CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

This chapter discusses the research findings which are related to the research questions. Thereafter, conclusions of the study are drawn and some recommendations for improvement of UML’s OPAC and future research are suggested.

5. 1. Discussion

5. 1. 1. Why do foreign postgraduate students use OPAC?

The study revealed that all respondents use the UML’s OPAC for their academic requirement fulfillment. Regardless the limitations of the study, data can be generalized to the population because the sample drawn is representative of the foreign postgraduate students who are studying at the University of Malaya when the research was conducted. Result implies that most of the University’s foreign postgraduate students use the UML’s OPAC. This result is similar to Hsieh-Yee’s (1996) finding which noted that 88% of the respondents who participated in her study used the OPAC.

The UML’s OPAC is attractive to the foreign postgraduate students and 73.8% of the respondents agree to this. The first major research on online catalogues in the CLR research (Matthews, 1983) found that 84% of the users are satisfied with the OPAC system. Users prefer to use it because it is more fun to use than the card catalogue and it saves patron’s time (Markey, 1984).
The primary purpose of an online catalogue is to help users identify and locate items that may contain information pertinent to the user’s present projects (Peters, 1991). Most of the foreign postgraduate students use the UML’s OPAC to find book titles (81%), followed by journal titles (73.8%). However they do not use other useful features provided by the OPAC itself. Some of the respondents use it to check borrower’s information (47.6%) and find articles as well as conference papers (40.5%). Only 31% of them had used the OPAC for renewals of items borrowed.

They used OPAC because it was easy to use. About 16.7% of the respondents stated that it is very easy to use and 47.6% of them stated that it is easy to use. The vast majority noted that it is moderately easy to use. They have given reasons for this: instructions in OPAC are clear, guidance given before use, and had used OPAC facilities before. Other reasons given were convenience, quality of information, and availability of terminals. This differs slightly from Hsieh-Yee’s (1996) findings. She found that the most important factor for use of the OPAC is convenience. A few respondents stated difficulties in using OPAC because they had never used it before. This is possible because most of the respondents do not have OPAC facilities in their home countries.

5. 1. 2. What are the common types of searches conducted?

The most popular search type conducted is the title search (92.9%). Respondents reported that they conducted the title search more often (73.8%) than the other searches. This is in keeping with the results of Connaway’s (1995) study which
reported a decline in the use of subject searches and an increase in the use of title searches. Other types of searches conducted are subject search, author/title keyword search, and author search respectively. Only 9 respondents conducted the call number search. No respondent had conducted any advanced searches such as Boolean searching, etc. This implies that users are satisfied with simple searches, or they do not know how to use these advanced search features. The vocabularies for subject searches are fixed and controlled and only specific headings can be used to express given topics or concepts (Chen, 1991). Thus, when searches fail, many users tend to rephrase search terms from the specific to the general. Accordingly, they will retrieve a large number of hits and this is time wasting. If they use an advanced search feature such as the Boolean operation, it will retrieve more relevant information.

As mentioned in Chapter Four, foreign postgraduate students may have conducted title searches for items based on the reading and reference list, given by their lecturers. If a user has complete and accurate information about the material required, he/she can conduct a successful search (Hufford, 1991). This type of search is easy to use since the user knows the item. No added effort or search strategy is required to conduct the title search, if the user can spell the title correctly and will subsequently retrieve the exact item. There is also no need for the user to explore the system using the ‘previous’ or ‘next’ screen since this search type will provide a perfect match. In order to explore other search options, users, especially postgraduate students should be exposed to and encouraged to use other search features that are provided by OPAC. This will improve their searching skills.
The third more popular search type is the author/title keyword search. This search will retrieve any items with the selected search terms appearing anywhere in the author/title field. Users tend to conduct this type of search when they have vague information about the items. This will also result in a large hit list of items retrieved based on the author/authors or titles. However, most of the foreign postgraduate students conduct only keyword searches. This result is fairly similar to Ensor’s (1990) findings whereby 80% of the users conduct keyword searching. Hildreth (1997) also noted that the users tend to search more often by keyword.

Peters (1991) stated that:

All users of the library should be able to use the online catalogue with a minimal amount of learning and effort; all of the advanced features are desired and used by many of the users; no matter what type of search is performed, the ultimate goal is to have an item in hand.

Therefore, regardless of the type of searching conducted, a user can conduct a search if he/she can understand and use the system available.

5.1.3. Were foreign postgraduate students given any formal training on how to use the OPAC?

The UM Library organizes library orientation programmes for all users. The library staff arranges an instruction sessions for postgraduate students to impart knowledge and skills on using OPAC, CD ROMs and other facilities provided by them. But the results of this study suggested that the majority of the respondents (54.8%) claimed
that they do not receive any formal training programme from the UML. As mentioned in chapter four, the researcher was unsure about this matter and had asked some of the respondents who provided this information. There were six Sri Lankan respondents and two of them mentioned that they did not attend any training programme. Actually, they had noted that they participated in a training programme but they could not understand it because they were unfamiliar with the computer system and they have had language difficulties. The researcher could not pursue this matter further since the respondents did not provide contact details.

However, the results also indicate that the training programme on using OPAC for the postgraduate students held by UML is insufficient. Only 52.63% of the respondents, who has claimed that they attended a training programme at the UML, stated that the training programme is successful. The low success rate could be due to the foreign postgraduate students’ vast disparity of computer using skills and knowledge on the English language.

5.1.4. From whom did they learn on how to use the OPAC?

Most of the foreign postgraduate students learn to use the UML’s OPAC by exploring the system themselves (66.7%) and this includes via on-screen instruction available in OPAC. This result is similar to an earlier study conducted by Cherry and Clinton (1992). Results of this study also indicated that the students learn to use OPAC from library staff (64.3%) and this is rated as the second learning method. Hsieh-Yee (1996) noted similar results attributed to on-screen instructions. Other learning methods of
OPAC are through formal library instruction programme, from friends, and from printed instructions respectively. As mentioned by Hsieh-Yee’s (1996) the strong reliance on on-screen instructions underscore the importance of system interface, screen displays, and message design. As system evolves, improvement in these areas will encourage its use.

5.1.5. Do professional librarians play a role in imparting OPAC usage skills to them?

When considering the professional librarians’ role in imparting OPAC use skills to foreign postgraduate students, one must not forget that the respondents have stated that they had learned to use OPAC from the library staff (64.3%). The users have limited skills in using OPAC and this hinders them from using other features of the UML’s OPAC. Therefore, librarians have a major role in imparting skills to the users. Barbakoff (2001) noted that:

Efficient and effective use of a university's online catalog requires an understanding of the many library terms used for the menu selections and for terms that appear on subsequent pages. This is a problem for many students, particularly for international students, those with limited library experience and students who are away from the assistance of a librarian.

However, the professional librarians must play a role in imparting OPAC use skills to the users. They should:
a) Allocate resources;

b) Organize training programmes;

c) Provide printed and special instructions;

d) Help users in need of help.

5.1.6. Are they aware of the facilities provided by OPAC?

Online catalogues have evolved through “generations” and we prefer to differentiate catalogues in terms of the sophistication of their search functions and user interface (Norgard, 1993). OPAC has now evolved into the third generation namely the Web-based OPAC. M2 Communications Ltd (2001) noted the following advantages of ‘Ramesys’ Web OPAC:

A major new system that extends book borrowing into the emerging world of e-business is now available from Ramesys. Web OPAC is a new module for Ramesys' Genesis Library contact and catalogue management system that enables members of the public to control their book borrowing on-line. It allows the user to search for a specific book or work by a specific author, check its availability and reserve it. Users also have 24-hour access to their "account" details, including the titles and due-back dates of any books they have on loan, and they have the facility to renew books on loan.

OPAC is an important access point to a library’s collections and holdings. Through the OPAC users can find where items are located via the holdings information. Today, an
OPAC allows full text or index searching. Librarians have loaded data from indexes and abstracts into the OPAC and users can conduct full-text search of materials available in libraries (Brown, 1999). Some OPACs provide abstracts of about 250-350 words (McMillan, 2001). However, up till today UML does not have a Web-based OPAC or any of the facilities mentioned above (see Appendix C). Thus, the foreign postgraduate students obtain only a few advantages of the existing facilities.

About 90.5% of the respondents noted that they do not know what are the other facilities provided by the OPAC. Only 4 respondents said that they know about other facilities, but have never used them. Only 2 respondents identified these facilities as ‘access to other databases’ and ‘indicate loan status.’ They also do not know search options other than keyword searching. They use these keyword searches to find book or journal titles. However, they know how to check for borrower information but they do not know how to renew items via OPAC. Only 31% of the respondents use this feature.

5.1.7. What are the problems faced when searching via OPAC?

Most of the foreign postgraduates claimed that they do not face any difficulties when searching via the OPAC. Only 31% of the respondents noted that their major difficulty is ‘never used OPAC facilities before.’ The second reason is ‘instructions in OPAC are not clear’, followed by ‘no guidance given before use,’ and ‘language difficulties.’ This is not a surprising since most of the postgraduate students do not use the system in its entirety. Most often they conduct known item searches such as title search and therefore, they do not need varied skills to use the system. Due to this,
they do not know how to select search terms or execute search problems. If they have a reading list, it will minimize spelling errors and they will not have language difficulties. Likewise, it prevents the retrieval of too large an item list. For those who have never used OPAC facilities before, this is an actual problem since they have not received any formal training. Therefore, the majority of the foreign postgraduate students may be uncomfortable with the system. Lombardo and Condic (2000) noted that this problem would affect the usage of the system. Novice users need more time to use OPAC than experienced users. Students claimed that instructions in OPAC are not clear, though the UML’s OPAC provide instructions in English step-by-step. Sometimes this may be seen as a difficulty because the respondents have language difficulties. UML does provide printed guides on using OPAC but some of the respondents did not have access to them (See Appendix D).

The obvious problem with foreign postgraduate students is that they tend to perform simple searches using only basic search features and not taking advantage of the sophisticated capabilities of the system. Borgman (1986) has emphasized this problem in her study. Hsie-Yee (1996) also agreed that usage of advanced features of online catalogues is low. As indicated by Harter (1984), several system commands are never used and most commands are employed in fewer searches, as well as the interactive capabilities of the system are relatively of little use. The success rate is low (40.5%= very successful + successful) and most of the users are moderately successful in locating items. This is implies that the UML’s OPAC is no longer an effective access tool for the foreign postgraduate students.
Hindrance to the foreign postgraduate students’ success in searches via OPAC may be attributed to:

a) Lack of computer skills;

b) Lack of library skills;

c) Language difficulties; and

d) System problems.

5.1.8. What other features would they like OPAC to provide?

Most of the foreign postgraduate students did not mention any other features that they would like to use in OPAC. Since they do not use most of the existing features, they are therefore unaware of the various features of an OPAC system. However, they have proposed that the UML’s OPAC interface should be changed, providing a more colourful and a nice interface. Other features suggested are the ability to search a book’s table of contents, summary or index, print facility, facility to see related terms, document rank retrieval, additional access points, error recovery facility and a spelling checker.

Several researchers have found out that the OPAC interface has affected the success of a search. Connell (1991) noted that the interface can be designed to support searching in order of defined priorities. Blecic et al (1999) also found out that the changes to the OPAC screen had a positive impact on users’ online catalogue searching behavior and success, and reduces some of the more common searching errors.
5. 2. Conclusions

The OPAC system of UML is a very important component of the library system because most of the respondents stated that the system has aided their studies. Most foreign postgraduate students use it to find materials at least 1-2 times per a month. However they have not taken the full advantage of the system since they are unaware of its various features. This is due to lack of computer using skills and insufficient knowledge of the English language. The features of the online catalogue system are very important for successful searches. They often conduct simple searches such as keyword searching and tend to conduct known item searches.

Successful online catalogue searches depend upon user’s computer skills, his/her knowledge on OPAC, and the system. In order to get full advantages of the system, librarians should concentrate their attention to these efforts. In order to establish and to maintain an OPAC system, libraries have to expand many resources. Therefore, to be cost effective, librarians must plan for the entire system and other resources related to it.

5. 3. Recommendations

5. 3. 1. Recommendations for Improvement of OPAC Usage

a) Librarians may try to instruct users in fruitful, efficient, and proper ways to use the system (Peters, 1991). In order to use OPAC effectively, foreign postgraduate students should be aware of the system. That could be achieved through OPAC instructions
programme. The existing programme should be well planned and two sessions could be held:

i) **Introduction programme**

When foreign students come to the University of Malaya, an introduction programme which include basic concepts of the OPAC should be organized. Simplicity of this programme is essential since the students may exhibit various levels of computer usage and language skills.

After this session they should be allowed to use OPAC until they are familiar with the system and the computer, and this might reduce their technological fear. They should be given an adequate period for this process and then a second session should be organized.

ii) **OPAC instruction session**

This programme should be focus on the skills of using OPAC such as advanced searching, various features of OPAC, and OPAC capabilities. Students could only attend this session when they are familiar with both the system and the computer. Skills such as data entry skills, subject knowledge, knowledge about the system, and conceptualization skills should be included.

The Julich Research Centre’s Central Library in Germany developed a typical training programme for OPAC users (Lapp, 1996). They used communication channels in order to advertise their training programme. These channels are the research centre’s
formal training programme, posters in the library and the cafeteria, informal invitations, and electronic mail.

They offer OPAC training on a monthly basis, and offer these training sessions in English. Each session lasts about two and a half hours and sessions take place in the library’s conference room. They use an LCD device and invite about 20 persons to a session. They also plan a coffee-break where they elicit information from their clients in an informal atmosphere. They also pass on information by answering their clients’ questions. During the training session, they demonstrate the OPAC functions by performing searches relevant to the users. They demonstrate:

i. How to do a subject search;

ii. What options there are if a subject search does not retrieve any relevant items;

iii. How to limit or expand a search;

iv. How users can save relevant titles to a file;

v. How they can create an individual format;

vi. How to call and work with their search history;

vii. How to print a search result; and

viii. How to place an online order.

This programme could be used to organize a similar training programme on OPAC for postgraduate students because they will spend one or more years to complete their courses.
b) UML should provide printed instructions on OPAC use. Generally, users do not use this type of instructions but when they are confused about using a system, they will use printed instructions. Instructions should be provided in English as well as in the Malay language.

c) Students should be advised to ask for help from librarians when using OPAC. Users tend to terminate search sessions early, when they could not retrieve any result. Therefore, they may need help from an intermediary who can be a librarian.

d) Some of the foreign postgraduate students claim that the number of terminals should be increased. Most of the time students, especially undergraduate students, have to queue for the terminals. If the library can provide additional terminals, or two or more separate terminals for postgraduate students, it would be very useful for them.

5.3.2. Recommendations for Further Research

Most of the activities of the online catalogue such as reading, thinking, evaluating, and deciding are not easily studied (Markey, 1984). This study was designed as a survey questionnaire. Thus, this method does not allow for face-to-face contact with the foreign postgraduate students. There could be numerous errors made when answering the questionnaire such as typographical and spelling errors, terminology errors, misinterpreting screen information, or other errors. The study could not measure the efforts taken for a search session, could not count the hit list for a search and could not assess the success in locating items. Therefore, to determine the actual OPAC usage
by foreign postgraduate students, other research methods including observation, written test and/or transaction log analysis should be used.

The respondents stated that the UML’s OPAC has helped them in their studies. It would be interesting to conduct a study on how this is so. There is not much research on this topic, but Epp (1987) has conducted a study which revealed that using OPAC had increased the respondents teaching productivity.

Therefore, further studies could be conducted to improve upon the findings of this study.