INFORMATION NEEDS OF ACADEMIC STAFF
AT THE UNIVERSITY OF MALAYA
IN A DIGITAL ENVIRONMENT

HARVINDER KAUR D/O BAKHTAWAR SINGH

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ABSTRACT

The aim of this study was to determine the information needs, use and expectations of academic staff at the University of Malaya in a digital environment. A survey research methodology was used, and 328 academic staff members were sent a questionnaire asking for information on their current information seeking patterns, perceptions on role, resources and services provided by the university library, information availability and usage, and their information needs. A total of 113 responses were received, representing a 34.45% rate of return.

The findings showed that a majority of the academic staff seeks information for research purposes. 87.6% of the respondents perceived the library as the most important source of information, and followed by Internet resources (84.1%) 47.2% of the respondents considered journals and periodicals as the most important published sources in meeting their information needs. The survey found that 90.7% of the academic staff had visited or used UNI Library or any of its branch libraries during the 1998/99 academic year. The library services and collections were rated between poor to fair. Overall the respondents were fairly satisfied with the library in meeting their information needs.

A majority (92.9%) of the respondent had Internet facilities either at their office or other convenient place. Over 80% of the respondents used the computer for word-processing and information search through the Internet. Over 60% of the respondents had used reference and secondary electronic resources for their work.

90.2% of the respondents were aware of the digital resources in their area of specialization and 82.1% of the respondents had accessed the digital information resources. A major deterrent for the use of computers and Internet as well as creating digital resources was a lack of knowledge, skills and time. 86% of the respondents felt that digital resources, which they produced, were an asset to their teaching, research or other professional work-related activities. Training was one of the main improvements the academic staff hoped to see in the future.
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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 he 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 (L,TML) 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 UNEL 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 LIMIL 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;

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