

CHAPTER ONE

INTRODUCTION

Universities play an important role in producing and distributing information. Information is produced through research in laboratories and in the field, while secondary information is acquired from the published works of others. Information is disseminated through publications, oral presentations, and through teaching. Much of this information is channelled to students through the teaching-learning process in the lecture halls and through the university libraries.

In recent years, several issues have affected the provision of information in many universities, and in particular the academic libraries. Budgetary limitations due to economic constraints, the increased costs of print materials, the need to keep pace with growing electronic media and resources, as well as demands by staff and students for better, current and faster access to information, are but some of the challenges being faced by these institutions. To meet these challenges, the higher education institutions and their libraries have developed various strategies. Ratcliffe (1996) noted that universities need to reassess the position of libraries and librarians and their functions, clarify their objectives, and allocate resources in order to function more effectively.

With the present increase of network media and the predictions of change these media might bring on academic work in future, Budd and Connaway (1997) noted that “in the midst of the excitement and the hope, higher education has to come to grips with a fairly entrenched pattern of behaviour by faculty, along with a complex set of

pressures imposed upon it by questions regarding the present scholarly communication system and the delicate balance of costs for technological development and sources for funding the new development.”

With the proliferation of new information systems, new resources, and the many challenges listed earlier, there is a need for universities and academic libraries to consider their community needs and expectations in order to be financially more efficient. By doing so, the universities and libraries can also make more meaningful decisions for improving upon existing services and incorporating new services. Abels, Liebscher and Denman (1998) stated “university administrators cannot make informed decisions on the requirements of faculty in different disciplines and for different tasks, the perceptions of accessibility and ease of use on the part of the campus community, and on successful institutional strategies implemented elsewhere, without appropriate data.” As academic libraries represent one of the more important sources used to provide subject information for the university community, it is therefore the responsibility of the university to make proper provision for its library’s and community’s changing needs.

The Changing Role of the Academic Library

In recent years the increasing availability of computer-based information systems, such as online databases, CD-ROMs, the World Wide Web, and digital libraries, allow users to access electronic information without leaving their homes. These electronic communication systems have brought new opportunities as well as challenges to academic libraries. The view of many researchers of the library as the

single repository of information needed for teaching, learning and research is no longer adequate, as information is now available through many different media and from many locations.

These new systems have also increased users' needs and expectations. In order to provide better services in the information age, academic libraries need to incorporate some of these new technological information systems in their services, as well as to understand the staff and students' changing needs and expectations.

To incorporate new technologies within the old systems, libraries have to make major transformations. Academic libraries should remember that to begin the transformation or reengineering of library user services, their focus must be user-centred. Millson-Martula and Vanaja (1995) commented that quality service is not only determined by providing new programs and services but also incorporating users' personal needs and expectations into the development of the service. Quality improvement programs tend to enhance existing processes rather than aim for breakthrough changes that will replace old processes with new (Hammer and Champy, 1993).

Shapiro and Long (1994) stated that libraries share a common focus with the business sector. While business looks towards its customers, libraries must look towards the library users. They added that while business communities face competition from within the industrial sector, libraries face competition from other information providers, such as computing centres, publishers, and the broadcasting or cable industry. Therefore libraries are preoccupied with an environment that has, and will continue, to experience transformational change.

The emergence of new information technologies has added an element of complexity for information providers. In moving towards the information technology (IT) age or providing computer services to the campus community, academic libraries have had to form working relationships with computing professionals. In many cases, the need to provide electronic information has led university libraries to develop close relationships with their institution's computer centers. In some cases libraries are responsible for both the library collection and computer services (Encyclopaedia Britannica, 1999). Therefore the library needs staff that are computer literate.

The role of a librarian too has changed with the incorporation of IT in libraries. Librarians not only teach users how to locate information in the library but also over the networks. In order to cope with the new technologies, librarians have to be computer literate and well trained in using the networks, creating databases and managing the computer systems. Therefore librarians in the current information age are not only considered as educators but also IT professionals, computer experts, designers of information systems, researchers and information analysts (Encyclopaedia Britannica, 1999).

Mischo (1998) noted that the organisational needs of academic libraries in an IT environment include the ability to respond to new and changing technologies, and to provide resources for staff training and development. They are also expected to provide communication mechanisms within and outside the library, incorporate collaborative mechanisms with university departments and outside the university, and provide flexibility in administrative functions.

In general, the increase in electronic information has not only changed but also

increased the academic library's functions and services. The job of librarians has also changed in order to create a new transformed information environment where multiple information resources in all formats are available from a single workstation. Zainal (1997) views the notion of a library as no longer a physical building with stacks of books but includes digital libraries that can be surfed through the Internet. With the efforts of academic libraries to transform themselves in line with current technological changes, it can be assumed that the use and importance of academic libraries as a source of information will increase. Budd and Connaway (1997) noted that some researchers are predicting a central role for the kinds of services a library can offer such as quoted by Plater, 1995

*"In the next century, transformed by digital information
and electronic communication, the library becomes
the common ground of the university and the community".*

Increasing Digital Environment: The Malaysian Scenario

Malaysia is a developing country with a unique vision of becoming a developed country in its own mould (Mahathir, 1996). Prime Minister, Datuk Seri Dr. Mahathir Mohamad, has instilled in the people a vision for the nation to become developed economically, politically, socially and spiritually by the year 2020 (Ahmad Sarji, 1996)

Like many other developing nations, Malaysia places special emphasis on the development of science and information technology to produce a knowledge-based society and economy. This is evident from development programs initiated by the government, such as the Multimedia Super Corridor (MSC), to help the country move

towards the Information Age. The MSC is a massive 15 x 50km² area spreading from the Kuala Lumpur City Centre (KLCC) to the Kuala Lumpur International Airport (KLIA), the region's largest international airport at Sepang. It includes two of the world's pioneer Smart Cities, namely Putrajaya, a new high-tech administrative capital, and Cyberjaya, an intelligent city with multimedia industries. The MSC will also include research and development (R&D) centers, a Multimedia University and operational headquarters for multinationals wishing to direct their world-wide manufacturing and trading activities using multimedia technology (What is the MSC?, n.d.) Dr. Mahathir foresees Malaysia being "a pioneer in electronic government, a multimedia-networked, paperless administration when the MSC becomes reality by the year 2000" ("A Global Facilitator", 1996).

In the creation of a technological society, institutions of higher education play a crucial role in producing a competent workforce equipped with skills, knowledge, attitudes and behaviour to meet the demands of an information era (Mohd Najib, 1998). With the advent of computer and information technology in Malaysia, institutions of higher education and their libraries are also keeping up with developments so as not to be left behind in the information age, as well as in support of government policy. Besides providing IT studies, Malaysian universities also provide access to computer systems for their staff and students, either in laboratories, offices or libraries. These computers are used for word processing, locating information from the Internet, presentations, analysing, and for sending and receiving e-mail. Zainab (1999) noted that most of the universities had also established a campus network of computer systems with connections to JARING, the national gateway to the Internet.

Most academic libraries in higher institutions have also started automating their library systems. These libraries have started making bibliographic information of their resources available through the library online public access catalog (OPAC) systems and through the Internet. Examples of such universities include the University of Malaya, the National University of Malaysia, the International Islamic University, and many others.

University of Malaya

The University of Malaya is the oldest higher education institution in the country, and currently comprises eleven faculties, two academies, three centres and an Institute of Postgraduate Studies and Research. The University of Malaya, located in Kuala Lumpur, is among the larger universities in Malaysia, with over 15,000 students, 1,500 full-time faculty and 2,500 staff (UM homepage n.d.). The university's mission is;

"To be a premier university seeking excellence in the advancement and dissemination of knowledge to meet the aspirations of the nation."

In pursuit of this mission, the University of Malaya offers various courses and facilities for effective learning and research. It is categorised as a multidisciplinary university and was rated the second best university in South East Asia (Budiman, 1999). The university also provides access to networked computing facilities for its students and staff (UM homepage, n.d.).

University of Malaya Library

The University of Malaya Library (UML) was the first major academic library in the country. The UML is an important component of the educational process among the university community. Being the largest academic library in Malaysia, it aims to provide the best facilities in support of its mission, viz.:

"To be the premier academic library providing excellent collections and information services in support of the University of Malaya's mission." (UML Homepage, n.d.)

The UML comprises a Main Library, which provides library facilities for the whole campus, and a network of branch libraries located in the faculties and academies. Together, these libraries house a vast collection of print and non-print materials, including monographs, journals, manuscripts, audio-visual materials, CD-ROMs, and microfilms. The library also provides interlibrary loan services through arrangements with local and overseas libraries, orientation tours and user education classes for postgraduate students. A one-unit Information Skills course has also been introduced for all undergraduate students.

Users can find information on UML's holdings from the library OPAC system that can be searched from the 180 dedicated OPAC terminals available throughout the campus. Users can also access the holdings through personal computers via the Internet from the library's homepage. Among the other facilities included in the library are two computer labs with 95 personal computers. Students use these computers for Information Skills instruction, Internet functions, and word processing.

This is ample evidence of UML's positive attitude towards the new information

technologies. The UML has taken steps to transform itself into a better organisation by incorporating new technologies in their library services, such as self-checkout machines, a regularly updated homepage, and online renewal services. These developments echo two of UML's objectives, viz.

“To provide excellent information services”, and

“To promote IT in a library environment.” (UML Homepage, n.d)

All these developments are designed to encourage the staff and students to make more effective use of the many resources available, including digital resources and technologies, to support their teaching-learning, research and publication activities. However, there is little documented evidence as to what extent the university community uses the IT-based digital resources and the facilities. There is also a scarcity of information on the needs of the university community, in relation to the digital resources and facilities. The readiness of community, particularly the academic staff, to use these facilities for their day-to-day work is also unknown.

Statement of Problem

The academic staff at University of Malaya play an important role in teaching their students, conducting research, publishing, providing consultancy, and providing community services. In doing so, they rely heavily on information to carry out these tasks. With the development of a digital environment containing many information technology based resources and services, the academic staff have been exposed to many new information seeking tools, such as the Internet, on-line catalogues and databases available through the UML. These tools have great potential in allowing

them to gather information for their day-to-day work.

However, there is no evidence as to what extent the information technology has brought about changes in the manner they gather the information for their work, the use of the information and their requirements. There is therefore a need for a study to examine and analyse the current information needs, information seeking behaviour and expectations of the academic staff of University of Malaya in a digital environment.

The UML attempts to provide the best of services. However, the adequacy of these library services currently provided to the academic staff is uncertain. There is no documented evidence as to what extent the library provides adequate information and services to the staff, as the UML moves into the technology age. There is also no indication as to what extent information technology has brought about changes in the perceptions of these users regarding the library. It has been maintained that the library is one of the important channels of information for academic staff. However with the growing information networks which can be accessed from the offices or even the homes, there is no indication whether the library still plays an important role among these professionals. Whitlatch (1983) in his study of library use patterns among full-time and part-time faculty and students concluded that, “.... low use of library may be the future trend in academic libraries”.

The resources acquired and maintained by a library must be reflective of its users' needs. There is again a scarcity of documented evidence of on type of resources required and needed by the staff. By asking academic staff about the sources they consult in gathering information for their work and the format they prefer, it is possible

to gain some insight on their needs and expectations. Similarly, in designing information services and systems, it is essential to understand the user and the characteristics of the information environment they work in. Millson-Martula and Vanaja (1995) indicated that advances in information technology have added a new complexity for information seekers. Their expectations have increased yet the information providers face many challenges in meeting their expectations. The recent financial constraints faced by Malaysian universities are example of the new challenges. With increasing student populations and new programmes, the universities had to search for new ways to meet their staff expectations within their limited budgets. Certain services and resources had to be given priority, but it was difficult for the library to decide which resources and services were needed for their academic staff. A needs' study would help the university and the library to determine priorities among the available resources and services.

Aims of Study

This study was primarily intended to examine the information needs, current information use, and expectations of academic staff at University of Malaya in a digital environment. The aims of the study were:

- a. To determine the current information seeking behaviour of academic staff at the University of Malaya;
- b. To determine the role of the university library in meeting their information needs;
- c. To assess the information needs and expectations of these academic staff in a

digital environment;

- d. To obtain input on the facilitators and obstacles to the use of information resources and services, as well as to identify other factors that may encourage the use of such resources.

Research Questions

Specifically, the study attempted to address the following questions:

- a. What are the information seeking patterns of academic staff at the University of Malaya?
- b. Does the university library, in general, play a role in providing information for their professional needs? If so, are the academic staff satisfied with the current resources and services provided by the library?
- c. How do the academic staff currently use information technology and to what extent they are able to use information technology to gather information?
- d. What are the expectations of the academic staff in relation to their information needs in a digital environment?

Importance of the Study

With the existence of new information resources, such as the Internet, CD-ROMs and online databases, the academic staff are exposed to an even wider range of information sources. However, little is known as to what extent they use these information sources. An understanding of how academic staff at the University of Malaya meet their information needs, through the university library or other

information sources in the digital environment, will certainly be useful to those who plan and provide these information services.

A number of previous studies have emphasised that a study on information use can reveal interesting and important information about user perceptions and priorities. This information can be an extremely useful tool in reviewing library services, budgeting, and allocating limited resources when planning new services. Straw (1993) in his research stated that information needs is an important area of research among librarians and professionals. The data obtained from such research has driven many important decisions about library collections and services as well as management. Much of this research also would help librarians understand the patterns of communication that exist in the clientele they serve.

Hayes (1990) wrote about the need for academic libraries to serve the professional staff. He argued that the academic library must find ways to better serve the professional staff in institutions of higher education, as the information needs of this user group have greatly expanded in recent years. Hayes further noted that this user group in the 1990's was responsible for an increasingly wide range of activities requiring information on diverse topics, and their information needs generally were not well served by the library or other campus information systems.

With a greater understanding of current patterns of use among academic staff from different disciplines, new methods and systems for improved services in a digital environment can also be designed and developed by the university library. This in turn could lead to increased use of information sources by the university academic staff in performing their day-to-day work, and eventually leading to greater productivity.

In general, the results obtained from this study will benefit the librarians in determining the professional needs as well as the type of services to be provided to the university academic staff. It is hoped that the university, and in particular the library, would be able to design information systems which are useful to the needs of clients, especially in an increasingly digital environment.

Assumptions

This study makes three major assumptions. It has been indicated earlier that the university and its library have started incorporating information technologies and services for their community in order to improve access to information. It is assumed that university and the library will continue heading towards this digital environment.

It is also assumed that the user group chosen for this study represents academic staffs that have used the library. Most academic staff rely on information for their professional needs. It is assumed that they have used the library, at least occasionally, for their information needs and are therefore familiar with existing services and materials available at UML.

Academic staff use a variety of information sources for their teaching, research, publishing, consultancy, and administration. These sources, including print, nonprint and electronic materials, can be accessed from libraries, homes, or offices. This study assumes that increasing use of information technology has changed the choices available to the staff in performing their day-to-day work. It is also assumed that the academic staff are familiar with electronic resources in their field.

Limitations

Like most studies, this study has a number of limitations and some of these are discussed below.

This study employed a questionnaire as the data-gathering instrument. In doing so, it relied on the accuracy of those completing the questionnaire based on self-reported attitudes and perceptions. Straw (1993) stated "information gathered in any fashion often depends on individuals memory, which may have lapsed over time." The responses given by the staff were accepted in totality and no attempt was made to verify the information.

This study examines the information needs of university academic staff as a whole, and differences among faculties or disciplines are not examined in detail. This aspect is left to a further study.

This study also makes no attempt to generalise the findings to all academic staff at institutions of higher learning. Only the academic staff at the University of Malaya were surveyed. Academic staff employed by universities, colleges and other educational institutions in Malaysia or elsewhere were not included in the study. Therefore, if the information needs of academic staff surveyed differ from those at other institutions, this study does not reflect that fact.

Factors effecting the information seeking behaviour and information needs are also not examined in detail.

Definitions

For the purpose of clarification, the following definitions were adopted in this study:

Expectations

Millson-Martula and Vanaja (1995) explain that expectations are assumptions about the likelihood of something occurring, coupled with these assumptions is the acknowledgment that the outcome may not be expected. More concisely, expectations reflect anticipated performance. In relation to the non-profit service organisations such as libraries, customer expectations are used as standards against which an organisation performance is judged (Shank, 1982).

Faculty/Academic staff

In some literature, the term faculty is used rather than academic staff. Razzaghi (1990) defines faculty as those involve in teaching or research in the academic environment. In this study, both terms are used interchangeably.

Informal Sources

Informal sources refer to sources generated to answer a specific request for information (Razzaghi 1990). Informal sources of communication include contacts with colleagues and attendance at scholarly or professional meetings (Hart 1997).

Information

Krikelas (1983) defines information as any stimulus that reduces uncertainty. The term 'information' is used, in the context of user studies, to represent factual data or advice or opinion, a physical object, such as a book or journal, or the channel through which a message is conveyed, for example, oral or written communication (Rohde, 1986). Longley and Shain (1989) describe information as knowledge that was unknown to the receiver prior to its receipt and information can only be derived from data that is accurate, timely, relevant and unexpected.

Information Needs

Krikelas (1983) defined information need as the recognition of the existence of uncertainty. Kuhlthau (1988) described information need as the initial stage of information seeking process. Hartmann (1993), in his research paper, defined information needs as "any requirement for data or knowledge of any kind that is desirable or necessary to conduct research or teaching." Chen and Hernon, as reported by Reniker's (1993) study, noted "information needs arise whenever individuals find themselves in a situation requiring knowledge... to deal with the situation as they see fit." A more theoretical definition of the term 'information needs' has been the subject of discussion in the 70's and 80's. Roberts (1975) views information needs in terms of wants, demands, desires, requirement in a subject area. Wilson (1981) views it in terms of affective needs and cognitive needs.

Information Seeking Behaviour

Krikelas (1983) in his information-seeking behaviour model defines information seeking behaviour as any activity of an individual that is undertaken to identify a message that satisfies a perceived need. In other words, information seeking begins when someone perceives that the current state of possessed knowledge is less than that needed to deal with some issues (or problem). Wilson (1981) had a similar but more detailed definition of information seeking behaviour. He defined information-seeking behaviour as a behaviour, which results from the recognition of some need, perceived by the user, and that behaviour may take several forms. The user may demand for information systems such as libraries, on-line services and other sources. He further explained that, "whatever the source of the information it will at some point be 'used', if only in the sense of being evaluated to discover its relationship to the user's need." Wilson (1977) noted that a person's process of information seeking begins only after he or she realises that the current state of knowledge is insufficient to meet his or her needs. There are several criterions for choosing an information source. These include accuracy (Chen and Hernon, 1982), familiarity, accessibility, costs (Leckie, 1996) and many more.

Resources

Resource is defined as an expedient or device to fulfil a function (Oxford English Dictionary, 1995). In the context of this research, resources can be defined as devices, which can be used for drawing information.

Sources

Source can be defined as a place or thing from which something originates (Oxford English Dictionary, 1995). This includes persons or documents that provide evidence or reliable information.

University

The Oxford English Dictionary (1995) defines university as “an educational institution designed for instruction, examination, or both of students in many branches of advanced learning, conferring degrees in various faculties and often embodying colleges and similar institutions”.

Summary

This chapter has provided an overview of the current role of universities and academic libraries, as well as an understanding of the phenomenon of information needs of academic staff. Generally information technologies have not only brought changes to the role of academic libraries and universities, but also their communities' information seeking activities the perceptions and the use of the new information technologies. Among the current issues faced by many academic libraries is the demand for a better understanding of their communities' changing needs. This study was designed to examine such changing needs among the academic staff at the University of Malaya.

The following chapter presents a review of the related literature.