIGHER EDUCATION INSTITUTIONS IN MALAYSIA

by

Laili Hashim

A Doctoral Thesis
Submitted in partial fulfilment of the requirements for the award of Doctor of Philosophy of the Loughborough University
December, 2000

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ABSTRACT

The study examines the perception of faculty members and students towards library services and usage in three selected Higher Education Institutions in Malaysia. It attempts to find out how academic users felt towards library staff/library services, their actual needs, library usage and their expectations of the library. It also looks closely at the feasibility and possible impact of the library/information skills course as part of the Higher Education Institutions' Curriculum. An extensive review of related and relevant literature that includes previous and present studies is also discussed. In addition, a profile of Malaysia, its educational system and the development of academic libraries are also presented in the study.

The population studied was drawn from faculty members and students of three selected Higher Education Institutions. Data was collected using self-administered questionnaires, personal interview, group interviews/discussions with focus groups and a short skill test. The Statistical Package for the Social Sciences (SPSS) was used to analyse the data collected from the questionnaires and the short skill test. As for the interviews, important and relevant comments or suggestions were collated and incorporated in the research.

The study concludes that users are not really getting the full benefit of the library services and some of the services are under-utilised. The major causes or reasons for this problem are the lack of knowledge and the low state of awareness of certain services, attitude of staff, inadequate training to use the services and the lack of computer facilities. Finally, the idea of having an in-class library/information skills course for students is well received by users of the three Higher Education Institutions.
DEDICATION

To My Parents, Sisters, Wife and Two Children for their continuous love, prayers, encouragement and constant support.
ACKNOWLEDGEMENTS

First and foremost, I am forever indebted and thankful to Allah for his blessings without which the whole effort would not have been possible.

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I gratefully acknowledge the kindness of many of the lecturers' and students' respondents who have participated in this study. The entire project would not have been completed without the cooperation of the 140 lecturers and 858 students who have given their time and effort in answering my questionnaire. I am also indebted to the 30 lecturers and 48 students who have voluntarily participated in the follow-up interviews. Also, my sincere appreciation to the 20 students who took part in the skill test.

My grateful thanks to Associate Professor Dr. Raja Abdullah Raja Yaacob and Associate Professor Norma Abu Seman for their valuable advice and support. I would also like to extend my gratitude to the following people for assisting me in one form or another while conducting this study: Mohd. Shah, Mohd Hanafiah, Abd. Basha, Riduan Pardi, Hussein, Saiful Yazam, Roslan, Baharum and Wan Hussein.
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CHAPTER ONE

INTRODUCTION

1.1 **Background of Study**

Library use and the attitudes of users towards library resources and services have received much attention in library research. It started with a study on call slips (1) and later venturing into the era of electronic or digital libraries (2). Library and information services play a significant part in the support of teaching and learning and as such contribute to meeting the goal and objectives of the parent institution.

In Malaysia, education is placed on a high priority since it is an essential tool for rapid modernisation. Hereupon education institutions by definition must also received a high priority and within them academic libraries have an important role to play. Their services apply to both research and teaching and therefore make a significant contribution. Though, this is so, it is not always smooth sailing. There can be shortcomings in academic library services, which can detract from the contribution.

There is a big investment in libraries therefore it is important to look at needs and usage and look at perceptions of clients if the investment that is put into libraries is going to pay returns. How this investment is justified and how this investment likely pays, depends on the quality and quantity of the use made of these institutions and therefore its certainly worthwhile measuring this kind of activities. Busha and Harter (3), point out the impact of user needs study:

- Choice and suitability of library materials.

- Nature of library collections in relation to needs of users.
- Use and non-use of library materials and services.

- Degree of awareness about library collections and services amongst users or potential users.

- Efficiency with which information in libraries is being stored, retrieved and used.

- User satisfaction and dissatisfaction.

The academic libraries' functions are very complex. They have to meet and satisfy the diverse demands of a variety of users and also use every possible effort to encourage and train users so as to utilise the potential of the libraries. Libraries have to acquire a creative collection, real or virtual and they have also to deploy every possible effort to publicise what they have to get return of the investment. As stated by two academic libraries in Malaysia, UiTM (4) and UUM (5), whose mission and objectives are:

- To provide an environment conducive to study, teaching and research to the Institution at large.

- To be an information rich centre by imparting knowledge through reading and research while ensuring the proficiency and skills in the utilisation of library resources and techniques.

- To be a centre of excellence in every aspects of electronic information-gathering and handling with the aim of providing the community with reservoirs of knowledge so as to be an informative and culturally rich society.

- To assist the Institution in its study, teaching, research and development programmes.
• To be an excellent library in all aspects of services, variety of collection, information-seeking technologies, and up-to-date sources of information.

• To provide trained, skilful, responsible, committed, motivated with high ethical standards, proactive and excellent personnel through education and training.

It may be argued that, sometimes the library falls short of the ideal and hence this study is significant in term of trying to find out what people's perceptions are and how can the library's value be enhanced. According to Wilson and Tauber:

The essentials that are fundamental to successful operation of the library and the co-ordination of its program with the teaching and research program of the university may be presented under eight headings: i) resources for instruction, research and extension; ii) a competent library staff; iii) organisation of materials for use; iv) adequate space and equipment; v) integration of the library with administrative and educational policies; vi) integration of the library with community, state, regional, national, and international library resources; vii) adequate financial support; and viii) a workable policy of library government. (6)

1.2 Statement of Problem

In Malaysia, higher institutions have undergone a transformation since their early establishment in the 1960s. The increase in the number of students has been accompanied by the establishment of more universities and colleges, be it government or private, especially in the field of science and technology. This is especially true with the announcement by the Malaysian Prime Minister Datuk Seri Dr. Mahathir Mohamad with the VISION 2020 which would tie economic and cultural development to the goal of:
"... making science and technology integral components of socio-economic planning and development and promoting a science and technology culture compatible with the process of building a modern industrial economy". (7)

Since then, the natural sciences have had an especially rapid development. Added to this, undergraduate and graduate research has become more noticeable and varied in nature, covering a lot of disciplines and involving students and many members of the faculties. The challenges posed by these developments are further added by the increasing output of scholarly writing and information.

The implication of these trends is that it may be assumed that all along both the managers of information and its users have been caught in the excitement likely to accompany these changes, and thus, concentration has been mainly on the quantitative and technical aspects of the library. It appears that, they are trying to make the collection bigger and at the same time creating more library services. Looking at the literature in Malaysia, IT seemed to dominate most documentation but not much has been written on the service aspect and limited attention was given to the clientele's broader needs in academic libraries.

This situation was supported by Anis at a Congress (8): "Most of the research and policy analysis in the area of Information Technology (IT) focuses on the process of technology acquisition, adaptation and diffusion. Much less attention has been given to factors and policies that affect user behaviour and their needs". A study of user library service and the perception of patrons may serve to confirm this apparent scenario.

Another main reason for choosing this topic as a subject for research originated from the researcher's experience as a librarian and later as a lecturer in one of the Higher Education Institutions in Malaysia. Throughout the researcher's long service as a librarian in various departments in the
library, he came across sources which were hardly used; Reader's Advisory Service or Reference Department which was not fully utilised; and library services provided not being used effectively. Kirby and colleagues (9) also pointed out this problem in their book. As a lecturer, the researcher came across students who relied only on sources from the reading lists, notes and journals for their references and bibliography when doing their assignment or projects. This problem may be hypothesised as the lack of awareness of library services among users.

In obtaining an accurate measurement of library services, usage and users' perceptions, researchers recognise the difficulties and disagree on methodologies for gaining valid information. Most of the user studies of libraries have revolved around circulation statistics. Ralph Esterquest noted this trend several years ago when he wrote:

In their efforts to indicate the volume of library use, librarians have traditionally kept such statistics as: books loaned for home use, number of reference questions asked, and number of interlibrary loans transacted. (10)

A more balanced view of usage or measure can be obtained by asking people a range of questions about their library usage habits and perceptions.

1.3 Need for Study

Librarians often take for granted that students and faculty are contented with library resources and services. These assumptions may be measured when there is appropriate data to support them. In view of the rapid student growth in Malaysia, there is a need for objective factual information about library utilisation characteristics and modes of student and faculty members' interactions with academic libraries in order to gain detailed analysis of their patterns of use.
At the same time, student and faculty perceptions toward the library are important to library management, services and collection development, and budgeting. It is hoped that the findings from this study will be helpful to library management in the provision of library services to their users. In their capacity as providers of information, the library management will also find the findings useful in deciding the kind of information services to be given to their users. The findings will further assist library management in identifying any strengths and weaknesses in the library.

In response to demands made on the services of the academic libraries in Malaysia and with the resources at their disposal for meeting these obligations, librarians tend to have concentrated on the acquisition and organisation of library materials. While this is vital to the existence of the organisation, the use made of the materials and services must also be recognised. It is so that this study is designed to generate data on the day-to-day interaction among the students, teaching staff and the library.

It is hoped that the study would provide information on the following:

- Frequency of library use and users patterns in using the library.
- Effect and quality of user education/bibliographic instruction.
- Main reason for using the library.
- Most frequently used library resources.
- User's satisfaction and dissatisfaction.
- Issues, problems, strengths and weaknesses of library services.
• User’s perception of the library in terms of meeting their needs and expectations.

The study also will look closely at the feasibility of including library/information skills course as part of the Higher Education Institutions’ Curriculum and also to look at the impact it has on the above. It will also try to provide answers to the following questions:

• Will having library/information skills programme enhance the take up?

• If we give people all the training, will it make any difference to what people are trying to do?

While many studies have been carried out on the use and attitudes of library users, these studies are usually related to library settings in developed countries. No major study or research has been made of library usage characteristics of the students and faculty members in the Malaysian higher institutions, nor has much been made known in respect of their perceptions toward library services, resources and staff.

1.4 **Objectives of Study**

• To identify detailed usage of the library and ascertain users’ patterns in using the library.

• To identify the users’ perception and awareness of the value of library services and resources.

• To identify issues and problems faced by users in their search for Information.
• To identify any strengths or weaknesses in the library services and Resources.

• To gauge the users satisfaction and dissatisfaction with library services and resources.

• To look at the relationship between users with user education (as well as users without user education) and their use of library services and resources.

• To look at the relationship between students who had received lecturer’s encouragement to use the library (as well as those who had not) and their actual usage of the library.

• To look at the relationship between users who had received hands-on-training in IT (as well as those who had not) and their usage of IT.

• To look at the relationship between students with experience of library/information skills course (as well as students without experience of library/information skills course) and their awareness of IT in the library.

• To look at the feasibility and possible impact of the library/information skills course as part of the curriculum requirement.

1.5 Hypotheses

The following hypotheses were formulated to determine the extent to which certain selected variables affected the awareness and usage of library services in Academic Libraries.
• A significant relationship exists between students who had received lecturer’s encouragement to use the library (as well as those who had not) and their actual usage of the library.

• A significant relationship exists between users who had received hands-on-training in IT (as well as those who had not) and their usage of IT.

• A significant relationship exists between students with experience of library/information skills course (as well as students without experience of library/information skills course) and their awareness of IT in the library.

• A significant relationship exists between users with user education (as well as users without user education) and their use of library services.

• A significant relationship exists between users who are satisfied (as well as users who are dissatisfied with library services) and their use of library services.

1.6 Definitions

The following definitions apply in this study are either defined operationally or adapted established definitions from authoritative sources.

Perception

One’s view or interpretation of something. Mental image and belief what something is like.
Higher Education Institutions

Education beyond the secondary level, especially colleges, polytechnics or Universities, but in this study only Institutions which culminate in a degree are considered.

Information Technology (IT)

The systems or services that make use of technological devices for library administration, storage, retrieval and transmission of information.

Library/Information Skills

Skills used in the location, interpretation and evaluation of information, such as using indexes, locating materials and conducting on-line searching. This skill will enable a person to function more independently and effectively (11). Information Literacy falls into this category. In this study it is used for a formal taught skill course in class by full-time instructors or lecturers. Hands-on-training is also included.

User Education

Various programmes of instruction, education, and exploration provided by libraries to users in the library to enable them to make more effective, efficient and independent use of the information sources, resources and services (12). In this study, the term user education does not include library/information skills training. It is more on instruction on how to use the information services. Hands-on-training is not included. Bibliographic instruction is part of user education.
**Library Instruction**

Activities such as providing library tours; delivering classroom lectures, presentations, or demonstrations on information gathering skills and resources; and credit and non-credit library courses (13). It includes user education as well as bibliographic instruction.

**Library Orientation**

Introducing new users to the general techniques of the library, services, facilities available and general layout as applied to a particular library (library tour).

**Library Services**

Facilities provided by the library to users.

**Professional Staff**

Individuals who are library officers. Chief Librarians and librarians are in this category.

**Non-Professional Staff**

Also known as library assistant or library attendant. They are the supporting staff.

**Library Management**

Professionals who manage the library. Also referred as Chief Librarian or Library Manager. They may be senior librarians too.
1.7 Limitations

This study is limited to three government-supported higher education institutions in Malaysia and therefore it may not be entirely applicable for the entire Malaysian context. Though there are only three, they represent a cross-section of institutions in Malaysia. The three were carefully selected based on the following:

- Having well-established libraries
- Geographical location
- Established at different times

1.8 Structure of Thesis

The research is presented in the following chapters:

Chapter 1 discusses the background, statement of problem and the need for the study. This chapter also provides the objectives, hypotheses, definitions and structure of the thesis.

Chapter 2 presents an extensive review of related and relevant literature and includes discussion of previous and present studies.

Chapter 3 describes the research setting. It includes a profile of Malaysia, its educational system and the development of academic libraries in Malaysia.

Chapter 4 covers the research design, which constitutes a plan of procedures for data collection. In describing the research design, the chapter begins by reviewing briefly some methodologies followed with a description and justification for it. It includes details of data gathering procedures,
questionnaire designs, interviews, skill test and finally the data analysis technique.

Chapter 5 presents the findings from the investigation undertaken. The results of the survey covered are described, analysed, discussed and their implications considered. Several statistical tests were undertaken with the aid of the Statistical Package for the Social Science.

Chapter 6 summarises and reviews the main findings and contributions of this research. It includes recommendations and some directions for future research are noted.
REFERENCES - CHAPTER 1 (Full references in the Bibliography)


CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

The literature of user studies is large and varied and the main problem of reviewing this literature related to this topic is that it is scattered throughout many disciplines. It is profitable to review some of the early research and writings in the field as a preliminary exercise. It is worth looking at some of the studies done earlier to gain an insight into how individuals perceived library services at that time. In considering the future, it is sometimes helpful to examine the past.

There are several compilations of user studies. One of the earliest dated back from the 1920s. Recently, this year (2000), Hannelore B. Rader (1) presented a summary review of 25 years of the literature on user instruction and information literacy. Within that 25 years period, a total of 28 publications were reviewed in 1973, and 286 publications were reviewed in 1998. A bibliography on Information Literacy was also published in 1998 in the Christian Librarian (2). In addition, a review of user studies is made each year in the Annual Review of Information Science and Technology which is generally concerned with the information needs and uses of scientists and technologists (3). User studies are also regularly indexed in Library Literature, Library and Information Science Abstracts, and Research in Education.

This chapter reviews related and relevant literature consisting of both theoretical and empirical writings.
2.2 **Library Usage**

Prior to the 1960s, studies carried out on library usage tended to be exploratory and descriptive in nature. Most of these early studies dealt with such matters as card catalogue utility, reading habits of students, and the need for library use instruction for the library's users. They were usually carried out on relatively small samples and generally involved only a single discipline. Since then, there have been many changes in library and information usage. It is worth noting the extent to which libraries and information centres have developed as compared to ten years ago. With the emergence of digital library, it is not surprising that recent studies have mostly been on usage of electronic services.

Earlier studies by Knapp (4), Lubans (5), Rzasa and Moriarty (6) showed library usage by students was mostly in connection with coursework. Fielder (7) and Gratch (8) reported the frequency of library use by faculty members and students. A majority cited using it at least once a week. In contrast, a study by Jiao (9) in 1997 showed libraries are not, and never have been, regularly used by most people. This finding supported Line earlier survey:

> There is a general impression that students use libraries far less than they ought to. (10)

Other studies by Linton (11), Barkey (12), Hardesty (13), and Naylor (14) indicated that a majority of the students did not use the library. Findings showed a heavy reliance on textbooks and class-distributed materials. In a further survey carried out at San Jose State University (15), it was revealed that library usage was relatively low amongst students and faculties. Dissatisfaction with library hours and the greater convenience of another library was the reasons given for the low usage. A majority of the faculty preferred to rely on purchased books and periodicals as their primary source of information for teaching and research.
Much of the research in the areas of library use and library users mentioned above are quite old and the use of IT did not play an important part when the studies were undertaken. There were also weaknesses in most of the studies. One weakness was the method of gathering data. Data was collected from users as they enter or leave the library. As a result, biases are bound to occur from the population studied, as it may not include a representative proportion of non-users and very infrequent users of library.

In 1997 a study on the prevalence and reasons for university library usage was carried out at one North-Eastern and Mid-Southern University in the USA (16). Its purpose was to ascertain how often students use the library and why they use it. The study was to determine the most popular reasons students visit the library and to develop a general profile of college student library users. The instruments used in this study were different from the earlier studies. This study used the demographic information form (DIF) and the library anxiety scale (LAS). The DIF which was developed specifically for this study, recorded relevant demographic information. Information sought in the DIF included gender, age, native language, year of study, academic achievement, semester course load, number of course credit hours, number of library instruction courses undertaken, computer usage experience, study habits, employment status, distance between home and the nearest academic library, and frequency of library visits. Included also was information regarding students' reasons for visiting the library. A list of 13 common reasons for using the library were given for students to choose from.

As for LAS, it is a 43-item, five-point Likert-format instrument, developed by Bostick (17) to assess the levels of library anxiety. The instrument has five subscales, namely barriers with staff, affective barriers, comfort with the library, knowledge of the library, and mechanical barriers. The scores for the total score which ranged from 43 to 215, were used as an overall measure of library 'anxiety', with the high scores on the scale representing high levels of
anxiety. Some 522 students were administered the LAS and the DIF during class sessions.

The findings revealed that 81.3 percent of the students visited the library at least once a week. This is quite similar to Gratch’s (18) much earlier finding of 83 percent. From the list, most students chose “to obtain a book or article for a course paper”. This further gives the impression that course assignments play a major role in determining how often students visit libraries. The 13 reasons listed seemed to be inadequate as there may be other reasons for using the library. The statement “Others, please specify...” should be added to the list. Though the instruments used look quite complex as compared to one used in earlier studies, the findings derived will give greater validity.

Using electronic sources or electronic information seemed to be a problem for a considerable number of academic users. According to Bell (19), electronic information embraces information technology (IT), electronic publishing, digital, virtual or electronic libraries, bibliographic and full-text data (including journals) in electronic form, On-line Public Access Catalogues (OPACs), World Wide Web pages, discussion lists, and electronic mail.

In a study of attitudes to electronic or digital libraries in 1996, Covi and Kling (20) interviewed a sample of academics from two institutions in the United States. All mention e-mail as an essential means of communication with interlibrary loan as the second most widely used electronic service. Only one respondent showed enthusiasm for the Internet. Those who experimented with Internet searches via gopher or World Wide Web described their experiences as frustrating. Bell (21) in 1997 found out that most academics were either unaware of, or did not know how to use, advanced database services and features.

A somewhat similar finding occurred in two surveys of academic researchers at Aston University (22). Users’ reaction to electronic CASIAS services
(Current Awareness Services combined with Individual Article Supply) were examined. The results showed, the awareness of these services was generally poor, with respondents using well-established sources, "sticking with the services they knew and trusted, being unaware or uninterested in the other services open to them" (23). A majority mentioned browsing printed journals as the most favoured source of current information.

Although BIDS (Bath Information and Data Services) was popular, users were not always using its full potential. It seemed that, the article supply feature was not used by any of the researchers interviewed. As for Internet sources, there was some interest but the respondents declared that they did not have the time and/or access to the right software. There was a general consensus that using World Wide Web can be frustrating and laborious. E-mail had been widely used but only a few were using it for current awareness. Usage of electronic journals was also poor. Concern about the quality and loss of the browsing capacity of printed journals was voiced. It was also felt that too few titles currently exist in electronic form to justify the time and effort required to learn the skills to use them (24).

In another study, The State University of New York University Centre Libraries (25) conducted a survey on usage of electronic information resources by academic staff. The findings disclosed a lack of knowledge about the electronic information resources which was seen to be a major obstacle to the exploitation of electronic information. Training and information about databases were recognised as the major factors to stimulate use. The respondents preferred the training to be carried out in small-group classes or workshops and also supported by a printed manual.

Low usage of electronic information resources could also be found in a study on Developing library research skills in academic libraries: the effectiveness of the research record (26). It was revealed that though demonstrations and encouragement had been given during introductory meeting and drop-in clinics on OPAC and CD-ROM, the usage was still low. Students commented
on the complexity and the unfamiliarity of the resources. There were complaints of not finding the sources even though they were listed in the OPAC. Added to this, the students were frustrated with the unavailability of CD-ROMs due to heavy bookings.

The capabilities of graduate students to use library resources effectively and their awareness of the resources and services available to them were investigated at the University of Botswana Library (27). In this study, the questionnaire survey method was used. Holland and Powell (28) also used this method in their user studies. Both closed and open-ended questions were used. Gay in his book noted: "the use of both types of question allows a combination of objectivity and depth" (29).

The findings revealed that some graduate students lack the basic skills in using the library services and resources. Most of them did not have adequate training in the use of the library and some are even unaware of the library services. There was a need of instruction in the use of library resources and services so as to enable users to use them more effectively and efficiently. These findings are similar to those of Lubans (30) and Holland and Powell (31).

A survey was carried out by Crawford and Dave (32) of the use of electronic services at the Glasgow Caledonian University library. The survey used both observational and questionnaire based methods and builds on a previous study which used focus groups and semi-structured interviews. E-mail, Web browsing and word processing were the main activity. The questionnaire worked reasonably well but was less successful on the analysis of the electronic information sources used. The observational methods seem promising as the observer was part of the staff and the users were familiar with him.

The awareness of electronic databases was investigated at Utah State University (33). A two-part survey was mailed to the teaching faculty as well
as to the administrators. The survey provided the libraries with some concrete and "actionable" information on how faculty members use the libraries' electronic resources. The main finding from the survey data was that the university libraries need to work harder to publicise the available electronic resources, how to access them, and what each database has to offer.

2.2.1 Summary

It is worth noting the similarity in findings in these surveys even though they are separated by time and the methodologies used vary. Significantly, course assignments still play an important part in determining the number of times students visit the library. Overall, the findings on use of electronic sources were quite worrying. Issues such as unawareness of the services, complexity and unfamiliarity with the sources, and the lack of knowledge of using the sources were quite rampant. Other than lack of adequate training the findings also revealed the lack of basic skills among users in using the services and resources. There is a tendency to use printed journals rather than electronic journals. E-mails are used commonly but not for current awareness. To conclude, the usage of electronic sources was quite low by faculty members and students.

It would appear from these conclusions that there is no point in having all the latest technology if users do not fully utilise the IT facilities available. If these problems are not tackle then the investment made to hardware and software will just go down the drain. On the part of the library management, there should be an openness and willingness to communicate with the users; to identify and resolve the problems and to ensure the services meet the users' need.
Library services as defined by Roberts (34) encompasses the educational, instructional, and informational categories. More specifically, the term was used to involve bibliographic compilations, organisation and management of the reference collection, interlibrary loans, and the provision of an organised system to enable easy access to the services.

One important indicator of the effectiveness of an academic library service is the extent of the availability of materials sought by users (35). A study to examine the total availability capability of a modern academic library was conducted at the King Fahd University of Petroleum & Minerals (KFUPM) library located in Dhahran, Saudi Arabia. In gathering the data, samples were drawn for users, shelflist (databases) and bibliographic reference sources. Survey forms were distributed for a period of 15 days to users entering the library in the morning. Reasons for the availability and unavailability of materials were identified. These included the following: • majority of items were checked out • lower acquisition budget • lack of information skills among users, and • errors in library operations.

It is to some extent surprising that the reason "lack of information skills among users" features so prominently. KFUPM Library has an elaborate orientation and user education programme that has been well documented. It could be expected that such a programme would leave few users without necessary skills. This indicates that things cannot be taken for granted and it does not mean that an existing programme will always give good results. A weakness of this study is the methodology. The capabilities of the library may not be accurately represented since the materials availability studies are only limited to the immediate availability of sources. Moreover the distribution time for the survey forms is questionable; for example what about users who always enter the library in the evening? It may be unwise to generalise conclusions in such circumstances.
Inadequate collections in libraries, and more especially inadequate journal collections are problems faced by developing countries. The frequent increases in cost and the rapid publication of new titles are among the reasons for some libraries not being able to subscribe to sufficient journals. In such circumstances it is hard to maintain academic standards especially in relation to research programmes.

One survey that dealt with faculty satisfaction with the periodical collection was carried out at the University of Hyderabad Library, India (36). Questionnaires were circulated to faculty members. The findings showed: a majority of the faculty was not satisfied with the library periodical collection and 90.99 percent of the faculty acquired additional information through their own effort. It is difficult to maintain academic standards in such circumstances. Scientific, technical and social development will be hampered if libraries cannot supply current information.

Academic libraries in Malaysia are also facing this problem but the situation is not as serious as that of University of Hyderabad. Journals in various fields are still available but the range of titles is small if compared to that of academic libraries in U.K. and U.S.A. It is important that journals either printed or electronic format are made available to academic users. Government subsidies and resource sharing can help in lessening the problem of availability of academic journals.

Much has been written about the digital library but the focus of most studies, papers and articles has been on the technology, or on the types of resources offered. Library services and human interaction between information providers and users are discussed less frequently. One would almost get the impression that the service tradition of the physical library will be unnecessary and redundant in the digital library environment (37). For a digital library to be successful, the role of the service providers and users has to be considered. Among studies that have considered the importance of
human interaction in the digital library are that of Crabtree, Twindale, Obrien, & Nichols (38); Nichols, Twindale, & Paice (39).

Most writers have indicated that librarians will continue to have a role in the future of networked information. That future will involve collaborating with users and information seekers, playing an intermediary role, and providing value-added information services, much as librarians do in the physical library setting. Library services have a role to play in the electronic/digital/virtual libraries of the future. A combination of video-based reference services with e-mail-based reference services was proposed as a model for remote reference services in a discussion of library administrators held in 1998. The model is based on observations made by researchers of video-based library services and by researchers of e-mail models. The remote reference services model can be one significant step toward meeting the challenge for library services in the largely digital library (40).

It is a commonly held belief that having well-motivated staff is a significant factor in providing an effective library and information service. To motivate staff is not easy and it does not remain constant once achieved. Green, Chivers and Mynott (41) speak of motivation as giving people the reason to work and to succeed and is needed even more with the challenges currently facing library services. Library management are by no means alone in the process of motivation but undoubtedly they play a key role in ensuring that libraries provide effective and quality services.

Providing good service always has been and always will be important, but librarians must learn how to promote systematic change within their operations and within the library profession to allow for enhancement of service delivery. In an article on delivering library services, Rose, Kristin and Gray (42) state that every effort has to be taken to ensure that the services are of quality, are cost-effective and meet users' needs. Users who know the value of information will expect better quality information services. To justify the expenditure made in libraries, library staff need to focus on improving the
returns on the investment by promoting their services. Libraries must be prepared to fully optimise their information resources as well as the expertise of their staff when providing value-added services. People will frequent the library if they are satisfied with the services.

2.3.1 Summary

The availability of library materials was discussed in two studies. Several reasons mentioned earlier were identified as to the unavailability of sources. The availability of journals vital to academic users was a matter of concern. Library services in a digital library situation were discussed. A model for remote reference services was proposed. Most agreed that no software application could replace a good librarian. Factors to the effectiveness of library services were mentioned. Motivation of staff is seen as one of the ways to achieve a better library service.

2.4 Information Needs

One of the difficulties faced by researchers in the field of user studies, is the distinction between information needs, demands, wants, and use. As a result, a number of user studies which have seemed to be of information needs have actually been of information use. Line defined information needs as: "what an individual ought to have for his work, his research and his edification" (43). Intensive studies of information needs of academics have been carried out since the late 1960s (44). Questionnaire, interview and observation are the three methods used in collecting data.

Among the earliest researcher to use observation in the study of information needs was Line and his colleagues (45). In this study, questionnaires and interviews were also used. The three methods prove useful and provide useful cross-checks. Line's study, INFROSS (Investigation into Information Requirements of the Social Sciences), is one of the major studies of social scientists' information needs. It is significant because it lays the foundations
for research on information needs (46). Unfortunately, with the advances of technology, some of the detailed content of the studies has become obsolete.

Price, however was against using questionnaires and interviews in her studies. She argued that interviews and questionnaires have the tendency to report what the respondent thinks happened, not what actually happened. She preferred the structured observation as according to her, all information seeking behaviour will be recorded (47). Stenstrom and Mcbride (48), Epp & Segal (49), and Folster (50) carried out studies which include finding out which is the best source of information. Personal, informal sources and citations were among the top choice. A study by Epp and Segal in 1987 indicated although computerised literature searching was available to scholars, only half of those responding made use of the service. It may be argued, at that time, not much was done to encourage computerised literature search. Other reasons, possibly are the cost of searches, limitations of the facilities and awareness of the service.

A study using a new observational technique for identifying the information needs of user was undertaken of three academics from the Psychology Department in the University of Strathclyde (51) in 1996. In this technique, the researcher has to be with the subject continuously throughout the day to observe his or her actions. Any action by the subject to answer a question was recorded. As expected, the presence of the shadower (researcher) has some influence on the academics' behaviour. Possibly, the participants will feel at ease if a more unobtrusive technique is used.

The result showed that academics preferred to carry out the information seeking themselves and followed by consultation with other individuals. On the whole, they preferred using print methods rather than those based on new technology. Eager & Oppenheim pointed out the implication of this for libraries and information centres:
Continued process of a good selection of core and periphery journals is vital to academics. Journals are seen as a vital resource for academics. The reputation of the library could be enhanced by marketing these resources already held and surveying users to establish if these are the most appropriate. (52)

Assessing the need for information is not new in the developed countries but is neglected in the less developed countries. In order to find out the needs and information seeking patterns of medical students at Lautech, Nigeria, a user needs study was conducted (53). A Questionnaire was the main method used, followed by oral interviews to cross-check facts as provided in the questionnaires. This cross-check method is useful in verifying the data. However, this study has one weakness as only the most senior medical students were given the questionnaires. On account of this, this study cannot be said to be truly representative of the whole community.

In a study in 1998 to determine information seeking behaviour, needs and use of information resources by graduate students at the University of Botswana (54), questionnaires were used as it was found to be more appropriate to this kind of study. The researcher believed, by using this method, he would be able to get responses from a relatively large population within a specified time. The result of the study showed that most graduate students lack basic skills on how to use the University of Botswana library services and resources. They also do not have adequate training in the use of the library and some of the students are not aware of the services the library can offer them. Guidance in the use of the library resources is necessary to help students meet some of the information requirements and they need to be taught how to use the available library resources and services. This was agreed by 93 per cent of the respondents.

A major study carried out recently was on the provision of legal information and information needs of the legal community in Kenya (55). Data was collected using semi-structured interviews and structured observation. Information was collected from members of the legal community which also
includes law lecturers and law students. The study attempted to identify the information needs and information seeking habits of the legal profession, and examined the problems experienced by users and providers of information.

The findings revealed that most law lecturers and law students interviewed were unsatisfied with the performance of their library citing as the main reason unavailability of current literature. Lack of information desk, lack of updated information and unco-operative staff were other reasons cited. Otiike (56) concludes his study by emphasising that the provision of legal information is inadequate to meet the needs of the legal profession. He cites inadequate funding from the government and the negative attitude of decision makers in government ministries and organisations towards libraries as the major causes for this situation.

A questionnaire survey of the information needs of research staff at Cardiff University (57) was conducted in early 1996. The survey revealed that conventional information sources - printed material, personal contacts and conference communications - were the most important. While respondents anticipated the increase in significance of electronic information resources over the next five to ten years, the importance of printed and informal sources was not expected to dwindle. This is especially true as this is now 2000, printed and informal sources are still widely used. A study by Shaheen Majid recently showed preference of printed journals. (58)

At the University of Alabama, Mehta and Young (59) conducted an investigation using a questionnaire, on the use of electronic sources to fulfil the information needs of science and engineering faculty users. The 1995 findings showed though that users were familiar with electronic products, they still were inclined to use printed sources or informal channels to get the needed information. More than half had negative opinions about electronic information resources in terms of comprehensiveness, relevance and ease of use. Buying more journals was the first choice in term of using library
expenditure to the best use. Concluding the study, Mehta and Young expressed their message to information providers:

They need to take a more active role to convince users of the advantages of new technologies. One way to accomplish this may be to develop products that have the features users want: namely, specialised databases with abstracts and easy to use interfaces. (60)

A recent study, which was carried out in Malaysia in 2000, was to find out the information needs and information seeking behaviour of Malaysian agricultural scientists (61). A questionnaire-based survey design was used for collecting data and follow-up interviews were conducted with some respondents to seek clarifications for certain trends emerging during the data analysis. It was a matter of concern to note that 43% of the respondents reported that they were unable to keep in touch with scientific literature produced in their specific area of specialisation. A more worrying finding was that a majority of these scientists felt that this inability was not due to their lack of knowledge about information sources and services, but was due to deficient library collections and facilities.

The study also revealed that scientists preferred using primary sources of information, particularly printed journal and review articles. Studies by Folster (62), Hart (63), and Mwila (64) also showed journal articles were the preferred information source for scientists and technologists. Informal communication with professional colleagues was also considered important for exchanging current research information. These findings of the importance of informal communication are similar to that of studies by Omekwu (65) in 1998 and Reddy & Karisiddappa (66) in 1997.

2.4.1 Summary

The majority of studies carried out on information needs have employed questionnaires. However, combinations of questionnaire, interview and observation have also been used. Each has its advantages and
disadvantages which are for example, in the Malaysian agricultural scientists study, questionnaire was preferred as it was less time consuming and affordable for a scattered population.

The lack of adequate library materials was also identified as a concern. There is a need for librarians to assess their collections in the light of such responses especially in the field of science and technology. Users still prefer printed and informal sources rather than electronic information sources. They would appear to be more comfortable with sources with which they are familiar.

2.5 Librarian/Faculty Interactions

Communication with faculty and other constituencies of the campus community is an effective way for the library to maintain relevance with the programme of the college or university (67). Thus, librarian and faculty interactions are critical not only to both groups but also to the students as well because of the influence that faculty exercise over their students' learning.

A survey by Roberts at the University of West Indies in 1995 revealed that lack of knowledge of faculty members and poor communication between faculty members and librarian was the most common barrier in the use of library services and resources (68). This finding is similar to that of Adams and Bonk (69). As a result of this, on average the faculties at the University of West Indies were aware of only 47 percent of the library services. This shows the importance of pro-active communication between librarians and their customers. Good communication with the teaching faculty is critical as this also affects the information literacy of the students that they teach (70).

In a study of librarian/faculty interaction at nine small New England College libraries (71), activity logs were used together with both questionnaires and interviews. Librarians were given activity logs containing lists of faculty members. They were to check the list each time they came into contact with
a faculty member. The records gathered will show the number of faculty members contacted by each librarian. The use of this method was based on the works of Thomas Allen in his network studies of research laboratory personnel (72). His study was on technology transfer and the dissemination of technological information. An important finding of the above study in New England was that, where frequent interaction between librarian and faculty occurred, the library services appeared to be more valued by the faculty. The possible cause for this phenomenon was explained in Allen’s study:

When two people are acquainted, they are also able to communicate more effectively. The understanding that develops between engineers through their social and work contacts is therefore important not only in encouraging communication but also in increasing its effectiveness. If one individual is familiar with another’s background, he is better able to tailor his responses to the other’s abilities. (73)

In a move to encourage librarian/faculty interactions, a number of library liaison programmes has been designed to connect academic librarians with academic departments. One such programme was implemented in 1997 at The Texas A&M University library (74). Each librarian, according to his or her subject background, was assigned to one or more academic departments as the liaison librarian. The aim was to facilitate communication with the academic faculty, enhance collection development, increase the awareness of faculty needs for teaching and research, and improve services. In Malaysia, these programmes do exist but have tended to be rather short-lived.

Numerous studies have been carried out on library liaison programmes. A study (75) on the faculty’s needs, expectations, and perceptions of the library liaison programme was carried out recently in the year 2000. This is a continuity of the library liaison programme established at The Texas A&M University in 1997. Questionnaires were used and the survey data were analysed and tabulated by using the Statistical Package for the Social
Overall the faculty were very supportive of the liaison programme. They are willing to take advantage of services the library may offer, but the first step is to educate them of the availability of specialised services and periodically remind faculty of the library services available to them and their students.

According to Wade R. Kotter (76), "Good relations between librarians and classroom faculty are a necessity, not luxury. The key to success is cooperation, not conflict". The benefit of improved relations is that faculty members who feel good about the librarian and the library will be more likely to take advantage of library services and increasing of faculty awareness of library services will have an obvious impact on librarian and faculty relations.

2.5.1 Summary

Librarians and faculty relations are emphasised and the relations are also reflected on students. Poor communication is seen as an obstacle to the effective use of library services. With the advent of new technologies, librarians must not only know how to provide access to information but also know how to define and organise themselves in relation to the public. Thus, the establishment of a library liaison programme is perceived as a good idea to encourage interactions between librarians and lecturers. The programme is also seen as an important promotion and marketing device. The important aspect of this programme is that it will provide communication to the teaching faculty and indirectly to students about new library services. One must not forget, the students are a major source of revenue and are the most powerful group and hence most demanding of a library's attention.

2.6 User Education

Almost all-academic libraries carry out some form of user education (also known as library instruction); that is, they attempt some instruction for their users on the use of the library. As perceived by Virginia M. Tiefel (77): "User
education can be seen as instruction given to readers to help them make the best use of the library". According to Fjällbrant and Malley: "user education is concerned with the whole information and communication process and ... involves the total interaction of the user with the library ... user education is central to the whole process of the library and the effective utilisation of information resources" (78). Fleming defined user education as follows:

Various programmes of instruction, education and exploration provided by libraries to users to enable them to make more effective, efficient and independent use of the information sources, resources and services to which these libraries provide access. (79)

There are various forms of user education, including library orientation, bibliographic instruction, teaching of information skills, on-line instruction and course-related instruction. Nancy H. Dewald (80) emphasised: "students will be more receptive to library instruction when it is course-related and specifically assignment related". They feel that they can get immediate benefit to their course work for an assignment that they face. Pask's study also showed that teaching library use in connection with a regular course in the curriculum was the most effective method of library instruction (81).

Hannelore B. Rader summary review of the 25 years review (1973-1998) of the literature on user instruction and information literacy saw academic libraries developed the concept of user instruction from library orientation to library instruction to course-integrated user instruction and finally to information skills instruction. Teaching materials, guides, teaching methods, and library skills test were developed by academic librarians. According to Rader (82), unfortunately, many of their efforts remained apart from the academic curriculum, thus generating much work for academic librarians with limited success in terms of students gaining appropriated information and research skills through such programs. Throughout this period, academic libraries worked diligently to form partnerships with faculty in the teaching and learning process by becoming involved in curriculum development. Generally, these efforts were not very successful.
There were a number of studies in the 1980s which investigated the impact of bibliographic instruction on scholarly achievement. Term paper analyses were used in a study by Amy Dykeman and Barbara King (83). Their findings revealed that group that had received bibliographic instruction "produced papers which were better written and contained more subject-pertinent research material". Qualities of student bibliographies were also measured by David F. Kohl and Lizabeth A. Wilson (84). A comparison was made to find out the impact that a conceptual/cognitive teaching methodology and a tools-based teaching methodology would have on improving the course work of students. The conclusion derived was that, the quality of student bibliographies was significantly higher for those students exposed to the cognitive approach BI sessions.

Using the same method as Kohl and Wilson, Frances Benham (85) found that students exposed to electronic sources of information in their BI sessions did not produce better quality work than students not exposed to electronic sources. The problem with the above study is the possibility of interference of other variables on the results such as the influence of faculty upon students and the depth and quality of assistance the student received.

A study to measure the long-term effect of a full-term credit course in bibliographic instruction was conducted by Roland Person (86). The results demonstrated that "appreciation of the course" increased over time. A survey of students who already had received instruction two years after, was conducted by Barbara Schwartz and Susan Burton. The results showed that the programme had made "a significant and lasting impact on students' reported library behaviour" (87).

In another study, a comparison was made between two groups of seniors, those who had received library instruction in their freshman year with those who had not. The result showed that those who had benefited from library instruction had maintained a greater degree of library skills (88). Students' library usage, attitudes and skills three years after they had participated in
library instruction at UCLA was investigated by Thomas K. Fry and Joan Kaplowitz. The scores of the participants showed the same high level of skills and usage as well as the same positive attitudes as those that had been surveyed three weeks following instruction (89).

Other studies that showed the impact of informational skill courses on students are that of Wood (90). His studies in the 1990s showed that:

i. Students acquired essential library skill.
ii. Improved attitudes towards the library.
iii. Student's reading comprehension and reference skills improve
iv. Improved reading habits.
v. Provide stimulus in finding materials for term papers.
vi. Improved language skills in terms of mechanics of the language & spelling.

vii. Quality of reading improve substantially.

A survey was conducted of the full-time faculty of colleges in Taiwan (91) to discover the viewpoints of faculty towards library user education. The finding indicates that faculty has reached a high acceptance on the importance of library user education, but with a low satisfaction with that offered by the libraries. Improving the quality and quantity in library user education is the only way to improve faculty satisfaction with library user education.

At York University, Ontario (92), a survey on library research instruction was conducted for more than 200 faculty in the social sciences and humanities. A twenty-item questionnaire was sent through the campus mail. The data collected were coded and entered into an SPSS data file. Cross tabulation was then carried out for selected variables and the results were later tested for statistical significance using chi-square tests. The results of the survey showed that faculty recognised the importance of BI or library research instruction. They also felt the need to improve students' library research skills across all disciplines.
However, there were weaknesses in this study. Pre-test was not administered and this raised the question of validity and reliability. The mailed questionnaires are questionable as they may not be as reliable as interviews, since it was always possible for respondents to interpret questions differently, with no opportunity for explanations or clarification.

Critical role of information literacy was discussed at two arts schools from opposite sides of the globe. They are the Institute of the Arts at the Australian National University, where the library is implementing an action plan to achieve the goals of improving student and raising staff information literacy and the California Institute of the Arts, where a commitment has been made to the use of technology in the curriculum on many levels, including hiring an Instruction Librarian devoted to designing instructional programmes based on the tenets of information literacy (93).

Both Institutes have identified competencies for a librarian in training students in both information literacy and technology literacy. These skills include the development and delivery of courses which cover library resources, both traditional and electronic; the use of a variety of software packages and computer platforms; and innovative approaches to communicate ideas to staff, faculty, and students.

Anthony Stamatoplos and Robert Mackoy (94) in their studies emphasised that library instruction for college students is an essential component of a rich academic experience. Students need some method of formal library instruction. As libraries become more complex and as more information is available with faster and easier access, it appears the future of library instruction is becoming more important than ever.

2.6.1 Summary

Numerous studies and personal perception since the 1980s showed the importance and advantages of having Bibliographic Instruction. The
perceptions are still the same in the 1990s. Studies revealed students with skills course performed better. User Education, Library Instruction, and Library and information skills course are seen as part of quality services to the faculty and students in an academic library. The education of the future will not only need to provide students with information and knowledge as such, but also equip them with the skills to acquire information and knowledge.

2.7 Perceptions/Attitudes of Users

In view of the overwhelming effect of faculty influence on library use, it is essential for librarians to understand faculty perceptions or attitudes toward, and knowledge about, the library (95). Though librarians gave more concentration on faculty perceptions, studies on students' perceptions are not neglected. Assessment of the user's perceptions is important as it can provide data and information as to what the user regards the library to be and to expect from the information service (96). Wrong or biased perceptions may have a negative effect on the library's total image and its performance.

There are a number of studies on various perceptions or attitudes of library users such as towards library services, bibliographic instruction, library/information skills, library usage and library staff. Looking at earlier studies, there are a number of weaknesses, such as, in the methodology, where interviews are not used even though it is needed to explore perceptions with great depth or accuracy. Crude categories were used rather than attitude scales in the questionnaire.

Studies on faculty's perception of academic librarians have been examined since the early 1980s. Cook's study on the teaching faculty at Southern Illinois University, Carbondale, used questionnaires as the methodology (97). As mentioned earlier, this study will generate more perceptions if interview is included in the study.
A study of the attitude of students towards the use of library courses that involve library orientation, bibliographic instruction and user education was conducted during the 1988/89 academic session at Bendel State University (98). The aim of the study was to find out if students liked the use of Library Course, whether they found it useful, should it continue to be compulsory or be made optional and lastly the impact made by this programme. An 18-item questionnaire with sub-sections plus room for comment was prepared. There was no question on personal data so as to elicit free responses. At the same time, students and staff were also personally interviewed. These interviews were significant as it provides opportunity to express freely their opinions or feelings as regards to the library course. The findings are highly positive. The respondents found the course very useful both in academic work and in social life and there were suggestions for the betterment of the course.

In 1993, a study was carried out at the University of Rhode Island (99) to identify students' perceptions on research abilities and their satisfaction on their use of the university library resources. Questionnaires were distributed to students entering the library for a two-week period. The result showed, 40 percent are dissatisfied with the research process. There was a need to learn effective search strategies on OPAC and CD-ROM databases. The problem with this study is that, non-users are not taken into account when the questionnaires were distributed. Hence, the findings will not be very representative.

A study by Baker (100) on faculty perceptions towards student library use in a large urban community college was reported in 1997. The investigator employed a two-phase multi-method strategy for data collection and assessment. A pilot-tested, expert-reviewed focus group protocol for three focus groups, each comprised five to six faculty known to be making student library assignments was used in phase one

The second phase was based on a content analysis of the information derived from the focus groups in phase one of the project, and it involved the
development and administration of a two-part, closed-question survey instrument. The survey was composed of 20 likert-scaled statement. Prospective researchers in this area are likely to find the multi-method research design particularly interesting as both the qualitative and quantitative techniques such as the focus group and likert-scaled surveys will allow the researcher to compare the results from each phase of the investigation to see how the results from the two phases compare and whether the findings converge. Looking at the multi-method used, a greater validity of results can be expected.

Among the things perceived by faculty who participated in this study was the strong belief that librarians have a major role to play in creating the library as a training and supportive educational environment. This idea was further supported by the notion that library use skills are an important way to help increase the self-esteem and self-confidence of students. The faculty also felt that the librarians need to engage in more "outreach" programmes that is by making efforts to meet the faculty on faculty terms (101).

User satisfaction which is the ultimate goal of any library or information agency is also discussed. Factors, which influence user satisfaction, have been addressed by Paul in a paper, which enumerated as "A Philosophy of Service". Paul states that to achieve a quality information service to its users, the following should be observed (102):

i. People come first
ii. We give accurate and reliable information
iii. We are serious about our high level of service
iv. We cannot afford to give one wrong answer
v. We are accessible and easy to approach
vi. We are doers - we work hard
vii. We are often pleased but never satisfied
viii. We want our staff to be happy working for us
ix. Service is a state of mind. People must care and have a desire to do it right and do it now

x. The client is always right

xi. Everyone must be thinking about how to do his/her job better and more effectively

xii. Enthusiasm and faith are necessary to remove barriers

Similarly, Brophy has explained user satisfaction from a TQM (Total Quality Management) perspective. Based on Brophy's model (103) in Figure 2.1, user satisfaction could be achieved through continuous improvement of 10 elements. The ten elements which are interlinked are as follows:

i. **Clear purpose** - It is important that there is clarity of purpose or objective that is understood by all library staff so as to achieve the same ends.

ii. **Vision, commitment and leadership** - Library management should be able to plan for future needs and demands. They should have the vision and commitment to anticipate users' need.

iii. **Teamwork and involvement** - There should be openness, supportiveness and participative decision making involving all library staff.

iv. **Service-oriented design** - The users should always be first and the services should be designed to provide the users with what they want.

v. **Systematic process** - It is essential that all staff be familiar with the library's policy so as to provide courteous and efficient service to all.

vi. **Availability of resources** - Library resources should always be available to users.

vii. **Supplier awareness** - A rapport between library management and the publishers will improve the quality of supplier's services which indirectly will satisfy users need.

viii. **Benchmarking** - This technique of checking one's performance against another is useful as it can help improve services to users.
ix. **Monitoring performance** - The monitoring of performance by library management on library staff on an ongoing basis will help achieve quality in the services.

x. **Training and Education** - The training and education of library staff will contribute to the delivery of quality services.

![Diagram of Users' Focus and Continuous Improvement](Figure 2.1 Users' satisfaction through continuous improvement (Source: Brophy and Coulling))

2.7.1 **Summary**

The strength and weaknesses of certain method used for collecting data were identified. Perceptions of users in various aspects were also given prominence. User satisfaction was also emphasised. A list of criteria for quality services was also noted. TQM perspective on user satisfaction was explained. Finally, it is important that librarians understand their users' needs
but users must also understand that it is difficult to please everyone every time, and users are just as complicated to handle.

2.8 Conclusion

This chapter has discussed relevant literature including previous and present studies. In addition to giving some background information on the subject, the literature is also influential in determining the research method to be used in the research and designing the data collection instruments.

Overall the findings documented in the literature seemed to indicate under usage of certain library services and resources by faculties and students. Under usage occurred not only in conventional information resources but also in electronic information resources. Lack of awareness, lack of knowledge, users' satisfaction or dissatisfaction, lack of resources and inadequate training was seen as factors in determining the usage of library services and resources.

The variable of primary interest for this thesis is the awareness and usage of library services and resources. A number of variables will be used to explain the variances in awareness that will eventually lead to the usage of library services and resources. The variables are lecturers' encouragement, hands-on-training, formal library/information skills course, library user education and users' satisfaction/dissatisfaction.

The encouragement given by lecturers to students to make use of library services usually has a strong and profound effect in library services and usage by students. Students usually respond favourably to lecturers' suggestions or recommendations. In usual instances, students will use the library collection when lecturers assigned them assignments or readings. They will be more alert, aware and perhaps be highly motivated if being told by their lecturers. On the other hand, an unenthusiastic lecturer will not have any effect on the students.
Hands-on-training if properly carried out will motivate users to probe deeper into what they are learning. People learn best by doing. Ultimately the learning should add value in user' usage, awareness and knowledge of the library. On the other hand, inadequate training and lack of facilities for training will add to the probability of users not using the library services.

A study by Hardesty (104) has showed that people who have benefited from library instruction had maintained a greater degree of library skills. Also a study by Wood (105) showed improved attitudes towards library skills as a result of an information skills course. Library user education and a formal library/information skills course by definition should enable users to be more effective, efficient and independent in the use of library services and resources. With the so called "information age" and the awareness that information is an important raw material, users obviously need user education or a library/information skills training to enhance their usage of library services.

As for users' satisfaction/dissatisfaction, users are more likely to be committed to using the library services if they are satisfied with the assistance from the library staff, satisfied with the library services and satisfied with the availability of library resources. One usually feels obligated and committed to the source that offers satisfaction. On the other hand, dissatisfied users will shun away from using the library services. The model showing the relationships between the variables are shown in Table 2.2.

In the diagram, the five variables: lecturers' encouragement on students, hands-on-training given by the library, a formal in-class library/information skills course, user education in the library and users' satisfaction/dissatisfaction are seen as factors that will determine users usage of library services. Awareness is shown here as an important intervening factor that will happen if four of the variables linking to it are properly carried out. The result will of course be users' awareness of the services that will eventually motivate them to use the library services.
However, not to forget that there are certain factors or variables that can influence the usage of library services even though users are aware of the services. For example, quality of training, quality of instructors, quality of user education and lack of IT facilities are some of the factors that can have an effect on library usage.

*Figure 2.2: Schematic diagram of the theoretical framework*
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CHAPTER THREE

RESEARCH SETTING

3.1 **Malaysia: Country Profile (1)**

Malaysia is a tropical country, situated in the heart of South East-Asia. It has an area of about 329,758 square kilometres, consisting of Peninsular Malaysia and the states of Sabah and Sarawak and the Federal Territory of Labuan in the north-western coastal area of Borneo Island. The two regions are separated by about 540 km. of the South China Sea. Peninsular Malaysia has its frontiers with Thailand in the North and Singapore in the South, while Sabah and Sarawak border the territory of Indonesia's Kalimantan.

Peninsular Malaysia consists of the following states: Negeri Johor Darul Takzim, Negeri Kedah Darulaman, Negeri Kelantan Darul Naim, Melaka, Negeri Sembilan Darul Khusus, Negeri Pahang Darul Makmur, Pulau Pinang, Perak Darul Ridzuan, Perlis, Selangor Darul Ehsan, Negeri Terengganu Darul Iman and Wilayah Persekutuan Kuala Lumpur. The state of Sabah consists of five divisions, namely, Tawau, Sandakan, Kudat, West Coast and Interior. The state of Sarawak comprises nine divisions. Wilayah Persekutuan Labuan with an area of 92 sq. kms., is situated off the west coast of Sabah. Figure 3.1 shows the location of Malaysia surrounded by Thailand, Singapore and Indonesia.
3.1.1 Climate (2)

Malaysia experiences a hot and humid weather throughout the year. Temperature ranges between 21°C and 33°C in the peninsular, while in the two eastern states of Sabah and Sarawak, the temperature can range between 24°C and 32°C. Rainfall is plentiful and usually the last quarter of the year is considered the “rainy” season. Annual rainfall is about 2,500 mm in the Peninsular. In Sabah and Sarawak, there is a monsoon season, called locally the “Landas” and annual rainfall can range between 3,200 mm to 4,600 mm.

3.1.2 Political & Socio-Economic Features (3)

After the Japanese occupation in 1942, Malaya was under British rule until independence in 1957. Singapore, Sabah and Sarawak joined the Federation in 1963. However, Singapore became independent in 1965. Malaysia enjoys a parliamentary democracy. The supreme head of state is His Majesty The Yang di-Pertuan Agong, a constitutional monarch selected for a term of five years by the Conference of Rulers. The Head of the Government is the Prime Minister, who is usually the leader of the party that commands the majority of seats in Parliament.

The population of Malaysia is approximately 22 million for the year 2000. The population is unevenly distributed. A high proportion is found in Peninsular Malaysia, the majority being on the West Coast while the remainder are found mainly in clusters in the coastal areas throughout the country. The distribution pattern reflects the geographical, historical and economic factors that have made possible rapid development in certain parts of the country.

The Malaysian population has a wonderful blend of different races comprising the three main groups - Malays, Chinese and Indians - in Peninsular Malaysia, and numerous indigenous groups such as the Ibans, Kadazans, Kenyahs, Bidayuhs and Muruts in Sabah and Sarawak. The
official language of the country is Malay, with the ultimate aim of uniting the people of the country with multi-ethnic and multi-cultural diversities. Though Islam is the official religion, there is freedom of worship.

Traditionally, agriculture has been the dominant sector in the economy. The major agricultural products are rubber, palm oil, cocoa, rice, timber, pineapple, coconut and pepper. Another important sector is mining and quarrying particularly for petroleum and liquefied gas (LNG). As early as the 1960s the government embarked upon a plan to industrialise the country, by placing the manufacturing sector as a dominant sector for income generation. This policy bore fruits, when beginning in 1980 the contribution of manufacturing sectors towards national income began climbing dramatically.

The National Industrialisation Policy has triggered the rapid growth of the industrial sector, particularly in the area of manufacturing. The manufacturing sector expanded rapidly making it the leading growth sector in the economy as well as the largest sector for employment creation. The major manufactured exports are textiles, clothing and footwear, electrical machinery appliances, and chemical and petroleum products.

Malaysia has entered a new phase in its industrial development. Its growth has been carefully shaped and guided by strategic five-year development master plans. It has moved towards capital intensive and technologically sophisticated industries. Providing the ultimate backdrop to these programmes is Vision 2020, a national agenda that sets out specific goals and objectives for long term development. This is aimed at providing the foundation towards the attainment of the status of a newly industrialised nation by the year 2020.

Vision 2020 is an optimistic, yet realistic, aspiration that draws upon past achievements and embodies the collective hopes of the Malaysian people (4). The chief architect of this vision is Malaysia’s Prime Minister, Datuk Seri Dr. Mahathir Mohamad. As a first step, Malaysia has created the Multimedia
Super Corridor - a world-first, world-class act - to help companies of the world test the limits of technology and prepare themselves for the future. The development of MSC is part of Malaysia's new strategy and programme to switch to high technology capital-intensive industries with special focus on information and telecommunication based industries. The MSC will also accelerate Malaysia's entry into the Information Age, and through it, help actualise Vision 2020 (5).

3.1.3 MSC (Multimedia Super Corridor)

MSC is physically a 15 kilometre by 50 km long corridor that runs from the world's tallest building, the Kuala Lumpur City Centre (KLCC), down to the region's largest international airport which opened in June 1998. Half way between the KLCC and the Kuala Lumpur International Airport (KLIA) will be two cities; one the new administrative capital of Malaysia (Putrajaya), and the other, a cyber city (Cyberjaya) where will be located industries, research and development (R&D) facilities, a Multimedia university and institutions and operational quarters for multinational corporations to direct their world-wide manufacturing and trading activities using multimedia. Both cities will have state-of-the-art communication facilities with fibre to all offices, business premises and houses. Putrajaya, the new federal government administrative capital will itself becomes a testbed for an electronic government (6).

The MSC is poised to become the centre of excellence where Vision 2020 will be realised. Covering and linking cities and major businesses and recreation facilities, the MSC will cater for everyone. It will comprise a region which centralises all facilities such as schools and government offices under a massive computerisation project that interlinks all the building within it. Information will be easily accessible through the widespread use of the electronic media within the corridor. If all the buildings are networked, access time to information as well as transactions will be greatly improved (7). The general perception of the MSC is that it will have a positive impact in terms of
boosting Malaysia's economic growth and enabling the country to become more competitive in the global market.

The financial crisis of 1998 and 1999, which has forced a slowdown in the economic growth, is only a temporary setback as Malaysia has the means and resources to bounce back and achieve what it has set out to do in the Vision 2020 (8).

3.2 Educational System in Malaysia

3.2.1 Background

During the period of pre-independence, the development of education in Malaya (the title by which it was then known) was subjected to the general objectives of the colonial authorities. There was little change and the status-quo of the different communities in the country were maintained. No attempt was made to develop a national policy of education then. Separate school systems were made available for the Malays, Chinese and Indians at all levels. It was only in the English schools that children from all races came together. The educational programme in these English medium schools followed the British model (9).

The need for integrating various ethnic groups had been felt in the late 1940s (10). In 1956, a Special Committee under the chairmanship of Tun Abdul Razak (who later became the first Minister of Education and the Second Prime Minister of the country) was set up to review education policies and to make recommendations with an objective:

To establish a national system of education acceptable to the people of the Federation as a whole which will satisfy their needs and promote their cultural, social, economic and political development as a nation, having regard to the intention to make Malay the national language of the country whilst preserving and sustaining the growth
of the language and culture of other communities living in the
country. (11)

The Report of the Committee, popularly known as the Razak Report (12),
became the basis of the present educational policies. It emphasised that:

The ultimate objective of education policy in this country must be to
bring together the children of all races under a national education
system in which the national language is the main medium of
instruction though we recognise the progress towards this goal
cannot be rushed and must be gradual. (13)

Concerning the educational context, the Report recommended a radical
departure from the existing practice. It stated that:

One of the fundamental requirements of the educational policy...is to
orientate all schools, primary and secondary, to a Malayan outlook.
We consider that the way to do this is to ensure a common content in
the syllabus of all schools. (14)

The main recommendations of the Razak Report became the basis of the
education system as enshrined in the Education Ordinance, 1957 (15). In
1960, a Review Committee was set up to monitor the progress of the
implementation of the National Education Policy. Recommendations were
made which include one important recommendation that was the raising of
the school leaving age to 15 years. This made possible the automatic
promotion throughout primary and lower secondary levels by the abolition of
the Malayan Secondary School Entrance Examination (MSSEE). The
recommendations of the Review Committee became the basis of the
Education Act, 1961, which characterised the features of the present
education system (16).
Since 1957, a number of steps have been taken to implement the national language policy in the education system. The Education Act, 1961, provides the legal basis for:

- The national language as a compulsory subject at all levels in primary and secondary schools and in all teacher training institutions;
- The setting up of secondary schools or classes to be taught in the national language; and
- A pass in the national language compulsory for the award of certificates for public examinations at the end of lower and upper secondary levels.

In the early 1970s, steps were taken to implement the language policy. Malay language was made to be the medium of instruction at all levels of education system except in the primary Chinese and Tamil schools. The main aim was to speed up national integration and unity. Schools using English as the medium of instruction were gradually adopting Malay language. At the secondary level, Malay language became the main medium of instruction since 1980. By the end of 1980s, Malay language became the medium of instruction at post-secondary and tertiary levels.

In 1974, a Cabinet Committee chaired by the then Minister of Education, Dr. Mahathir bin Mohamed (who later became the Prime Minister in 1981) was set up to review the implementation of the education policy. Recommendations of the Cabinet Committee Report of 1979 were directed towards achieving the following objectives:
To achieve national unity in a multi-ethnic society.

To produce skilled manpower for national development.

To further extend the policy of democratisation of education in order to strike a balance in all aspects of education between rural and urban areas.

Today, education programmes and activities in Malaysia are designed to:

- Equip pupils with the essential skills in a holistic and integrated manner, in order to produce individuals who are intellectually, spiritually, emotionally and physically balanced; as well as functionally literate;

- Inculcate and nurture national consciousness by promoting common ideals, values, aspirations and loyalties to foster national unity and national identity;

- Produce manpower for economic & national development; and

- Instil desired moral values in pupils so that they can contribute effectively towards national building.

3.2.3 **Education Structure and School System** (19)

While private education is increasingly making an impact on the education system in Malaysia, the very foundation of education is still very much the province of the government sector, under the Ministry of Education, Malaysia. Though Malaysia is by no means a welfare state, it offers a wide range of social services (including education) administered by the
government that are accessible to all, including the poor. Education as a whole comes under the Ministry of Education that manages a comprehensive school system from primary to university, regulates syllabuses, controls national examinations and in general supervises the development of education in the country.

The formal school system in Malaysia provides education in four stages beginning from primary to upper secondary. The primary level covers a period of six years. The lower secondary level covers a period of three years, followed by two years at upper secondary and another two years at sixth form level. The admission age to the first year of primary education is six years old. Education at primary and secondary levels is free but not compulsory. Most schools in the country are government or government-aided schools. Figure 3.2 gives a summary of the Public Education System in Malaysia.
Figure 3.2  Education System in Malaysia (Source: Ministry of Education, Malaysia)

AGE
6 7 8 9 10 11 | 12 13 14 | 15 16 | 17 18 | 19 20
6 7 8 9 10 11 | 12 13 14 15 | 16 17 | 18 19 | 20

PRIMARY LOWER SECONDARY UPPER SECONDARY POST SECONDARY AND COLLEGE HIGHER EDUCATION

EDUCATIONAL LEVEL
1 2 3 4 5 6 > 1 2 3 4 5 6
NATIONAL SCHOOL
NATIONAL TYPE CHINESE SCHOOL
NATIONAL TYPE TAMIL SCHOOL

1 2 3 4 5 6
PMR
Sijil Pelajaran Malaysia (Lower Secondary Assessment)

SPM
Sijil Pelajaran Malaysia (Malaysian Certificate of Education)

SPMV
Sijil Pelajaran Malaysia Vokesyonal (Malaysia Certificate of Vocational Education)

STPM
Sijil Tinggi Persekolahan Malaysia (Malaysian Higher School Certificate)

R Klas Peraihan
(Remove Class)

FOREIGN UNIVERSITIES
PRE-UNIVERSITY MATRICULATION

UNIVERSITIES
COLLEGES
EMPLOYMENT

LOWER UPPER
ACADEMIC

ACADEMIC ARTS & SCIENCE

ACADEMIC TECHNICAL

COLLEGE
POLYTECHNIC
3.2.3.1 **Primary Education (Year One to Year Six)**

The six years of primary education in Malaysia is aimed at providing a good foundation for children in the 3 R's, that is a proficiency in reading, writing and arithmetic. The introduction of the Kurikulum Bersepadu Sekolah Rendah (KBSR) in 1983 has been a major step undertaken by the Ministry of Education towards achieving the objectives of the 3 R's programme (20). Instead of the old content-loaded approach, the KBSR stresses on the importance of social, moral and ethical values along with the acquisition of the 3 R's. Classroom activities such as educational games and play-acting are introduced to stimulate learning and personal development.

At the end of the six years, primary school pupils sit for the Primary School Assessment Test (UPSR/PSAT). The test is not an entry qualification for secondary schools, rather, it is an assessment of the pupils' mastery of the 3R's. Irrespective of their performance in the PSAT, all primary school pupils are promoted to Form One, the foundation year of secondary education. However, there is an exception in the case of the Chinese and Tamil National Type Primary Schools. These schools follow the national curriculum and use Bahasa Malaysia as the medium of instruction but they also teach their respective vernacular languages as a subject. The pupils of these schools have to undergo one year in Remove Form before being promoted to Form One.

3.2.3.1.1 **Primary School Library**

School libraries were known to exist in the 1950's but their development was ad hoc and mainly at the initiative of a few individuals (21).

The 1960's was the most significant period in the history of school libraries in Malaysia because it marked the beginning of organised school library development, spearheaded for the first time by the government (22). The move towards information skills was in the 1980's when the Ministry of
Education started establishing the School Resource Centres (SRCs). According to Zaiton Osman this move was significant for 2 reasons: (23)

- It made possible the integration of two separate services, the library and the audio-visual services.

- It provided school libraries with the opportunity to play a more meaningful role in the teaching-learning process in schools.

Though there are about 6,965 libraries or resource centres in primary school (24), as far as the library/information skills is concerned, the pupils are taught the DDC (Dewey Decimal Classification), use of reference materials, use of audio-visual materials, use of catalogue and shelf-arrangement (25). After visiting 10 schools, Zaiton realised that, pupils are taught location skills rather than retrieval skills. The finding also revealed that those who were taught the location skills were the pupil assistants and the teacher-librarians were the ones who taught them. Zaiton added:

> This sounds like a convenient arrangement whereby the teacher-librarians taught their pupil assistants certain basic skills to enable them to help around – organise the collection, maintain the catalogue and shelve books. Seen against this background, the “skills” taught and the “skills” learnt (if at all the word “skills” can really be used) are not skills that would enable the pupils to use the library independently. (26)

3.2.3.2 **Secondary Education** (27)

Secondary education in Malaysia is divided into three main levels:

- lower secondary level

- upper secondary level
pre-university level

As in the case of the KBSR in the primary school, the Ministry of Education has taken steps to develop a secondary school syllabus that suits the needs and aspirations of the country. Today all secondary schools in the country follow the Kurikulum Bersepadu Sekolah Menengah (KBSM) or the Integrated Curriculum for Secondary School. At the end of the third year of the lower secondary level, pupils have to sit for public examination, the Penilaian Menengah Rendah (PMR) or the Lower Secondary Assessment.

Entrance to the upper secondary level (Forms 4 and 5) is based on the students' performance in the PMR. The four streams are Arts, Science, Technical and Vocational. Then at the end of the two years in upper secondary school, the pupils have to sit for another public examination, the Sijil Pelajaran Malaysia (SPM) or the Sijil Pelajaran Malaysia Vokasional (SPVM) in the case of the vocational stream (equivalent to the Senior "O" levels Cambridge exams).

Pre-university education under the public school system in Malaysia lasts for two years in Form Six. Entry to this level is based on performance in the SPM/SPVM. Another public examination, the Sijil Tinggi Persekolahan Malaysia (STPM), marks the end of this level of education. This examination is run by the Malaysian Examination Council or Majlis Peperiksaan Malaysia that is accredited to the University of Cambridge Local Examination Syndicate (UCLES) of England. With this arrangement, the STPM (equivalent to "A" levels) is not only the entry qualification for Malaysian universities but is also recognised by most universities around the world (28).

3.2.3.2.1 Secondary School Library

Malaysia has approximately 1,470 libraries or resource centres in secondary schools (29). The total collections within the school libraries are not known. Although school library services have improved greatly over the years, there
is still a lot to be done. For example, no resource sharing exists among resource centres as well as with the broader information community.

As for library/information skills in Secondary School, the situation is quite similar to that of Primary School. A number of pupils are selected as school librarians and they are the only one taught certain basic skills. Their tasks are to assist the teacher-librarian in organising, maintaining and shelving of the libraries' collections. From this, it looks as if pupils from the Secondary Schools are not equipped with library/information skills before entering the Higher Education Institution. This was further highlight by the Minister of Education, Datuk Seri Najib Tun Razak:

Schools must make sure that pupils are taught in using the library services more effectively since they will be needing the skills when they enter Higher Education Institutions. (30)

3.2.4 Higher Education (31)

Higher education in Malaysia is provided by both public and private institutions. It provides opportunities to equip individuals with the appropriate knowledge and skills. At the same time it aims to produce professionals to meet national human resources needs and to provide facilities for research. Malaysian education is geared towards fostering national universities, catering for manpower requirements and to developing the abilities of students. Institutes of higher education consist of universities, colleges and polytechnics.

Due to the increasing demands for higher education, the government has allowed the establishment of private higher education institutions. These institutions can only be established upon the Ministry's approval and should conform to the national requirements. Such institutions are proliferating and they provide courses leading to foreign professional and other diplomas and degrees. The most recent development has been the introduction of twinning programmes whereby a local college enters into an arrangement with a
foreign university and provides the first stages of the degree course in this country, while the final part is taken at the university concerned overseas. An example is that of Sunway College (a private institution in Malaysia) which has twinning programmes with Monash University, Victoria University of Technology, Leicester University, Loughborough University, Nottingham University and Western Michigan University.

At present, there are ten universities, one college and six polytechnics, which all come under the aegis of the Ministry of Education (32).

3.2.4.1 College Education

Kolej Tunku Abdul Rahman (KTAR) offers semi-professional courses at certificates and diploma level and was established in 1969. It provides pre-university, diploma and certificate education in the fields of commerce, science and technology.

3.2.4.2 Polytechnic Education

The idea of polytechnic education has been established since 1969 to provide training in engineering and commerce at the technician and junior executive levels. The full-time three-year diploma programmes and two year certificate programmes are conducted by four departments, namely, Commerce, Civil Engineering, Mechanical Engineering and Electrical Engineering (35). At present there are six polytechnics in Malaysia. They are:

- Politeknik Sultan Abdul Halim Mu'adzam Shah, Kedah
- Politeknik Ungku Omar, Perak
- Politeknik Port Dickson, Negri Sembilan
3.2.4.3 University Education

There are nine local universities and one international university in Malaysia providing undergraduate and postgraduate studies (36). They are:

- Universiti Malaya (UM)
- Universiti Sains Malaysia (USM)
- Universiti Kebangsaan Malaysia (UKM)
- Universiti Putra Malaysia (UPM)
- Universiti Teknologi Malaysia (UTM)
- International Islamic University (IIU)
- Universiti Utara Malaysia (UUM)
- Universiti Malaysia Sarawak (UMS)
- Universiti Malaysia Sabah (UMS)
- Universiti Teknologi MARA (UiTM)
Universiti Malaya was the first University of the country. It was established on 8 October 1949 as a national institution to serve the higher education needs of the Federation of Malaya and Singapore. The growth of the University was very rapid during the first decade of its establishment and this resulted in the setting up of the two autonomous Divisions in 1959, one located in Singapore and the other in Kuala Lumpur. In 1960, the government of the two territories indicated their desire to change the status of the Divisions into that of a national university. Legislation was passed in 1961 and the founding of the University of Malaya followed the next year, on 1 January 1962 (37). This was to be the only university for another decade.

Between 1969-1972 four universities: Universiti Sains Malaysia (USM): 1969), Universiti Kebangsaan Malaysia (UKM: 1970), Universiti Putra Malaysia (UPM:1971), and Universiti Teknologi Malaysia (UTM: 1972) were established in quick succession. Then the International Islamic University (IIU) was established in 1983. Although it was set up by the Malaysian government, this university operates as a company under the ownership of a board representing the university's sponsoring governments and organisations (38), which include Malaysia, the Maldives, Turkey, Pakistan, Bangladesh, Libya, Egypt, Saudi Arabia and the Organisation of Islamic Conference (OIC). Next was Universiti Utara Malaysia (UUM: 1984) which was established after another decade. Two more universities emerged after 1990. They were Universiti Malaysia Sarawak (UMS: 1993) and Universiti Malaysia Sabah (UMS: 1995).

ITM or now UiTM was set up in 1956 with its main campus in Shah Alam, Selangor and have branches in all the thirteen states. It was an autonomous body until 1976 when the ITM Act of 1976 (33) was introduced. With the passing of the act, ITM became a statutory body within the Ministry of Education and under the supervision of a council. It provides education and training in a wide range of sciences, technology, business management and professionals' courses at certificates, diploma, degree and doctorate levels. It was only with the amendment made to the ITM Act 1996 by the government.
that allow ITM to award Bachelor degrees and at the same time run Masters and Doctorate programme (34). On the 26th of August 1999, ITM was accorded the status of a University by the honourable Prime Minister of Malaysia. It is now known as Universiti Teknologi MARA (UiTM).

The Government has planned to set up more universities in the near future. This supports the statement made by the Prime Minister, Datuk Seri Dr. Mahathir bin Mohamad who believed that Malaysia can be an important centre of education (39). With concerted development, the local universities should be able to stem the flow of students to foreign universities that, during the period of 1990-1996, numbered no less than 75,000 students. The situation will change radically with the expansion of local universities, the majority of which, with a current average enrolment of about 11,000 to 12,000 students, may expect to triple their intake (40). This will include students from other, especially Asian countries. The Government also intends to allow foreign universities to establish branch campuses in Malaysia (41).

In addition to the universities that have been mentioned above, there are various private organisations that were involved in the setting up of universities recently in 1997 and were also in the process of setting up of more universities in the near future. All this augurs well for education in Malaysia. Some of the private universities that have been or going to be established are: Universiti Telekom (UNITELE); Universiti Tenaga Nasional (UNITEN); Universiti Petronas; Virtual University (Unitar - Universiti Tun Abdul Razak); Universiti Teknologi Industri; Universiti Mara (UNIMARA); and Universiti Kolej Malaysia (UNIKOM). All these universities are not under the Ministry of Education. Education is clearly becoming important in Malaysia, with a continually increasing demand, especially with the country’s commitment to the goal of the globalisation of its economy (42).
3.3 **Academic Libraries in Malaysia**

There were very few libraries in Malaysia, and they were of little importance during the pre-World War II period. From 1817 subscription public libraries were established and their main purpose was essentially for recreational reading. Small collections of serious materials existed in colleges and institutes (of agriculture and technical training), but academic libraries were only established after the country’s independence in 1957, beginning with that of the University of Malaya (43).

The oldest academic library is the University of Malaya Library. It was established in 1959. Then come Universiti Teknologi MARA Library, which was established in 1967 and followed by Universiti Sains Malaysia Library in 1969. The 1970s saw the establishment of three other libraries: the UKM Library in 1970, the UPM Library in 1971 and the UTM Library in 1972. The IIU Library and the UUM Library were established in 1983 and 1984 respectively (44). These were the major academic libraries in term of staffing, facilities and services, membership, and collections. The newly formed Universiti Sarawak Malaysia and the Universiti Sabah Malaysia are fast catching up with more emphasis on the latest information technology in their library. The three academic libraries that have been selected as the locations for the research are described briefly.

3.3.1 **Universiti Teknologi MARA (UITM) Library** (45)

The Universiti Teknologi MARA Library or better known as Tun Abdul Razak Library has the biggest network system in Malaysia, with its main campus in Shah Alam and eleventh regional campuses in other locations throughout Malaysia. To date, the library collections totals more than 356,545 volumes comprising of books, pamphlets, conference papers, bibliographies, calendars and other non-print materials in microform format. The library also holds about 2,800 periodical titles currently subscribed or received through donations. Overall, the library is serving 36,717 full time students' population,
with 13,820 students at the main campus. As for faculty, the population is 2,506.

Currently, the library uses ILMU (Integrated Library Management Utility) for its integrated library system. The project began in 1992 and is near its completion. Infotrack (OPAC), Circulation, Cataloguing, Acquisition, Information Retrieval Services (IRS), Accounting, Control File Maintenance, Serial and Authority File Maintenance are modules from ILMU that are fully functional and operational at the library. Services that are offered by the library are:

- Book Loan
- Book Reservation
- Reference
- Readers' Services
- Inter-Library Loans
- 24-Hours Reading Rooms
- IRS via CD-ROM's and other Media Media
- Library Orientation and Library Tours
- Basic Reading and Library Skills
- Selective Dissemination of Information (SDI)
Ancillary Services such as Microfilm

Reproduction, Bindery & Study Carrels

The library skills programme organised by the library was started in July 1996. It was part of the UiTM co-curricular activities. At the beginning of every new semester, only 30 - 40 students will be accepted in the programme. They will be taught Introduction to the Library, Its Services, Functions of the Departments, and Computerisation and Information Technology. It was a one credit hour and it was not compulsory. The facilitators were librarians and they did it voluntarily. Sessions were usually after office hours. However, the programme did not last, it was discontinued in 1999.

In contrast to the library skills organised by the library, there are 3 Faculties in UiTM which conduct a formal in-class Library/Information Skills course for their students. It is compulsory for the first years and it is a one credit hour course. Facilitators are mostly lecturers from the Faculty of Information Studies and the course is better organised by them.

3.3.2 Universiti Putra Malaysia (UPM) Library (46)

The UPM library at Serdang, Selangor is situated near Putrajaya, the new administrative capital within the Multimedia Super Corridor. The library has a total floor area of approximately 17,652 square metres and has a seating capacity of 2,000, not taking into consideration the carrels, meeting rooms, auditoriums, etc. It has a branch library at the University's Faculty of Fisheries and Marine Science in Kuala Trengganu. UPM library has a book collection of about 400,000 volumes, 6,300 serial titles, as well as a collection of maps, sound recordings, microforms, video tapes, slides, computer files and other research materials. There are approximately 15,798 students and 3,600 academic and support staff in UPM.
UPM library uses the Virginia Tech Library System (VTLS) for all its operations, that are Cataloguing, Acquisitions, Circulation, Serials Control, Reserve Room Control and On-line Public Access Catalogue. Among the services offered by UPM library are;

- Library Orientation Programme
- Information Literacy Course
- Circulation Services
- Information Centres
- Contents Page Service
- Reader's Advisory Service
- Information Searching Service
- Access to External Databases

The Library Orientation Programme provided is somewhat similar to other academic libraries. It is usually held at the beginning of the first semester of every academic year. The courses comprise video and slide presentations, talks and guided tour. The purpose of the course is to enable the students to use the library's collections, facilities and services effectively.

UPM library also provides an Information Literacy Course that is offered to the undergraduates as an elective paper and to the post graduate students as an audit paper. The objective of the course is to enable students to understand the value and need for information; identify the various sources of information; acquire skills in retrieving and accessing information and its
use as part of their life-long education. The course is worthwhile and according to a librarian, the responses from the students are very encouraging. He added, that it will be more beneficial if all students were to undertake the course.

3.3.3 Universiti Utara Malaysia (UUM) Library (47)

The Northern University of Malaysia (UUM) library was established in 1984 and is located in Sintok, Kedah. It got its name (Northern University) because of its location at the northern part of Malaysia. The library is housed in a five-storey building situated in the heart of the campus. It has a seating capacity of up to 1,000 persons including discussion and carrel rooms. At present the library has more than 120,000 volumes of books and subscribes to over 3,000 periodical titles. In addition, it holds audio-visual material, theses, maps, company reports and various databases on CD-ROM. There are approximately 9,692 students and 278 academic staff at UUM at the moment.

UUM library is fully computerised with an integrated library software, LINTAS - an in-house software that the library had helped to develop. The library is organised into 12 divisions as follows:

- Acquisition
- Technical Processing
- Automation
- Circulation and Reader Service
- Serial
The library has its programme in educating users. The programme is known as "Program Bantuan Penyelidikan" (P.B.P) or "Research Assisted Programme". The class or workshop for small or large group is available for the whole year and those interested can contact and make arrangement with the library. It is not compulsory, with the librarians taking turns to run the programme. The objective of the programme is to assist users in doing their research and guide them through the library research strategies.

3.3.4 **Legal Provisions** (48)

The constitutions of the academic libraries, except for UIA Library, are governed by Section 8 of the Universities and University Colleges Act, 1971 (Act 30). In the Schedule (Section 8), it provides that universities shall not only provide courses of instruction and confer degrees and diplomas, but also:

> Erect, equip and maintain libraries, laboratories, museums, lecture halls, halls of residence and all other buildings required for the purpose of the University, whether in the Federation or elsewhere.

(Part 1, d(i).)

Furthermore, there is a provision under Part II of the Schedule (10(1)), which states that:
There shall be a Registrar, a Bursar and a Librarian, who shall be whole-time officers of the University and shall have such powers and duties as prescribed by Statute (49).

Hence, there is a clear provision for libraries and professional librarians in academic libraries in Malaysia.

3.3.5 **Roles, Functions and Achievements**

All the major academic libraries have experienced a dramatic growth except for a temporary setback due to the economic recession in the mid-1980s. Each has actual or planned space for housing up a million volumes; well trained professional staff; and consistent budgets that are fairly adequate for supporting teaching functions (50). A great deal of bibliographical activity is carried out by each library; information exchanges occurred on formalised national meetings of Chief Librarians; through library association forum, and ad hoc committees. A good example is the AGRIS (International Information System for Agricultural Sciences and Technology) bibliographic database at Universiti Putra Malaysia (UPM). Resource sharing, co-operative cataloguing, co-operative acquisition programs, producing a union list of serials (PERPUNET Project)¹ in Malaysia are some of the joint activities carried out among the major academic libraries (51).

The 1990's brought about computer search services in academic libraries. Both local and foreign databases are used, such as DIALOG, ERIC, MEDLARS and AGRIS. All the major academic libraries are fully computerised now, whereby on-line searchers, cataloguing, acquisitions, circulation, serials and other software packages are made available. The Online Public Access Catalogue (OPAC) is already operational. With the introduction of the telecommunication network facility named MAYPAC (Malaysian Packet Switching Network) in Malaysia, it will not be long before

¹The PERPUNET Project was started in 1977 for the purpose of producing a union list of serials in Malaysia. It provides co-operative acquisition programmes for serials.
all on-line networks of academic and other libraries of Malaysia will be in operation. The achievements of the last decade have provided a firm foundation for future developments (52).

3.4 The Future

Malaysia is working hard towards the attainment of Vision 2020 or the status of a developed country by the year 2020 through productivity-led growth (53). Multimedia is no doubt seen as the key enabler in attaining this status and hence, the creation of the Multimedia Super Corridor (MSC). The measure of the nation's success in 2020 will be the number and quality of people who can add value to information. This, in turn would depend on the quality and level of education that remain the most important factor to ensure the country is able to sustain whatever it may achieve over the next couple of years (54). Towards that end, the Multimedia University, Unitar (Universiti Tun Abdul Razak) Virtual University and Smart Schools are being created and implemented.

3.4.1 Multimedia University

Initially located at Telekom Malaysia Berhad's Universiti Telekom or Unitele in Malacca, the University will eventually move to the heart of the MSC's "intelligent" city called Cyberjaya. The university has been modelled after top universities in the United States and Canada. Universities like Stanford and Massachusetts Institute of Technology (MIT) in U.S.A. and Waterloo University and Simon Frazer University in Canada, have already lent their assistance to help fine-tune the university's academic programmes and their academic workforce (55).

The first intake was in May 1997 of 1,500 students. The second intake was admitted in June 1998, consisting of 2,000 students. Along with that, the University has also accepted the first intake of 300 students for its virtual university programme. Under this programme, only working adults are
allowed to enrol in a three-year degree programme in management without having to physically attend classes (56). Among the courses at the University are: Multimedia Engineering, IT, Media Arts & Sciences and Management. The Education Minister Datuk Seri Mohd Najib Tun Razak was reported to have said that by the year 2000, the country will see a total of 15,000 graduates from the field of Computer Science, Multimedia and IT through local tertiary institutions (57).

3.4.2 **Unitar (Universiti Tun Abdul Razak) Virtual University**

Educational development in the country took a big leap forward with the setting up of the first virtual university, providing greater access to tertiary education for Malaysians (58). The Universiti Tun Abdul Razak was built and managed by KUB Malaysia Bhd, a private organisation with links to the government. The establishment of such a university is timely as the Government is trying to provide more places for Malaysians to obtain a tertiary education. This will also be in line with the Education Ministry’s vision to make Malaysia a regional centre of educational excellence.

In a speech after handing over a letter of intent to KUB to set up the university, Minister Datuk Seri Najib Tun Razak said:

> This new concept is an unconventional but workable way to provide tertiary education for the masses, and will open up more educational opportunities especially for those in the rural areas. (59)

The virtual university will provide 12 study centres covering the major towns and will have an intake capacity of 300 students per semester. Each study centre will be equipped with state-of-the-art multimedia equipment, including multimedia PCs, colour printers and scanners, video conferencing equipment and an advanced networking system. There will also be a virtual library as well as a courseware management and delivery service. Unitar’s learning and instructional model is designed around the use of interactive multimedia
courseware and the Internet to create an effective stimulating learning experience (60).

3.4.3 **Smart Schools** (61)

One of the flagship applications in the MSC is the Smart School Project, which introduces to the learning environment a concept that embraces extensive use of information technology (IT) components such as multimedia and other computer-aided learning facilities. Computers will be a common place item and the extensive use of multimedia IT applications will be a common feature in Smart School. It holds much potential and many promises in giving birth to a new thinking generation and a knowledgeable society. There are five main goals of establishing the Smart School:

- to encourage all-round development of individual, covering the intellectual, physical, emotional and spiritual domains.
- to provide opportunities for the individual to develop his/her own special strengths and disabilities
- to produce a thinking workforce that is also technologically literate.
- to democratise education such that every child has equal access to learning.
- to increase the participation of all stakeholders such as parent, the community and the private sector in the education process.

In order to enhance IT literacy, model Smart Schools are being developed within the MSC and then rolled out to the rest of the Malaysian schools. Existing schools primary as well as secondary will be upgraded with facilities to accommodate the smart learning environment (62). The emphasis of the Smart Schools Project will be the development of creative and independent thinking among students. To facilitate learning, all Smart Schools will be equipped with fibre-optics, computers and multimedia facilities (63).
Nine secondary schools were chosen as model Smart Schools, while the rest will be upgraded with facilities to accommodate the smart learning environment. It is envisioned that by the year 2010, all 10,000 primary and secondary schools will become smart schools. The success of the Smart School is crucial as it would be a critical platform for building the right skill base for taking Malaysia into the information age and also creating an excellent pool of knowledge workers.

3.4.4 Economic Changes

Malaysia's aim of reaching developed nation status by 2020 is not in jeopardy even though the financial crisis of the late 1990's has battered the region's currencies and shares, and forced a slowdown in economic growth. Long-term targets were unlikely to be affected though the Government had scaled back its 1998 GDP growth forecast to between 4% and 5% from an earlier projection of 8% after the regional financial crisis erupted last July 1997. According to a statement made by the Ministry of Finance:

If we are able to sustain (growth) at 4% to 5% this year and move on somewhat (to) about 5% to 6% the following year, then most of the Seventh Plan targets will be achieved. The nation's "Vision 2020" to become a fully developed economy by 2020 was unlikely to be affected by "temporary setbacks" like the current economic slowdown. With the understanding between countries in the region, I think recovery will be faster, swifter than many have anticipated. (64)

However, in a recent report, Malaysia posted its largest trade surplus of RM8.7 billion in December 1999 compared to an average of RM5.7 billion recorded in the preceding months. The Industrial Production Index also rose in December by 16.2 per cent year-on-year, spurred by the robust growth in manufacturing and power industries. In addition, Malaysia is also expected to register a gross domestic product growth of six per cent this year, higher than the five per cent forecast by the Central Bank of Malaysia. Given the
improving economy, the future looks positive. The following factors point to continued growth in the country’s economy (65):

- Abundant liquidity brought about by three consecutive years of current account surpluses;
- Low inflation;
- Rebound in consumer spending, as evidenced by the recovery in motor vehicle sales, up by 76 per cent in 1999;
- Re-inclusion of Malaysia into Morgan Stanley Capital Indices in May; and,
- Malaysia’s improved international ratings.

3.5 Conclusion

Information has been regarded as the most important commodity in any pursuit and this is apparent in the current economic growth of Malaysia. The fast development of electronic information environment and the changing phases of the parent organisations’ roles have induced the academic libraries in Malaysia to shift in information management, services and staffing and at the same time anticipate future development. Changes in information technology and the external environment have altered the context for library services in Malaysia and the pace of the changes has speeded up with the Government’s positive policy towards information service (66).

The application of IT in Malaysian libraries and information services is the result of the concerted effort of the information professionals and it is only in the 1990s that full support from the authorities were realised as the budget allocation that were provided to government agencies. With the introduction and usage of Internet, the current aspiration of the government is to fit Malaysia into the information age, with special interest given on yet another avenue, the Multimedia Super Corridor (MSC). Granted the increasing availability of the on-line systems, the population may now get access to unlimited information while at the same time reduce information deprivations as well as increasing IT literacy level.
As more libraries and information centres embark on library computerisation, the capability of a much wider resource sharing linkages among libraries through networking systems would be realised. This would make it possible to access directly to other libraries. As it is, the increasing role of government and non-government agencies in research and development has increased the economic value of information and to this effect it becomes inevitable for most agencies to place the investment of IT as a top priority.

There is no turning back to the information era and present staff must be IT literate. This is because all library operations may eventually be computerised and the ability to run the computers would therefore be required. Lewis (67) noted: “Reference, other library operations, and the library as a whole, need to be able to demonstrate their worth in the current electronic environments”. New challenges that are created can be listed as the followings:

- training of staff
- training of users
- maintenance
- management

Although the information age has brought along with it many changes to the operating environment of libraries, the extent of use of the information and services of the library is still limited. The socio-economic background of Malaysians reflects the lack of reading and library culture among them. A visit to the library has not been the society’s top priority, except during the time of urgency such as during the examination period. Users will often use the premise for private pursuits instead of utilising the library information and services. That being the case, the library management has to transform the library into a place that will attract users both on a short term and along term basis. Academic libraries will continue to play a significant role in supporting their respective institution’s mission. Traditional user services will continue
and innovative services will be added. This has presented a great challenge to all academic libraries, being agents of information, to prepare the students as well as faculty members for the advent of an established information culture.
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30. *A Large Number Do Not Know How To Use the Library.*


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CHAPTER FOUR

RESEARCH DESIGN

4.1 Introduction

This chapter will focus on the design of the research methods used in the study. Basically, a research design is a plan of procedures for data collection and its analysis. The research design will offer the researcher a direction to follow from the beginning to the completion of the study (1). As described by Otike, "It is a crucial aspect of any empirical research programme, and is the factor which, more than any other, determines the course of research. The success or failure of research programmes have more often than not been accredited to the choice of the research method used in collecting and analysing the data" (2). Hakim depicted the importance of research design as follows:

Research is in the nature of sailing off to chart unexplored seas or, more concretely, trudging off to map unexplored territories. Research design is about aiming in the right direction, getting your bearings right (from previous studies) and making sure you are adequately equipped to get there and back. Columbus set sail to find the western route to the East Indies and came across the West Indies and America instead. Research designs which fail in their original intentions are not always quite so lucky, but it helps if one is clear that their original plan made sense, can offer some reasons on why it went awry, and describes what was discovered instead. (3)

Oppenheim further emphasised that:

It is the research design which must hold all the parts and phases of the enquiry together. The design must aim at precision, logic-tightness and efficient use of resources. A poorly designed survey will fail to provide accurate answers to the questions under investigation; it will have too many loopholes in the conclusions; it
will permit little generalisation; and it will produce much irrelevant information, thereby wasting case material and resources. (4)

4.2 Research Strategy

According to Stone and Harris, (5) there are several things to consider in deciding the research strategy. They are:

- Whether to adopt a quantitative or qualitative approach or a combination of both
- Method of data collection
- Sampling strategies

The first basic thing to do before gathering of the data or deciding on the sampling, is to make a choice between a quantitative approach or a qualitative approach, or by adopting a combination of both approaches. Both quantitative and qualitative methods have its own characteristics, strength and weaknesses.

4.3 Quantitative/Qualitative Approach

The main difference between quantitative and qualitative approaches as outlined by Stone and Harris is that:

Quantitative research seeks objective explanation by statistical description and manipulation, and Qualitative research seeks understanding of an event or behaviour from the “actor’s” perspective. (6)

Quantitative research usually involves gathering a massive data with questionnaires as a method typically used as an instrument for data collection. It encompasses counting and measuring. Margaret Slater stated:
"the quantitative approach is best suited in getting the frequency and describing its occurrence in very strictly terms" (7). The main advantage is that it can be applied to a larger population and if properly undertaken, the findings can be generalised to represent the total population.

Qualitative research, on the other hand, pays less attention to statistics or accounting. As defined by Patton: “a research method that consist of detailed descriptions of situations, events, people, interactions, and observed behaviours, direct quotations from people about their experiences, attitudes, beliefs and thoughts, excerpts or entire passages from documents, correspondence records and case documentation” (8). Interviews, observations and document analyses are the main instrument for data collection.

A lot of people think of qualitative research mainly in terms of depth interviews and group discussions (9). In reality, however, as Mary Goodyear points out: "Qualitative research is a many-splendour thing and certain problems and clients will respond to one type of approach, whilst other problems and other clients need to be offered something else. There is no one correct way to do qualitative research. It all depends on your problem" (10).

4.4 Selection of Method/Technique

In selecting the method or technique, the first thing to do is to look into the quantitative and qualitative approach as a whole. The method of gathering data must also be taken into consideration. It all depends on what is going to be investigated. Stone and Harris (11) further emphasised, the technique chosen must meet the following requirements:

- It must be suitable for studying the problem.
- It must be within the available resources.
• It must be within the competence of the researcher who will be using it.

• It must produce the kind of data needed.

According to De Vaus, though there exists a variety of approaches of library studies, questionnaire is still the most widely used data collection technique in survey research (12). However, researchers have found that a combination of methods may work best in a library survey (13).

After weighing the advantages and disadvantages of the various methods of library survey and also looking at the various methodologies used in previous studies, questionnaires and interviews (discussed below) were chosen as the main research instruments in the gathering of data for this study. Furthermore, using both questionnaires and face-to-face interview lead to the collection of the most extensive data on each person questioned. In addition, both methods met the four requirements emphasised by Stone and Harris.

4.4.1 Questionnaires

(14). It is perhaps the most familiar tool used in getting responses. It facilitates for easy categorisation and tabulation of results. Question on questionnaires varies. It can be open-ended, multiple choice, or a variety of attitude scales (15).

An important aspect in designing a questionnaire is the careful and suitable wording of the questions used. Once designed, a questionnaire can gather a large quantity of data without requiring a lot of time and expenses. One disadvantage of the Questionnaire is that, it is a one-way communication that generally does not allow respondents to clarify answers (16). The techniques of distributing questionnaires are also varied. Questionnaires can be handed out personally, mailed out to respondents, or made available to users at their department.
4.4.2 Interviews

Interviews, though the most time consuming, may reveal the most data about user/nonuser attitudes and concerns about library use (17). The personal interaction allows the greatest probing and answer seeking. Aside from getting verbal responses from the subject, more importantly, the researcher will also be in the position to observe the subject's non-verbal behaviour. This observed behaviour, many times, will be more meaningful than the words alone (18). As stated by Farr, "You can observe a great deal just by watching" (19). The questions during the interview can be clarified and made more specific. Though time consuming, the information gained even from a small sample is usually of value.

There are two types of interviews - structured and unstructured. A structured interview follows a predetermined line of questioning; an unstructured interview allows participants to freely express their thoughts. A good interview process calls for the 5 C's (20):

- Constructing the Interview
- Commencing the Interview
- Conducting the interview
- Concluding the Interview
- Compiling the Data and Analysing the Results

In this study, the researcher opted for the semi-structured interview which is a combination of the structured and unstructured interview. By using the semi-structured interview, not only is it possible for the respondents to discuss freely with the researcher but also the data collected can also be
quantified for comparative purposes. An interview schedule is made available to allow some amount of control over the interview. As stated by Otike, "the schedule will assure that the respondent has answered all the questions, and act as a check list. It will also ensure some form of uniformity and thereby rendering the data collected more reliable" (21).

4.5 Research Instrument

As mentioned earlier, the self-administered questionnaire was the main research instrument selected. This was supplemented by personal interviews, group interviews/discussions for focus group and a short skill test. Questionnaires were distributed to some 1,000 students and 300 lecturers at 3 Higher Education Institutions in Malaysia. Interviews for 30 lecturers and group discussions for 48 students were also included. In addition, a short skill test for 20 students from one higher education institution (UiTM) was also carried out. Further detail of these survey instruments on population studied and data gatherings are discussed later.

Efforts were taken to make sure the instruments are valid and reliable. "Valid" in the sense that it measures what it is intended to measure and "reliable", when it gets consistent responses when administered on the same subjects at different times. These were carefully monitored during the pre-test. As pointed out by Silverman (22), "pre-testing can act as a preventive measure against inconsistencies and ambiguities". He further stressed on the importance of each respondent understanding of the question that is, it must be responded in the same way.

The self-administered questionnaires were distributed both to faculty and student. Personal interviews were carried out among the faculty while group interviews were administered to students. The reason for carrying out group interviews for students was to find out whether there is a difference of perceptions between two different focus groups of students. In order to strengthen the findings, a short skill test was carried out between two
different groups of students. The interviews were done to derive at the qualitative aspect, while the quantitative aspect will be obtained from the questionnaires. The short skill test will show whether there is a difference between students with library/information skill and those students without it.

4.6 Questionnaire Design

Two sets of questionnaires were developed: one for the faculty members and the other set for the students. The way in which the questions are presented in the questionnaire will affect the quality of responses and therefore it is important to ensure not only that the right questions are asked, but also they are understood and asked in the right way. A poor questionnaire will result in errors and biases and will tend to increase the amount of non-response in a survey (23).

The questions were developed from the literature of user studies and standard attitude scales. The format was based upon Likert-type scale matrix with precoded numerical values assigned to the fixed and close-ended questions designed to measure the intensity of views of respondents to the questionnaires. These structured questions are multiple-choice items from which respondents were asked to choose or rate. A few open questions was included in the questionnaire so as to get the views of the respondents in their own words.

The prepared questionnaires were later translated into the Malay language which is the main language used in Malaysia. Translation was only done for the student's questionnaire as it was assumed that the faculty members will not have any problem comprehending the questionnaire in the English Language. The translation work was quite difficult for certain questions. To assist in the translation work, a "reverse translation method" was used (24). A colleague helped in translating back the translated version of the questionnaire into English Language.
More attempts were made until a better translation was attained when the translation did not match the original language. Finally, the final version was referred to a lecturer from the Language Centre, MARA University of Technology. After making some necessary modifications, the translated questionnaire for students was ready for the pre-test.

4.7 Contents of the Questionnaire

There are two sets of questionnaires and the contents are as follows:

4.7.1 Questionnaire for Faculty Members (Appendix A)

Demographic Profile (Section A, Questions 1 - 6):

The respondents were required to state the name of Faculty and Institution they belong to. A question on gender was also included. The faculty members too have to indicate their designation or status as well as providing their years in service in the present Institution. A question on academic qualification was also included.

Library Services & Usage (Section B, Questions 1 - 12):

The respondents were asked whether they have ever used the university library and if they did, they have to indicate the main reason for using it, based on a number of listed reasons given in the question. In order to find out how often the libraries are used, respondents had to choose from the multiple-choice questions given. For the same question, if the visit to the library was only once a term, the respondents were required to state the reasons for it.

Questions on library instruction were put forward. Respondents were required to indicate whether they received any kind of library instruction such as: Library Orientation and In Group or Individual User
Education/Bibliographic Instruction. Following this question, the respondents were required to state whether the type of library instruction they received were helpful in identifying and getting materials for their needs.

The next subject was Information Technology. Respondents were asked on their state of awareness of IT and were also required to indicate whether they were given any hands-on-training for the following types of IT:

- OPAC
- On-line Searching
- CD-ROM
- Internet

A listing of library services were given in Question 9 and the respondents were required to indicate all the services that they have used. They have to state the reasons for not using any of the services in question 10. Following Question 10, are a listing of statements based upon the Likert-type scale matrix with precoded numerical values assigned to the fixed and close-ended statements designed to measure the intensity of views of respondents to the given statements. Finally, for this section, the respondents were required to indicate whether they feel that there is a need for a formal in class library/information skill course for the students.

**Respondents' Perception (Section C.1 - 8):**

Questions on certain issues were put forward to derive respondents' perceptions on them. The issues were:

- Helpfulness of library staff
Level of assistance given by library staff

Satisfaction of the services and reasons for answers

Adequacy of the current holdings for teaching, research and recreation

Respondents were then required to indicate whether encouragement were given to students to make use of the library resources for their studies and assignments. They also have to state how the encouragement was given. Another aspect asked was on communication between respondents and librarians. Finally for this section, the respondents were given the choice to comment or give suggestions regarding the services of the University Library.

Section D (No. 1):

Question in this section is related to Section B, question number 1. Respondents were required to give their reasons for not using the library.

4.7.2 Questionnaire for Students (Appendix B)

Demographic Profile (Section A, 1-4):

The students were required to state their Faculty and Institution. They too have to indicate their semester and year of study. Question on gender was also included.

Library Services & Usage (Section B, 1-13):

Most of the questions asked are similar to that found in the "Questionnaire for Faculty Members". The difference is in question 4 where "an in-class
library/information skills course was added to the type of library instruction. Another one is in question 13, where students have to indicate whether there is a need to have a formal in-class library skills course.

**Respondents' Perception (1 - 7):**

The questions were quite similar to that of the faculty except that for question 6, the students were required to state whether the current holdings of the library are adequate for learning, assignment and recreation.

**Section D (No. 1):**

The question in this section which is similar to that of the faculty, requires students to give reasons for not using the library.

4.8 **Interview Schedule** (Appendix D)

For the personal and group interviews, an interview schedule was prepared based from the questionnaires of both lecturers and students. Discussions during the interview were related to the following areas:

- Library Services
- Library Staff
- Library/Information Skills
- Encouragement by Lecturers
- Comments or Suggestions
The questions for the skill test were carefully designed bearing in mind not to overburden the respondents who have already participated in the group interviews. It was made simple and short. There were three main parts. The first part was on comprehending the contents of the *Reader’s Guide to Periodical Literature*. The second part of the question was on *Boolean Operator’s* while the last part was a question about the *CD-ROM ‘ProQuest’*.

### Pre-test of Research Instrument

Questionnaires do not emerge fully-fledged; they have to be created or adapted, fashioned and developed to maturity after many abortive test flights. In fact, every aspect of a survey has to be tried out beforehand to make sure it works as intended. (25)

A pre-test or pilot study of the research instrument was initially done at Loughborough University. The pre-test sample was drawn from 5 undergraduates and 5 research students (lecturers by profession) of Loughborough University. From the result of the pre-test, some changes were made to both sets of the questionnaire. The two sets of questionnaires were again pre-tested for clarity and understanding before beginning the fieldwork. The pre-tested sample was drawn from 10 students and 10 faculties of UiTM, Malaysia.

Upon receiving the responses, the questionnaires were assessed to ascertain the reliability of the instrument. The result showed some weaknesses in the questionnaire. There was some duplication in the questions asked, there were questions that were not understood, and some contained unclear choices. Comments and suggestions were also received from 2 lecturers involved in the pre-test. Both the questionnaires were then revised. Photocopying of the questionnaires were only carried out when everything was in order. All together 1000 sets of questionnaires for students and 300 sets for lecturers were prepared.
4.11 Sampling

After looking at the various sampling methods, the researcher felt that Quota Sampling is the most appropriate method to be used for this kind of study. As in many practical situations, it will be either impossible or too expensive to compile a complete list of the population under study, thus quota sampling offers a cheaper and satisfactorily alternative to random sampling (26). It is also frequently used in practice (27). As defined by Sekaran (28), quota sampling is a form of proportionate stratified sampling, in which a predetermined portion of people are samples from different groups, but on a convenience basis. In other word, subjects are conveniently chosen from targeted groups according to some predetermined number or quota.

Although a non-random sample was selected, the researcher made every attempt to maximise the representativeness of the sample. Students' respondents were selected from a wide variety of disciplinary areas and year of study. The designation or status of faculty respondents was taken into account. Attempts were also made to have an equal number of male and female respondents. The researcher deemed this method of selection as a significant improvement over the common practice of surveying students as they enter or leave the library, or while utilising the library. Stephen further emphasised on quota sampling:

Quota sampling is a popular method. The interviewer is given a list of desirable characteristics and then has to find and interview a quota of people possessing those characteristics. In effect, the population is stratified by the chosen characteristics such as age, gender, social class, occupation. Despite its defects, is considered to provide sufficiently representative results in surveys. If very carefully done, reducing human bias sufficiently, it can give results similar to an equivalent stratified sample. (29)
The 3 Higher Education Institutions selected for this study were UiTM (MARA University of Technology), UUM (Northern University of Malaysia) and UPM (University Putra Malaysia). All three have well established libraries and adequate professional staff. Geographic location was one of the reasons for selecting UUM and UPM. One (UUM) lies to the northern part of the country while UPM at the central region and at the same time it also lies along the Multimedia Super Corridor (discussed in Chapter 3) where much IT activities are happening at this moment. As for UiTM, aside having the largest number of students, it is also the main sponsor of this study. Thus, this was the reason for selecting UiTM. The 3 Institutions were also selected based on their varying status of development that is they were established at a different time.

The sample consisted of 1000 students and 300 lecturers from the main campuses of the 3 well-known Higher Education Institutions in Malaysia. Four hundred questionnaires for students and 100 questionnaires for lecturers were distributed at UiTM. As for UUM and UPM, each got 300 questionnaires for students and 100 questionnaires for lecturers. UiTM was allocated with more questionnaires for students as it has a larger student population. The sample size as described by Stephen:

"The desirable sample size of a sample does not necessarily reflect the size of the population from which it is drawn. A large population does not need to be measured by a large sample to give valid results. Validity depends more on the appropriateness of the questions asked, on the skill of the investigators, and on the fullness, accuracy and honesty of the responses. We may proceed on the basis that a "large" sample over 30 would be sufficient for most purposes. (30)"

The lecturers and students were selected from two main streams, the Arts and Sciences. The entire sample was distributed almost equally by
Institution, subject field and gender. Effort was also taken by the researcher to pick out representatives from the different years of study for students and the various designation/status of faculty members.

4.13 Methods of Data Gathering

The survey or fieldwork was carried out at the 3 selected Higher Education Institutions in Malaysia from February 1997 to April 1997.

4.13.1 Questionnaires

The questionnaires for the students were personally handed to the various Deans and Lecturers of the chosen School/Department/Faculty. The questionnaires which were completed were to be handed back to the office of the Deans or to the lecturers concerned. This is one way of getting back the questionnaires. The Deans and lecturers were earlier briefed to answer any queries that might be raised while answering the questionnaire. The students were given one week to complete the questionnaire, but most of them completed the questionnaire in the class with the supervision of their lecturers. They were very co-operative and took approximately 15 - 20 minutes in answering the questionnaire. The assistance given by the Deans and lecturers accounted for the large number of students’ questionnaires returned.

As for the faculty members, the questionnaires were personally handed to them or through their various Deans. The faculty members were also given one week to return their questionnaires. The response from them was quite slow. It was quite difficult to get their full co-operation. They seemed to be very busy and tend to delay filling in the questionnaires. The faculty members had to be reminded by the researcher and even then the number of questionnaires returned was not satisfactory at all. The collection of the questionnaires from the faculty members in Malaysia was done on the last week of April 1997.
The researcher interviewed 17 faculty members during the fieldwork in Malaysia. The majority of those interviewed were Deans and Senior lecturers. It was a semi-structured interview and the format used was personal, that is face-to-face interview. Although the interviews were carried out on the basis of a pre-prepared questionnaire, conversation did not follow a simple question and answer format, but was developed in a more flexible way. Farr (31) outlined the advantages of face-to-face interviews as follows:

- The technique may be the only way to obtain accurate data on complicated or sensitive questions.

- The questioning is generally more thorough.

- You can build stronger rapport and better respondent cooperation in this more personalised format.

- The interviewer can get fuller explanations and clarifications by probing (follow-up-questions) and observing non-verbal behaviours.

Due to these advantages, face-to-face interviewing by skilled individuals is normally credited as being the most accurate data-gathering research method (32). The interview for the rest of the faculty members was carried out in the United Kingdom. They comprised 13 academic staff who is at present on study leave, either doing their Masters or Ph.D. in various universities in United Kingdom. Face-to-face interview (nine respondents) as well as telephone interview (four respondents) were the techniques used by the researcher.
Overall, good responses were received from the in-depth interviews. Useful and valuable comments, suggestions and recommendations were obtained. The time taken to interview each faculty member in Malaysia and UK was approximately 30 minutes. The conversation during the interview was recorded on a cassette tape, and notes on major points were also noted down. As for the telephone interview, all the major points were noted down.

4.13.3 Group Discussions/Group Interviews

Two focus groups of students were selected, numbering 24 in each group (please refer to chapter 5.3.3). One group had undergone a library/information skills course, while the other had not undergone any library/information skills course of whatsoever. Both groups were interviewed on the same day, one in the morning and the other in the afternoon. The students were first asked to fill up the questionnaire before taking part in the group interviews. An interview schedule, which was based on the students' questionnaire, was used for the interview. Most of the students from both groups participated actively during the interview. Similar to the personal interviews, useful and valuable comments, suggestions and recommendations were obtained. The interviews were recorded and the time taken for each group was approximately 1 hour, which includes 15 minutes of filling up the questionnaires.

4.13.4 Skill Test

A short skill test to see the understanding and ability of two different groups in searching for materials was undertaken with the help of an academic colleague in Malaysia. Ten participants were selected at random from each of the two groups involved in the group interview. They were then asked to answer the questions within 15 minutes.
The data gathered from both the lecturers' and students' questionnaires were tabulated, and then analysed using the Statistical Package for the Social Sciences (SPSS). It was described using univariate and bivariate distributions with frequency tables, pie diagrams and bar charts. Statistical tests using Chi-square goodness of fit test and Pearson Product Moment Correlation Coefficients were carried out to test the hypotheses. Further tests such as mean were also undertaken. Important and significant comments from the open-ended questions were noted down and included to support and elaborate appropriate findings.

The interview data was not analysed statistically. The cassette tapes containing the conversations were transcribed as soon as possible. This was done for two reasons:

- Any shortcomings found during the interview could be corrected before the next interview.
- The transcription work was heavily time-consuming. It required several playbacks of the tapes to acquire all that information. By transcribing it early, it was one way of avoiding a backlog.

In analysing the interview data, the researcher attempts firstly, to identify the common themes. Later, a frequency count was undertaken simply to note the same or closely related comments that had occurred. Important and relevant comments or recommendations that will support the research were noted down and later incorporated in the research.

As for the skill test, the answered questions were first graded and given a score. The data was then presented by comparing the score between both groups. A two-way cross tabulation test was also carried out by using Fisher exact probability, two-tailed test and Pearson Product Moment Correlation Coefficients.
Coefficients to find out whether a significant relationship exist. In this experiment, a significant relationship was demonstrated.

4.15 Conclusion

The decision to choose both quantitative and qualitative methods for this study appears to have been justified as it was felt that the questionnaires, in conjunction with interviews, group discussions and a short skill test would give a full picture. Moreover, the responses received from respondents have been most satisfying. It was also believed that based on previous studies (33), the Chi-square goodness of fit test and Pearson Product Moment Correlation Coefficients were suitable for the testing of the hypotheses. The only area that the researcher felt should be improved is the "skill test", so that more areas or topics could be covered and on-line searching should also be included in the test. This is to obtain a wider and clearer picture of the students' skill in manual and on-line searching. The findings too will be more concrete.
REFERENCES - CHAPTER 4 (Full references in the Bibliography)


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9. Slater, ref. 7, p. 111.

11. Stone, ref. 5, p. 10.


17. Lubans, ref. 13, p. 151.

18. Farr, ref. 16, p. 73.

19. Farr, ref. 16, p. 36.


23. Ismail, ref. 1, p. 108.


25. Oppenheim, ref. 4, p. 47.


30. Ibid., p. 84.

31. Farr, ref. 16, p. 8

32. Ibid.

5.0 Introduction

This section describes and analyses the data gathered from the three selected government-supported Higher Education Institutions. It was collected through Questionnaires, in-depth Interviews, Group Interviews and a short Skill Test. The data was described, using univariate and bivariate distributions. Frequency tables, pie diagrams and bar charts were used to illustrate the distributions. Several statistical tests were undertaken with the aid of the Statistical Package for the Social Sciences (SPSS). Chi-square goodness of fit test and Pearson Product Moment Correlation Coefficients were conducted with several variables to determine the major variables that were related to the hypotheses. The results from the in-depth and group interviews were discussed and presented. This chapter is in five parts:

- Results From Questionnaire Responses
- Results of In-depth Interviews
- Results of Group Interviews
- Results of the Skill Test
- Results of Hypothesis Testing
5.1 RESULTS FROM QUESTIONNAIRE RESPONSES
5.1 Results From Questionnaire Responses

A total of 1000 sets of questionnaires for students and 300 sets for lecturers were sent out. Out of this total, 858 or 85.8% of the students' questionnaires and 140 or 46.7% of the lecturers' questionnaires were returned. These suggest a satisfactory response rate from both respondents, with the returns from the students being much higher. Looking at Table 5.0 and Table 5.1, the numbers of both respondents from each of the three selected Higher Education Institutions are quite similar. This is quite encouraging. Table 5.0 depicts the response rate of the lecturers while Table 5.1 depicts the students' response rate.

Table 5.0 Distribution of Lecturers' Response Rate from Selected Higher Education Institutions

<table>
<thead>
<tr>
<th>Institution</th>
<th>No. issued</th>
<th>No. of return</th>
<th>% return</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITM</td>
<td>100</td>
<td>57</td>
<td>40.7%</td>
</tr>
<tr>
<td>UPM</td>
<td>100</td>
<td>43</td>
<td>30.7%</td>
</tr>
<tr>
<td>UUM</td>
<td>100</td>
<td>40</td>
<td>28.6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>300</strong></td>
<td><strong>140</strong></td>
<td><strong>46.7%</strong></td>
</tr>
</tbody>
</table>

Table 5.1 Distribution of Students' Response Rate from Selected Higher Education Institutions

<table>
<thead>
<tr>
<th>Institution</th>
<th>No. issued</th>
<th>No. of return</th>
<th>% return</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITM</td>
<td>400</td>
<td>345</td>
<td>86.3%</td>
</tr>
<tr>
<td>UPM</td>
<td>300</td>
<td>261</td>
<td>87%</td>
</tr>
<tr>
<td>UUM</td>
<td>300</td>
<td>252</td>
<td>84%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1000</strong></td>
<td><strong>858</strong></td>
<td><strong>85.8%</strong></td>
</tr>
</tbody>
</table>
5.1.1 Demographic Profile

5.1.1.1 Subject field

The respondents were divided into 2 main streams, Arts and Sciences. Out of the total of 858 student respondents, 428 or 49.9% were from the Arts and 430 or 50.1% were from the Sciences. As for the lecturers, 73 or 52.1% came from the Arts while 67 or 47.9% were from the Sciences. This suggests the respondents were both basically equally divided. Figure 5.0 shows the division of both fields.

![Subject Field of Respondents](image.png)

*Figure 5.0 Distribution of Respondents by Subject Field*
5.1.1.2 Year of study

The students' respondents comprised those from Year 1 to Year 4. The most respondents were from Year 1 with 325 or 38%. This is understandable as in all Higher Education Institutions in Malaysia, the largest number of students' population will always be in the first year. The respondents from the First Year usually forms the largest number of students' population compared to students in the Second, Third or Final Year. The number usually gets lesser after the first year due to failures, or they prefer to take up other courses in different higher education institutions. Next was Year 3 with 229 or 27% respondents. The response from Year 2 was 165 or 19%. The lowest were from Year 4 with 139 or 16% respondents. Figure 5.1 shows the response rate from each year of study.

![Pie chart showing students' year of study](image)

**Figure 5.1 Distribution of Students' Responses by Year of Study**
There were 469 or 54.7% female student respondents as compared to 389 or 45.3% male student respondents. The slightly higher number of female student respondents was partly due to a larger female population in the 3 Higher Education Institutions. As for lecturers, there were 71 or 50.7% male respondents compared to 69 or 49.3% female respondents. Figure 5.2 shows the distribution of respondents according to gender.

![Figure 5.2 Distribution of Respondents by Gender](image-url)
Lecturers with Masters' degrees seemed to be the largest number of respondents with 99 or 70.7%. This is because lecturers with this qualification made up the largest figure in most Higher Education Institutions in Malaysia. A Masters' qualification seemed to be the entry point for those joining the academic stream in most Higher Education Institutions. The Ph.D. Qualification is next with 29 or 20.7% of respondents. The First Degree or Bachelor's made up of 10 or 7.2% of the respondents. The least were those with a Professional qualification with 2 or 1.4%. Figure 5.3 refers to the distribution of respondents by academic qualifications.

Figure 5.3 Distribution of Lecturers' Responses by Academic Qualification

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2Professional qualification – lecturers who possessed qualifications from professional bodies such as I.C.M.A.; A.C.C.A.; C.I.T.; C.I.I.
5.1.1.5 Status of faculty

As expected, lecturers made up the majority of the respondents with 86 or 61.4%. Next were senior lecturers with 41 or 29.3%. Attempts were made to include as many Professors and Associate Professors\(^3\) in this study. It was quite difficult as their numbers were quite limited. Respondents from Professors made up of 1.4% while associate professors are 7.9% as can be seen in Figure 5.4.

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\(^3\)Associate Professors are Academicians who in terms of seniority are one scale below the Professor. It is similar to that of a Reader.
5.1.2 Library Services and Usage

5.1.2.1 Library usage

Lecturers' usage of the library is 100%. As for students, out of a total of 858 students asked, 99.8% have, in one way or another, made used of the library. Both figures showed a high percentage of users using the Library. These figures, however, do not mean that the users are frequent library users. The question specifically asked, "Have you ever used the library before?" So, for this study as long as the user has used the library even once then it is considered as using the library. Indeed, if Lubans' definition of a nonuser is to be accepted, they may be considered as "nonusers". According to Lubans (1), "a nonuser may be defined as a person who spends two hours or less in the library per week".

The purpose of this question was to find out if there are faculty members or students who have never used the University Library. Surprisingly there were two students (0.2%) who have never used the library. One of the students who is in the 3rd. Year, provides the excuse that he had no guidance on how to use the library. The other student who is in year one prefers 'noisier' places and depended on friends for references. These are actually rare cases but should be checked so that it will not recur in the future. The distributions of users' usage are shown in Figure 5.5.
5.1.2.2 Main reason for library usage

It is as expected that doing research (39.3%) was the top choice by lecturers. This is in line with the objectives of the Malaysian Higher Education Institutions, which emphasis on research by staff. In addition, lecturers undertaking research have a better chance for future promotion. Participating in research activities will also help promote the credibility of the lecturers. Borrowing & returning of books (29.3%) and preparing for lectures (26.4%) also rank high. Figure 5.6 showed the breakdown of reasons for library usage by lecturers.

In the case of students, doing research or assignments (50.8%) was the main reason for library usage. This was anticipated, as students have to use the library when they are given research projects or assignments. Another factor is the encouragement given by some lecturers to find the materials in the library when giving out research projects or assignments. Doing revision (25.8%) is the next important reason given by students. It is quite popular as the students like the environment that they perceived as most suitable for doing revision. Looking at the overall findings for students, it can be assumed that most students used the library for course related activities. Students do
use the library for searching databases, asking enquiries and using Internet, but these were not the main reasons. This finding is similar to that of earlier studies discussed in Chapter Two. Figure 5.7 showed the distribution of students' main reason for library usage.

**Figure 5.6** Distribution of Lecturers' Responses by Main reason of Library Usage

**Figure 5.7** Distribution of Students' Responses by Main Reason of Library Usage
5.1.2.3 **Frequency of library usage**

As expected, lecturers do not frequent the library often as can be seen from Figure 5.8. A large number of them do visit the library that is *at least once a month* (42%). From interviews carried out with them, most of the lecturers mentioned that they have adequate sources at their department and do not have to rely much on the library. Some of them have their own computer workstation and though it is not yet connected to the library they felt that the Internet can provide them with most of the information needed. Future implication, shows that the lecturers would likely to be less dependent on libraries. There exists the possibility that less people would visit the libraries. However, according to Dato’ Dr. Ahmad Tajuddin Ali:

> This phenomenon is not all that negative for libraries but has its positive implications. We must realise that greater availability would lead to greater awareness of the value of information by society. Hence, more people are expected to make use of information in their work. Hence, many may end up at the service counter of libraries, requesting for various types of value-added information services. (2)

Being busy is another reason given for not frequenting the library.

In contrast to the lecturers, the students have to rely much from the library and it is not surprising that most of them used the library *more than once a week* (42.8%). Quite encouraging (Figure 5.9) also was the number of students who frequent the library at least once a week (28.2%). Doing revision also influenced the number of visits' students made to the library. As mentioned earlier, the number of students who never used the library was 0.2%.
FREQUENCY OF LIBRARY USAGE BY LECTURERS (N = 140)

- More than once a week: 13%
- At least once a week: 16%
- At least once every two weeks: 10%
- At least once a month: 42%
- At least once a term: 19%

Figure 5.8 Distribution of Lecturers' Responses by Frequency of Library Usage

FREQUENCY OF LIBRARY USAGE BY STUDENTS (N = 858)

- More than once a week: 42.8%
- At least once a week: 28.2%
- At least once every two weeks: 14.9%
- At least once a month: 11.7%
- Never: 2.2%
- At least once a term: 1.7%

Figure 5.9 Distribution of Students' Responses by Frequency of Library Usage
5.1.2.4 Type of library instruction received

It was discovered that 34.3% of the lecturers did receive library orientation as shown in Table 5.2. The figure was much higher for user education (60%). This figure is quite encouraging considering that both library orientation and user education are not compulsory for lecturers. This finding suggested that lecturers will eventually use the library services as a result of the library orientation and user education received. However, later findings (Figure 5.15) showed that there are certain library services that were not fully used.

Only recently were new lecturers given some sort of library orientation during their induction period. However it was considered by the lecturers as inadequate since it was theoretical in nature. As for user education, it is up to the initiative of the lecturers to approach the library staff to arrange for user education. Looking at this scenario, it is hoped that arrangements can be made by the library management so that all faculty members be given an effective user education programme. This is important as it will create a sense of awareness of the availability of the library services and the advantages the services can offer to the faculty members.

Out of 858 student respondents, only 38.7% (332) have had a formal in class library/information skills course. This is a small figure, in fact if the total student population of all the 3 Higher Education Institutions is taken into account, the total number will still be around 332 as little activity is evident in the two other institutions. At the moment, only few faculties or departments (fewer than five) are running the skills course.

Library orientation is usually carried out at the beginning of a new session for all new students by the library. The figure 56.4% is quite baffling as it should read 100% of students that have received library orientation. Why the other 43.6% have not received library orientation is open to question.
• Is it the fault of the Orientation Committee for not giving adequate time for all new students to attend library orientation?; or

• Is it the fault of the library for not making sure that all new students are accounted for the library orientation session?; or

• Is it the fault of the various faculties or departments for not ensuring that their new students to attend the library orientation session?

Further investigation revealed the following reasons for poor participation level:

i. Time factor.

ii. Large population of new students.

The students' population was too large to be accommodated within the given period. In the case of user education, the figure of 40.4% is quite reassuring considering it is not compulsory for students to attend user education. Similar to the lecturers, students have to request from the library if they need user education.

Table 5.2  Distribution of Type of Library Instruction Received by Lecturers and Students

<table>
<thead>
<tr>
<th></th>
<th>Lecturers (N = 140)</th>
<th>Students (N = 858)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>In-class library/information skills</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Library Orientation</td>
<td>34.3% (48)</td>
<td>65.7% (92)</td>
</tr>
<tr>
<td>User Education</td>
<td>60% (84)</td>
<td>40% (56)</td>
</tr>
</tbody>
</table>
5.1.2.5 Helpfulness of library instruction in getting materials

Respondents were asked to give their opinions regarding the usefulness of the different types of library instruction in getting library materials. The results are detailed in Table 5.3 on the next page. As illustrated in the Questionnaire, the frequency distributions of the respondents' perceptions for each attitude item are indicated by the percentage and mean score, which correspond to the attitude scale. For this question, '1 = very helpful, 2 = somewhat helpful, 3 = not very helpful, 4 = not helpful at all.' "N" denotes the number of total respondents. Only respondents who have undergone library instruction were asked to answer.

The findings revealed that out of the total number of 48 lecturers, 47.9% believed library orientation as very helpful and another 47.9% as somewhat helpful. This was indicated by the mean score of 1.563. For user education, most of the respondents considered it as very helpful and somewhat helpful. The mean response was 1.679 for the total number of 84 respondents. As for the students, 91.9% out of the total number of 332 of those with library/information skills course believed the course as very helpful. The mean score 1.093 is a good sign as the result will help towards the justification of having a formal in-class library/information skills course. While in user education, 55.6% of the students put it as somewhat helpful. Looking at Table 5.3, one can assume that most of the respondents do feel that Library Instruction is helpful in getting library materials.
<table>
<thead>
<tr>
<th>Mean</th>
<th>Very Helpful (1)</th>
<th>Somewhat Helpful (2)</th>
<th>Not Very Helpful (3)</th>
<th>Not Helpful At All (4)</th>
<th>N</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library Orientation (lecturer)</td>
<td>47.9</td>
<td>47.9</td>
<td>4.2</td>
<td>–</td>
<td>48</td>
<td>1.563</td>
</tr>
<tr>
<td>Library Orientation (student)</td>
<td>31.8</td>
<td>47.9</td>
<td>17.6</td>
<td>2.7</td>
<td>484</td>
<td>1.911</td>
</tr>
<tr>
<td>User Education (lecturer)</td>
<td>40.5</td>
<td>51.2</td>
<td>8.3</td>
<td>–</td>
<td>84</td>
<td>1.679</td>
</tr>
<tr>
<td>User Education (student)</td>
<td>36.1</td>
<td>55.6</td>
<td>6.6</td>
<td>1.7</td>
<td>347</td>
<td>1.741</td>
</tr>
<tr>
<td>In Class Library/Information Skills Course (student)</td>
<td>91.9</td>
<td>6.9</td>
<td>1.2</td>
<td>–</td>
<td>332</td>
<td>1.093</td>
</tr>
</tbody>
</table>
A large number of lecturers seemed to be aware of certain IT development in the library. This is depicted in Figure 5.10. The highest score is CD-ROM (70.7%). This is in line with the results in Figure 5.15 where a considerable number of lecturers (53.6%) made use of the CD-ROM service. It is quite different with on-line searching and Internet. Though the awareness for both is considered high yet the results in Figure 5.15 revealed a low usage of both services. This is another problem that has to be worked out. Is it due to the lack of hands-on-training for these services? Or is it because of the lack of computer facilities in the library? The answers to both questions are discussed further on. The awareness for OPAC is quite disturbing, as 55.7% of the lecturers are unaware of OPAC.

Looking at the students' results in Figure 5.11, awareness of IT in the library is considered average. Around 40% of the students are unaware of IT development in the library and the usage of these services is quite low (see Figure 5.15). This figure is quite alarming considering Malaysia is gearing towards an Information Technology related economy.

It is the task of the library management to make the users aware of the services offered by the library. Figure 5.12, which is based on McDonald's "brand loyalty ladder" (2), refers from the unawareness stage right to the action stage (usage of the library services). To achieve this, users must be made to understand or comprehend the importance and relevance of the services. If the library management is sending the right message and supported by the right image then users will eventually believe in what has been transmitted to them. On this basis, users will ultimately take action that is by using the services offered.
Figure 5.10 Distribution of Lecturers' Responses Regarding Awareness of IT

Figure 5.11 Distribution of Students' Responses Regarding Awareness of IT
Figure 5.12 Diagram showing the process from unawareness to usage of library services (Adapted from Malcolm McDonald's book "Retail Marketing Plans")
5.1.2.7 Hands-on training in IT

The distributions of lecturers' and students' responses on hands-on-training in IT are presented in Figure 5.13 and 5.14. On the whole it can be assumed that there is a lack of hands-on-training in IT given to both lecturers and students in academic libraries in Malaysia. The highest percentage recorded was in OPAC where 44.6% of students received hands-on-training.

As for the rest of IT services, only a small percentage of both lecturers and students received hands-on-training. The reason for this can be attributed to the lack of computer facilities in the library. This was mentioned by both lecturers and students during the interviews done with the researcher. Unless the library management tackles the problem of inadequate computer facilities quickly and decisively then the users will lose out. Users will not only face difficulties in using the IT but also have the problem of accessing information from it.
Both lecturers and students were questioned on the type of library services used. The findings in figure 5.15 and 5.16 indicate borrowing books as the main service used by both lecturers (96.4%) and students (92.3%). Internet, On-line searching and audio-visual have a low usage amongst lecturers. This may be due to the problem in IT, which was mentioned earlier. Except for the newspaper cuttings, ILL and OPAC, the rest of the services have a fairly high usage by lecturers. As for the students, low usage is prominent in ILL, On-line searching, Internet and audio-visual. Those services that can be categorised as average usage are: book reservation, journals, newspaper cuttings, OPAC, CD-ROM and librarian’s assistance. A high percentage of users can be found using services such as borrowing books, reference materials and photocopying. These services are basic services which students will use it somehow or other.

Looking at the results for both lecturers and students, it seems that only certain library services are being widely used. Quite a number of lecturers and students did indicate in the open-ended question that the reason for not
using some of the services was due to unawareness of using these services. Some of them don't have the skill or knowledge to use the services. This was followed by users' perception that these services are not relevant and at the same time difficult to use.

It is important that users have a positive perception towards library services. As shown in the model (Figure 5.17) which was adapted from Davis (3), the usage of library services is determined by two factors; perceived usefulness and perceived ease of use. Perceived usefulness is the degree to which a user believes that the use of library services will enhance his or her performance while perceived ease of use is the degree to which a user believes the use of library services is easy to use. It is the role of the library management to make sure that users have both these perceptions as both perceived usefulness and perceived ease of use have a significant impact on the user's attitude towards using the services.
Figure 5.15 Distribution of Lecturers' Responses by Usage of Library Services

Figure 5.16 Distribution of Students' Responses by Usage of Library Services
Figure 5.17 Library services acceptance model (adapted from the Technology acceptance model TAM by Davis)
5.1.2.9 Conformity with provision of library materials and services

In this section, questions in the form of statements were posed to both lecturers and students. They were required to state whether they agree or disagree to the statements given. As indicated in Table 5.4 and 5.5, the attitude scales for these questions are "1 = strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = strongly agree". "N" denotes the number of total respondents.

A high proportion of both lecturers (67.4%) and students (59.8%) seemed to agree that the library's catalogue is useful in retrieving materials. The same can be said for Interlibrary loan with 66.3% lecturers and 43.8% students agreeing on the usefulness of ILL in getting the information needed. It might be expected that the usage of ILL by students should be higher considering that 43.8% agree on the usefulness of ILL. However, from feedback obtained, certain Institutions discouraged students from using this service. Both lecturers (73.3%) and students (73.5%) appeared to agree on the usefulness of reference and information service in getting the needed information. The mean score recorded was 4.030 and 3.913.

A neutral score for both lecturers and students was noted for adequate numbers of terminal for OPAC. This is not the case for adequate numbers of terminal/computer for CD-ROM and Internet. The lecturers (60%) and students (59.3%) strongly felt that there were not enough terminals around for CD-ROM and Internet. The mean score for this statement was 2.308 and 2.387. More than 50% of the lecturers felt that the CD-ROM databases in various subjects, are inadequate. The mean score of 2.434 supported this statement.

The above findings have a serious implication on the users. Firstly, hands-on-training will be a major problem unless the library management increases the number of terminals/computers for CD-ROM and Internet. Secondly,
potential users will have to wait for quite some time for their turn before being able to use the computer. This will act as a disincentive and they will be discouraged from using the services later on. Another serious problem is the perception of the lecturers that the library lacks CD-ROM databases in various subject areas. The lecturers' work will be hampered as they usually relied heavily on information from CD-ROM for their research.

On the statements: *photocopying services are satisfactory* and *library materials are current*, the highest score was at neutral for both lecturers and students. The average mean score was 2.789 and 2.970 for lecturers, while students' mean score was 3.135 and 3.227. It seemed that a large proportion of both lecturers and students are undecided as they did not really agree or disagree over both statements. However, the percentage of lecturers that disagree (33.1%) is more than that of agree (18.8%) for the statement *photocopying is satisfactory*. They felt that the available photocopying machines are not adequate to keep up with the demand by both lecturers and students and they do not have the time to queue to use the service.

As for *competency of library staff in answering enquiries*, both appeared to agree on it even though quite a number gave a neutral score. The lecturers (75.5%) and students (75.9%) both agreed that a formal in-class library/information skills course will make student better library users. The mean score of 3.978 and 3.957 agreed with this statement. These results tend to reflect those from a similar study reported by Sellen in which she asserts: "If students were to be expected to successfully use sophisticated library resources for the enhancement of course material and for specific research endeavours, they needed to have knowledge of and the appropriate skill to use these resources" (4). This finding though not a consensus is good enough to support the plan of having an integrated library/information skills course as part of the Curriculum in Higher Education Institutions in Malaysia.
<table>
<thead>
<tr>
<th>Attitude Statements</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>N</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library's catalogue is useful in retrieving materials</td>
<td>1.5</td>
<td>3.7</td>
<td>27.4</td>
<td>42.2</td>
<td>25.2</td>
<td>135</td>
<td>3.859</td>
</tr>
<tr>
<td>ILL is useful in getting information needed</td>
<td>3.2</td>
<td>8.5</td>
<td>21.7</td>
<td>33.3</td>
<td>33.3</td>
<td>129</td>
<td>3.853</td>
</tr>
<tr>
<td>Reference &amp; Information service is useful in getting information needed</td>
<td>-</td>
<td>3.0</td>
<td>23.7</td>
<td>40.7</td>
<td>32.6</td>
<td>135</td>
<td>4.030</td>
</tr>
<tr>
<td>Adequate nos. of terminals for OPAC</td>
<td>1.8</td>
<td>17.9</td>
<td>44.6</td>
<td>31.2</td>
<td>4.5</td>
<td>112</td>
<td>3.188</td>
</tr>
<tr>
<td>Adequate nos. of computers for CD-ROM &amp; Internet</td>
<td>9.2</td>
<td>50.8</td>
<td>40.0</td>
<td>-</td>
<td>-</td>
<td>120</td>
<td>2.308</td>
</tr>
<tr>
<td>Adequate nos. of CD-ROM databases in various subjects</td>
<td>11.5</td>
<td>40.7</td>
<td>40.7</td>
<td>7.1</td>
<td>-</td>
<td>113</td>
<td>2.434</td>
</tr>
<tr>
<td>Photocopying services is satisfactory</td>
<td>6.8</td>
<td>26.3</td>
<td>48.1</td>
<td>18.8</td>
<td>-</td>
<td>133</td>
<td>2.789</td>
</tr>
<tr>
<td>Library materials are current</td>
<td>5.2</td>
<td>21.5</td>
<td>45.9</td>
<td>25.9</td>
<td>1.5</td>
<td>135</td>
<td>2.970</td>
</tr>
<tr>
<td>Library staff are competent in answering enquiries</td>
<td>-</td>
<td>14.4</td>
<td>42.4</td>
<td>41.0</td>
<td>2.2</td>
<td>139</td>
<td>3.309</td>
</tr>
<tr>
<td>A formal in-class library/information skills course will make student better library users</td>
<td>2.2</td>
<td>2.9</td>
<td>19.4</td>
<td>46.0</td>
<td>29.5</td>
<td>139</td>
<td>3.978</td>
</tr>
<tr>
<td>Attitude Statements</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td>N</td>
<td>Mean Score</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>------------------</td>
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<td>---------</td>
<td>-------</td>
<td>----------------</td>
<td>----</td>
<td>------------</td>
</tr>
<tr>
<td>Library's catalogue is useful in retrieving materials</td>
<td>1.6</td>
<td>6.8</td>
<td>31.8</td>
<td>42.1</td>
<td>17.7</td>
<td>847</td>
<td>3.677</td>
</tr>
<tr>
<td>ILL is useful in getting information needed</td>
<td>3.3</td>
<td>10.4</td>
<td>42.5</td>
<td>33.8</td>
<td>10.0</td>
<td>816</td>
<td>3.371</td>
</tr>
<tr>
<td>Reference &amp; Information service is useful in getting information needed</td>
<td>1.3</td>
<td>4.8</td>
<td>20.4</td>
<td>48.2</td>
<td>25.3</td>
<td>847</td>
<td>3.913</td>
</tr>
<tr>
<td>Adequate nos. of terminals for OPAC</td>
<td>3.5</td>
<td>13.2</td>
<td>35.9</td>
<td>36.2</td>
<td>11.2</td>
<td>824</td>
<td>3.382</td>
</tr>
<tr>
<td>Adequate nos. of computers for CD-ROM &amp; Internet</td>
<td>27.9</td>
<td>31.4</td>
<td>19.1</td>
<td>17.4</td>
<td>4.2</td>
<td>832</td>
<td>2.387</td>
</tr>
<tr>
<td>Adequate nos. of CD-ROM databases in various subjects</td>
<td>7.3</td>
<td>19.2</td>
<td>40.6</td>
<td>29.0</td>
<td>3.9</td>
<td>820</td>
<td>3.030</td>
</tr>
<tr>
<td>Photocopying services is satisfactory</td>
<td>8.6</td>
<td>18.0</td>
<td>33.1</td>
<td>31.8</td>
<td>8.5</td>
<td>849</td>
<td>3.135</td>
</tr>
<tr>
<td>Library materials are current</td>
<td>4.0</td>
<td>14.4</td>
<td>42.5</td>
<td>33.3</td>
<td>5.8</td>
<td>850</td>
<td>3.227</td>
</tr>
<tr>
<td>Library staff are competent in answering enquiries</td>
<td>3.8</td>
<td>9.1</td>
<td>36.9</td>
<td>41.5</td>
<td>8.7</td>
<td>853</td>
<td>3.422</td>
</tr>
<tr>
<td>A formal in-class library/information skills course will make you a better library user</td>
<td>1.6</td>
<td>3.5</td>
<td>19.0</td>
<td>49.3</td>
<td>26.6</td>
<td>854</td>
<td>3.957</td>
</tr>
</tbody>
</table>

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There is a need to have an in-class library information skills course for all students as seen from the bar chart in Figure 5.18. Most lecturers and students agreed to having the skills course. This supports the earlier perceptions of most lecturers and students that the course will help make students better library users (see 5.1.2.9). These findings should help to convince the management of Higher Education Institutions especially those in charge of Academic Affairs of the importance of having the library information skills course for all students.

It is important that the course be made compulsory and formally carried out so that all students will benefit from it. At the moment, as mentioned in Chapter Three, some Higher Education Institutions' libraries are running the skills course on a voluntary basis and it is not compulsory for the students to attend. There are also certain Faculties or Departments which are running the course as an optional paper. One well-known university - The University of Malaya (UM) Library - has just started offering an information skills course which is compulsory for all first year students. The UM Library is fortunate in receiving the backing and support from the highest level of management. However, according to the Chief Librarian (5), there have had to overcome some problems and shortcomings such as insufficient computer facilities and insufficient time for running the session. Facilitators of the course are the librarians from the UM main library and the branch libraries.
Figure 5.18 Distribution of Respondents' Opinions Regarding the Question of Having a Formal In-Class Library/Information Skills Course for Students

From the responses of the lecturers and students, there was a general agreement that the library staff were very helpful. The mean rating of the helpfulness of library staff was 1.700 and 1.777, with 88.6% of respondents indicating strongly that the library staff were helpful. This suggests that the staff are well acquainted with the staff and have previously received assistance from that particular staff. On the whole, the perception of both lecturers and students regarding helpfulness of library staff are somewhat helpful which could mean that staff will not go "all out" to number help. This is partly due to the moderate assistance by library staff as perceived by most lecturers and students (see Figure 5.18).
5.1.3 RESPONDENTS' PERCEPTIONS

5.1.3.1 Helpfulness of library staff

The distribution of the respondents' opinions regarding helpfulness of library staff is represented in Table 5.6. The data indicated strongly that the library staff are somewhat helpful when entertaining request from lecturers (68.6%) and students (61.4%). The mean score for this statement was 1.786 and 1.877, which clearly showed that the average figure concentrated at the area of somewhat helpful. The results for this question are somewhat related to the question on staff assistance (see 5.1.3.2).

From the researcher's discussions with both lecturers and students, it was agreed by respondents that there are individual staff who are very helpful when giving library services. It all brings up to the question of who is giving the assistance. Thus, most of those users who viewed library staff as very helpful are well acquainted with the staff well and have previously received assistance from that particular staff. On the whole, the perception of both lecturers and students regarding helpfulness of library staff are somewhat helpful which could mean that staff will not go "all out" to render help. This is partly due to the moderate assistance by library staff as perceived by most lecturers and students (see Figure 5.19).
Table 5.6  Distribution of Lecturers' and Students' Opinions Regarding Helpfulness of Library Staff

<table>
<thead>
<tr>
<th></th>
<th>Very Helpful (1)</th>
<th>Somewhat Helpful (2)</th>
<th>Not Very Helpful (3)</th>
<th>Not Helpful At All (4)</th>
<th>N</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturers</td>
<td>26.4</td>
<td>68.6</td>
<td>5.0</td>
<td>-</td>
<td>140</td>
<td>1.786</td>
</tr>
<tr>
<td>Students</td>
<td>26.6</td>
<td>61.4</td>
<td>9.5</td>
<td>2.5</td>
<td>856</td>
<td>1.877</td>
</tr>
</tbody>
</table>

5.1.3.2  Staff assistance

Due to the large number of lecturers’ and students’ population, most higher education institutions in Malaysia follow an unwritten policy of giving moderate assistance to their users particularly to students. Thus this account for 71.4% of lecturers and 35.9% of students who viewed staff assistance as moderate (Figure 5.19). 45.6% of students stated that the assistance given by each staff varies. According to them, from interviews carried out by the researcher, it all depends on the situation at that particular time and the individual giving the assistance.

For instance, if the staff are too busy or there is a large number of users, the assistance rendered can be at a minimum level. It was made known by both lecturers and students that whenever they need assistance from library staff they will always seek a particular person whom they knew. They felt that they will feel more at ease if they were served with a friendlier face. From experience and observation of the researcher, lecturers usually obtained better assistance as compared to students. Those holding administrative posts such as the Vice-Chancellor, Provost or Deans were usually given maximum assistance! (14.3%).
Figure 5.19  Distribution of Responses Regarding Level of Staff Assistance

Figure 5.20  Distribution of Responses Regarding Lecturers' Encouragement on Library Usage
5.1.3.3 Lecturers encouragement of students for further readings in library

The responses (75.7%) indicated that lecturers did play an important part in giving encouragement to students in seeking further readings. The students (76%) agreed that lecturers did give them encouragement to make use of library sources. From the results shown (Figure 5.20), the students' usage of library services looks most encouraging. However, according to both lecturers and students, encouragement was mainly undertaken through reading lists, which contained mostly printed materials prepared by the lecturers. Students were not really inclined to use other types of library resources. Since lecturers exercise the strongest influence on students, it is important that lecturers encourage students to use the various types of information services available in the library.

![Figure 5.20 Distribution of Responses Regarding Lecturers' Encouragement on Library Usage](image-url)
5.1.3.4 Satisfaction of services offered

A large proportion of lecturers and students were somewhat satisfied with the provision of library services. However looking at Table 5.7, 30.8% of lecturers and 17.7% of students were not satisfied with the services. Twice as many lecturers as students are not satisfied with the service. These figures are quite alarming and this should be of concern to the library management. The image and prestige of a library are at stake and are significantly affected if users are not satisfied with the services provided. "Satisfied users do not just happen, you have to work at them" (6). At the same time it must also be remembered that no library is perfect. It is impossible to satisfy everybody who uses the services.

<table>
<thead>
<tr>
<th></th>
<th>Very Satisfied (1)</th>
<th>Somewhat Satisfied (2)</th>
<th>Not Very Satisfied (3)</th>
<th>Not At All Satisfied (4)</th>
<th>N</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturers</td>
<td>7.1</td>
<td>62.1</td>
<td>27.9</td>
<td>2.9</td>
<td>140</td>
<td>2.264</td>
</tr>
<tr>
<td>Students</td>
<td>16.1</td>
<td>66.2</td>
<td>14.6</td>
<td>3.1</td>
<td>856</td>
<td>2.046</td>
</tr>
</tbody>
</table>
5.1.3.5 Adequacy of current holdings

A question was posed to lecturers on the adequacy of library collections for teaching, research and recreation. Table 5.8 shows most respondents agreed strongly that the library collection was somewhat adequate (60.7%) for teaching. The mean score recorded was 2.030. As for research, the highest score was not very adequate (42.2%), followed by somewhat adequate (37.1%). The mean for research was 2.504. This is not a good sign since all lecturers of Higher Education Institutions will have to be involved in research in one way or another. They need the sources especially current sources which are vital for research work. The library has an important role to play in providing the research materials which are current or retrospective in nature. On recreation materials, the mean was 2.235 with 63% choosing somewhat adequate.

A somewhat similar question was also directed to students. Looking at table 5.9, the learning materials are somewhat adequate (57.2%). The same can be said for assignment materials (49.5%) and recreation materials (46.5%). Overall, the students’ considered the adequacy of current holdings as overall reasonable.
### Table 5.8: Distribution of Lecturers' Opinions Regarding Adequacy of Current Holdings

<table>
<thead>
<tr>
<th></th>
<th>Very Adequate (1)</th>
<th>Somewhat Adequate (2)</th>
<th>Not Very Adequate (3)</th>
<th>Not At All Adequate (4)</th>
<th>N</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching</td>
<td>20.0</td>
<td>60.7</td>
<td>15.6</td>
<td>3.7</td>
<td>135</td>
<td>2.030</td>
</tr>
<tr>
<td>Research</td>
<td>11.1</td>
<td>37.1</td>
<td>42.2</td>
<td>9.6</td>
<td>135</td>
<td>2.504</td>
</tr>
<tr>
<td>Recreation</td>
<td>8.4</td>
<td>63.0</td>
<td>25.2</td>
<td>3.4</td>
<td>119</td>
<td>2.235</td>
</tr>
</tbody>
</table>

### Table 5.9: Distribution of Students' Opinions Regarding Adequacy of Current Holdings

<table>
<thead>
<tr>
<th></th>
<th>Very Adequate (1)</th>
<th>Somewhat Adequate (2)</th>
<th>Not Very Adequate (3)</th>
<th>Not At All Adequate (4)</th>
<th>N</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning</td>
<td>31.1</td>
<td>57.2</td>
<td>10.6</td>
<td>1.1</td>
<td>829</td>
<td>1.817</td>
</tr>
<tr>
<td>Assignment</td>
<td>38.6</td>
<td>49.5</td>
<td>10.5</td>
<td>1.4</td>
<td>836</td>
<td>1.745</td>
</tr>
<tr>
<td>Recreation</td>
<td>11.5</td>
<td>46.5</td>
<td>33.7</td>
<td>8.3</td>
<td>823</td>
<td>2.386</td>
</tr>
</tbody>
</table>
5.1.3.6 Communication with librarians

Communication plays an important part in determining the usage of library services. Hence, proper communication between lecturers and librarians are to be welcomed and encouraged. The distribution of communication between lecturers and librarians is represented in Figure 5.21. The figure revealed that 76% of the lecturers do communicate with the librarians regarding their information needs and on behalf of their students while 24% did not have any contact at all with the Librarians. From observations and experience of the researcher, lecturers do communicate with librarians but mostly on the basis of ordering new titles and placing orders for extra copies of titles used as textbooks by students from publishers catalogue sent by the library to their Department or Faculty.

There are other instances where librarians are invited to attend monthly academic meetings and are involved in the discussions pertaining to library matters. The only setback is that only one or two Departments or Faculties are doing this. Another method of communication between lecturers and librarians is the visit made by the Collection Development librarian to the Department or Faculty to see the Course-Tutor. The purpose being to get feedback and suggestions from the lecturers. However, this is not done consistently and not all Higher Education Institutions are giving this service.
Figure 5.21  Distribution of Communication between lecturers and librarians
5.2 RESULTS OF INTERVIEWS
5.2 Results of Interviews

5.2.1 Introduction

Besides the data gathered through questionnaires, in-depth interviews were also carried out with the faculty to get a clearer picture of the respondent's interpretation of the situation under study. This technique may be the only method to obtain accurate data on sensitive or complicated questions. Khan & Cannel (7) defined research interview as:

A two person conversation initiated by the interviewer for the specific purpose of obtaining research-relevant information.

The conversation is not entirely free flowing as the interviewer is there to make sure the content is focused and orientated around the main research question. It enables both parties to explore the meaning of the questions and answers involved. Any misunderstandings on the part of the interviewer or the interviewee can be checked immediately in a way that is not possible when questionnaires are being completed (8).

Thirty respondents who earlier have answered the questionnaire were invited to participate in the interview. Attempts were made to include, not only lecturers, but also senior lecturers, associate professors and professors from the 3 selected Higher Education Institutions (UiTM = Institution A, UPM = Institution B, UUM = Institution C). The checklist that was used to structure the interviews is given in Appendix D. To structure the responses from the in-depth interview, 5 topics or categories were initiated as follows:

- Library Services
- Library Staff
- Library/Information Skills Course


- **Encouragement by Lecturers**

- **Comments or Suggestions**


### 5.2.2 Library services

Respondents interviewed were asked to comment on the services offered by the library. Are the services fully utilised by them? If not, why? The general response was that, only a few of the services are fully utilised. This is especially true if we were to refer to Chapter 5, Figure 5.15 and 5.16. Services like borrowing books, referring to journals, using reference materials and getting librarian's assistance are the ones which are fully used. The rest especially IT sources in the library have a relatively low take-up. There are various reasons given by respondents.

I am not aware of the existence of some of the services. Perhaps there is a lack of announcement regarding the services available. For example, I am not aware of any new CD-ROM titles.

and

I am aware of the existence and development of IT in the library but I do not know how to use the services.

For example, there were two respondents who are senior lecturers and have been working for 11 and 12 years respectively. Although they have been using the library, they affirmed that they are still unaware of some of the services and do not have the sufficient knowledge to use the IT services. The reasons for the lack of usage and knowledge of service in the library can be the result of:

(i) lack of publicity or marketing of services by the library, or

(ii) Inadequate or no hands-on-training
(iii) the lackdaisical attitude of the lecturers to look for extra information in the library.

The respondents were also asked whether they depend much on the library for their lecture notes and research. A number of the lecturers did, but five respondents stated that they chiefly used their own texts and Internet. One commented:

I got everything from the Internet.

Inadequacy of computer terminals is another drawback and it should be of concern to the library management. A majority of the respondents interviewed commented on the lack of computers in the library.

Accessibility to the facilities is not very encouraging and

How can the users be given hands-on-training if there are not enough computers around?

The lack of computers in the library is quite serious. From the researcher's observation during the fieldwork, Institutions A and C have only one Internet terminal each in the library for all its users. Institution B is also not that well provided, having just two Internet terminals. In addition to that, users are only allowed 1 hour of usage time. All these restraining factors will only impede or deprive users from getting access to the information needed. Possibly, this is one of the factors that lead to the low usage of IT services even though some faculty members are aware of IT development in the library. The Information and Retrieval area is another aspect brought out by one respondent from Institution A:
I used to work in a library (overseas) when I was a student. I discover that the library system here is not very user friendly and any advanced facility is not well promoted compared to the library overseas.

There are quite a number of respondents who complained on the slowness of some of the services especially getting returned books on the shelves. This problem is widely voiced by a majority of the respondents from all the three institutions. To quote one respondent's comment:

> With a large number of staff, there is no reason why it should take that long to shelve the books and if the problem could not be solve why not employ part-time students to help shelve the books.

So far, two of the libraries studied have already taken steps to come out with the scheme to employ part-time students. One common problem articulated by respondents from the 3 Higher Education Institution was the unavailability of sources on the shelves.

> Books and journals that are supposed to be in the library (as indicated in OPAC) are always missing. They could not be found on the shelves.

This is a universal problem faced by most libraries. Though electronic sources and services are widely valued at present, the importance of basic services such as making available the books and journals should not be neglected if the users' satisfaction is to be taken seriously. It is worth noting that in a survey at the University of Alabama, print sources and informal channels were preferred by faculty members to get needed information even though the faculty members were familiar with electronic sources.

Another aspect of service highlighted is the Interlibrary loan service, which, according to faculty members, took more than 3 weeks to get the materials. They regarded it as a waste of time and would prefer to go and get the materials themselves rather than using their library's Interlibrary loan service. This might be the reason for the average figure of 44.3% (refer Chapter 5, Figure 5.15) in the usage of interlibrary loan service. One respondent said:
As for interlibrary loan, I deal with the publishers myself. It’s too much hassle in dealing with the ILL services in the library.

Questions on short lectures and courses were posed to the 30 respondents. They were asked whether they have ever attended any of them given by the library staff. Only ten respondents remembered ever attending such courses but according to them it was very basic and was not sufficient. It was some sort of library orientation given to new lecturers who have just joined the Academic Staff.

The orientation was theoretical in nature and no hands-on training was given.

5.2.3 Library staff

Questions relating to library staff were posed to the 30 respondents. Most agreed that a majority of the library staff are somewhat helpful but they remarked that it all depends on the individual on duty. A large number of respondents agreed that the services given are neither maximum nor minimum. They appear to be moderate. They would like to see the library staff who is more customer/user friendly and hence make the library more pleasing and welcoming to users. One Dean of Faculty from Institution A pointed out:

Librarians do not apply interpersonal communication. They have to be more user-oriented. The information is good, current and up-to-date. Many users think otherwise because the users are not aware. Librarians should make them more aware.

The respondents interviewed would like to see staff who are more friendly and sensitive to the needs of the users. A sense of humour would be of great help. Judging from what has been said by respondents, it would help very much if library staff made users feel comfortable and establish a good
rapport with them. Mathew (10) gave an example how it should be done: "When a person approaches the reference desk or counter, the staff should acknowledge, by looking up, or standing up, and attending to the person by asking, "May I help you?" Or "How may I help you?" This will indicate to the user that the staff is aware of the user's presence and is willing to help".

One senior lecturer added:

Library staff should be more proactive in looking for potential material and in promoting new facilities in the library.

This means that library staff has to stay "one step ahead" of users' needs, not only in meeting present needs but also in planning for future needs and demands. One respondent perceived the situation in the library as:

The administrative structure is such that there are too many officers in the library but not many who are around to help us.

This comment looks bad on the image of the library. If this is true, then the library management have to ensure that such a thing will not occur in future. Another respondent added:

Prior experience with the attitude of some of the junior staff was one of the reasons for not using the library frequently. The staff should have a more positive attitude.

According to the respondent, some of the junior staff seemed quite reluctant to assist and are not very approachable. On the whole, those interviewed agreed that most of the library staff are somewhat helpful but they believed that more can be done for a better and excellent service. A more courteous, competent, friendly and helpful staff will help attract users to fully utilise the library services. It will also help break down the "us-them" feeling between lecturers and library staff.
In addition to the questions on library/information skills course (discussed in Chapter 5, Table 5.4, Table 5.5 and Figure 5.18), respondents were then asked to give their view on the question whether an in-class library/information skills course would be useful and should it be a part of the institution's education curriculum. Out of the 30 respondents interviewed, a majority of 27 respondents agreed on the importance and usefulness of an in-class library/information skills course and they unanimously supported the idea that the course should be part of the institution education curriculum. The rest (3 respondents) were undecided, as they were not really aware of the course. They seek clarification regarding the course. After explaining to them, they seemed quite positive. As for the 27 respondents, they felt that there is a real need for an in-class library/information skills course as from their point of view most of their students lack training in library/information skills and do not have the capability of developing a good search strategy when given a term paper or research project. Even some of the faculty members interviewed admit that they themselves are ignorant in distinguishing between good and bad material retrieved for their research. It is hoped that with a library/information skills course student will be better users, and eventually they will be able to evaluate which are the more relevant sources. This is a good sign as 5 out of the 30 respondents are the current Deans of five faculties. These Deans are involved with policy making and with their support there is a future for the library/information skills course to be a part of the institution education curriculum.

As for the other three, they were undecided since they were not familiar with the course. They did enquire about the course during the interview. After listening to the explanation, they looked quite positive.
5.2.5 Encouragement by lecturers

Again, the faculty members interviewed confirmed their part in encouraging students for further reading in the library. It is important to know how and how well the faculty members instruct their students for further readings in the library since faculty members have the strongest influence on students’ use of the library. The faculty also realised that most students tend to depend too much on lecture notes and confined their reading to books recommended by the faculty. Most of the faculty interviewed, did not really motivate the students to use the library resources fully. They usually inform on the students to use the library when giving out lecture notes and assignments.

A few (3 respondents) have their specific ways of making sure that their students really do make use of the sources in the library. One commented:

I always insist that my students include in their assignments (bibliography part) at least a minimum of two sources each from the various types of sources in the library. Failing to do this will affect their marks. This, in a way will make the student learn to use the latest information technology apart from the printed materials when doing their assignments or research.

5.2.6 Comments or Suggestions

Finally, respondents interviewed were then asked if they would like to add something or make any comments or suggestions. Several comments and suggestions pertaining to facilities and services needed were received.

I am quite happy with the services but there is room for Improvement in giving better services to library users. Staff should devote more time and attention to helping and advising users.

The library should subscribe to the most current journals. Make the Internet facilities more available to the users and the library’s home page should be revised. It should contain more information.
Rooms should be made available in the library for small group discussions.

Have more full-text CD-ROM titles.

General library education to non-library officers must be made compulsory. In addition, the staff must be made to understand and appreciate that they are exposed to users' scrutiny. Thus, they need to have a very much better user orientation and feelings to make the library more pleasing and welcoming to library users.

Please increase the number of IT facilities in the library.

The comments and suggestions made were wide ranging. Overall, the faculty members would like to see an improvement in the services and the library's home page. They want the library to make available current journals, to make available rooms for group discussions, to have more full-text CD-ROM titles, to increase the number of IT facilities, and to provide a general library education for non-library officers.

5.2.7 Conclusion

Judging from the numerous comments by those interviewed, the general viewpoint given of the library staff are that they can be quite unfriendly and uncooperative. It is very important that a closer and a more co-operative relationship should exist between the faculty and library staff in order for the users to really benefit from the wealth of information available in the library. Efforts should be made to inform the faculty members more adequately of the potential of the library staff. "Increased interaction through consultation, committees, and workshops might well result in a different perception of the library staff and management responsibilities" (11). In other word, this call for the establishment of a library liaison programme.
5.3 RESULTS OF GROUP INTERVIEWS
5.3 Results of Group Interviews

5.3.1 Introduction

Other than questionnaires and in-depth interviews, group interviews or discussions for focus groups were the next method used in gathering data. According to Richard A. Krueger:

Focus groups produce qualitative data that provide insights into the attitudes, perceptions, and opinions of participants. These results are solicited through open-ended questions where respondents are able to choose the manner in which they respond and also from observation of these respondents in group discussion. (12)

David L. Morgan asserts:

Focus groups are fundamentally a way of listening to people and learning from them. Focus groups create a line of communication. This is most obvious within the group itself, where there is continual communication between the moderator and the participants, as well as among the participants themselves. (13)

5.3.2 Purpose

Two focus group interviews were conducted in one of the selected Higher Education Institutions, namely, UiTM. The purpose was to explore and compare the experiences, perceptions and attitudes towards library services, usage and library/information skills course between the two focus groups.
5.3.3 Composition of the Groups

The recommended ideal size of a focus group differs from one writer to another. For example, Richard A. Krueger notes, a focus group is typically composed of 7 to 10 participants (14). Sekaran states 8 to 12 members randomly chosen, with a moderator leading discussions regarding a particular topic, item or product (15). While Fink mentions 10 to 20 people in a focus group (16).

In this study, each group is composed of 24 students being the total number of two different classes. Though the number is slightly bigger than that recommended by most writers, the researcher believes that the number in the focus groups is controllable and adequate information can be derived from both groups. One of the groups consisted of students who have already undergone a formal in-class library/information skills course (Group A), while the other group is made up of students who did not have any library/information skills course (Group B).

The same 5 topics or categories (library services, library staff, library/information skills course, encouragement by lecturers, and comments or suggestions) that were used in the in-depth interviews for lecturers were similarly used for the focus groups. Both group sessions lasted approximately one hour. Along with the group interviews, a short skill test was later administered to both groups with the help of a member of faculty. Only ten students from each group were selected for this test using simple random sampling. The time taken to complete the skill test was approximately 15 minutes.

5.3.4 Library Services

Each group discussion began with consideration of the factors that were influential in inhibiting the use of some of the library services listed in the Questionnaire (Section B, no. 11). Participants were given the opportunity to
volunteer what specific factors were most important in their decisions. Members of the groups offered a wide variety of opinions regarding the relative importance of various factors that influenced their decisions. Inadequate information on how to use the services especially the "Audio-Visual Services" and the "Inter-Library Loan Services" seemed to be the main issue for both groups. Both groups have a low usage of both services. Most of the comments were from Group B participants:

I am not even aware of its existence - Not enough publicity.

No one told me the relevance of the services to my study. I was not briefed well as to the usefulness of the services. I thought it is not needed.

No detailed instruction on how to use the services. They should have brochures or pamphlets explaining each service clearly and how to go about it.

There were no announcements regarding the services.

A common problem for both groups and one similarly experienced by the lecturers is that of misplaced or missing sources.

I could not locate the books at the place where they should be.

This problem is quite widespread and though library staff are aware of it, the same problem will occur again. Library management should take measures to overcome it.

Group A members seemed to make use of most of the services listed. There appeared to be gaps between the two groups when usage of services such as CD-ROM, Internet, OPAC and On-line are considered. Group B has a low usage for this kind of services as compared to Group A. The prevalent feeling among Group B was that they did not really know how to use the
services. At least one or two participants in Group B cited unawareness of the importance and relevance of some of the services.

Two participants from Group A complained of the cost of on-line searching. The uniform problem for both groups appeared to be the lack of computer terminals and hands-on-training for services such as CD-ROM, Internet, OPAC and On-line services. A number of the participants expressed their frustration at having to queue for a long time to use the only Internet terminal available (From the researcher's observation during the fieldwork, the same problem also occurred in the other two Institutions). Typical comments by the participants from both groups were:

The accessibility to the facilities is not encouraging. It is very time consuming.

The libraries need more computers for the Internet. I have no chance to use it.

It's difficult to access. Terminals are inadequate. They are fully booked and too many people are waiting.

On-line searching is too expensive especially DIALOG. (The service has been stopped due to the expensive cost).

The practical instructions are insufficient, inadequate and no proper instruction.

No hands-on and not exposed to the services.

Looking at the above comments, inadequacy of computer terminals seemed to be the most serious problem as it will have an effect on other services such as users' access of the computer terminals as well as hands-on-training. The best way of reducing this problem is by getting more computer

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4Printing of one piece of paper and service charge for a local online searching cost Malaysian Ringgit 1.70 = 30 pence U.K.
terminals for the library. The other alternative is "resource sharing". As a temporary measure, library management can make arrangements with the Faculty of Information Technology/Faculty of Computer Science to make use of their computer facilities, which is available at their computer lab.

Another service, which has a low usage amongst Group B, is Journals. Most participants depended heavily on the lecturers' notes, textbooks and recommended articles. According to most of them, they are aware of the journals but they do not really know, and are not aware of the function and availability of Indexes and Abstracts in their particular field. Only a few, who are the more adventurous (by enquiring of the library staff) seemed to know how to make use of the Indexes and Abstracts. As for participants in Group A, members generally agreed that they were well aware of the importance of Indexes and Abstracts since they have already been exposed to them during their library/information skills course. Usage of the Indexes and Abstracts was therefore not a problem to them.

The implication from this finding is that Group A which has library/information skills is better aware of some important aspects of information seeking than are those in Group B. It indicates the importance of having library/information skills course for all students. Finally, one common problem for both groups is the unavailability of most journals' titles that they are interested in. This problem is similar to that of a study by Reddy (17), in which, a majority of the faculty was not satisfied with the library periodical collection.

I could not get most of the articles I want.

5.3.5 Library Staff

On the question of whether the library staff are helpful or not, the responses from members of both groups were quite divided. Some felt that the library staff are generally helpful while there were others who were not. This shows that individual experience varies. In common with the faculty perceptions,
participants from both groups unanimously agreed that the library staff should be more helpful and informative. They mentioned the need of cooperation from the library staff.

Some participants from both groups commented that they were not very happy with the staff. They indicated that they were quite reluctant to seek assistance from them. The reason given was that the staff are moody and unapproachable at times and this poses a barrier. One or two participants mentioned that they were quite scared to ask for assistance, judging from the "authoritarian" manner of some of the staff. They would like the staff to be friendly and more approachable when handling enquiries. Any initial uneasiness that students feel will disappear if there is a warm and friendly atmosphere from staff. Students will not be discouraged and appreciate better the services available to them. This will encourage them to return for further assistance if needed, without feeling apprehensive.

On the other hand, there were a number of participants from both groups who are quite happy with most of the staff. The participants felt that the staff with whom they had positive experiences were able to provide the information they need. However, they seemed to agree that there are a few staff, librarians or non-librarians that are not that helpful that have led to unpleasant experiences. Mathew, in her book (18) also brought out this point: "Although most library personnel are helpful and emphatic, and few are deliberately rude or overtly unpleasant, disconfirming behaviour does occur in libraries". Among the comments pertaining to library staff were:

- There are a few staff who are quite helpful.
- Some of the staff are not that knowledgeable and thus are hesitant to give help.
- The staff should try to smile more often.
- It makes me angry when the staff are moody and put on a sour face.
One common comment was that the staff always appeared too busy and did not like to be bothered. This perception of students toward the staff has a serious implication on library usage. The individual staff attitude during the first encounter with users is very important. The experience users have with the library staff will somewhat determine the users' usage of library services. The non-professional staff who are in charge of issuing, returning and reservation of books are often blamed for contributing to the poor image of a library. They are the front line staff and generally lack communication skills and customer relations but they alone cannot be held responsible. Library management has to provide training, support and encouragement to these staff whose motivation is known to be low.

5.3.6 Library/Information Skills Course

Members of both groups expressed a near-consensus that there was really a need to have formal provision of in-class library/information skills course. In fact, they agreed that it should be made compulsory to all students. They indicated that, during their schooling days (Primary and Secondary School) they were never given any kind of library/information skills. The participants suggested that the library/information skills course should be given to the first year students as this will be very beneficial during their studies at the Higher Education Institution.

According to the students, by starting from the first year they can really benefit and make full use of the available services offered by the university library and other information centres throughout their studies at the university. It was also suggested that the course taught for one year was already adequate. To make the course a continuous process would be to further add to the already packed and overloaded subjects in the curriculum and thus would be a burden on the students.

There was a general perception from both groups that a formal library/information skills course will make them better students. However, two
participants from both groups disagreed. It was somewhat expected of the two from Group B since they are not familiar with the course. As for the other two from Group A, they seemed to have a bad experience in the course. They sought clarification as to how the course can make them into better students. Though only 8.3% from each group, it was taken seriously and discussed. A participant from Group A responded that, based on his experience after undergoing a library/information skills course, one will be able to identify, gather, analyse and present information better than a student without a library/information skills course. He further added, the ability to identify, gather, analyse and present information will result in better output and thus will make them into better students. This was also emphasised to the two participants in the other group.

In the discussion, there were suggestions as to why certain students may have a bad experience in the library/information skills course:

i. Quality of training.
ii. Timing of training not appropriate.
iii. Quality of the lecturers.
iv. Lack of relevance of what is taught.

In addition, training must also accommodate individual differences. The student's academic background and ability level influence the amount of learning time needed. Failure to accommodate individual differences results in instructional inefficiency, with too much instructional time allotted for some students and not enough for others. Several participants in Group A indicated that it would be much better if more practical sessions were included in the library/information skills course. Comments relating to library skills course were heard:

More time should be added for a practical session (Group A).
The course looks good. Perhaps it can make me more confident to use the library (Group B).

I will be able to understand the latest technology in the library better with the Course (Group B).

The results of the interview look positive and encouraging for introducing a compulsory course in library/information skills for all students. There are a few things that have to be considered. There should be more computer terminals and adequate hands-on-training. In addition, students would like to see more practical sessions. Information is the critical resource of the future and the library/information skills course is the key to the future for all higher education students. It is much needed in a knowledge society that requires continuous and lifelong learning.

5.3.7 Encouragement by Lecturers

A majority of the participants from both groups agreed that they did receive encouragement from their lecturers to use the library resources especially for their assignments and projects. Some participants from Group B pointed out that this was mainly achieved through reading lists prepared by lecturers. However, little was done to ensure that they really used library resources.

On the other hand, a number of participants from Group A indicated that there were some lecturers who insisted on the inclusion of a variety of sources in students' bibliographies or references. They were strictly advised to include them. In addition, they were given assignments that needed searching to be done in the library. Typical comments included:

Get the latest and additional information from the library.

Use the library to get further information.
5.3.8 **Comments or Suggestions**

Similar to the individual interviews, participants from both groups were asked if there is anything to add. Among the comments or suggestions were:

The library should provide lockers for rental.

Provide a common room with vending machines or cafe that allow users to eat and drink while reading and discussing. (This is somewhat similar to the user lounge at Pilkington Library at Loughborough University).

Any kind of Library Instruction should be made compulsory.

The junior staff should be given training on customer service.

Install more computers in the library.

Have OPAC terminals at all levels of the library.

The library should provide small rooms for discussion purposes and book drops all over the campus.

Clear directional signs are lacking.

The comments were wide ranging and called for a more and better service for users. The facilities requested should be considered seriously bearing in mind the cost, practicality and implications. However, the users' satisfaction and expectation should be the main consideration in all service decisions. As noted by Harry I. Forsha on users' expectations:

People want what they want when they want it. They don't want less than they want, and they certainly don't want it at some other time. (19)
Looking at the various comments and suggestions from both groups of students, it seems that there is a lot to be done to improve the condition and situation in the library. Both parties (library staff and users) have to play their part so that appropriate and adequate services be given and fully utilised. All the comments, suggestions and perceptions of users be it right or wrong have to be taken into consideration by the library management. Perhaps, a task force should be set up to look into the matter.
5.4 RESULTS OF THE SKILL TEST
5.4 Results of the Skill Test

In all, there were twenty participants drawn from the focus groups to undertake the skill test (Appendix E). Ten participants each were selected from both groups. The participants were chosen at random. As a reminder, participants from Group A are those who have already undertaken a library/information skills course while Group B participants are those who have never had any library/information skills course.

From the result of the test (see Figure 5.22), it was found out that, ten participants (100%) from Group A had no problem in identifying the subject heading from the Reader's Guide to Periodical Literature. Only three (30%) out of ten participants (100%) in Group B knew the right subject heading. On the function of the "see also reference" in the Reader's Guide to Periodical Literature, the Group A participants (100%) were able to recognise the function of "see also reference". This was not the case with Group B where only two participants (20%) managed to recognise its function.

Questions pertaining to Boolean Operator's were also included. Members of Group A (100%) knew about Boolean Operator's but only seven (70%) of the members knew how to really make use of the operator's in searching for materials. Five participants (50%) from Group B admitted hearing about Boolean Operator's but none (0%) knew how to used them fully for searching materials.

The last question was on the CD-ROM 'ProQuest'. A question was asked whether the participants have any idea as to its function. Again, as expected the participants (100%) from Group A indicated that, they were aware of the function of 'Proquest'. Only two (20%) participants from group B seemed to know the function of 'ProQuest.'
A two-way cross tabulation test also was run to find out whether there exist a significant relationship between Group A students (those with library/information skills) and Group B students (those without library/information skills) towards the skill test taken. The test was carried out on each of the questions. N denotes the total number of respondents. Looking at the results (Fisher exact probability, two-tailed test) in Table 5.10, there was a significant relationship for all the pairs of variables. The value of Pearson’s correlation too indicated a strong positive relationship for most of the pairs of variables, except for one (Students/Know Boolean Operators) which showed a moderate positive relationship. These data clearly showed that students with library/information skills course tend to do better in their skill test. This skill test further strengthened the belief in the importance of an in-class library/information skills course for students.
Table 5.10  Two-Way Cross Tabulation Correlation Summary Showing Relationships Between Two Group of Students Towards the Skill Test.

<table>
<thead>
<tr>
<th>Pairs of Variables</th>
<th>Fisher's Exact Probability</th>
<th>N</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students/Identify subject heading</td>
<td>0.0031</td>
<td>20</td>
<td>0.7338</td>
</tr>
<tr>
<td>Students/Function of see-also-ref.</td>
<td>0.0007</td>
<td>20</td>
<td>0.8165</td>
</tr>
<tr>
<td>Students/Know Boolean Operator's</td>
<td>0.0325</td>
<td>20</td>
<td>0.5774</td>
</tr>
<tr>
<td>Students/Usage of Boolean</td>
<td>0.0031</td>
<td>20</td>
<td>0.7338</td>
</tr>
<tr>
<td>Student/Function of ProQuest</td>
<td>0.0007</td>
<td>20</td>
<td>0.8165</td>
</tr>
</tbody>
</table>

[Note: Statistically significant differences at 0.05 level]
5.5 RESULTS OF HYPOTHESIS TESTING
5.5 Results of Hypothesis Testing

The results of the hypothesis testing were described according to appropriate methods used to verify their validity, using Chi-square and Pearson’s Product Moment Correlation Coefficients. The values of chi-square, its degree of freedom and its significance are given. Also included is the total number of respondents (N) and the value of the correlation. In certain cases the Fisher’s Exact Probability Two-Tailed Test will be used instead of the Chi-square.

**Hypothesis 1**

A significant relationship exists between students who had received lecturer’s encouragement to use the library (as well as those who had not) and their actual usage of the library.

A two-way cross tabulation test run for these two variables confirmed this relationship (please refer Table 5.11). There was a significant relationship between students who had received lecturer’s encouragement to use the library and those who had not towards library usage by students (Fisher exact probability = 0.003, two-tailed test). However the value of Pearson’s correlation of both variables at 0.1986 indicated a weak correlation between both variables. These data supported the hypothesis that the more encouragement given by lecturers to use the library will lead to higher usage of library by students.
Table 5.11  Two-Way Cross Tabulation Correlation Summary Showing Relationships Between Students Who Had Received Lecturer's Encouragement To Use the Library (As Well As Those Who Had Not) and Their Actual Usage of the Library.

<table>
<thead>
<tr>
<th>Pairs of Variables</th>
<th>Fisher's Exact Probability</th>
<th>N</th>
<th>Correlation Two-Tailed Test</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturers'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encouragement/</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students' Library Usage</td>
<td>0.003</td>
<td>140</td>
<td>0.1986</td>
<td></td>
</tr>
</tbody>
</table>

[Note: Statistically significant differences at 0.05 level]
Hypothesis 2

A significant relationship exists between users who had received hands-on-training in IT (as well as those who had not) and their usage of IT.

A two-way cross tabulation test was carried out for each of the different types of IT (OPAL, CD-ROM, On-line Searching & Internet) training and its usage by lecturers and students. The first column in Table 1 shows the pairs of variables, followed by the value of Chi-square and its degree of freedom. The fourth column gives its exact two-tailed probability. N shows the number of cases, followed with the value of Pearson's correlation in the last column.

Looking at the results of Chi-square and its significance for all the pairs of variables, Table 5.12 clearly shows the relationships between each type of IT training and its usage by both lecturers and students. Thus, this confirmed that a significant relationship exists between hands-on-training in IT and its usage by lecturers and students. As for the value of Pearson's correlation, only the first pair of variable (Hands-on-training in OPAC/Usage by lecturers) shows a weak correlation coefficient ($r = 0.3270$). The rest indicated a moderate relationship between both variables. These data supported the hypothesis of the importance of hands-on-training in IT and its usage by the users. In this case, the lack of hands-on-training that prevailed at the 3 higher education institutions reflected the under utilisation of IT in the libraries.
Table 5.12 Two-Way Cross Tabulation Correlation Summary Showing Relationships Between Users Who Had Received Hands-On-Training in IT (As Well As Those Who Had Not) and Their Usage of IT.

<table>
<thead>
<tr>
<th>Pairs of Variables</th>
<th>Chi-square</th>
<th>df</th>
<th>Significance</th>
<th>N</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hands-on-training in OPAC/Usage (lecturers)</td>
<td>14.97</td>
<td>1</td>
<td>0.000</td>
<td>140</td>
<td>0.3270</td>
</tr>
<tr>
<td>Hands-on-training in OPAC/Usage (students)</td>
<td>357.54</td>
<td>1</td>
<td>0.000</td>
<td>858</td>
<td>0.6455</td>
</tr>
<tr>
<td>Hands-on-training in CD-ROM/Usage (lecturers)</td>
<td>26.89</td>
<td>1</td>
<td>0.000</td>
<td>140</td>
<td>0.4383</td>
</tr>
<tr>
<td>Hands-on-training in CD-ROM/Usage (students)</td>
<td>300.04</td>
<td>1</td>
<td>0.000</td>
<td>858</td>
<td>0.5914</td>
</tr>
<tr>
<td>Hands-on-training in Online searching/Usage (lecturers)</td>
<td>51.66</td>
<td>1</td>
<td>0.000</td>
<td>140</td>
<td>0.6074</td>
</tr>
<tr>
<td>Hands-on-training in Online searching/Usage (students)</td>
<td>108.35</td>
<td>1</td>
<td>0.000</td>
<td>858</td>
<td>0.3554</td>
</tr>
<tr>
<td>Hands-on-training in Internet/Usage (lecturers)</td>
<td>30.36</td>
<td>1</td>
<td>0.000</td>
<td>140</td>
<td>0.4657</td>
</tr>
<tr>
<td>Hands-on-training in Internet/Usage (students)</td>
<td>145.92</td>
<td>1</td>
<td>0.000</td>
<td>858</td>
<td>0.4124</td>
</tr>
</tbody>
</table>

[Note: Statistically significant differences at 0.05 level]
Hypothesis 3

A significant relationship exists between students with experience of library/information skills course (as well as students without experience of library/information skills course) and their awareness of IT in the library.

A total of 48 students was taken from the total population of 858. Steps were taken to have an equal number of students with library/information skill and those without it. These 48 students were from the Interview/Discussion groups. A two-way cross tabulation test was run to obtain the Chi-square output. Similar to the test carried out in the second hypothesis, each type of IT was tested separately. Table 5.13 gave a summary of the test.

All the pairs of variables exhibit a significant relationship as shown from the Chi-square results. The value of Pearson's correlation too showed a strong and positive relationship between the variables, except for 'Library skill/Awareness of online searching' which has a moderate relationship ($r = 0.4132$). On the whole, it is right to state that a significant relationship exists between students with library/information skills and those without library/information skills towards awareness of IT in the library. These data supported the hypothesis that students with library/information skills are more aware of IT as compared to students without library/information skills.
Table 5.13  Two-Way Cross Tabulation Correlation Summary Showing Relationships Between Students With Experience of Library/Information Skills Course (As Well As Students Without Experience of Library/Information Skills Course) and Their Awareness of IT in the Library.

<table>
<thead>
<tr>
<th>Pairs of Variables</th>
<th>Chi-square</th>
<th>df</th>
<th>Significance</th>
<th>N</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library skill/Awareness of OPAC</td>
<td>28.80</td>
<td>1</td>
<td>0.000</td>
<td>48</td>
<td>0.7746</td>
</tr>
<tr>
<td>Library skill/Awareness of CD-ROM</td>
<td>31.45</td>
<td>1</td>
<td>0.000</td>
<td>48</td>
<td>0.8094</td>
</tr>
<tr>
<td>Library skill/Awareness of Online searching</td>
<td>8.20</td>
<td>1</td>
<td>0.042</td>
<td>48</td>
<td>0.4132</td>
</tr>
<tr>
<td>Library skill/Awareness of Internet</td>
<td>31.45</td>
<td>1</td>
<td>0.000</td>
<td>48</td>
<td>0.8094</td>
</tr>
</tbody>
</table>

[Notes: Statistically significant differences at 0.05 level]
Hypothesis 4

A significant relationship exists between users with user education (as well as users without user education) and their use of library services.

Due to the different type of library services existing in the university libraries, the Chi-square and Pearson product-moment coefficient tests were run for each type of the services used. The test was carried out to see the relationship between users who were given user education and those who have not received any user education towards using the services available in the library.

In Table 5.14, the results of the test on lecturers showed that User education/Borrowing books are not significant statistically (Chi-square = 3.46, df = 1, ns). As for the rest, there was a significant relationship between the variables. On the whole, there was a significant association between the two groups of lecturers for the different types of library services used.

However, this was not the case with students. As can be seen from Table 5.15, there were quite a number of the pairs of variables that are not significant statistically. There were no statistical differences for the following variables:

- User education/Usage of AV (Chi-square = 0.21, df = 1, ns)
- User education/Borrowing books (Chi-square = 0.02, df = 1, ns)
- User education/Book reservation (Chi-square = 0.82, df = 1, ns)
- User education/CD-ROM services (Chi-square = 1.57, df = 1, ns)
- User education/Inter-library loan (Chi-square = 3.60, df = 1, ns)
- User education/Journals (Chi-square = 3.00, df = 1, ns)
- User education/Internet services (Chi-square = 0.80, df = 1, ns)
- User education/Online services (Chi-square = 0.00, df = 1, ns)
- User education/OPAC (Chi-square = 0.07, df = 1, ns)
The likely reason for the above is the possibility of interference of other variables or factors such as the quality of user education and the type of services. As user education in this study relates to instructions, it can be assumed that instruction alone is not adequate without the backing of adequate training. Most IT services need to have training and guidance. Another factor which can be argued is that services which users are familiar with and are basic in nature such as borrowing books, using journals, and book reservation have not much affect whether users are given user education or not. Likewise, the researcher would like to suggest to the library management to look closely into this matter. Perhaps a further study solely into this matter will help in giving answers to the following questions: Does availability matter?; Does publicising the services matter?; and Does quality of instruction matter? Should instruction be followed up with hands-on-training?. As for the rest of the pairs of variables, the results of the Chi-square test showed a significant association between the variables. However, the correlation between the variables showed a very weak relationship.

The test on the hypothesis showed both statistically significant as well as not statistically significant for the services tested. As a result, it is not advisable to generalise across the whole array of services.
<table>
<thead>
<tr>
<th>Pairs of Variables</th>
<th>Chi-square</th>
<th>df</th>
<th>Significance</th>
<th>N</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>User education/Usage of audio visual</td>
<td>13.74</td>
<td>1</td>
<td>0.002*</td>
<td>140</td>
<td>0.3133</td>
</tr>
<tr>
<td>User education/Borrowing books</td>
<td>3.46</td>
<td>1</td>
<td>0.063</td>
<td>140</td>
<td>0.1571</td>
</tr>
<tr>
<td>User education/Book reservation</td>
<td>28.08</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
<td>0.4478</td>
</tr>
<tr>
<td>User education/CD-ROM services</td>
<td>20.22</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
<td>0.3800</td>
</tr>
<tr>
<td>User education/Inter-library loan</td>
<td>14.07</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
<td>0.3170</td>
</tr>
<tr>
<td>User education/Internet services</td>
<td>11.92</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
<td>0.2918</td>
</tr>
<tr>
<td>User education/Journals</td>
<td>10.02</td>
<td>1</td>
<td>0.002*</td>
<td>140</td>
<td>0.2676</td>
</tr>
<tr>
<td>User education/Staff assistance</td>
<td>25.46</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
<td>0.4264</td>
</tr>
<tr>
<td>User education/Newspaper cutting</td>
<td>12.76</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
<td>0.3019</td>
</tr>
<tr>
<td>User education/Online services</td>
<td>8.55</td>
<td>1</td>
<td>0.003*</td>
<td>140</td>
<td>0.2472</td>
</tr>
<tr>
<td>User education/OPAC</td>
<td>17.23</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
<td>0.3508</td>
</tr>
<tr>
<td>User education/Photocopying</td>
<td>35.71</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
<td>0.5050</td>
</tr>
<tr>
<td>User education/Ref. materials</td>
<td>13.09</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
<td>0.3057</td>
</tr>
</tbody>
</table>

Notes:* Statistically significant differences at 0.05 level
Table 5.15  Two-Way Cross Tabulation Correlation Summary Showing Relationships Between Students With User Education (As Well As Students Without User Education) and Their Use of Library Services.

<table>
<thead>
<tr>
<th>Pairs of Variables</th>
<th>Chi-square</th>
<th>df</th>
<th>Significance</th>
<th>N</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>User education/ Usage of AV</td>
<td>0.21</td>
<td>1</td>
<td>0.646</td>
<td>858</td>
<td>0.0157</td>
</tr>
<tr>
<td>User education/ Borrowing books</td>
<td>0.20</td>
<td>1</td>
<td>0.659</td>
<td>858</td>
<td>0.0151</td>
</tr>
<tr>
<td>User education/ Book reservation</td>
<td>0.82</td>
<td>1</td>
<td>0.367</td>
<td>858</td>
<td>0.0308</td>
</tr>
<tr>
<td>User education/ CD-ROM services</td>
<td>1.57</td>
<td>1</td>
<td>0.210</td>
<td>858</td>
<td>-0.0428</td>
</tr>
<tr>
<td>User education/ Inter-library loan</td>
<td>3.60</td>
<td>1</td>
<td>0.058</td>
<td>858</td>
<td>0.0648</td>
</tr>
<tr>
<td>User education/ Internet services</td>
<td>0.80</td>
<td>1</td>
<td>0.371</td>
<td>858</td>
<td>-0.0352</td>
</tr>
<tr>
<td>User education/ Journals</td>
<td>3.00</td>
<td>1</td>
<td>0.083</td>
<td>858</td>
<td>0.0592</td>
</tr>
<tr>
<td>User education/ Staff assistance</td>
<td>8.24</td>
<td>1</td>
<td>0.004*</td>
<td>858</td>
<td>0.0980</td>
</tr>
<tr>
<td>User education/ Newspaper cutting</td>
<td>6.81</td>
<td>1</td>
<td>0.009*</td>
<td>858</td>
<td>0.0891</td>
</tr>
<tr>
<td>User education/ Online services</td>
<td>0.00</td>
<td>1</td>
<td>0.955</td>
<td>858</td>
<td>0.0019</td>
</tr>
<tr>
<td>User education/ OPAC</td>
<td>0.07</td>
<td>1</td>
<td>0.797</td>
<td>858</td>
<td>0.0088</td>
</tr>
<tr>
<td>User education/ Photocopying</td>
<td>4.00</td>
<td>1</td>
<td>0.045*</td>
<td>858</td>
<td>0.0682</td>
</tr>
<tr>
<td>User education/ Reference Materials</td>
<td>5.58</td>
<td>1</td>
<td>0.018*</td>
<td>858</td>
<td>0.0806</td>
</tr>
</tbody>
</table>

[Note: * Statistically significant differences at 0.05 level]
Hypothesis 5

A significant relationship exists between users who are satisfied (as well as users who are dissatisfied with library services) and their use of library services.

Similar to the testing in Hypothesis 4, each type of library services used were tested on. In this case, only Chi-square was used to find out whether there was a significant difference or significant association between users' satisfaction and dissatisfaction in library services towards its usage.

The results of the test on lecturers are shown in Table 5.16. From the results, three pairs of variables are not significant statistically. They are:

- Satisfaction or Dissatisfaction/ Borrowing books  \( (\text{Chi-square} = 0.21, \text{df} = 1, \text{ns}) \)
- Satisfaction or Dissatisfaction/ Journals  \( (\text{Chi-square} = 2.11, \text{df} = 1, \text{ns}) \)
- Satisfaction or Dissatisfaction/ Staff assistance  \( (\text{Chi-square} = 2.86, \text{df} = 1, \text{ns}) \)

This means, It makes no difference if lecturers are satisfied or not towards the usage of these three types of library services. The lecturers will still use the services because they are fundamental to most of the lecturers. As for the other types of library services, all revealed a significant association between the two categories of satisfaction towards usage of the particular library services. In this case, usage of library services depends totally on the satisfaction or dissatisfaction of users.

The results of the test on students are shown in Table 5.17. There are also three pairs of variables, which are not significant statistically. They are:
Satisfaction or Dissatisfaction/
Borrowing books
Satisfaction or Dissatisfaction/
Photocopying
Satisfaction or Dissatisfaction/
Reference materials

(Chi-square = 1.36, df = 1, ns)
(Chi-square = 1.04, df = 1, ns)
(Chi-square = 0.81, df = 1, ns)

The rest of the pairs of variables showed a significant difference. In this case, students' satisfaction will lead to better usage of the library services. As for the three pairs of variables which are not significant, students will still use them as it is a basic necessity for them to do their assignments.

Due to both statistically significant as well as not statistically significant occurring in the services tested, the hypothesis cannot be generalised for all the services.
Table 5.16  Two-Way Cross Tabulation Summary Showing Relationships Between Lecturers Who Are Satisfied (As Well As Lecturers Who Are Dissatisfied in Library Services) and Their Use of Library Services.

<table>
<thead>
<tr>
<th>Pairs of Variables</th>
<th>Chi-square</th>
<th>df</th>
<th>Significance</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction or Dissatisfaction/Usage of AV</td>
<td>20.54</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/Borrowing books</td>
<td>0.21</td>
<td>1</td>
<td>0.647</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/Book reservation</td>
<td>7.11</td>
<td>1</td>
<td>0.008*</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/CD-ROM services</td>
<td>8.71</td>
<td>1</td>
<td>0.003*</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/Inter-library loan</td>
<td>13.72</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/Internet services</td>
<td>22.38</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/Journals</td>
<td>2.11</td>
<td>1</td>
<td>0.147</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/Staff assistance</td>
<td>2.86</td>
<td>1</td>
<td>0.091</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/Newspaper cutting</td>
<td>16.18</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/Online services</td>
<td>23.97</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/OPAC</td>
<td>13.40</td>
<td>1</td>
<td>0.000*</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/Photocopying</td>
<td>6.45</td>
<td>1</td>
<td>0.011*</td>
<td>140</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/Reference Materials</td>
<td>4.21</td>
<td>1</td>
<td>0.040*</td>
<td>140</td>
</tr>
</tbody>
</table>

[Note: * Statistically significant differences at 0.05 level]
Table 5.17 Two-Way Cross Tabulation Summary Showing Relationships Between Students Who Are Satisfied (As Well As Students Who Are Dissatisfied in Library Services) and Their Use of Library Services

<table>
<thead>
<tr>
<th>Pairs of Variables</th>
<th>Chi-square</th>
<th>df</th>
<th>Significance</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction or Dissatisfaction/ Usage of AV</td>
<td>96.23</td>
<td>1</td>
<td>0.000*</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ Borrowing books</td>
<td>1.36</td>
<td>1</td>
<td>0.243</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ Book reservation</td>
<td>28.72</td>
<td>1</td>
<td>0.000*</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ CD-ROM services</td>
<td>21.54</td>
<td>1</td>
<td>0.000*</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ Inter-library loan</td>
<td>4.19</td>
<td>1</td>
<td>0.041*</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ Internet services</td>
<td>14.82</td>
<td>1</td>
<td>0.000*</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ Journals</td>
<td>25.94</td>
<td>1</td>
<td>0.000*</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ Staff assistance</td>
<td>5.21</td>
<td>1</td>
<td>0.022*</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ Newspaper cutting</td>
<td>57.90</td>
<td>1</td>
<td>0.000*</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ Online services</td>
<td>5.94</td>
<td>1</td>
<td>0.015*</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ OPAC</td>
<td>17.83</td>
<td>1</td>
<td>0.000*</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ Photocopying</td>
<td>1.04</td>
<td>1</td>
<td>0.307</td>
<td>856</td>
</tr>
<tr>
<td>Satisfaction or Dissatisfaction/ Reference Materials</td>
<td>0.81</td>
<td>1</td>
<td>0.369</td>
<td>856</td>
</tr>
</tbody>
</table>

[Note: * Statistically significant differences at 0.05 level]
REFERENCES - CHAPTER 5 (Full references in the Bibliography)


8. Ibid.


CHAPTER SIX

SUMMARY, REVIEW, RECOMMENDATIONS & CONCLUSION

6.1 Summary of Study

The main purpose of this study was to examine the perceptions of faculty members and students towards the performance of the library staff/library services in the context of the current library and information services provision of the academic library. It also focused on library usage by faculty members and students. The feasibility and possible impact of the library/information skills course as part of the curriculum requirement was also examined. One of the factors that led to this study was the perceived state of under utilisation of library services in most academic libraries in Malaysia. Studies by Bell (1) in 1997 and Hooper (2) in 1994 also showed under utilisation of library services particularly in the electronic information resources.

An extensive review of related and relevant literature that includes previous and present studies was also discussed. In addition, a profile of Malaysia, its educational system and the development of academic libraries in Malaysia were also presented in the study. The population studied were that of 3 selected Higher Education Institutions in Malaysia. They were UiTM (MARA University of Technology), UUM (Northern University of Malaysia) and UPM (University Putra Malaysia). The subjects for this study were confined to faculty members and students only. The sample consisted of 300 faculty members and 1000 students.

The research instruments used were self-administered questionnaires, personal interview, group interviews/discussions for focus groups and a short skill test. Data collected from the questionnaires and the short skill test was
analysed statistically using the Statistical Package for the Social Sciences (SPSS). As for the interviews, important and relevant comments or suggestions were noted down and incorporated in the research.

6.2 Review & Recommendations

This section begins by reviewing the findings discussed earlier in Chapter 5 and is followed with recommendations of the study.

6.2.1 Library usage

(a) 100% of the faculty members have used the library
(b) 99.8% of students have used the library

A high percentage of faculty members and students have used the University library before. However, this does not really mean they are frequent library users as discussed earlier in Chapter 5. The finding also revealed that two students have never been to the university library.

The Management through compulsory library orientation programme for new students should be able to encourage and influence students to use the library more frequently. The importance of library resources should be highlighted. If these are properly carried out then it is reasonable to assume that in future all students would have to use the library in one way or another.

6.2.2 Main reason for library usage

(a) Lecturers
   i) 39.3% doing research
   ii) 29.3% borrowing and returning of books
   iii) 26.4% preparing for lectures
   iv) 2.9% searching databases
   v) 2.1% reading newspapers and journals
Most lecturers used the library for these three purposes: doing research, borrowing & returning of books and preparing for lectures. The findings established showed that the main reason why most lecturers or faculty members use the library was for research purposes. Apart from that, borrowing and returning of books and preparing for lectures were also chosen by a majority of the lecturers. The findings indicated that research is an important component in the lecturer's profession apart from teaching.

(b) Students
i) 50.8% doing research or assignment
ii) 25.8% revision
iii) 17.8% borrowing and returning of books
iv) 3.7% reading newspapers and journals
v) 0.7% using Internet
vi) 0.6% searching databases
vii) 0.6% asking enquiries

In the case of students, the main reason chosen for using the library was doing research or assignments. Revision or studying for their exams in the library was also popular as the other reason why students used the library. While a number of students also enter the library to borrow or return their library books. It is clear from these findings that students' usage of library was mainly for course related activities. This is a universal finding as earlier studies by Lubans (3), Rzasa (4), and Jiao (5) in 1997 showed similar findings.

6.2.3 Frequency of library usage

(a) Lecturers
i) 13% more than once a week
ii) 16% at least once a week
iii) 10% at least once every two weeks
iv) 42% at least once a month
v) 19% at least once a term

Only a small percentage (13%) of the lecturers frequented the library more than once a week compared to the other 42% who periodically visited the library at least once a month. The findings showed lecturers do not use the library regularly. The reasons given by them were that they have adequate sources at their department to do their research work, and they are often too busy to use the library. Another possible reason is that, lecturers are fully equipped with textbooks that were given to them as desk copy from the booksellers.

(b) Students
i) 42.8% more than once a week
ii) 28.2% at least once a week
iii) 14.9% at least once every two weeks
iv) 11.7% at least once a month
v) 2.2% at least once a term
vi) 0.2% never

As for the students, 42.8% frequented the library more than once a week. The most likely reason for this is that students need to rely greatly on the library materials for their assignments or research projects. In addition, the students using the library for revision purposes had also affected the total number of visits made to the library. In contrast to earlier studies by Jiao (6) in 1997 and Gratch (7) in 1980, a majority of users used the library at least once a week as compared to this study where the distribution of frequency of usage is quite spread. Though there is an improvement in the frequency of usage by students (more than once a week), 42.8% can't be considered as high usage. Overall, most of the lecturers and many students can still be regarded as not heavy users of the library.

The findings in 6.2.14, which showed users aren't really satisfied, might have influenced the usage of the library. If users aren't satisfied they are not likely
to use very much. Possibly, to overcome this problem, the quality and efficiency of the services need to be improved. Library management must be aware of user expectations and perceptions of quality so as to tailor the services to meet their users' quality value. Quality control should be a regular item on the agenda of the librarian. Efforts must also be taken to encourage both the lecturers and the students to use the library effectively and more frequently. Library management must make users have a positive perception towards library services. This can be done by making users aware of the usefulness and importance of the services to them.

An awareness programme for lecturers and students could be organised by the library to attract the users' attention and rouse their interest in the services offered. "Library Week" or "Library Open Day" might be an effective way of getting closer and in finding out the users' needs. There is also an implication that lecturers somehow need to be assisted so that they can use the library more often and for their advantage.

6.2.4 **Type of library instruction received**

(a) Lecturers

i) 34.3% received library orientation

ii) 60% received user education

The findings showed that certain percentage of lecturers have undergone library orientation and user education programmes even though both services are not made compulsory for them.

(b) Students

i) 38.7% attended in-class library/information skills course

ii) 56.4% received library orientation

iii) 40.4% received user education
Only 38.7% students (which was considered a small percentage from the three Higher Education Institutions) attended a formal in-class library/information skills course. Library orientation, which was compulsory for new students, showed only a reading of 56.4%. In the case of user education, 40.4% is quite reassuring considering it is not compulsory for students to attend user education programme.

In Malaysia, although user education programmes in academic libraries are being carried out, there is still no study done to show which university has achieved the most effective user education programme so far. Evaluation is yet to be carried out to study the effectiveness, and the thoroughness of these programmes.

6.2.5 Helpfulness of library instruction in getting materials

(a) Lecturers
   i) Library orientation
      - 47.9 very helpful
      - 47.9% somewhat helpful
      - 4.2% not very helpful
   ii) User education
      - 40.5% very helpful
      - 51.2% somewhat helpful
      - 8.3% not very helpful

(b) Students
   i) Library orientation
      - 31.8% very helpful
      - 47.9% somewhat helpful
      - 17.6% not very helpful
      - 2.7% not helpful at all
   ii) User education
      - 36.1% very helpful

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Most of the lecturers and students have the opinion that both library orientation and user education will be helpful in getting library materials. However, as mentioned earlier, there was no study done so far to show the effectiveness and thoroughness of these programmes in academic libraries in Malaysia. Interviews carried out with new lecturers, indicated that the library orientation given to them was too theoretical in nature. They would like to see some changes made to the orientation given.

Library orientation for students also needs improvement since 20.3% state that library orientation is not helpful in getting library materials. The libraries should again look into the library orientation and also at the user education programme given to users. Perhaps an evaluation of the library orientation and user education programme will be useful. This situation could be related to Chaudry's study (8) in 1994, which showed a lack of information skills among users even though the library has an elaborate orientation and user education programme. The study concluded that a more effectively designed bibliographic instruction and user skills programme were needed for users and hands-on-training should be emphasised.

The in-class library/information skills course which was taught by lecturers was perceived by a large number of students as very helpful in the quest for library materials. Perhaps, the assignments and hands-on-training from the course help students to become more competent and independent users of information.
6.2.6 **Awareness of IT development in library**

(a) Lecturers  
i) 44.3% aware of OPAC  
ii) 67.1% aware of Online searching  
iii) 70.7% aware of CD-ROM  
iv) 60.7% aware of Internet  

(b) Students  
l) 58.4% aware of OPAC  
ii) 59.7% aware of Online searching  
iii) 56.3% aware of CD-ROM  
iv) 63.3% aware of Internet  

With the exception of OPAC, a large number of lecturers seemed to be aware of IT development in the library. In contrast, around 40% of students were not aware of IT development in the library. Overall the levels of IT awareness among students were quite low. One reason mentioned in the group interview was that users were not exposed to the services. The library staff must inform users what are available in the library. Promotions and publicity have to be carried out from time to time to increase the visibility of the library. The events must be well planned to maximise the impact on users.

6.2.7 **Hands-on-training in IT**

(a) Lecturers  
i) 12.9% OPAC  
ii) 21.4% Online searching  
iii) 25% CD-ROM  
iv) 11.4% Internet
Overall, the findings clearly revealed that a large number of lecturers and students are not getting hands-on-training in IT. The content of the training is also inadequate as pointed out by users during the interview with the researcher. One possible reason may be due to the shortage of computer facilities in the library. When resources or facilities are lacking, users will spend less time in learning. As a result users will lack the knowledge and skills to use the IT facilities. The users especially the students would like to see more computer facilities in the library and a systematic and adequate hands-on-training be given to the users.

The above finding is quite alarming, as in a survey in 1995 by Adams and Bonk (9) recognised training and information as the major factors to stimulate use. Lack of knowledge about the electronic information resources was seen to be a major obstacle to the exploitation of electronic information.

It is recommended that more computer facilities be made available to the Higher Education Institutions' library even though there were some computer facilities added since the fieldwork was done. The libraries in Malaysia should try to emulate some of the new learning centres in the United Kingdom for example, the University of Derby has some 230 workstations providing independent access for students to a range of networked software and resource material, including CD-ROM sources, e-mail and World Wide Web (10).

At the same time, hands-on-training or practical sessions should be on-going and it should be made available to both lecturers and students. The training is essential as some users perceived computers as an obstacle to library
use. For example in a study by Andrews (11), a student mentioned, "I did not use the computerised catalogue because I have never had any dealings with computers before and consequently was nervous of them". The importance of hands-on skills training was also highlighted in a recent "Young Malay Professionals Congress" in February 2000 where 'enhancing skills through hands-on training and the need to promote greater awareness of information technology and its application' were among resolutions passed (12).

6.2.8 Type of services used

<table>
<thead>
<tr>
<th></th>
<th>(a)</th>
<th>(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrowing books</td>
<td>96.4%</td>
<td>92.3%</td>
</tr>
<tr>
<td>Book reservation</td>
<td>60.7%</td>
<td>42%</td>
</tr>
<tr>
<td>Journals</td>
<td>83.6%</td>
<td>51.2%</td>
</tr>
<tr>
<td>Reference materials</td>
<td>72.1%</td>
<td>70.2%</td>
</tr>
<tr>
<td>Newspaper cuttings</td>
<td>41.4%</td>
<td>45.3%</td>
</tr>
<tr>
<td>Photocopying</td>
<td>62.1%</td>
<td>70.3%</td>
</tr>
<tr>
<td>ILL</td>
<td>44.3%</td>
<td>6.2%</td>
</tr>
<tr>
<td>OPAC</td>
<td>46.4%</td>
<td>57.1%</td>
</tr>
<tr>
<td>Online</td>
<td>27.9%</td>
<td>27.3%</td>
</tr>
<tr>
<td>CD-ROM</td>
<td>53.6%</td>
<td>47%</td>
</tr>
<tr>
<td>Internet</td>
<td>32.9%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Audio-visual</td>
<td>34.3%</td>
<td>13.8%</td>
</tr>
<tr>
<td>Librarian's assistance</td>
<td>78.6%</td>
<td>44.5%</td>
</tr>
</tbody>
</table>

Internet, Online searching and audio-visual have a low usage amongst lecturers. Except for the newspaper cuttings, ILL and OPAC, the rest of the services have a fairly high usage by lecturers. Looking at the earlier finding on awareness (6.2.6), quite a number of lecturers seemed to be aware of IT development yet IT usage is quite low among them. The possible explanation is that though the lecturers are aware of IT, they don't have the knowledge or skill to use them. Inadequate hands-on-training is another factor for the low usage of IT.
As for the students, low usage is prominent in ILL, Online searching, Internet and audio-visual. Those services that can be categorised as average usage are book reservation, journals, newspaper cuttings, OPAC, CD-ROM and librarian's assistance. A high percentage of students as might be expected can be found using services such as borrowing books, reference materials and photocopying. The reason, students are already familiar with these services which are considered as basic services. Overall, looking at the findings, only certain library services were widely used by both lecturers and students. This is in line with the findings of two surveys of academic researchers at Aston University in 1996 (13), where awareness of certain services were generally poor, with respondents using only services they knew and trusted.

From the responses to the open-ended question in the questionnaire, it was apparent that, "lack of knowledge", "services not relevant" and "difficult to use" were the most common reasons given for not using some of the services. It is no surprise if there are users who do not know what their library can do for them, as most will never bother to find out. Promoting the library and its services as well as training users ought to be an ongoing concern and must be taken seriously.

6.2.9 Conformity with provision of library materials and services

(a) Lecturers

A large proportion of lecturers appear to agree with the following statements:

i) Library's catalogue is useful in retrieving materials.

ii) ILL is useful in getting information needed.

iii) Reference & information service is useful in getting information needed.
iv) A formal in-class library/information skills course will make student better library users.

v) Library staff are competent in answering enquiries.

Of the above, the numbers of lecturers who agreed and who were neutral were somewhat equal for the statement: “library staff are competent in answering enquiries”. This shows that only around 50% really agree with this statement. In order to improve the situation, libraries should invest in training their staff so as to increase their knowledge, skills and competencies in answering enquiries. In-service training must be conceived as an ongoing, regular operational feature. Lecturers agreed on the usefulness of OPAC and ILL but the earlier data presented indicated that they have relatively low usage. It could be expected that if a service is considered useful then the usage will be high. ILL may prove the exception as it relates to the quality of the collection to a large extent. This apparent mismatch regarding the perception and use of OPAC however, should be of concern to the library management.

The following statements have also a large proportion of lecturers who neither agree nor disagree:

i) Adequate nos. of terminal for OPAC.

ii) Photocopying services is satisfactory.

iii) Library materials are current.

A large number of lecturers were either neutral or seemed to disagree with the statements “Adequate nos. of computers for CD-ROM & Internet” and “Adequate nos. of CD-ROM databases in various subjects”. They felt that the services were not adequate. It has been argued in earlier page that there is much scope for enhancing IT and related provision.
(b) Students

Most students appeared to agree with the following statements:

i) Library's catalogue is useful in retrieving materials.

ii) Reference & information service is useful in getting information needed.

iii) A formal in-class library/information skills course will make student better library users.

The findings in 6.2.5 which showed the in-class library/information skills course as very helpful in getting library materials will support the finding that the skill course will make better users as agreed by most lecturers and students.

For the following statements there were an equally large number of students who were neutral and those who agree to the statements:

i) ILL is useful in getting information needed.

ii) Adequate nos. of terminal for OPAC.

iii) Photocopying services is satisfactory.

iv) Library materials are current.

v) Library staff are competent in answering enquiries.

A large number of students perceived that the numbers of computers for CD-ROM and Internet were inadequate. Most students were neutral in their answers regarding whether there were adequate numbers of CD-ROM databases in have various subjects. The findings clearly reveal that there were not enough computer terminals for CD-ROM and Internet. The lecturers also felt that there was a lack of CD-ROM databases in various subject areas. It is quite apparent that more computer terminals are needed and this reinforces earlier conclusions (see 6.2.7).
Action that can be taken by the library management is to ensure that there are enough CD-ROM databases in various subject areas. From the feedback derived from the findings above, library management can decide which of the services discussed need to be improved or maintained. It is acknowledged that lack of funding, high cost of developing and maintenance are inhibiting factors of automation, but librarian should be aware of the enhancement automation may bring to the library in whole.

6.2.10 Need for in-class library/information skills course

(a) 82.1% of lecturers agree
(b) 85.6% of students agree

A large number of lecturers and students agreed that there is a need to have an in-class library/information skills course for all students. This supports the earlier perceptions that the course will help make students better library users (see 6.2.9) and will be very helpful in getting library materials (see 6.2.5). The results of a skill test revealed Group A (those with training in library/information skills) did much better than Group B (those without training in library/information skills). The test clearly showed students with library/information skills course tend to do better in the test. This result is quite similar to that of a study by Hardesty and colleagues (14) in which students who had received library instruction maintained a greater degree of library skill compared to those students who had not received library instruction. Studies by Holland and Powell in 1995 (15) and Fidzani in 1998 (16) also showed the need of instruction in the use of the library to enable students to make more effective and efficient use of information sources and services.

Interviews carried out also received a positive response from both the lecturers and students. Most faculty members agreed on the importance and usefulness of an in-class library/information skills course. They unanimously supported the idea that the course be part of the institution’s education
curriculum. As for the students, there was a near-consensus from both groups that there was really a need to have a compulsory in-class library/information skills course for all students.

Based on the above findings and realising the importance of library/information skills in our everyday life, Higher Education Institutions in Malaysia must take a bold step to incorporate library/information skills course/subject into their curriculum. Developed countries such as UK, Australia and US have incorporated library/information skills subject into their educational system at primary, secondary and tertiary level.

Library/information skills course/subject should be made compulsory with a minimal credit hour (between 1-2 credit hours) so as not to be a burden to the students and overload the curriculum. Instructors or lecturers should be on full-time basis. Even though many academicians might say that the existing curriculum in Higher Education Institutions' courses is already overloaded, academicians and educators must try to include library/information skills subject into the curriculum of the various faculties or departments (17).

6.2.11 Helpfulness of library staff

Most lecturers and students have the perceptions that library staff were somewhat helpful. According to the lecturers, from the interviews carried out, it was felt that most library staff were helpful but more could be done to improve the service. Lecturers would like to see library staff having better customer orientation and attitude to make the library more pleasing and welcoming to users. Staff should be more user friendly and encouraged to behave less formally. They should be more cordial and sensitive to the user's need. In addition, they should be more proactive in looking for potential materials and in promoting new facilities in the library. Finally, the lecturers would like to see library staff, especially the non-professional staff, have a more positive attitude and exhibit good customer relations.
Interviews with students showed a divided response from the two groups on whether the library staff were helpful or not. However, both groups would like to see a more helpful and informative library staff. Perhaps, librarians in providing services to users should emulate the RATER (18) criteria below:

- **Reliability** – ability to perform the promised service dependably and accurately.
- **Assurance** – knowledge and courtesy of library staff and their ability to inspire trust and confidence.
- **Tangibles** – physical facilities, equipment, and appearance of personnel correctly project the service quality.
- **Empathy** – caring, individualised attention the librarian provides its users.
- **Responsiveness** – willingness to help users and provide prompt service.

6.2.12 **Staff assistance**

(a) Lecturers
   i) 14.3% minimum level
   ii) 71.4% moderate level
   iii) 14.3% Maximum level

(b) Students
   i) 10.1% minimum level
   ii) 35.9% moderate level
   iii) 8.4% maximum level
   iv) 45.6% it varies

Most lecturers felt that they were getting moderate assistance while 46.5% students believed that the staff assistance giving to them varies. It all depends on the situation at that time. For example if the staff seemed busy at that particular time then according to the students, the assistance given
will be very minimal. A somewhat similar figure of students agreed that they were also given a moderate level of assistance.

From the interviews carried out, both lecturers and students would like to see both professional and non-professional staff giving better services and more than moderate assistance. Many pointed out, to a great extent, it all depends on the individual staff and his or her attitude during the first encounter is very important. The users will come back if proper assistance was given. On the other hand if users are not given complete assistance and careful attention then users will be discouraged to ask for assistance again because of the perception that the staff would give the same kind of assistance.

The key to improving the situation is effective and compulsory staff training and development programmes for professional and non-professional staff. Such training is essential for the delivery of quality services and it adds value in the delivery of services. Training in areas such as management, attitude, IT and public relations should be given to professional staff while a general library education and attitude training should be made compulsory for non-professional staff. Staff training should cover such issues as negative/positive body language, basic communication skills, and the ability to deal with complaints (19). A sad state of affairs today is that there are some institutions' employees training programmes are simply for show. Institutions send their employees for training simply because they are compelled by regulations. There is no follow-up done after the training to ensure its effectiveness.

Library management should also take into account the need for an adequate number of staff so that proper attention could be given to enquirers. Different users have different requirements and the important part of service delivery is to tailor services to meet user requirements. The services should be delivered at the user's convenience. It should be fast, on time and efficiently handled.
6.2.13 Lecturers encouragement of students

(a) Lecturers
   i) 75.7% Yes
   ii) 4.3% No
   iii) 20% Sometimes

(b) Students
   i) 76% Yes
   ii) 5.4% No
   iii) 18.6% Sometimes

Lecturers gave encouragement to students in pursuing library materials from the library. The students also confirmed this. The answers derived from the open-ended question showed that the most common method of encouragement was through the distribution of reading lists, which contained mostly printed sources pre-prepared by the lecturers. This was supported by interviews with both lecturers and students. There is scope for offering even greater encouragement to students by monitoring the sources used by students through checking their references and bibliographies in their assignments or research projects. Students could be encouraged to use all the various types of sources, manual as well as computerised sources through being assured that this would attract extra marks.

6.2.14 Satisfaction of services

Overall, lecturers and students were not really satisfied with the services. This was substantiated by the mean score for both which lies between somewhat satisfied and not very satisfied. Though in 6.2.1, the finding showed 100% of faculty members and 98.8% have used the University Library before but this does not really mean they are frequent users. The findings in 6.2.3 gave a clearer picture of the frequency of library usage by faculty members and students. It can be said that the satisfaction or
dissatisfaction of services in a way influenced the usage rate in 6.2.3. Both lecturers and students did mention in the open-ended question and interviews that staff attitude was a major factor in determining the satisfaction of services. Any facilities, no matter how attractively arranged, how good their collection is, how equipped their IT facilities, cannot withstand the presence of unfriendly, less welcoming staff members.

A good service is usually an advertisement by itself. Satisfied users will usually relate their good experience to others who will in turn visit the library. This was further emphasised by Kirby and colleagues:

> If users are satisfied, it will generate good publicity for the services and raise awareness of what a library service can provide and will help ensure that such services will continue to be valued. (20)

It is recommended that Library staff should show a positive attitude, better interpersonal communication, better customer orientation, competence and efficiency if a satisfactory and quality service is to be expected. These aspects and the role of staff training and development have already been noted earlier. Paul states that to achieve a quality information service to its users, “A Philosophy of Service” should be followed (21). Brophy’s model of user satisfaction is also a component for service improvement (22). Both have been discussed earlier.

### 6.2.15 Adequacy of current holdings

Lecturers have the opinion that the current holdings in the library were adequate for teaching and recreation purposes but not for research. This is an almost universal attitude since few libraries anywhere have the resources to meet all research demands. It is vital that the current holdings for research be improved as the findings in 6.2.2 showed that doing research was the main reason for most lecturers using the library. Students on the other hand
felt that the current holdings were adequate for their learning, assignment and recreation.

6.2.16 Communication with librarians

Communication did occur between lecturers and librarians but mostly on personal issues. Things like new books and new journals to be added were among the things discussed. There is scope for more communication and collaboration between the lecturers and librarians especially in the provision of information services. University librarians should also be actively involved in curriculum planning, together with the lecturers so that they are aware of teaching objectives, strategies and information need of students. Likewise, the library liaison officer or collection development officer should meet faculty members, establish contact with them, and motivate them to participate in the development of the library collection. They could also visit the academic departments to achieve a better understanding of teaching needs. It is essential to improve communication between librarians and faculty as in a study of two university libraries by Lawson (23), it was revealed that the lack of knowledge of the existing library provision was due to the lack of communication between librarian and faculty members.

6.2.17 Comments or Suggestions

On the whole, lecturers would like to see the library staff, professionals and non-professionals giving better services and assistance. Apart from library orientation for new lecturers, there were no short courses or demonstration given to them. The lecturers would like the library to subscribe to the most current journals, have more IT facilities and make available spaces for small group discussions. In addition, lecturers would like to see the library provide compulsory training to the non-professional staff on the wider role and function of the library service in a "general library education" format, rather than simply training them to perform specific tasks. Baker notes the importance of non-professional staff:
Library assistants or non-professionals constitute the majority of library workers, and play an important supporting role to the profession. They are often the bridge between management and public (users); in the eyes of the readership it is the assistant standing behind the counter or sending the standard overdue notice who often epitomizes the library and it is on his or her performance, especially in interactive situations, that much of a library's standing may rest. (24)

Students interviewed mentioned the lack of publicity or announcement of the existence of services and the absence of detailed instruction on how to use the services. Raising awareness and skill levels have been discussed earlier. Both groups pointed out problems, which were similar to that of the lecturers such as missing books from the shelves, inadequate computer facilities and lack of hands-on-training. The problem of missing books was also highlighted in Hooper's study (25), in which users complained of not finding the sources even though they were listed in the OPAC.

Students from both groups called for better services and facilities as not all services and facilities can be fully utilised. When services are poor and facilities are lacking, students spend less time in the library. Compulsory library instruction and more computer facilities were again mentioned. Clear directional signs and OPAC terminals at all floor levels should be available. Facilities such as lockers for rental, a common room with vending machines and book drops were also suggested. Based on the comments and suggestions from both lecturers and students, the following recommendations are made:

i) The library should provide better signage to communicate not only location but also to provide guidance while searching for information. Colourful leaflets, pathfinders and guides containing a variety of information and instructions on how to access information both manually and electronically should be made available on a "help yourself" basis. The idea is to make users as self-sufficient as possible. One such example is the University of Malaya Library Information System (UMLIS). The system, which is still being
developed, is designed as a multimedia library guide that can handle general reference enquiries. Specifically, the guide focuses on the services, functions and facilities provided by the University of Malaya Library (26). Beside a multimedia library guide, a printed user guide should also be made available. The "Pilkington Library Self-Guided Tour" (Appendix G) of Loughborough University is a good example. These self-guide's tours are quite effective because users play an active role in the learning process and they can tour the library at their own pace (27).

ii) The library should organise short courses such as introductory OPAC sessions, CD-ROM workshops and demonstrations if possible during lunch time free for all members of the University. They can be held throughout the academic year. This is one way of reaching and making users aware of its services.

iii) Information or reference service desks that are staffed by professionals should be clearly marked and apparent. Signage such as "We are here to help you"; "Please feel free to interrupt" may prove helpful. This is essential because most students are quite unwilling to disturb or bother someone sitting behind a desk especially if that person is doing something else.

6.2.18 Summary

A detailed perspective of the attitudes and practices of library users has been gained from the research which has been sufficient to develop general conclusions, to provide evidence with which to test hypotheses, to enable broad recommendations for service enhancement and further investigations to be made.

On the whole, the findings showed users' lack of knowledge of using library services particularly those delivered through IT. If users were to be expected to successfully use sophisticated library resources for the enhancement of course material and for specific research endeavours, they need to have
knowledge of and the appropriate skills to use these resources. There are also cases where users are not aware of certain services in the library. Lack of publicity of library services was perceived as one of the reasons for the above. Based on the frequency of library use, library usage is considered quite low among faculty members and students. As expected, usage of library by students was mainly for course related activities. The study did discover that users do not have adequate training particularly hands-on-training in the use of IT services and that computer facilities are inadequate. Some users blamed staff attitude for their dissatisfaction with the services. This study also established a wide acceptance of an in-class library/information skills course and a wider scope for communication and collaboration between lecturers and librarians.

6.3 **Summary of Hypothesis Testing**

(a) Hypothesis 1: A significant relationship exists between students who had received lecturer's encouragement to use the library (as well as those who had not) and their actual usage of the library.

There was a significant relationship between students who had received lecturer's encouragement to use the library and those who had not towards student's usage of the library. The data obtained supported the hypothesis that the more encouragement given by lecturers to use the library will lead to higher usage of library by students.

(b) Hypothesis 2: A significant relationship exists between users who had received hands-on-training in IT (as well as those who had not) and their usage of IT.

The test clearly showed a significant relationship exists between users who had received hands-on-training in the various types of IT and those who had not towards their usage of IT. The data supported the hypothesis of the
importance of hands-on-training in IT and its usage by users. Usage depends largely on hands-on-training given.

(c) Hypothesis 3: A significant relationship exists between students with experience of library/information skills course (as well as students without experience of library/information skills course) and their awareness of IT in the library.

There was a significant relationship between students who had been given library/information skills course and those who had not towards their awareness of the various types of IT in the library. The test showed students with experience of library/information skills course were more aware of IT as compared to students without library/information skills.

(d) Hypothesis 4: A significant relationship exists between users with user education (as well as users without user education) and their use of library services.

The results of the test on lecturers showed there was a significant relationship for most of the variables. The only exception is user education/borrowing books. As for the students, there were quite a number of the pairs of variables that were not significant statistically. These findings for students indicate, that in certain services, it makes no difference on usage of these services (e.g. borrowing books; book reservation; journals) whether the users were given instruction or not. It may be argued that these services are basic services which the users are familiar with, thus user education is not the determining factor in the usage or non-usage of these services.

It is not advisable to generalise across the whole array of services regarding this hypothesis since the test showed aspects that were statistically significant as well as some not statistically significant towards usage of
library services for both lecturers and students though the majority of
correlation performed for lecturers point strongly to statistical significance.

(e) Hypothesis 5: A significant relationship exists between users who are satisfied (as well as users who are dissatisfied with library services) and their use of library services.

Except for three pairs of variables on the test for lecturers, the rest showed the existence of a significant relationship between lecturers who are satisfied and lecturers who are dissatisfied in library services towards its usage. The test on students also showed three pairs of variables that were not statistically significant. These variables are basic necessity and as such students will still use them. Similar to the findings in Hypothesis 4, it is also not advisable to generalise the whole array of services regarding this hypothesis.

6.4 Directions for Future Research

No research work is complete or will provide answers to all questions. As pointed out by Ahmed (28), "This stems from the fact that research is a continuous process, and a logical and scholarly answer to a research question is a stimulus to other research problems". The present research, therefore, opens many opportunities for further research.

(1) As this study was limited to government supported academic libraries, further study may replicate the present study to include non-governmental organisations which have a substantial number of academic libraries.

(2) A further study may replicate the present study to include non-academic staff of the University.
A further study may replicate the present study to include part-time faculty members and off-campus students.

A further study may replicate the present study to include faculty members and students at branch campuses. Also, worth looking into is the viability of online services from the main campus to branch campuses.

As this study was on perceptions of lecturers and students, a further study on the perceptions of library staff on library users will be quite interesting.

6.5 Challenges and Expectations

With the advent of Vision 2020, MSC (Multimedia Super Corridor), and Smart Schools (discussed in Chapter 3), the management of the libraries, especially the academic libraries will become more complex because of the injection of new IT in their systems which requires additional responsibilities in the operation, staffing, servicing and training. These are challenging and exciting times for academic libraries with new technologies appearing on a regular basis in the library and on the campus. Academic Libraries in Malaysia need to readjust their roles. The change of pace has been too fast that if academic libraries in Malaysia do not keep abreast they would be overwhelmingly left behind. There is a need for a paradigm shift for the libraries in order to cope with the changes in the environment.

Library services in Malaysia for instance, must support the national aspiration to achieve the status of an industrialised and developed nation by the year 2020. The time has come for academic libraries to adapt to the exigencies of a rapidly changing, turbulent and competitive environment. Their visions, missions, and strategic plans should be in line with the nation's vision and strategies (29). One of the ways of achieving results is the support of effective and efficient information systems and services. It is the growing
challenge befalling the information professionals to provide optimum services by way of formulating efficient and effective information systems including those stipulated by the MSC.

The above scenario warrants libraries to address the developments correctly so that users will be able to get efficient services and easy access to global information. The new shift will indicate the need for libraries to be more prepared in terms of management and training to cater the new IT.

As a knowledge centre, academic libraries can be a source for technological innovation. As mentioned earlier, academic libraries must have the enabling features, such as an efficient library service for easy and rapid access to information. They must have the resources, expertise and experience that can take on the challenge to create greater opportunities for the access and application of information by the future generations. Libraries must invest in training their staff in order to increase their knowledge, skills, competencies and the right attitudes towards change, thereby improving organisational performances in providing new information products and services which are technologically based (30). In the training of staff, they should try to emulate the following guideline (31):

i. The level of proficiency in the use of the new electronic information resources should be established for each information service provider, involved in assisting users with the service.

ii. Some staff may be designated as specialists who will acquire an in-depth knowledge of the service. Others may be designated as generalists who will need a basic or adequate familiarity with the service. A timetable for achieving the required level of competence should also be established.

iii. Staff orientation and training for the new service should include accommodation for various learning styles and may involve a
combination on hands-on-training, system tutorials, peer instruction, outside trainers, and/or study of appropriate manuals or other documentation.

Quality library and information services must be congruent with the supply of library and information services and the demand for the services by the users. It is useless to have all the expensive equipment (IT) installed but the staff are not ready to change their way of giving better quality services to the users. The commitment of staff and students are fundamental to success because technologies will not help much if those concerned are unwilling to make full use of the potential that technologies bring.

The quality of the library and information services is judged by the user's perception of an individual member of staff. For that individual user the particular member of staff who deals with his/her enquiry does not merely represent the library—he or she is the library. (32)

Successful academic libraries in the future have to be innovative in the way educational programmes are packaged and delivered. They have to address themselves to the more appropriate methods of handling students especially smart school leavers who may be smarter by virtue of their access and exposure to modern knowledge technology and more importantly, to help them acquire and develop wisdom despite the richness of information and knowledge that they have at their disposal. Though these smart school students are capable of finding knowledge to solve their own problems; the advice and guidance from academic librarians are still needed when they enrol into higher institutions of learning.

As for the economy, Malaysia showed a remarkable turnaround (discussed in Chapter 3). The International Monetary Fund (IMF) also projected a 7.0 per cent growth for Malaysia in the year 2000, driven by exports, especially in the electronics sector. Michael Mussa, IMF's Director of Research, said:
The GDP growth of Malaysia exceeded 5.0 per cent in 1999 and the Bank Negara Malaysia\(^5\) cited a 5.4 per cent GDP growth for Malaysia in its 1999 annual report. Aside South Korea, Malaysia had achieved the most progress in restructuring and strengthening the financial sector. The IMF noted that Malaysia had made progress in its plan to streamline the financial sector through extensive mergers between problem institutions and profitable banks. (33)

The British Minister of Trade, Richard Caborn added, "Malaysia is coming out of the financial crisis that had affected the region in the last two years in a very effective and sustainable way. Representatives of several British companies with investments in Malaysia have said to me that they are confident, now that measures have been put in place by the administration, Malaysia will continue to attract new investments and was also in a strong position in the region to continue to develop" (34).

Given the improving economy, the Malaysian Government has embarked substantial funding for an extensive IT infrastructure in schools and institutions nation-wide. All primary schools will eventually adopt the smart schools programme. There was a hefty increase for education and training. The 2001 Budget encourages the acquisition of skills for a knowledge-based economy and the incentives given to the Information and Communication Technology (ICT) will pave way to IT literate society. The future looks quite positive for academic libraries in Malaysia.

6.6 Conclusion

This study has attempted to investigate the perception of students and faculty members towards library services and usage in three selected Higher Education Institutions in Malaysia. It also looked at the feasibility and possible impact of the library/information skills course as part of the Higher Education Institutions' curriculum. From the findings, valuable information has been obtained about what the faculty members and students felt towards

\(^5\) Bank Negara Malaysia is the Central or National Bank of Malaysia.
library services. It also revealed their actual needs and their expectations of the library. It has identified how these needs are met, or not met by the library staff.

The results of the research should be most useful to all Chief Librarians of the various Higher Education Institutions' libraries in Malaysia, since no major similar research has been conducted in this area. The study also reveals that users were not really getting the full benefit of the library services and that some of the services were under utilised. The major causes or reasons for this problem were the lack of knowledge and the low state of awareness of certain services, attitude of staff, inadequate training to use the services and the lack of computer facilities. Academic libraries should give full emphasis to the training especially IT related skills to students rather than teaching only the theoretical aspects. Some of the findings from this study showed similarity with the findings from Fidzani's research whose results indicated the lack of adequate training and lack of awareness of the services among students (35). If the situation is not addressed soon, it is likely to have a considerable effect.

In addition, this study has shown that a majority of lecturers and students agreed on the need of an in-class library/information skills course to be implemented in Higher Education Institutions in Malaysia. This was evidenced from results of questionnaires discussed in Chapter 5, Table 5.4, Table 5.5 and Figure 5.18, and from interviews carried out with lecturers and students. The test on a sample of students demonstrated that there was a significant difference in the level of skills and consequent quality of library use between those who had and those who had not received library/information skills training. This further strengthens the point of the need of an in-class library/information skills course. That respondents endorsed the need for library training is an encouraging factor in its support. It is to be hoped that the Management at Higher Education Institutions specifically those in charge of Academic Affairs take note of this important finding. In a paper presented at the Tenth Congress of Southeast Asian
Librarians, it was also emphasised by Tan (Specialist Inspector, Ministry of Education, Singapore) of the need for students to acquire information skills: skills that will help them to access, use and present information and to learn how to learn (36). This was further supported by Lee in a statement:

In Malaysia there is definitely a growing awareness of the need for students in institutions of higher learning to acquire library/information skills. (37)

Finally, on the evidence of the findings, one can conclude that users' perceptions of library services and attitude of staff are rather adverse. The findings of this study should be viewed positively and a careful analysis needs to be made and it should not be viewed as simply fault-finding. The library management should be open and practical in receiving the user's evaluation and comments. The perceptions right or wrong must be taken seriously by the library management and acted upon. To achieve the best results in academic libraries, it is important to evaluate existing library services and it has to be recognised that it is the user's perception that defines much the library and its services (38). As mentioned by Peter Herron and Charles R. McClure:

Evaluation embraces change and encourages libraries to treat change as a positive force. By engaging in planning and research, libraries have a better idea of the future and they can meet the future with relevant, effective, and efficient services. (39)
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APPENDICES
APPENDIX A

LECTURERS’ QUESTIONNAIRES
Dear Sir/Madam,

I would like to ask for your time and cooperation to fill out the enclosed questionnaire which relates to my thesis entitled, *A Study on the Perceptions of Library Services and Usage in Selected Higher Education Institutions in Malaysia*. The main purpose of this study is to identify the perceptions of faculty and students towards library services and usage in higher education institutions in Malaysia.

The data collected will not be used for any other purpose other than to be included in my thesis at Loughborough University and related publications. Your assistance is highly essential and important to the success of this study.

Thanking you for your time, effort and cooperation.

Sincerely yours,

(Laili bin Hashim)
A STUDY ON THE PERCEPTIONS OF LIBRARY SERVICES AND USAGE IN SELECTED HIGHER EDUCATION INSTITUTIONS IN MALAYSIA

QUESTIONNAIRE FOR FACULTY MEMBERS

Section A: Demographic Profile

1. School/Faculty

2. Institution

3. Gender. Please circle one number only.
   Male 1   Female 2

4. Designation/Status. Please circle one number only.
   Professor 1   Lecturer 4
   Associate Professor 2   Others 5
   Senior Lecturer 3

5. Years in service: □□□ years

6. Academic Qualifications. Please circle only the highest qualification.
   Ph. D 1   First Degree/Bachelors 4
   Masters 2   Others 5
   Professional 3

Section B: Library Services & Usage

1. Have you ever used the University/Institute library? Please circle one number only.
   Yes 1   No (please go to Section D, page 8)
2. If yes, what is the main reason for using the University/Institute library? Please circle one number only.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Circle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparing for Lectures</td>
<td>1</td>
</tr>
<tr>
<td>Doing Research</td>
<td>2</td>
</tr>
<tr>
<td>Reading Newspapers &amp; Journals</td>
<td>3</td>
</tr>
<tr>
<td>Borrowing and Returning of Books</td>
<td>4</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>5</td>
</tr>
<tr>
<td>Asking Enquiries</td>
<td>6</td>
</tr>
<tr>
<td>Searching Databases (CD-ROM)</td>
<td>7</td>
</tr>
<tr>
<td>Using Internet</td>
<td>8</td>
</tr>
</tbody>
</table>

3. How often do you usually visit the University/Institute libraries? Please circle one number only.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Circle</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than once a week</td>
<td>1</td>
</tr>
<tr>
<td>At least once a week</td>
<td>2</td>
</tr>
<tr>
<td>At least once every two weeks</td>
<td>3</td>
</tr>
<tr>
<td>At least once a month</td>
<td>4</td>
</tr>
<tr>
<td>At least once a term</td>
<td>5</td>
</tr>
<tr>
<td>Never</td>
<td>6</td>
</tr>
</tbody>
</table>

If your answer is “5”, please state why at least once a term.

4. What type of instruction have you had on library use? Please tick all that apply.

a. [ ] Library orientation (Introduction to the library and library tour especially given to new lecturers). *(Please go to no. 5, then to no. 7)*

b. [ ] In group or individual user education/bibliographic instruction (such as instruction on how to use the information sources, literature searching and etc.) given by library staff in library. *(Please go to no. 6, then to no. 7)*

c. [ ] No instruction in library use. *(Please go to no. 7)*
5. Was library orientation helpful in identifying and getting materials for your needs? Please circle one number only.
   a. Very helpful 1  c. Not very helpful 3
   b. Somewhat helpful 2  d. Not helpful at all 4

6. Was user education helpful in identifying and getting materials for your needs? Please circle one number only.
   a. very helpful 1  c. Not very helpful 3
   b. Somewhat helpful 2  d. Not helpful at all 4

7. Are you aware of the information technology development in the University library? Please tick only those that you are aware of.
   a. □ OPAC  c. □ CD-ROM
   b. □ Online Searching  d. □ Internet

8. Are you given hands-on-training in the use of the following information technology? Please circle one number only.
   a. OPAC Yes 1 No 2
   b. Online Searching Yes 1 No 2
   c. CD-ROM Yes 1 No 2
   d. Internet Yes 1 No 2

9. Please indicate the type of services that you have ever used. Please tick all that apply.
   a. □ Borrowing books
   b. □ Book reservation
   c. □ Journals
   d. □ Reference materials
   e. □ Newspaper cuttings
   f. □ Photocopying services
   g. □ Interlibrary loan
h. ☐ OPAC (On-line Public Access Catalog)

i. ☐ Information Online services (eg. DIALOG, NSTP)

j. ☐ CD-ROM data bases

k. ☐ Internet

l. ☐ Audio-visual services (include microfilm/microfiche)

m. ☐ Librarian's assistance (answering enquiries)

10. Please indicate any reasons for not using some of the services.

........................................................................................................

........................................................................................................

........................................................................................................

11. Please indicate whether you agree or not to the following statement using the scale below. Please circle one number only.

<table>
<thead>
<tr>
<th>1 - Strongly Disagree</th>
<th>2 - Disagree</th>
<th>3 - Neutral</th>
<th>4 - Agree</th>
<th>5 - Strongly Agree</th>
</tr>
</thead>
</table>

a. The library’s catalogue is useful in retrieving materials

1 2 3 4 5

b. The Interlibrary loan service is useful in getting information needed

1 2 3 4 5

c. The Reference and Information service is useful in getting the information needed

1 2 3 4 5

d. There are adequate numbers of catalog terminal for OPAC

1 2 3 4 5

e. There are adequate numbers of computers for CD-ROM and Internet

1 2 3 4 5
1. The number of CD-ROM databases in the various subject areas is adequate

   1  2  3  4  5

2. The photocopying services is satisfactory

   1  2  3  4  5

3. The library materials are current

   1  2  3  4  5

4. The library staff are competent in answering all enquiries

   1  2  3  4  5

5. A formal in-class library/information skills course will make the student better library users

   1  2  3  4  5

12. Is there a need to have a formal in-class library/information skills course for students? Please circle one number only.

   Yes  1   No  2

Section C: Respondents' Perceptions

1. On the whole, would you say the library staff are: Please circle one number only.

   a. Very helpful  1   c. Not very helpful  3
   b. Somewhat helpful  2   d. Not helpful at all  4

2. At which level do the library staff assist you in getting the information needed? Please circle one number only.

   a. Minimum  1   b. Moderate  2   c. Maximum  3

3. Do you encourage your students to make use of library resources for their studies and assignments? Please circle one number only.

   a. Yes  1   b. No  2   c. Sometimes  3
4. In general, how satisfied are you with the services offered by the University/Institute library? Please circle one number only.

a. Very satisfied 1  c. Not very satisfied 3
b. Somewhat satisfied 2  d. Not at all satisfied 4

5. Please give reasons for any of your answers:

........................................................................................................
........................................................................................................

6. On the whole, how adequately would you say the current holdings of the library meet your need for: Please circle one number only.

<table>
<thead>
<tr>
<th></th>
<th>Very Adequate</th>
<th>Somewhat Adequate</th>
<th>Not Very Adequate</th>
<th>Not at all Adequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Teaching</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. Research</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. Recreation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

7. Do you communicate with the Librarians regarding your information needs and your students' information needs? Please circle one number only.

Yes 1 No 2

8. Please comment or give suggestions regarding the services of your university library:

........................................................................................................
........................................................................................................
........................................................................................................
Section D (Please refer to Section B no. 1)

1. What are your reasons for not using the library?

........................................................................................................
........................................................................................................
........................................................................................................
........................................................................................................
........................................................................................................

Please return the questionnaire by 25th April 1997.

To: Laili bin Hashim
Faculty of Information Studies
MARA University of Technology
40450 Shah Alam
Selangor.

Tel: 03-5507421 (Hse.)
Fax: 03-5596159
e-mail L.Hashim@lboro.ac.uk

Thank you for your co-operation.
Dear Students,

I would like to ask for your time and cooperation to fill out the enclosed questionnaire which relates to my thesis entitled, *A Study on the Perceptions of Library Services and Usage in Selected Higher Education Institutions in Malaysia*. The main purpose of this study is to identify the perceptions of faculty and students towards library services and usage in higher education institutions in Malaysia.

The data collected will not be used for any other purpose other than to be included in my thesis at Loughborough University and related publications. Your assistance is highly essential and important to the success of this study.

Thanking you for your time, effort and cooperation.

Sincerely yours,

(Laili bin Hashim)
A STUDY ON THE PERCEPTIONS OF LIBRARY SERVICES AND USAGE IN SELECTED HIGHER EDUCATION INSTITUTIONS IN MALAYSIA

QUESTIONNAIRE FOR STUDENTS

Section A: Demographic Profile

1. School/Faculty: ......................................................................................
2. Institution: ............................................................................................
3. Semester: [ ] Year: [ ]
4. Gender. Please circle one number only.
   Male 1   Female 2

Section B: Library Services & Usage

1. Have you ever used the University/Institute library? Please circle one number only.
   Yes 1   No (please go to Section D, page 7) 2

2. If yes, what is the main reason for using the library? Please circle one number only.
   Revision 1   Asking Enquiries 6
   Doing Research/Assignments 2   Searching Databases (CD-ROM) 7
   Reading Newspapers & Journals 3   Using Internet 8
   Borrowing and Returning of Books 4
   Others (please specify) 5

Page 273
3. How often do you usually visit the library? Please circle one number only.
   a. More than once a week 1  d. At least once a month 4
   c. At least once a week 2  e. At least once a term 5
   e. At least once every two weeks 3  f. Never 6

   If your answer is "5", please state why at least once a term.

   ........................................................................................................

   ........................................................................................................

4. What type of instruction have you had on library use? Please tick all that apply.
   a. ☐ An in class library/information skills course for credit/non-credit (formal lectures & workshop). (Please go to no. 5, then to no. 8)
   b. ☐ Library orientation (introduction and library tour especially given to new students). (Please go to no. 6, then to no. 8)
   c. ☐ In group or individual user education/bibliographic instruction (such as instruction on how to use the information sources, literature searching and etc.) given by library staff in the library. (Please go to no. 7, then to no. 8)
   d. ☐ No instruction in library use. (Please go to no. 8)

5. Was in class library skill course helpful in identifying and getting materials for your studies? Please circle one number only.
   a. very helpful 1  c. Not very helpful 3
   b. Somewhat helpful 2  d. Not helpful at all 4

6. Was library orientation helpful in identifying and getting materials for your studies? Please circle one number only.
   a. very helpful 1  c. Not very helpful 3
   b. Somewhat helpful 2  d. Not helpful at all 4
7. Was user education helpful in identifying and getting materials for your studies? Please circle one number only.
   a. very helpful 1  c. Not very helpful 3
   b. Somewhat helpful 2  d. Not helpful at all 4

8. Are you aware of any new information technology development in the library? Please tick only those that you are aware of.
   a. □ OPAC
   b. □ Online Searching
   c. □ CD-ROM
   d. □ Internet

9. Are you given hands-on training (practical) in the use of the following information technology? Please circle one number only.
   a. OPAC
      Yes 1 No 2
   b. Online Searching
      Yes 1 No 2
   c. CD-ROM
      Yes 1 No 2
   d. Internet
      Yes 1 No 2

10. Please indicate the type of services that you have ever used. Please tick all that apply.
    a. □ Borrowing books
    b. □ Book reservation
    c. □ Journals
    d. □ Reference materials
    e. □ Newspaper cuttings
    f. □ Photocopying services
    g. □ Interlibrary loan
h. □ OPAC (On-line Public Access Catalog)

l. □ Information Online services (eg. DIALOG, NSTP)

j. □ CD-ROM data bases

k. □ Internet

l. □ Audio-visual services (include microfilm/microfiche)

m. □ Librarian's assistance (answering enquiries)

11. Please indicate any reasons for not using some of the services.

................................................................................................................
................................................................................................................
................................................................................................................

12. Please indicate whether you agree or not to the following statement using the scale below. Please circle one number only.

<table>
<thead>
<tr>
<th>1 - Strongly Disagree</th>
<th>2 - Disagree</th>
<th>3 - Neutral</th>
<th>4 - Agree</th>
<th>5 - Strongly Agree</th>
</tr>
</thead>
</table>

a. The library's catalog is useful in retrieving materials

1  2  3  4  5

b. The Interlibrary loan service is useful in getting information needed

1  2  3  4  5

c. The Reference and Information services is useful in getting the information needed

1  2  3  4  5

d. There are adequate numbers of catalog terminal for OPAC

1  2  3  4  5

e. There are adequate numbers of computers for CD-ROM and Internet

1  2  3  4  5
f. The number of CD-ROM databases in the various subject areas is adequate
   1 2  3  4  5

g. The photocopying services is satisfactory
   1 2  3  4  5

h. The library materials are current
   1 2  3  4  5

i. The library staff are competence in answering all enquiries
   1 2  3  4  5

j. A formal in class library/information skills course will make you a better library user
   1 2  3  4  5

13. Is there a need to have a formal in class library/information skills course for students? Please circle one number only.
    Yes  1  No  2

Section C: Respondents' Perceptions

1. On the whole, would you say the library staff are: Please circle one number only.
   a. Very helpful  1    c. Not very helpful  3
   b. Somewhat helpful  2    d. Not helpful at all  4

2. At which level do the library staff assist you in getting the information needed? Please circle one number only.
   a. Minimum  1    c. Maximum  3
   b. Moderate  2    d. It varies (depends on the nature of enquiry)  4
3. Do your lecturers encourage you to make use of the library resources for your studies and assignments? Please circle one number only.

a. Yes 1  b. No 2  c. Sometimes 3

If yes or sometimes, please specify in what ways?

........................................................................................................
........................................................................................................

4. In general, how satisfied are you with the services offered by the University/Institute library? Please circle one number only.

a. Very satisfied 1  c. Not very satisfied 3
b. Somewhat satisfied 2  d. Not at all satisfied 4

5. Please give reasons for any of your answers:

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6. On the whole, how adequately would you say the current holdings of your University/Institute library meet your need for: Please circle one number only.

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<th>Somewhat Adequate</th>
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</tr>
</thead>
<tbody>
<tr>
<td>a. Learning</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. Research/ Assignment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>c. Recreation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

7. Please comment or give suggestions regarding the services of your library.

........................................................................................................
........................................................................................................
........................................................................................................
Section D  *(Please refer to Section B no.1)*

1. What are your reasons for not using the library?

........................................................................................................
........................................................................................................
........................................................................................................
........................................................................................................
........................................................................................................

Please return the questionnaire by 25th April 1997.

To:  Laili Hashim
     Faculty of Information Studies
     MARA University of Technology
     40450 Shah Alam
     Selangor.

     Tel:  03-5507421
     Fax:  03-5596159
     e-mail  L.Hashim@lboro.ac.uk

Thank you for your co-operation.
APPENDIX C

STUDENTS’ QUESTIONNAIRE
(Translated Version)
Saudara/Saudari,


Maklumat dan data yang diperolehi akan dimasukkan di dalam tesis saya di *Loughborough University*. Bantuan saudari saudari amat diperlukan bagi menjayakan kajian ini.

Terima kasih di atas masa, usaha dan kerja sama saudara dan saudari sekelian.

Yang ikhlas,

(Laili bin Hashim)
SATU KAJIAN PERSEPSI TERHADAP PERKHIDMATAN DAN PENGGUNAAN PERPUSTAKAAN DI INSTITUSI-INSTITUSI PENGAJIAN TINGGI YANG TERPILIH DI MALAYSIA

SOAL-SELIDIK UNTUK PELAJAR

Seksyen A : Profil Demografi

1. Fakulti : ............................................................................................
2. Institusi : ..........................................................................................
3. Semester : □ Tahun : □
   Lelaki 1   Perempuan 2

Seksyen B : Perkhidmatan dan Penggunaan Perpustakaan

1. Pernahkah anda guna perpustakaan Universiti/Institusi? Sila bulatkan satu nombor sahaja.
   Ya 1   Tidak (sila pergi ke 2)
   (sila pergi ke Seksyen D, muka surat 7)

2. Jika ya, nyatakan sebab utama menggunakan perpustakaan? Sila bulatkan satu nombor sahaja.
   Ulangkaji pelajaran 1   Pertanyaan rujukan 6
   Membuat penyelidikan/tugasan 2   Pencarian pangkalan data (CD-ROM) 7
   Membaca akhbar/Jurnal 3   Penggunaan Internet 8
   Pinjaman & Pemulangan Bahan 4
   Lain-lain (sila nyatakan) 5

Page 282

- Lebih dari sekali seminggu 1
- Sekurangnya sekali seminggu 2
- Sekurangnya sekali tiap-tiap dua minggu 3
- Sekurangnya sekali sebulan 4
- Sekurangnya sekali sepenggal 5
- Tidak pernah 6

Sekiranya jawapan anda "5", sila nyatakan kenapa hanya sekali sepenggal.


- Kursus kemahiran perpustakaan/maklumat untuk kredit/bukan kredit. (Sila pergi ke nombor 5, kemudian ke nombor 8)
- Orientasi perpustakaan (pengenalan dan lawatan perpustakaan untuk pelajar-pelajar baru). (Sila pergi ke nombor 6, kemudian ke nombor 8)
- Pendidikan pengguna/pengajaran bibliografik secara individu atau kumpulan (tunjuk ajar cara menggunakan sumber-sumber maklumat, pencarian bahan dan lain-lain lagi) yang diberikan oleh kakitangan perpustakaan di dalam perpustakaan. (Sila pergi ke nombor 7, kemudian ke nombor 8)
- Tiada tunjuk ajar dalam penggunaan perpustakaan. (Sila pergi ke nombor 8)


- amat membantu 1
- Lebih kurang membantu 2
- Tidak sangat membantu 3
- Tidak membantu langsung 4
   a. amat membantu 1 c. Tidak sangat membantu 3
   b. Lebih kurang membantu 2 d. Tidak membantu langsung 4

7. Adakah pendidikan pengguna membantu mengenali pasti dan memperolehi bahan-bahan untuk pengajian anda? Sila bulatkan satu nombor sahaja.
   a. amat membantu 1 c. Tidak sangat membantu 3
   b. Lebih kurang membantu 2 d. Not helpful at all 4

8. Adakah anda menyedari sebarang perkembangan baru dalam Teknologi Maklumat (IT) di perpustakaan anda? Sila tandakan yang ada sedari sahaja.
   a. OPAC c. CD-ROM
   b. Pencarian atas talian d. Internet

   a. OPAC
      Ya 1 Tidak 2
   b. Pencarian atas talian
      Ya 1 Tidak 2
   c. CD-ROM
      Ya 1 Tidak 2
   d. Internet
      Ya 1 Tidak 2

10. Sila nyatakan jenis-jenis perkhidmatan yang telah anda gunakan. Sila pendedahkan yang anda gunakan sahaja.
   a. Pinjaman buku
   b. Tempahan buku
   c. Jurnal
   d. Bahan-bahan rujukan
   e. Keratan akhbar
f. ☐ Perkhidmatan fotostat

g. ☐ Pinjaman antara perpustakaan

h. ☐ OPAC (On-line Public Access Catalog)

i. ☐ Pencarian atas talian (contoh: DIALOG, NSTP)

j. ☐ Pangkalan data CD-ROM

k. ☐ Internet

l. ☐ Alat pandang dengar (mikrofileml/mikrufis)

m. ☐ Merujuk kepada kakitangan perpustakaan

11. Sila nyatakan sebab-sebab tidak menggunakan ke semua perkhidmatan yang disenaraikan.


<table>
<thead>
<tr>
<th></th>
<th>1 - Amat tidak setuju</th>
<th>2 - Tidak setuju</th>
<th>3 - Sederhana</th>
<th>4 - Setuju</th>
<th>5 - Amat setuju</th>
</tr>
</thead>
</table>

a. Katalog perpustakaan berguna untuk mendapatkan bahan

1 2 3 4 5

b. Perkhidmatan pinjaman antara perpustakaan berguna untuk mendapatkan maklumat yang dikehendaki

1 2 3 4 5

c. Perkhidmatan rujukan dan maklumat berguna untuk mendapatkan maklumat yang dikehendaki

1 2 3 4 5

d. Komputer untuk OPAC adalah mencukupi

1 2 3 4 5
e. Komputer untuk CD-ROM dan Internet adalah mencukupi

1  2  3  4  5

f. Pangkalan data CD-ROM di dalam berbagai bidang perkara adalah mencukupi

1  2  3  4  5

g. Perkhidmatan fotostat adalah memuaskan

1  2  3  4  5

h. Bahan-bahan perpustakaan adalah terkini

1  2  3  4  5

i. Kakitangan perpustakaan mampu untuk menjawab semua pertanyaan rujukan

1  2  3  4  5

j. Kursus kemahiran perpustakaan/maklumat boleh menjadikan anda pengguna yang lebih berkesan

1  2  3  4  5


Ya  1  Tidak  2

Seksyen C: Persepsi Pengguna

1. Secara keseluruhan, apakah pendapat anda tentang kakitangan perpustakaan: Sila bulatkan satu nombor sahaja.

a. Amat membantu  1  c. Tidak sangat membantu  3

b. Lebih kurang membantu  2  d. Tidak membantu langsung  4
2. Pada tahap manakah kakitangan perpustakaan membantu anda dalam mendapatkan maklumat yang dikehendaki? Sila bulatkan satu nombor sahaja.

   a. Minima 1   c. Maxima 3
   b. Sederhana 2   d. Berubah-ubah 4 (Bergantung pada soalan yang dikemukakan)

3. Adakah pensyarah anda memberi galakkan untuk menggunakan sumber-sumber perpustakaan bagi pengajian dan tugusan anda? Sila bulatkan satu nombor sahaja.

   a. Ya 1   b. Tidak 2   c. Kadang-kadang 3

   Jika ya atau kadang-kadang, sila nyatakan cara ia dilakukan.

   ........................................................................................................

4. Secara umum, nyatakan tahap kepuasan anda bagi perkhidmatan yang diberikan oleh perpustakaan anda? Sila bulatkan satu nombor sahaja.

   a. Amat memuaskan 1   c. Tidak begitu memuaskan 3
   b. Lebih kurang memuaskan 2   d. Tidak memuaskan langsung 4

5. Sila beri sebab-sebab bagi jawapan yang diberikan:

   ........................................................................................................


<table>
<thead>
<tr>
<th>Amat mencukupi</th>
<th>Lebih kurang mencukupi</th>
<th>Tidak begitu mencukupi</th>
<th>Tidak mencukupi langsung</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Pelajaran</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Page 287
7. Sila beri komen atau cadangan mengenai perkhidmatan di perpustakaan anda.

........................................................................................................
........................................................................................................
........................................................................................................
........................................................................................................

Seksyen D (Sila rujuk Seksyen B nombor 1)

1. Apakah sebab-sebab anda tidak menggunakan perpustakaan?
........................................................................................................
........................................................................................................
........................................................................................................
........................................................................................................

Kepada: Lalli Hashim
Fakulti Pengajian Maklumat
Universiti Teknologi MARA
40450 Shah Alam
Selangor.

Tel: 03-5507421
Fax: 03-5596159
e-mail L.Hashim@lboro.ac.uk

Terima kasih di atas kerja sama saudara/saudari sekellan.
APPENDIX D

INTERVIEW SCHEDULE
(LECTURERS & STUDENTS)
Interview Schedule for Lecturers and Students

(A) 1. How often do you use the library? Please give reason for your answer.
   2. Do you depend a lot from the library for your needs? Where do you get the information?
   3. Are you aware of all the services in the library? If not why?
   4. Do you know how to use the services in the library?
   5. Was you given any training or short courses so far? Please specify.
   6. How do you rate the library services? Please explain.

(B) 1. How do you rate the professional library staff and the non-professional library staff? Please give reasons for your answer.
   2. Do you communicate with them and on what matters?
   3. How do you interact with the library staff?

(C) 1. Are you aware of any library/information skill course for students?
   2. What do you think of the course? Should it be make compulsory for all students?
   3. Are you aware of any library orientation or user education programme organised by the library?

(D) 1. Do you encourage your students/Were you encourage by your lecturers to make use of the library resources? Please specify how the encouragement was done.

(E) 1. Is there any comment or suggestions concerning the library that you would like to give?
Please Answer “Yes” or “No” to the following Questions:

A. Below is an excerpt taken from the “Reader’s Guide to Periodical Literature”.

MEDICAL POLICY
Second opinion [Clinton plan] M. Kinsley. II The New Republic v210 p44 F 14 ’94

PUBLIC HEALTH
See also
Medical Policy

i. Can you identify the subject heading? ............

ii. Do you know the function of “See also” references? ............

B. i. Do you know what are “Boolean Operator’s”? ............

ii. Do you really know how to use it? ............

C. Do you know the function of CD-ROM “ProQuest”? ............
APPENDIX F

QUESTIONNAIRE FOR SKILL TEST
(TRANSLATED VERSION)
Sila jawab "Ya" atau "Tidak" bagi soalan-soalan berikut:

A. Di bawah ini disertakan petikan dari "Reader's Guide to Periodical Literature".

MEDICAL POLICY

PUBLIC HEALTH
See also
Medical Policy

I. Dapatkah anda kenalpasti tajuk perkaranya? .......... 

ii. Tahukah anda fungsi rujukan "lihat juga" ("see also " references) ? .......... 

B. I. Tahukah anda apa itu "Boolean Operator's"? .......... 

ii. Tahukah anda cara menggunakan? .......... 

C. Tahukah anda fungsi "CD-ROM ProQuest"? ..........
APPENDIX G

SELF-GUIDED TOUR LEAFLET
How to use this guide

Welcome to the Pilkington Library. This guide has been designed to help you find your way around the library and its resources.

Within the building, a simple route is marked with consecutively numbered signs suspended from the ceiling. These are also marked on the maps inside this guide. Please follow the numbered signs from 1 to 25, pausing to read the information provided.

Detailed information is provided on posters and in leaflets situated at various points on the tour. If you have difficulty or further questions please ask a member of the Library staff.

Key
- L A lift is available for people with mobility problems
- W Library Catalogue (OPAC) or Workstation
- T Toilet
- Library administration area
- Indicates there is an Information Poster on this subject

Opening Hours

| In Term       | Monday-Friday | 9.00am - 10.00pm |
| In Term       | Saturday      | 9.00am - 5.30pm  |
| In Term       | Sunday        | 10.00am - 9.00pm |

| In Vacation   | Monday-Friday | 9.00am - 5.30pm |

Loan periods
- Undergraduates: 10 items for 4 weeks
- Course Postgraduates: 15 items for 4 weeks
- Research postgraduates and University staff: 25 items for 12 weeks

Telephone Numbers
- Information and enquiries: (01509) (22)2360
- Issue desk: (01509) (22)2361

ULISEES
http://www.lboro.ac.uk/ulisees.html
level 2  arts and humanities

11 The book sequence starts to your left. The first row is where books are kept until they are reshelved.

Included in this section are the Teaching Practice Collection and Loughborough University Theses.

12 Here you will see that many of the study desks are located around the edge of the building.

13 The book sequence continues here. Look for the class numbers which are shown on the ends of the shelves.

14 Across to your left is the first part of the Serials sequence. Back copies of Serials are shelved here.

15 To your left are more PCs for viewing the Library Catalogue (OPAC).

In front of you is the Information Desk.

Across to your right are more Workstations.

16 To your left and right are the final parts of the Serials sequence on this level.

Now do a 'U' turn to go to 17.

17 To your right are self-service Photocopiers.

Now use staircase A. The tour continues at 18 downstairs on Level 1.

level 1  science and technology

18 Ahead of you is the Information Desk. To your left the main book sequence starts at class number 500.

19 Note that the book sequence which ends here continues across the aisle to your right.

20 As on Level 2 above, most of the study places are located around the edge of the building.

21 The main book sequence on this level ends here.

22 To your left are more photocopiers.

23 Back copies of Serials from classmark 500 start here.

Behind you on the left is a Group Study Room.

To the left are more Workstations.

24 Turn to your right and walk back towards the stairs. On your left is the final part of the Serials sequence on this level. Now return to Level 3 by staircase A where the tour continues at 25.

25 Ahead of you is the way out through a Security Barrier.

Remember to have your library books stamped at the Issue Desk before you leave.

As you leave the Library there is a Café on the left and a Shop on the right.

Thank you for visiting the Pilkington Library
APPENDIX H

EXAMPLES OF RAW DATA FROM INTERVIEWS

(Translated Version)
Participant One

Interviewer: Hello, good morning!

Interviewee: Good morning to you too.

Interviewer: How are you? And please be seated.

Interviewee: Fine, thank you.

Interviewer: Thank you for willing to be interviewed.

Interviewee: I hope I can contribute something to your research.

Interviewer: First, let me explain briefly the nature of my research. I am undertaking this research as a partial fulfilment of the requirements for the award of a Ph.D. The data collected will not be used for any other purpose other than to be included in my thesis at Loughborough University. The topic of my research is "A study on the Perceptions of Library Services and Usage in Selected Higher Education Institutions in Malaysia". It is an attempt to find out how academic users (faculty members and students) feel towards library staff/library services, their actual needs, library usage and expectation by them from the library. I will also want to find out the feasibility and possible impact of the library/information skills course as part of the Malaysian Higher Education Institutions’ Curriculum. Okay, can I start now?

Interviewee: Fine with me.

Interviewer: How often do you use the library?

Interviewee: Only when there is a need.

Interviewer: Can you elaborate further?

Interviewee: I will only go to the library when I could not get information from the Internet.

Interviewer: What about your lecture notes and research?

Interviewee: I use the Internet as well as books from the library.

Interviewer: Are you aware of all the services in the library? If not, why?
Interviewee: Not all, only the basic services such as borrowing and returning. Actually, to tell you frankly, I am not aware of the other services.

Interviewer: Do you know how to use the services in the library?
Interviewee: As I am not aware of all the services, I cannot say that I know how to use all the services. Borrowing and returning is not a problem.

Interviewer: Was you given any training or short courses so far? Please specify.
Interviewee: As far as I can remember, I was not involved with any training or short courses. I am not aware of its existence.

Interviewer: How do you rate the library services? Please explain?
Interviewee: I am happy with the services that I used. There was no problem with the borrowing and returning of library materials. As for the other services, I can't say much.

Interviewer: How do you rate the professional library staff and the non-professional library staff? Please give reasons for your answer.
Interviewee: It is quite difficult for me to rate the professional staff, as I have not many interactions with them. As for the non-professional staff, they are okay. I do not experience any problem whenever I borrow or return library materials.

Interviewer: There are three parts for the next question. Are you aware of any library/information skill course for students? What do you think of the course? Should it be made compulsory for all students?
Interviewee: I am sorry, I can't decide because I am not aware of the course. What is it all about?

Interviewer: (After explaining about the course) So, what do you think about the course?
Interviewee: It sounds okay.

Interviewer: Are you aware of any library orientation or user education programme organised by the library?
Interviewee: I have heard of library orientation, but user education programme, I am not very sure.

Interviewer: Do you encourage your students to make use of the library resources? Please specify how the encouragement was done.

Interviewee: Of course. The students were instructed to refer to various library resources when doing their projects or term papers. They have to indicate the sources used in the bibliography.

Interviewer: One last question. Is there any comment or suggestions concerning the library that you would like to give?

Interviewee: I hope the library will take effort to publicise all their services so that potential users will be more aware of the services available. For instance, I have been working for some time, yet I am only familiar with certain services.

Interviewer: That's all and I would like to thank you for taking the time off to participate in this interview. I really appreciate your help.
Participant Two

Interviewer: Hello, how are you?
Interviewee: Fine.

Interviewer: First of all I would like to thank you for your willingness to be involved in my research. Let me explain briefly the nature of my research. I am undertaking this research as a partial fulfilment of the requirements for the award of a Ph.D. The data collected will not be used for any other purpose other than to be included in my thesis at Loughborough University. The topic of my research is "A study on the Perceptions of Library Services and Usage in Selected Higher Education Institutions in Malaysia". It is an attempt to find out how academic users (faculty members and students) feel towards library staff/library services, their actual needs, library usage and their expectation of the library. I will also want to find out the feasibility and possible impact of the library/information skills course as part of the Malaysian Higher Education Institutions' Curriculum. Okay, can we start now?

Interviewee: Fine with me.

Interviewer: Can I assume that you have used the library before?
Interviewee: Yes, you are right.

Interviewer: How often do you use the library?
Interviewee: It is difficult to give the number of times but I usually used the library before a new semester begins. This is the time when I gather new information to be added to my lecture notes.

Interviewer: Are you aware of all the services in the library?
Interviewee: I am quite aware of some of the services.

Interviewer: Do you depend much on the library for your lecture notes.
Interviewee: Frankly speaking, no.

Interviewer: Why? Any reason?
Interviewee: I have my own textbook. Furthermore the journals in the library are not up-to-date.
Interviewer: Do you know how to use the services in the library?
Interviewee: Only the one that I usually used.
Interviewer: Did the library give you any training or short courses so far? Please specify.
Interviewee: The only thing given was during the induction week for new lecturers. It was a two hours talk on the library and its services. It was theoretical in nature.
Interviewer: How do you rate the library services? Please explain?
Interviewee: The services can be better. The librarian must take measures so that we lecturers are aware and also know how to use the services.
Interviewer: How do you rate the professional library staff and the non-professional library staff? Please give reasons for your answer.
Interviewee: As for the staff, not all are approachable. Only a few who showed their eagerness to assist. I will only seek assistance from those I am familiar with.
Interviewer: There are three parts for the next question. Are you aware of any library/information skill course for students? What do you think of the course? Should it be made compulsory for all students?
Interviewee: Yes, I am aware. In fact, we have this course for our new students. By the look of it, the students seemed more independent and more critical in their quest for information. I believe the course should be made compulsory to all new students.
Interviewer: Are you aware of any library orientation or user education programme organised by the library?
Interviewee: I am only aware of the library orientation because the library will usually send a circular asking all Faculties to make arrangement with the library for library orientation whenever there is an intake of new students.
Interviewer: Do you encourage your students to make use of the library resources? Please specify how the encouragement was done.

Interviewee: Yes, I always tell my students to refer to the library resources especially journals so as to get the latest current information on a particular subject.

Interviewer: One last question. Is there any comment or suggestions concerning the library that you would like to give?

Interviewee: In view of the fast development of electronic information environment, it is important that the library assist and also play its role in educating users especially students so that they have the knowledge to fully utilise the latest technology to meet their information needs.

Interviewer: Thank you for your help.
Interviewer: Hi! How are you?
Interviewee: Fine.

Interviewer: First of all I would like to thank you for your willingness to be involved in my research. Let me explain briefly the nature of my research. I am undertaking this research as a partial fulfilment of the requirements for the award of a Ph.D. The data collected will not be used for any other purpose other than to be included in my thesis at Loughborough University. The topic of my research is "A study on the Perceptions of Library Services and Usage in Selected Higher Education Institutions in Malaysia". It is an attempt to find out how academic users (faculty members and students) feel towards library staff/library services, their actual needs, library usage and their expectation of the library. I will also want to find out the feasibility and possible impact of the library/information skills course as part of the Malaysian Higher Education Institutions' Curriculum. Okay, can we start now?

Interviewee: Fine with me.

Interviewer: How often do you use the library and for what purpose?
Interviewee: Once or twice a week and to look for new information to add to my lecture notes.

Interviewer: Are you aware of all the services in the library?
Interviewee: Most of the services.

Interviewer: Do you know how to use the services in the library?
Interviewee: Yes, with the assistance of the library staff.

Interviewer: Do you use the library sources for your lecture notes and research.

Interviewee: Most of the time, but I have problems with journals. There are not current and some of them are missing from the shelves.

Interviewer: Did the library give you any training or short courses so far? Please specify.
Interviewee: There was no training or short courses given.

Interviewer: How do you rate the library services? Please explain?

Interviewee: There are a number of weaknesses. Books are missing from the shelves, Interlibrary loan service quite slow and there are not enough computer facilities.

Interviewer: How do you rate the professional library staff and the non-professional library staff? Please give reasons for your answer.

Interviewee: On the whole, most of the library staff are somewhat helpful. Actually, it all depends on the individual on duty.

Interviewer: There are three parts for the next question. Are you aware of any library/information skill course for students? What do you think of the course? Should it be made compulsory for all students?

Interviewee: Yes, I am aware of it. I believe the course is useful and it should be a part of the institution education curriculum.

Interviewer: Are you aware of any library orientation or user education programme organised by the library?

Interviewee: As far as I know, library orientation is always available to all new students but I am not very sure how it is done.

Interviewer: Do you encourage your students to make use of the library resources? Please specify how the encouragement was done.

Interviewee: I remember mentioning to the students to use the library when giving out assignments.

Interviewer: One last question. Is there any comment or suggestions concerning the library that you would like to give?

Interviewee: I would like to see the library staff become friendlier and more sensitive to the needs of the users. IT facilities in the library have to be increased.

Interviewer: Thank you for your suggestions.