

CHAPTER 4

RESULTS AND DISCUSSION

The popularity of the Internet over the past few years has made a substantial impact on libraries. Library users no longer see the library as the only source for information, for they now feel that everything they need is available on the Internet with just a touch of a button or a click of a mouse. The perceptions of postgraduate students and librarians at the University of Malaya will be one indication of whether the Internet will substitute the library or not.

As described in the methodology chapter, a questionnaire containing 26 questions was distributed among 100 randomly selected postgraduate students from different faculties at the University of Malaya to gauge their perceptions on the impact of the Internet on the library.

Demographic Patterns of Respondents

The overall response rate was 71%, as shown below in Table 1.

Table 1
Rate of Response by Faculty

Faculty	Number of Responses Received	Percentage Response
Engineering	6	8.5
Faculty of Computer Science and Info. Tech.	8	11.3
Science	13	18.3
Education	8	11.3
Economics	6	8.5
Arts and Social Sciences	8	11.3
Institute of Postgraduate Studies and Research	2	2.8
Law	9	12.7
Medicine	11	15.5
<i>Total</i>	71	100.0

The distribution is not even due to the fact that the questionnaire was distributed during the holidays and some students were not available.

The distribution by level of study was fairly representative in the university with almost two-thirds being Masters level students, as shown in Table 2 below.

Table 2

Level of Study of Respondents

Level of Study	Number of Responses Received	Percentage Response
Postgraduate Diploma	5	7.0
Masters	48	67.6
Ph.D.	18	25.4
<i>Total</i>	71	100.0

Of the 71 respondents, 49 (76 %) were males and 22 (24 %) were females.

From the 71 respondents, only 8 students reported that they did not use the Internet for research related purposes or projects related to their studies, indicating that 88.7% of the postgraduate students did use the Internet, as shown in Table 3.

Table 3

Use of the Internet for Research Purposes

Usage of the Internet	Number of Responses	Percentage Response
Use the Internet	63	88.7
Do not use the Internet	8	11.3
<i>Total</i>	71	100.0

The following results and discussion are based on the replies given by 63 respondents.

Of the users, 46 (64.6 %) were males and 17 (24.1 %) were females.

Usage of Library by Respondents

A large percentage of the postgraduate students (47.9%) used the University of Malaya Library less than once per day, as shown in Table 4 below. It is also clear from Table 4 that postgraduate students who used the library more than once were very few, as only 5 respondents (7%) indicated they used the library twice a day, and 9 (12.7%) used it three or more times per day. (The use is estimated to be one hour at once)

Table 4
Frequency of Use of Library per Day

Frequency of Use	Number of Respondents	Percentage Response
Less than once	34	47.9
Once per day	23	32.4
Twice a day	5	7.0
3 or more	9	12.7
<i>Total</i>	71	100.0

Use of the Internet

Major Information Sources

As seen above, (Table 3) 88.7% of the sample postgraduate students at the University of Malaya used the Internet for research related purposes or projects relating to their degree.

The respondents were asked to indicate the major sources of information used in their research. Table 5 below shows the sources indicated.

Table 5
Major Information Sources

Source of Information	Number of Respondents	Percentage Response
Books, monographs and other printed materials (excluding journals)	5	7.0
Printed journal	6	8.5
Non-print materials (e.g. CD-ROMs) only	0	0.0
Internet	5	7.0
Books and printed journals	28	39.4
Books and non-print materials	11	15.5
Books and Internet	6	8.5
Printed journals and non-print materials	2	2.8
Printed journals and Internet	2	2.8
Non-print materials and Internet	1	1.4
Books, Printed journals, Non-print and Internet	3	4.2
Other sources, including others not listed	2	2.8
<i>Total</i>	71	100.0

It is obvious from Table 5 that a large percentage of the postgraduate students (39.4%) prefer to use books and printed journals as sources of information when doing their research. Based on the table, it is noted also that none of the students used the non-print material (e.g. CD-ROMs) as their sole source of information for research. This suggests that University of Malaya students use a variety of resources for their research.

It is also clear that students do not rely much on the Internet as a single source of information for their research, since the percentage was only 7.0%. This may be due to many reasons, including problems that students encounter when using the Internet.

In addition, an important fact stemming from Table 5 is that postgraduate students liked to use the Internet in combination with other sources of information from the library. This is obvious since about 15.5 % students used both print and non-

print materials when doing their research, while about 2.8% used the Internet in addition to print material to conduct their research. This again may be due to many reasons, including the possibility that postgraduate students do not trust the information obtained from the Internet, and cannot depend entirely on it to do their research.

Table 6 below shows the distribution of the major types of information sources used for research by postgraduate students from the various faculties.

Table 6
Relationship between Students' Faculties and Information Sources Used

Faculty	Number of Responses from Faculty	Type of Information Sources Used within Faculty				
		Books and Monographs	Printed Journals	Combination of print and non-print sources	Internet alone	All the Sources
Engineering	6		16.7%	50%		33.3%
Computer Sc. And Info Tech.	8	12.5%		37.5%		50.0%
Science	13		7.7%	40.1%		46.2%
Education	8	12.5%		37.5%		50.0%
Economics	6		16.7%	50%		33.3%
Arts & Social Sciences	8	25.0%	12.5%	12.5%	25.0%	25.0%
Inst. Of Postgraduate Studies and Research	2					100.0%
Law	9			66.4%		33.3%
Medicine	11	9.1%	18.2%	17.2%		45.5%

It is clear from the above table that very few students used the Internet as a single source of information to do their research. The number of students who used

books and monographs alone or printed journals alone was also low. Most students used a combination of print and non-print sources, including the Internet in combination with other sources.

The percentage of students from the Faculty of Science using printed materials or the Internet as the sole source of information was also very low. This may be due to the reason that science students tend to do much of their research in the laboratories. This was borne out by statements made to the researcher by a few science students during the data collection process. This may also apply to postgraduate students from the Institute of Postgraduate Studies and Research (IPSR), as the two students from IPSR who responded to the study said they were using all of the available information sources. This fact is also evident for postgraduate students at the Faculty of Medicine. A large percentage (45.5%) indicated they were using all of the available resources, but no student reported using the Internet as a sole source of information.

The case is different for the postgraduate students who do theoretical or field-based research. As can be seen from the above table, 25% of the students at the Faculty of Arts and Social Sciences used the Internet as a single source of information for their research. A large percentage of students at the Faculty of Economics (33.3%) and the Faculty of Education (50%) were using all of the resources.

From the above table, one can infer that students in general tend to use a combination of the different sources available. It can also be inferred that students at the faculties where research is practical-oriented tend to use less print material, as compared to those at the theory-oriented faculties where students give more attention and consideration to printed and non-print sources.

Patterns of Use of the Internet

Table 7 below shows the methods through which postgraduate students learned to use the Internet.

Table 7
Methods of Learning to Use the Internet

Method of Learning	Number of Respondents	Percentage
Self study	34	47.9
University course	1	1.4
From Friends	25	35.2
Library Orientation	3	4.2
<i>Missing</i>	8	11.3
<i>Total</i>	71	100.0

It is obvious from the table that a larger percent (47.9%) learned to use the Internet by self-study, followed by (35.2%) who learned from friends. The number of students who learned through university course or a library orientation program is very small. From these facts, it is important to note that self-directed learning and learning from friends are the primary methods used by postgraduate students to learn about the Internet.

This situation may provide one explanation why postgraduate students do not rely very much on the Internet as a sole source of information to do their research. Learning by themselves or from friends is not always an efficient way of acquiring Internet skills. This may be one reason why postgraduate students use information from the Internet in combination with information from other library sources, as shown in Table 5. They may not be aware of methods to obtain in-depth information from the Internet.

Table 8 below shows the main Internet services used.

Table 8
Internet Services Used

Internet Services	Number of Respondents	Percentage
E-Mail	6	8.5
File Transfer Protocol (FTP)	2	2.8
Litservs/Newsgroups	5	7.0
World Wide Web (WWW)	13	18.3
Internet Relay Chat (IRC)	1	1.4
E-Mail/FTP	1	1.4
E-mail /WWW	13	18.3
Listserve /WWW	2	2.8
E-Mail/Listserve/www	2	2.8
E-Mail/FTP/WWW	4	5.6
All of the above	14	19.7
<i>Total</i>	63	88.7
<i>Missing/Did not answer</i>	8	11.3

It is clear from Table 8 above that postgraduate students used a combination of the services available on the Web. The services that were more popularly used include the World Wide Web (18.3%), e-mail and the World Wide Web (18.3%) and the E-mail alone (8.5%).

E-mail and WWW are used intensively by postgraduate students. This may be due to the fact that they are the easy to use, and also are a faster compared to other services on the Net. These two services are also useful sources of information and efficient mean of communication. It is surprising that few students used listserve and newsgroups for their research. These can be useful sources of information. The low usage may be because of students not knowing how to use them effectively.

Table 9
Internet Services Used by Faculties

Faculty	Number of Responses from Faculty	Type of the Internet Services					
		Combination of services	E-mail	File Transfer Protocol	Litserve/ News group	World Wide Web (WWW)	All Services
Engineering	5	20.0%	20.0%	20.0%		40.0%	
Computer Sc. and Info. Tech.	8						100.0%
Science	9	55.6%	22.2%			22.2%	
Education	7	42.8%	14.3%		14.3%	28.6%	
Economics	6	50.0%			33.3%		16.7%
Arts and Social Sciences	7	28.5%	14.3 %	14.3%	14.3%	28.6%	
Institute of Postgraduate Studies and Research	2					100.0%	
Law	9						100.0
Medicine	10	50.0%	10.0%		10.0%	30.0%	

From Table 9 it is clear that postgraduate students using all of the services provided by the Internet were very few, and these were students from the Faculty of Computer Science and Information Technology and the Faculty of Law. A probable reason for students at the Faculty of Computer Science and Information Technology to use all services offered by the Internet may be that the faculty offers a variety of courses about the Internet to its students. This is not the case for the Faculty of Law students, but it is possible they may be more concerned about the content of the work (please refer to table 13).

One important fact to be inferred from this table is that the e-mail and the World Wide Web (WWW) received the greater weight of use. This is evident from the fact that WWW is used by 40% of the Faculty of Engineering students, 22% of the

Faculty of Science students, 28% of the Faculty of Education students, 28% of the Faculty of Arts and Social Sciences students, 100% of The Institute of Postgraduate Studies and Research students and 30% of the Faculty of Medicine students.

A larger number of students were using a combination of two or more of the different services provided by the Internet.

Time of Using Internet

Postgraduate students use the Internet with its different services at different times of the day, as shown in Table 10. The majority of them use the Internet during daytime, primarily in the mornings and afternoons which could be attributed to the fact that most of the students are using it at the university campus and not at their homes. This fact suggests that most of the postgraduate students use the university computers to access the Internet, because they are free and available every where in the campus.

Table 10

Times of Using Internet during the Day

Time of Use	Number of Respondents	Percentage
Morning	11	15.5
Afternoon	15	21.1
Evening	3	4.2
Night	2	2.8
Any time when necessary	13	18.3
Morning /afternoon	12	16.9
Morning /Evening	2	2.8
Morning/night	2	2.8
Afternoon/Evening	3	4.2
<i>Missing</i>	8	11.3
<i>Total</i>	71	100.0

Duration of Use

The average time spent by postgraduate students on the Internet was approximately 3 hours per day.

Table 11

Places where Postgraduate Students Primarily Used the Internet

Places of Use	Number of Respondents	Percentage
University computer center	18	25.4
Faculty	15	21.1
Home	3	4.2
The Library	7	9.9
University/Faculty	2	2.8
Faculty/Home	9	12.7
Faculty/Library	3	4.2
University/faculty/home	1	1.4
University/Faculty/Library	3	4.2
University/Home	2	2.8
<i>Total</i>	63	88.7

Postgraduate students use the Internet at different places, with the main uses being, at the Computer Services Unit (UNIX LAB), faculty laboratories, home and the university library. It is quite obvious from Table 11 that the larger percent of the postgraduate students (25.4%) used the Internet in the university computer center, followed by the faculties (21.1%). This may be because Internet services are available for free in all faculties of the university.

It is important to note that about 9.9% of the postgraduate students used the Internet in the library. This fact may add to the role of the library as a training center where students can use the Internet.

Table 12
Factors to Determine Internet Information Quality

Factors	Number of Respondents	Percentage
The author of the work	11	15.5
The source of the work	13	18.3
The content of the work	35	49.3
Others	4	5.6
Missing	8	11.3
Total	71	100.0

Postgraduate students have to consider many factors when using the information obtained from the Internet. One of the most important factors is the quality of information from the Internet. When asked how they determined the quality of information, 49.3% reported that the content of the work was the first indicator to show whether a work was of a good quality or not. A smaller percentage used the source of the work (18.5%) and 15.5% of the respondents used the author of the work. Only few of them used some other indicators to determine the quality of the work, such as the relevance of the work and its date.

Table 13 below shows the factors postgraduate students from different faculties used to determine the quality of information obtained from the Internet.

The content of the work also received the greater percentage among the different faculties. Of the students from the Faculty of Engineering, 80% advocated the content of the work as the major single indicator of information quality. The rates for other faculties were 33.3% for the Faculty of Science, 85.7% for the Faculty of Education, 16.7% for the Faculty of Economics, 57.1% for the Faculty of Arts and

Social Sciences, 50% for the Institute of Postgraduate Studies and Research, 77.8% for the Faculty of Law and 40% for The Faculty of Medicine. The high percentage in the Faculty of could be linked to their usage as they stated that they were using all of the Internet services (please refer to table 9).

Table 13

Factors to Determine Information Quality by Faculty

Faculty	Number of Respondents in a Faculty	Factors			
		The author of the work	The source of the work	The content of the work	Others
Engineering	5			80.0%	20.0%
Faculty of Computer and IT	8	12.5%	25.0%	62.5%	
Science	9	44.4%	22.2%	33.3%	3
Education	7		14.3%	85.7%	
Economics	6	16.7%	50.0%	16.7%	16.7%
Arts and Social Sciences	7	14.3%		57.1%	28.6%
Institute of Postgraduate Study and Research	2		50.0%	50.0%	
Law	9	11.1%	11.1%	77.8%	
Medicine	10	30.0%	30.0%	40.0%	

Table 14

The Influence of the Internet on Research

Type of influence	Number of Respondents	Percentage
1. Browsing less printed material	14	19.7
2. Conducting research with distance colleagues	6	8.5
3. Spending considerable time on E-mail	11	15.5
4. Carry out tasks previously done by reference librarian	5	7.0
5. Others	5	7.0
6. All of the above	2	2.8
7. Browsing less materials / conducting research with distant colleagues	1	1.4
8. Browsing less print materials/ spend considerable time on e-mail	1	1.4
9. Less print materials/ carry out tasks done by reference librarian	8	11.3
10. Research with distant colleagues/ Carry out tasks done by reference librarians	1	1.4
11. Browsing less print materials/. Conducting research with distance colleagues /Carry out tasks previously done by reference librarian	1	1.4
12. Browsing less printed material/. Spending considerable time on E-mail /. Carry out tasks previously done by reference librarian	8	11.3
Missing	8	11.3
Total	71	100.0

The Internet is influencing postgraduate students' research in different ways. Table 14 shows the responses on how the Internet was influencing their research. A larger percent of them (19.7%) stated they were browsing less printed materials. This indicates that they are using information from the Internet whereas use of information from the library has declined.

A second major influence was that about 15.5% were spending considerable time on e-mail for research related activities. In addition, the Internet allowed 7% of

the respondents to carry out tasks which was previously done by reference librarian. This suggests the Internet is providing postgraduate students with answers for short and quick queries.

Table 15
Forms of Influence of Internet on Student's Research

Forms of Influence	Number of Respondents	Percentage
Access to more recent information	21	29.6
Cooperation with colleagues	19	26.8
Faster access to databases	23	32.4
<i>Missing</i>	8	11.3
<i>Total</i>	71	100.0

A large percentage of the postgraduate students (32.4%) stated that the Internet allowed faster access to databases. Another 29.6% favored it due to the fact that it provided access to more recent information.

In addition, the Internet influenced about 26.8% by allowing them to have better cooperation with colleagues through the different services. Students used the different Internet services to contact each other and to share ideas for research purposes.

Table 16

Problems Encountered when using the Internet

Type of Problem	Number of Respondents	Percentage
Lack of knowledge/Skill	19	26.8
Low quality/irrelevant information	7	9.9
Slow retrieval	37	52.1
<i>Missing</i>	8	11.3
<i>Total</i>	71	100.0

There are some problems facing postgraduate students when using the Internet. These problems included a lack of knowledge, slow retrieval and low quality of information. It is clear from table 16 that the majority of students (52.1%) found slow retrieval, and other factors which cause slow retrieval such as power failure and server problems to be a major problem. It was also surprising to learn that 26.8% of the students were lacking knowledge or skills to use the Internet. This may be due to the fact that those who had received formal training were very few, and that most of the students had learned to use the Internet via self-study. Only 9.9% indicated the low quality of information as a major problem.

It is important to note that no student mentioned language as a problem when using the Internet.

Assistance from the University Library with the Internet

To know the impact that the Internet will have on the library, it is important to study the assistance rendered by the university library to postgraduate students in the University of Malaya. Table 17 below shows the numbers indicating they had received assistance with the Internet from the UM Library.

Table 17
Assistance from the Library

Assistance	Number of Respondents	Percentage
Received assistance	20	28.2
Do not receive assistance	43	60.6
<i>Missing</i>	8	11.3
<i>Total</i>	71	100.0

The number of postgraduate students who received assistance from the library amounted to only 28.2% out of the sample. This may be due to the fact that most of the students had learned to use the Internet through self-study or from friends, and that most of them used the Internet in the computer centre or the respective faculties.

Assistance from the library was given in different ways including, lectures, practical training, brochures, etc. Table 18 below shows the kinds of training the postgraduate student had received from the library to use the Internet. The majority of them 11.3% had assistance in a form of practical training, 4.2% received printed materials or brochures, while the rest had received lectures, workshops or a combination of two or more of the kinds of assistance, as shown in Table 18.

Table 18

Types of Assistance from the Library

Type of Assistance	Number of Respondents	Percentage
1. Lectures/workshops	1	1.4
2. Printed materials/brochures	3	4.2
3. Practical training	8	11.3
4. Lectures/workshops/Printed materials/brochures	4	5.6
5. Lectures/workshops/Practical training	1	1.4
6. Lectures/workshops Lectures/workshops/Printed materials/brochures	3	4.2
<i>Total</i>	20	28.2

Table 19

Availability of Librarian during Training Sessions

Availability	Number of Respondents	Percentage
Available	18	90
Not available	2	10
<i>Total</i>	20	100

Table 19 shows that 90% who received training also stated that librarians were available during the training sessions, whereas 10% indicated the non-availability of librarian during the training sessions.

Table 20

Availability of Librarians after Training Session

Availability of librarian	Number of Respondents	Percentage
Available	9	49
Not Available	11	51
<i>Total</i>	20	100.0

On the contrary, when asked to state whether librarians were available after the training sessions, the majority of students (51%) said that they were not. Only 49% stated that were available after the training session. These facts are shown in Table 20 above.

Table 21

Satisfaction with Assistance Provided by Librarians

Level of Satisfaction	Number of Respondents	Percentage
Very satisfied	1	5
Satisfied	13	65
Not satisfied	6	35
<i>Total</i>	20	100.0

Table 21 above shows that the majority of postgraduate students (65%) in the sample were satisfied with the assistance rendered to them by librarians. However only 5% were very satisfied but about 35% were not satisfied with assistance given by the librarians.

Table 22

Seeking Help from Librarians to Determine Quality of Information

Help Seeking	Number of Respondents	Percentage
Seek Help	8	40%
Do not seek help	12	60%
<i>Total</i>	20	100.0

Table 22 shows that about 60% did not seek any help to determine the quality of information they obtained from the Internet, while 40% did seek help.

This may be due to the fact that most of the respondents used the Internet in the Computer Centre or in the respective faculties where librarians were not available.

Changes in the Role of the library

It is expected that the use of the Internet will bring about some changes in the role of library and librarians. Concerning the role of the library, the respondents were asked to give some opinions and views about what should the role of library be in this new era of information technology.

Table 23

Expected Role of the Library in IT Era

Role	Number of Respondents	Percentage
Continue to provide print materials	15	21.1
Non Print materials	18	25.4
Training on the Internet	25	35.2
Others	3	4.2
Print materials/ training	1	1.4
Print & non print materials and training	1	1.4
<i>Missing</i>	8	11.3
<i>Total</i>	71	100.0

A large percentage (35.2%) of them said that the library should provide more training on the use of the Internet, and about 25.4% stated that the library should provide more non-print materials such as CD-ROM. It is also obvious from Table 23 that about 21.1% of the students wanted the library to continue providing print materials. Only a few of the respondents combined all or at least two of the options provided in the questionnaire.

Table 24
Expected Role of the Library by Faculty

Faculty	Number of respondents	Continue to provide print material	Provide more non-print material	Provide training on the use of the Internet	Others
Engineering	5	20.0%		60.0%	20.0%
Computer Sc. and Information Tech.	8	37.5%	50.0%		12.5%
Sciences	9	55.6%	33.3%	11.1%	
Education	7	14.3%	28.6%	57.1%	
Economics	6		16.7%	66.7%	16.7%
Arts and Social Sciences	7	14.3%	28.6%	57.1%	
Institute of Postgraduate studies and Research	2			100.0%	
Law	9	11.1%	33.3%	55.6%	
Medicine	10	30.0%	40.0%	30.0%	

Table 24 above shows the perception of respondents by faculty on the role of the library in the future. About 60% from the Faculty of Engineering stated that the library should provide training on the use of the Internet, 20% expected the library to continue providing print materials and 20% were expecting the library to carry out other roles, such as determining appropriate sources for postgraduate researches. At the Faculty of Computer Science and Information Technology, 50% asked for the provision of non-print materials such as CD-ROM, 37.5% were concerned about print material and 12.5% asked for more training on the use of the Internet. The majority of respondents (55.6%) at the Faculty of Sciences wanted the library to continue providing print materials and text books, 33.3% were concerned about non-print materials and only 11.1% asked for more training on the Internet. The possible

interpretation of these results is that science students do most of their work in the laboratories, unlike the humanities and social sciences students who preferred the provision of more training on the use of the Internet. This fact can easily be seen from Table 26, since students who asked for training on the Internet were majorities at the Faculty of Economics 66.7%, Law 55.6% and 57% at the Faculty of Education.

Table 25
Role of Librarian

Role to be played by Librarian	Number of Respondents	Percentage
1. Do their jobs as at present	10	14.1
2. Work as guide to information sources	35	49.3
3. Work as Internet trainers	9	12.7
4. Do their jobs as at present /Work as guide to information sources	1	1.4
5. Do their jobs as at present / Work as Internet trainers	1	1.4
6. Work as guide to information sources /Work as Internet trainers	3	4.2
7. Work as guide to information sources/Do their jobs as at present /Work as guide to information sources.	4	5.6
<i>Missing</i>	8	11.3
<i>Total</i>	71	100.0

As mentioned earlier, the introduction of the Internet in the library is expected to produce some changes in the role of library and librarian as well. A large percentage of students (49.3%) indicated that the librarian should work as a guide to information resources, where such resources are available on different format ranging from print to non-print material and on the Internet as well. Also, students wanted librarian to work as Internet trainers, in training students to use the Internet, and to generate quality information for their research. This fact is clear from Table 27 as

12.7% of the respondents asked librarian to work as Internet trainers. Some 14.1% said that librarian should continue to do their jobs as at present.

It is important to note that few students wanted the librarians to do their jobs as it is at the present, and be flexible to carry out new roles necessitated by the introduction of new sources of information such as the Internet.

Table 26
Preferred Resources of Research

Type of Information Resources	Number of Respondents	Percentage
Library resources	6	8.5
Library /Internet	57	80.3
<i>Missing</i>	8	11.3
<i>Total</i>	71	100.0

When asked which information resources they preferred for their research, the majority of them 80.3% preferred to use both library and Internet information resources. Only 8.5% said that they preferred to use the library resources alone. It was surprising that no student wanted to use the Internet resources alone for their research.

This may be a reason the majority of the respondents 71.8% were sure that the Internet will not substitute the library in the future. On the contrary they said the Internet will supplement the role of the library in this new era of information technology.

Table 27

Perceptions if the Internet will Replace the Library

Type of Response	Number of Respondents	Percentage
Will Replace	12	16.9
Will Not Replace	51	71.8
<i>Missing</i>	8	11.3
<i>Total</i>	71	100.0

Table 27 above shows that only 16.9% believe that the Internet is going to substitute the library in the future.

The response rates from different faculties about whether the Internet will replace the library as a physical entity are given in Table 28.

Table 28

Perceptions of Students about the Future of Library by Faculty

Faculty	Number of respondents	Will replace	Will not replace
Engineering	5	20.0%	80.0%
Faculty of Computer Sciences and IT	8	25.0%	75.0%
Sciences	9	22.2%	77.8%
Education	7	28.6%	71.4%
Economics	6		100.0%
Arts and Social Sciences	7	14.3%	85.7%
Institute of Postgraduate Studies and Research	2	50.0%	50.0%
Institute of Postgraduate Studies and Research	2	50.0%	50.0%
Law	11	11.1%	88.9%
Law	11	11.1%	88.9%
Medicine	10	20.0%	80.0%

Taking some examples from the above table, 20% of the Faculty of Engineering's students were expecting the Internet to replace the library, while 80% indicated the library to continue exist in the future. Students at the Institute of Postgraduate Studies and Research were 100% sure about the Internet would not replace the library. In general the majority of respondents at different faculties, believe that there is no substitute for the library.

Perceptions of Librarians

To determine the perceptions of librarians on the changes as a result of the introduction of the Internet, a structured interview was distributed to 18 library professional at the University of Malaya, all of them having at least a master degree in library and information sciences.

Out of this number, only 14 were able to respond. The other 4, two were either busy or were unable to answer the questions.

All of the librarians interviewed had worked for 10 years in the library on average. The librarians were using the Internet although they did not have any kind of formal training.

Table 29 below shows the different type of activities that are performed by librarians at the Um library via the Internet

Table 29
Activities done by librarians via the Internet

Activity	No. of respondents
Location of Online resources for cataloguing and classification purposes	12
To find out what books are available for purchase	6
Promotion of library services via Web page	13
Answering reference inquiries via e-mail	11
Interlibrary loan activities	10
Discussion with Librarians	14
Other activities	5

It is obvious from Table 29 that the majority of respondents used the Internet to perform different activities. Out of the 14 librarians interviewed, 12 used Internet services to locate online resources for cataloguing and classification purposes. All the respondents indicated discussions among librarians as one of the important activities carried out through the Internet.

Interlibrary loan is another important activity carried out via Internet. This is true since 10 of the respondents indicated that they use some of the Internet services such as e-mail for interlibrary loan. In this way the Internet will add to the role of the library by saving costs and time.

Among the other activities the Internet were used for were:

- E- mail was used for interlibrary loan, acquisition and office communications. One librarian stated that the Internet was an expeditious mode of transmission that had cut down on time in sending out interlibrary loan requests and orders through e-mail .
- Telnet was used for logging in to remote library catalogues to check on bibliographic details for acquisition and cataloguing.
- File transfer protocol was used to obtain files and programs for database management.
- The Web and gopher were used to logging in to databases and to obtain information from various sites.

Librarians were convinced that the role of the library as a repository of information will not diminish. They expected the library to continue to purchase a lot of materials in print format. This is obvious from Table 29 since 6 respondents indicated their use of Internet services was to locate books available for purchase.

Table 30
Some Expected Changes due to the Internet

Type of Change Expected	No. of respondents
Professional rather than clerical work	12
Reduction of manpower	10
Subscription to online databases via Internet	13
Less purchase of print material	9
Easy information storage and transfer	10

It is clear from Table 30 above, that the majority of librarians (10) felt that the need for human resources may become less since many things could be done via the Internet. Another change that librarians expected the Internet to produce in the role of the library was that subscriptions to online databases will be a prevalent feature in the library of the future. They also expected the purchase of print materials to be reduced. These facts are clear from the above table since 13 of the respondents mentioned subscription to online databases. Ten of the respondents expected information storage and transfer to become easy and fast and 9 respondents advocated the less purchase of print material.

Table 31
Role of Librarians in Relation to the Internet

Expected role	No. of respondents
Evaluate information quality and accuracy on the Web	14
Search information on the Web	12
Guide library patrons to the proper Web sites	13
Checking of bibliographic details from remote sources	9
Training of library patrons to use the Internet	11

The majority of librarians expected the Internet to enhance their role for the better. It is clear from Table 31 above that 14 librarians expected new roles such as evaluation of information accuracy and quality on the Web, beside their traditional roles, 13 stated that librarians would work as a guide to the proper Web sites. Nine librarians stated that the Internet will help them to enhance their role in the future due to the fact that it allows them to check bibliographic details from several remote

sources and hence facilitate a comprehensive search, an important feature in bibliography and ten librarians indicated training of library patrons to become one of their roles.

Most of the librarians believed that the Internet will improve the efficiency in the library. Table 32 below supports these claims.

Table 32
Improving Efficiency in the Library

Role of Internet in Improving Efficiency	No. of respondents
Communication within and outside the library	14
Easy search of the resources available	11
Provision of instruction for using online catalogue	10
Provision of current and latest information	13
Fast searching facilities (search engines)	12
Fast acquisition of databases, software updates, etc.	10

It is clear from the above table that librarians feel the Internet will improve the efficiency in the library. This is because it provides librarians with facilities which can help them to do their jobs better. From the table, all librarians interviewed agreed that the Internet offers them a good opportunity for communication within and outside the library. The Internet will also add to the efficiency of the library services. Ten librarians stated that the Internet provides instructions for using online catalogues. Thirteen respondents mentioned the provision of current and latest information on the

Internet to increase efficiency in the library, and ten librarians encouraged the use of the Internet in libraries for faster acquisition of databases and software updates.

The librarians came to the conclusion that the Internet will enhance the role of the library and will not threaten its existence.

The next chapter presents the major findings, recommendations and conclusions.