CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

Summary of the Study

The purpose of this study was to determine the information needs, use and expectations of academic staff at the University of Malaya in a digital environment. Knowledge of information needs is of central concern to academic libraries, universities and information professionals in order to design and provide information systems and resources based on the needs of academic staff.

The literature was examined for past user studies specifically among academic staff. A survey instrument was designed, pre-tested and then sent to the members in the sample, comprising professors, associate professors, lecturers, and language teachers at the University of Malaya. For the purpose of this study, a sample of 328 academic staff was selected from all the faculties at the university. From the 113 responses received, the data were compiled, entered into a database, and then analysed using SPSS. The findings were presented in the preceding chapter.

This chapter discusses the findings of the study and draws certain conclusions from it.

Discussion of Findings

The discussion of the findings is organised into the following sections:

1. Current Information Seeking Patterns

2. Perceptions on Role, Resources and Services Provided by UM Library

3. Information Technology Availability and Usage

4. Information Needs and Expectations in a Digital Environment

Current Information Seeking Patterns

One of the aims of the study was to ascertain the information needs of academic staff in performing various professional activities. Based on the results, the most information seeking activity was research, closely followed by teaching. This finding is similar to those of studies by Razzaghi (1990) and Abels et.al (1996), which found that information is widely used for research activity. De Arenas (1984), cited in Razzaghi's study, also concluded that even though teaching is the main role of the faculty members, a larger number of information sources are perceived to be more important for research than for teaching.

In this study, it was found that Professors, Associate Professors and Lecturers noted research activity as the most information seeking, followed by teaching activity. On the other hand, among the language teachers, teaching was noted as the most information seeking activity. Hart (1998), in his study, found that besides faculty work, roles such as teaching, research and services affected the information gathering.

The respondents in this study used various types of resources when performing the

information seeking activities. However the most highly used information resources were the Internet and UM Libraries, with percentages of 87.6% and 84.1% respectively. The high use of Internet shows that it is increasingly becoming a very important source of information among the University of Malaya academic staff. This study also found that among the respondents, a majority of the Professors and Associate Professors consulted the UM Library to obtain information, while most of the lecturers and language teachers consulted Internet resources to obtain information. The UM Library was perceived to be the most important source in meeting the majority of the respondent's information needs. Hartmann's (1993) study showed similar results. In his study, most of the respondents noted that mainly their university library met their information needs. This suggests that although there is a vast development of information technology, the library is still considered as an important source of information, especially among the Professors and Associate Professors.

Based on the findings, respondents consulted various published information resources. It is found that the most consulted published information resources were journals and periodicals and followed by books and monographs. Professors, Associate Professors and Lecturers are among the high users of these resources. While among the language teachers, electronic resources were highly used compared to other published resources. Earlier studies conducted by Linton (1980), Razzaghi (1990), Hartmann (1993) and Hart (1997) showed majority of their respondents too relied heavily on journals and books in meeting their information needs.

Perceptions on Role, Resources and Services Provided by UM Library

Another aim of this study was to determine the role of university library in providing information for the academic staff's professional needs. The findings of the study indicate that a majority of the respondents did use the UM Library, and they used it quite frequently. The result showed that 56.5% of the academic staff used the library at least once a week. Similarly, Lintons (1980) study among faculty use of library materials and services shows that majority of the faculty did use the college library.

There is a difference in the use of UM Library during 1998/1999 academic year among the academic ranks. Majority of the Associate Professors (96.8%) used the UM Library compared to other academic ranks. The results showed that among the academic ranks Language Teachers are the least users of UM Library.

A majority of the respondents of this study used the library mainly for examining new materials. The second reason for using the library was to borrow or return books. Photocopying materials follow this. Reference or research was the number one reason for Wenxian's (1998) respondents to use the college library. This was followed by borrowing and return books, developing class assignments, attending meetings, quiet study etc.

In Questions 9 and 10 respondents were asked to rate the library collection and services respectively. The findings show that the print collection and electronic resources were rated close to fair. This suggests that the UML still needs to make improvements in their collection services especially for media collection, which was rated poor by most of the respondents.

Academic staffs were fairly satisfied with the reference services, circulation

services, inter-library loan and photocopy services provided by UML. Among these services reference services and circulation services scored the highest marks. The finding correlate with theose reported by Wenxian (1998) where the survey respondents gave high marks for reference services followed by circulation service. However in Wenxian's study the satisfactory level rated for these collections was higher (between "good" and "fair") when compared to this study's finding. The results of this study showed that a majority of the respondents in this study rated Internet service provided by UML as poor. This may be due to the lack of exposure of such services to this library user group, therefore they may not have any opinion over Internet service provided by UML.

The results on the overall satisfaction with the role of UM Library showed that majority of the respondents are fairly satisfied with the library in meeting their information needs. Most of the respondents wanted the library to purchase more relevant, current and up-to-date journals, periodicals and books. They too want the library to improve on circulation, photocopying and inter library loan service. A small percentage of respondents wanted to see the electronic resources improved. Overall the respondents want the library to reduce outdated materials.

Opinion provided by the respondents on new resources that need to be introduced in the library shows that a majority of them requested for more online access to journals and increased CDROMs. Respondents also asked for training on the use of electronic facilities.

Information Technology Availability and Usage

This section provides the information on another purpose of this study, that is to determine on how the academic staff currently use information technology and the extent they are able to use IT to gather information.

The results on the accessibility to electronic technologies showed that 92.9% of the respondents had Internet facilities either from office or other convenient place. Budd and Connaway's (1997) study also showed that most of their respondents had access to Internet connection at work. Wenxian (1998) findings showed that Internet was increasingly becoming a very important source of information among the faculty and professional staff.

Among the academic ranks all the Language Teachers have access to computer with the Internet facilities either from office or other convenient place compared to Professors, Associate Professors and Lecturers with the percentage between 90% to 95%.

Base on the findings reported in Chapter 4, a majority of the respondents used the computer for word-processing. Graphics and presentations, spreadsheets, databases and statistical analysis activities follow this.

Academic staff also used the computer to perform various networked activities. Searching information through the Internet and electronic mail were two highly performed networked activities by majority of the respondents using the computer. Among these two activities, the highest networked activity performed by the respondents using the computer was searching information through the Internet with the percentage of 89.4% and this was closely followed by electronic mail with the percentage of 86.7%. Almost 60% of the

respondents use the computer for downloading files from remote sources. The respondents least perform online discussions and participation in newsgroups. Respondents in Lazinger et.al (1997) study use the Internet mainly for e-mail. Other services via Internet includes discussion group and search interfaces.

Over 60% of the respondents use two main electronic resources, that is reference and secondary resources for their work.

The major deterrent, which hindered the academic staff in finding information through computer was a lack of time. Other barriers noted were unawareness of the availability of such information and lack of skill or training in finding information through the computer. A very low rate of the respondents found that the information required through the computer did not exist as another problem they found when finding information through the computer.

Information Needs and Expectations in a Digital Environment

This study also aimed at finding information on the respondent's awareness, access, and use of digital resources. The results of this study showed that 90.2% of the academic staff were aware of the digital resources in their area of specialisation and 82.1% of the respondents had actually accessed the digital information resources within the last 12 months. Electronic journals and Internet sites related to area of specialisation were the main types of digital resources accessed by majority of the respondents.

The most common factors, which prevents the respondents from accessing digital resources were:

- lack of knowledge about the availability of electronic resources,

- lack of training and skills in using computer

- lack of time

- finding information from the Internet can be slow.

This was similar to Adam and Bonk (1995), who reported in their study on the use of electronic information technologies and resources that the common obstacle to the use of electronic resources among the respondents surveyed was lack of knowledge about the availability of electronic resources.

Almost half (42.2%) of the respondents in this study used digital information resources via Internet through UM Library. However a majority of the respondents would use digital resources relevant to their needs if made available by the UM Library through the Internet in the future. Respondents who chose not to use these resources if made available in UML were mainly because they did not know how to access these resources.

Although a majority of the respondents in this study had access to Internet facilities, very few (13.6%) of the respondents had actually created digital resources on the Internet. Lack of skills, motivation, time and related knowledge were the main reasons given by respondents who had not created any digital resources on the net. Other reasons given included not having a computer in the office, lack of interest, preferred writing on papers and saw no necessity to create and place materials on the net as it was not relevant to their needs. However some of the respondents stated that they were willing and have the interest to learn how to place materials on the net.

Greenstien and Porter (1998) study revealed various factors, which hampered the use of digital resources and information technology. These included the high cost of creating and acquiring high-quality data resources, training and organisational issues, lack of awareness about availability of appropriate data resources and information technology applications, training that was relevant to its use and lack of professional recognition, criteria and mechanisms for accessing computer based research and teaching.

A very small percentage (13.5%) of the respondents placed their teaching materials on the Internet through the University of Malaya Multimedia Development Centre (MDC). A lack of time, knowledge and skills were the main reasons given by respondents who had not place teaching materials on the Internet through University of Malaya MDC.

However 86% of the respondents stated that they would consider digital resources as an asset in their teaching, research or other professional work-related activities if they were to produce their own digital resources.

This study also found that a majority of the respondents did not have their own homepage or website. Only 18.3% of the respondents had their own homepage or website either through the university or through an external web-hosting service.

Although the access to computer with Internet facilities are made available to a large percentage of Language Teachers compared to other academic ranks however very few of the Language teachers are aware of the digital information resources in are of specialisation compared to other academic ranks. Among the academic ranks again a small percentage of Language Teachers had access digital information resources within the last 12-months compared to other academic ranks. Associate Professors were found to be the

high users of digital resources compared to other academic ranks. Among the academic ranks the findings showed that less than 50% of the respondents from the academic ranks had actually placed teaching materials, created digital resources and homepage. None of the Language Teachers were found to have created digital resources on the Internet, placed teaching materials and have their on homepage although all of them have access to computer with Internet facilities.

A question on their hopes, expectations and concern in relation to academic staff information needs in a digital environment which the university should keep in mind as it plans for the future showed interesting results. The respondents indicated they would like to see improvements in many services, including

- computer facilities for teaching and research activities,

- better maintenance of computer labs,

- provide more direct links to other resource centers especially overseas universities,

- easy access to titles in the library,

- changing and discharging of loaned books without going to the library

- training and workshop on the use of digital information technology

- update of IT in branch libraries

- more interlibrary linkage with major libraries of the world

- regular update of computer hardware and software

- regular updates of events and courses available in the university

- easy access to online databases, publications, e-mail server and library resources

from distance computer

- provide full text articles and CD-ROM proceedings

In Berger and Hines's (1994) study, responses to the question of types of resources desired to be seen available via computer, more than half of the respondents choose journal articles, card catalogues, bibliographies, newspaper and magazine articles, conference proceedings and books. Their perception on the library of the future showed respondents desired for a library, which can quickly and easily provide accurate information.

Adams' (1995) findings showed that there was a high demand for electronic information user training program. Abels et.al (1996) survey found that to increase the use of electronic networks, more advanced training programs were needed besides the physical access of the network. 55% of the respondents in Lazinger's et.al (1997) expressed an interest to enrol in formal course to learn Internet services. The result in Lazinger study showed that the respondents learned how to use the Internet without any specific course.

Wenxian (1998) reported in his study that, with the arrival of the electronic age information needs and expectations of the library services among the respondents had increased. They demanded a system that provides accurate, reliable and sufficient information services to meet their needs. They want more library materials and electronic databases, better delivery systems, and more training and library staff assistance.

This overall findings suggests that there is an urgent need for the academic libraries to consider and incorporate IT training programs for not only the students but also the

academic staff as well.

Recommendations for Further Study

The results of this study raise several questions, which suggests several areas for further study.

This study did not attempt to compare the information needs of different disciplines or faculties in the digital environment. Therefore researchers can do a comparative study on information needs of different faculties.

Comparatively this finding showed that Professors, Associate Professors and Lecturers were high users of published information resources while language teachers are high users of electronic resources (see Table 10). Therefore another interesting area of study for future researchers to pursue is to determine if there is a major differences between information gathering among different ranks as well as the relationships between work roles and information needs in the digital environment.

Another viable study to pursue would be to examine the impact or effect of information technologies on the information seeking behaviour of academic staff.

Finally it is realised that the findings in this study are limited in generalizability because the sample involved is confined to only one university. The inclusion of more or all universities in Malaysia may improve the generalizability of the findings.

Despite the limitations, it is hoped that the present study has been able to answer a number of questions, which have led to several concrete suggestions aimed towards improvement of information services by the university and library especially in this digital

environment.

Suggestion for Improvement

Based on the findings of this study, the library still plays and important role in meeting most of the respondent's information needs. However the results of this study shows that the UML resource collection and services need to be improved. This study gives the library an overview of the types of information used by academic staff from various fields and the expectations or demands placed by the respondents towards the library and university.

The use of information technology, such as Internet and electronic resources among the academic staff is seen to be increasing. The library and university can take note of the hopes and expectations of academic staff in the digital environment, which are reported in this study. The study suggests that library need to incorporate new information technologies and resources in order to enhance their services and in order to remain its role as an important source of information among the academic staff.

Since there is a wide range of information and services currently made available by the UML, it is very important for the library to inform the academic staff on the current collections, facilities and services provided by the library and how best they can use these facilities. Library can do this by developing services and print/electronic publications to provide ongoing effective information on specific databases and other types of resources.

This study found that lack of knowledge and skills is the common obstacle to the use of electronic technologies and digital resources. The results of this study highlighted

the need for the library to provide training and workshops on the use of IT. It is important for libraries to know that, besides playing the role as information provider, they should also provide training programs in IT environment such as, learning how to use library OPAC systems, finding information on the Internet, creating websites, and placing notes on the net. Training is crucial if the university wants the academic staff to make more affective use of information technologies and digital resources for wok-related activities.

The training also should be provided at appropriate time when most of the academic staff are able to attend. It is important for the library to advertise frequently the training programs to this user group.

In order to support the demand and expectations brought on by the electronic age, the university and library need a long-range strategic plan, professional dedication and good financial commitment.

Summary

This study supports the notion that the library still acts as an important source of information to the academic staff in the information age. The use of Internet and electronic resources among this user group has increased and is closely becoming an important source of information, after library. However many respondents are unable to use these resources effectively due to lack of knowledge and skills. Therefore IT training programs should be made available to the academic staff.

This study too suggest that the increased usage of electronic resources has brought about new demands and expectations among the respondents, such as more computers with Internet links, databases etc. Universities and libraries therefore face new challenges and responsibilities in order to support the demands and expectations of academic staff.