

## THE USE OF INTERNET AMONG MALAYSIAN LIBRARIANS

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### **ABSTRACT**

*The Internet is fast becoming an important tool for librarians. The purpose of this study was to determine how librarians in Malaysia use the Internet for work-related purposes. A questionnaire was sent to 158 librarians, and 83 usable responses were received. The main findings indicated 90% of the respondents used the Internet for work-related purposes. The majority were recent users and had first learned to use it, from a friend or colleague, although they had also attended some formal training sessions. The users spent an average of 45.8 minutes per access, and averaged 6.97 hours per week on the net. All of them used the WWW, with the majority using it at least once a day, while 97.3% used the e-mail, 62.0% used Telnet, 31.5% used file transfers and 28.2% used newsgroups. A vast majority regarded the Internet as essential tool for librarians and felt that it had contributed to increased efficiency in their workplace. The main problem faced was the lack of time.*

Keywords: Internet use; Librarians; Malaysia.

### **INTRODUCTION**

The Internet has become a familiar term to almost everyone. Originally intended as a means of communication between researchers, it has now evolved to become a network of networks, linking millions of computers. The Internet facilitates electronic mail communication, logins to remote computers, file transfers, and access to a multitude of information resources. From a slow start, the Internet has grown into a global community with an estimated 60 million users in mid-1997.

Most libraries and information centers have welcomed this new technology. The

initial use of it was confined to online searching of databases for reference and inter-library loans. Today, the Internet provides libraries with vast opportunities in diverse areas such as management activities, question answering services, international interlibrary loans, document delivery services, online transactions, government information, information sharing, and increasing librarian's visibility and value to the community (McKenna 1994).

### **THE PROBLEM**

Librarians have been among the strong advocates of the Internet. The Internet provides librarians with opportunities for

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initiating new services and programs, and to perform traditional services more effectively and efficiently. While there has been studies on the use of the Internet by librarians in the developed countries, little is known about its usage in Malaysia.

The main aim of the study was to determine how librarians in Malaysia use the Internet for work-related purposes. In particular, it was intended to find out the type of services for which the Internet was used, the frequency and purpose of use, the problems faced, and the opinions on the need for the Internet and its contribution to efficiency in the library.

The term librarian was used in a loose context in this study to refer to anyone working in a library, and no distinction was made on the basis on qualification or nature of job.

## **REVIEW OF RESOURCES**

An initial review of the literature and electronic resources was conducted by searching the print indexes and electronic databases using combinations of keywords such as Internet, librarian and use, and their synonyms. Some of the relevant findings are presented below.

Among the earlier studies located was Ladner and Tillman's (1992) survey on special librarians. Their study indicated that an overwhelming majority of the special librarians (93%) used the Internet for electronic mail. They also found that 65% of the respondents had trained themselves on the Internet, while 59% had learned informally from a colleague.

In a follow-up to the above study, Singh (1994) found that corporate librarians were aware of the consequences of not integrating the resources available on the Internet in their routine library work and were enthusiastically exploring the new frontiers of 'cyber-space' on their way to becoming expert 'cyber-librarians.'

The 17<sup>th</sup> International Essen Symposium expressed concern that the development of electronic resources had been so rapid that many information professionals had been left behind. Another issue at the symposium was that access to resources through the Internet no longer needed to be intervened by trained professionals, and the future role of the librarian was uncertain (Helal and Weiss, 1995).

Condic's (1995) survey of Internet use by academic librarians showed that library staff and community training takes place through non-credit workshops (62%), presentations to academic departments (55%), and sessions from bibliographic instruction (54%). She also noted that librarians were finding it increasingly difficult to maintain their Internet skills due to lack of time.

In a study of 101 Canadian librarians, Finlay and Finlay (1996) suggested that technical and procedural knowledge had a significant influence on attitudes towards the Internet and the frequency of use. In a study by Ghidui cited in the Finlay study, it was noted that the majority of the respondents were self-taught.

Kovacs, Kraft and Schneider (1997) conducted an online survey on the net to find out the extent and specific ways in which

librarians use the Internet to do their jobs. Their findings could not be located on the net.

### **METHODOLOGY**

This study adopted a descriptive approach, primarily because it was an exploratory study and no local studies could be located on the subject.

The population for this study was all librarians with a Malaysian work address. This population was established by combining the membership list of the Library Association of Malaysia, and all registered attendees at the 10th CONSAL meeting in 1996 who had a Malaysian library address, which resulted in a figure of 315 persons. A random sample of 50% of the population was selected for the survey.

The survey instrument was developed based on the research questions, using the researcher's own knowledge of local librarians' working conditions and Kovacs, Kraft and Schneider's [1997] online survey. The instrument was pretested on ten local librarians and changes were made based on their comments and suggestions.

The actual questionnaire was mailed out in early September 1997, and a follow-up postcard was sent three weeks later. The returned questionnaires were checked for completeness. Some respondents did not answer all questions, and the missing responses are reflected in the varying sample size (*n*) values in the findings below. The data was entered into SPSS Version 7.5 and analyzed for descriptive statistics.

### **FINDINGS AND DISCUSSIONS**

#### **Background of Respondents**

Out of the 158 questionnaires sent out, four were returned unopened as the respondents had either moved with no forwarding address, or had resigned and no longer worked in a library environment. A total of 83 usable responses were received, giving a response rate of 53.9%. Two responses were received very late, after the analysis had been completed, and two other respondents sent e-mail messages stating that they had received the instrument late and were unable to respond. These four were not included in the analysis.

Of the 83 respondents, 16 (19.3%) were males and 67 (80.7%) were females. Their mean age was 39.5 years, with the youngest being 24 and the oldest being 50. Their mean length of service as a librarian or information professional was 14.2 years, with the lowest being one year and the longest being 27 years.

The majority of the respondents were from academic libraries and special libraries. Table 1 shows the distribution of the respondents' workplace.

In terms of qualifications, 36.1% of the respondents had a Master's degree, 13.3% had a Bachelor's degree or equivalent, while 33.7% had a Diploma in Library and/or Information Science or equivalent. One person had a certificate, while another respondent had no formal qualification.

The main language spoken at home was Bahasa Malaysia among 78.3% of the res-

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pondents, with another 18.2% using English, and the remaining 3.6% using Chinese or other languages.

Table 1: Workplace of Respondents

Workplace/Nature of Work	Percentage (n=82)
Academic Library	37.8
Special Library	25.6
Public Library	18.3
National Library	15.9
School Library	1.2
Consultancy	1.2

### Awareness and Use of Internet

All 83 respondents had heard of the Internet, and 75 of them (90.4%) used it either at their place of work or home, or both.

Of the eight who had heard of the Internet but did not use it, four respondents indicated that the Internet was not available at their place of work, three indicated that it was available but there were too many hindrances to use it. Only one respondent indicated that he/she saw no reason for using it.

Among the 75 Internet users, 68 (90.7%) used it primarily from their place of work, five (6.7%) used it both at work and home, whereas one (1.3%) used it primarily at home, while another indicated 'other place(s)'.

The majority of the respondents were recent users, with 69.4% having begun

using it in 1995 or later. Table 2 shows the year the respondents first started using the Internet.

Table 2: Year of First Usage

Year Began Using Internet	Percentage of Respondents (n=75)
1991	1.3
1992	2.7
1993	8.0
1994	18.7
1995	30.7
1996	32.0
1997	6.7

The initial modes of learning to use the Internet were through a course or training session (37.3%), self-taught (34.7%) and from a friend (24.0%). However, 74.7% had also attended some form of training that had been organized by their place of work. This suggests more librarians in Malaysia had had the opportunity of formal learning, as compared to the Ladner and Tillman (1992) and Condit (1995) studies, although the time period and places of the studies are different.

The Internet users spent an average of 45.8 minutes each time they accessed the net, with a range of 1 minute to 300 minutes per access. In terms of total time, they averaged 6.97 hours per week, with a range of 1 hour to 25 hours per week. Assuming a 40-hour workweek, this data suggests that on an average Malaysian librarians spend approximately 17.5% of their time using the Internet.

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When analyzed according to the type of library, it was noted that academic library users spent more time on each access to the net, as well as more time per week compared to other libraries. Table 3 shows the mean times by type of library of the respondents.

**Use of E-mail**

A resounding 73 out of the 75 respondents (97.3%) indicated that they used e-mail services. The majority of the respondents (59.4%) used it more than

once per day. The frequency of e-mail usage is shown in Table 4.

The mean time spent on e-mail related activities was 2.23 hours per week, with a range of 10 minutes to 12 hours per week. The main uses of e-mail were for correspondence, primarily with overseas colleagues, for answering queries, sending out notices and minutes of meetings, communication with publishers, and inter-library loan or document delivery matters. Among the less frequent uses mentioned were tracing local newspapers in foreign

Table 3: Mean Time Spent on the Internet Use by Types of Libraries

Type of Library	Mean Time Per Access (minutes)	Mean Time per Week (hours)
Academic Library ( <i>n</i> =30)	50.50	9.22
Special Library ( <i>n</i> =18)	34.58	5.97
Public Library ( <i>n</i> =13)	49.23	5.81
National Library ( <i>n</i> =11)	41.82	4.29

Table 4: Frequency of E-mail Usage

Average Frequency of E-mail Usage	Percentage of Respondents ( <i>n</i> =69)
More than once a day	59.4
Once a day	11.6
2 – 5 times per week	18.8
Once a week	2.9
2 – 4 times a month	4.3
Once a month	1.4
Other	1.4

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countries, and arranging schedules for overseas visits

### Use of the World Wide Web (WWW)

All 75 respondents indicated that they used the World Wide Web. The frequency of use is indicated in Table 5.

Table 5: Frequency of Use of World Wide Web

Average Frequency of WWW Usage	Percentage of Respondents (n=74)
More than once a day	31.1
Once a day	18.9
2 – 5 times per week	32.4
Once a week	5.4
2 – 4 times a month	2.7
Once a month	4.1
Others	5.4

The mean time spent on the WWW was 3.08 hours per week, with a range of 15 minutes to 14 hours per week.

The main uses of the WWW were for information retrieval, answering reference queries, checking cataloging data from other library catalogs, and keeping posted with the information on the latest publications. Among the less frequent uses mentioned were evaluating web sites for

linkage to the library's own homepage, searching for materials for inclusion in the local library newsletter, and evaluating electronic journals.

The number of sites visited per month ranged from 2 to 200, with a mean of 16 sites. There were a variety of sites regularly visited, and no pattern could be discerned.

Of the 75 respondents, 45 of them (60%) indicated they used *Netscape* as their primary browser, while the other 40% indicated they used *Internet Explorer* as their primary browser.

The main search engines used (in order of decreasing frequency) were *Yahoo*, *Infoseek*, *Webcrawler*, *Excite*, *Magellan* and *AltaVista*. The most popular, *Yahoo*, was preferred by 45.8% of the respondents, with *Infoseek* by 18.1% of the respondents, and followed by the others.

A comparison of the time spent on e-mail and the WWW showed that academic library respondents spent more time on e-mail as compared to the respondents from other libraries. Table 6 shows the mean time spent on e-mail and the WWW per week by type of library.

There was also a difference in the time spent on e-mail and the WWW among those who had had formal training as compared to those who had not. Table 7 shows the mean time spent on e-mail and the WWW.

Table 6: Mean Time Spent on the E-mail and WWW by Type of Library

Type of Library	Mean Time on E-mail (hours per week)	Mean Time on WWW (hours per week)
Academic Library ( <i>n</i> =27)	2.58	3.23
Special Library ( <i>n</i> =17)	2.00	3.63
Public Library ( <i>n</i> =12)	2.08	2.62
National Library ( <i>n</i> =12)	1.83	1.95

Table 7: Mean Time Spent on E-mail and WWW after Training

Formal Training	Mean Time on E-mail (hours per week)	Mean Time on WWW (hours per week)
Had formal training ( <i>n</i> =51)	1.94	2.93
No formal training ( <i>n</i> =19)	3.00	3.08

### Use of Newsgroups

Only 20 out of 71 (28.2%) librarians who responded to the questionnaire indicated that they used newsgroups. However, those who did use the newsgroups were frequent users, as shown in Table 8 where 47.4% of the respondents used it at least once a day.

The mean time spent on newsgroups was 1.18 hours per week, with a range of 0.2 to 3.0 hours. The main use of newsgroups was to keep abreast of the current developments and to seek information on solving problems.

Table 8: Frequency of Use of Newsgroups

Average Frequency of Newsgroup Usage	Percentage of Respondents ( <i>n</i> =19)
More than once a day	26.3
Once a day	21.1
2 – 5 times per week	5.3
Once a week	15.8
2 – 4 times a month	15.8
Once a month	5.3
Other	10.5

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### **Use of Telnet**

The use of Telnet was more frequent, with 44 respondents out of 71 (62.0%) indicating that they used Telnet services. The mean time spent on Telnet services was 2.80 hours per week, with a range of 0.25 to 30 hours per week. The sites most frequently accessed were OPACs and library catalogs of other institutions, and bibliographic databases.

### **Use of File Transfer Protocols (FTPs)**

The use of file transfer protocols (FTP) was less frequent, with only 23 out of 73 respondents (31.5%) indicating that they used this service. The types of materials downloaded often were articles and news, anti-virus software, and software for the enhancement of the net.

The data presented above suggests that Malaysian librarians are active users of the Internet. A comparison of the various services used is shown in Table 9.

### **Problems faced**

The major problem faced by the librarians in the use of the Internet was the lack of time, with 49.3% indicating this being the major problem. This is similar to Kondic's (1995) findings. Surprisingly, only 18.7% indicated the lack of skills as a major problem. Table 10 shows the major problems faced.

### **Need for Internet**

A vast majority (82.7%) of the Malaysian librarians indicated that the Internet was an essential tool. Table 11 shows their perceptions on the need for the Internet.

Table 9: Comparison on Internet Services Used

Internet Service	Percentage of Respondents Using Service
World Wide Web	100.0
E-mail	97.3
Telnet	62.0
File transfers	31.5
Newsgroups	28.2

Table 10: Problems in Use of Internet

Problem	Percentage Indicating as Major Problem ( <i>n</i> =75)
Lack of time	49.3
Lack of skills	18.7
Other problems	8.0
No major problem faced	24.0



### **Need for Internet**

A vast majority (82.7%) of the Malaysian librarians indicated that the Internet was an essential tool. Table 11 shows their perceptions on the need for the Internet.

Table 11: Need for Internet

Need for Internet	Percentage of Respondents (n=75)
Essential	82.7
Occasionally useful	14.7
Nice to have	2.7

### **Effect of Internet on Efficiency in the Library**

All respondents agreed that the Internet had contributed to improve the efficiency in their library, with 65.3% indicating that it had increased the efficiency a great deal. None of the respondents checked the 'very little' or 'not at all' responses. Table 12 shows their perceptions on the contribution of the Internet to the improvement of efficiency.

Table 12: Contribution of Internet to Improving Efficiency

Contribution to Efficiency	Percentage of Respondents (n=75)
A great deal	65.3
A fair amount	32.0
A little	2.7

### **Views on Restriction of Materials**

The respondents were asked if they agreed with the statement "Certain information should not be made available on the Internet/World Wide Web".

A total of 49 out of 74 (67.6%) respondents agreed with the statement. The types of materials that they felt should not be on the Internet were pornographic materials, racially sensitive materials, and confidential items.

## **CONCLUSIONS AND RECOMMENDATIONS**

This study indicates that Malaysian librarians are active users of the Internet. Although the majority of the respondents were recent users, it showed that the WWW and e-mail were heavily used for work-related purposes. The librarians felt that the Internet was an essential feature and had contributed a great deal in improving the efficiency in their library. This reinforces the argument that the Internet is an important tool for librarians, and they should be provided with facilities and encouragement to use the net in their work.

This was an exploratory study, and more studies are needed to examine how other librarians use the net, and the effect of this usage on their work. It is also suggested that future studies should go beyond questionnaires, and use interview and observation methods for an in-depth look at the information seeking behavior of librarians. As intermediaries between complex information resources and a diverse clientele, the findings on informa-

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tion seeking and retrieval can lead to a better understanding of worker productivity in general.

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