

Influence of Internet on library and information centres of National Institutes of Technology in India

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The Internet has been described as the gateway to a world of seemingly inexhaustible information resources and a valuable information tool to the library and information centres that supplements existing library resources. The paper attempts to understand and evaluate the use of the Internet as an information source by libraries of National Institutes of Technology in India and aims to determine the utilization of Internet in library activities and services, search methods employed, problems encountered and associated factors.

Introduction

Internet has become an integral part of library and information centres that helps in meeting the information requirements of the users in a timely manner. The relevance of Internet to the library is well described by Rudenstine¹, "In fact, the library and the Internet are being viewed increasingly as a versatile unified system, providing an enormous variety of materials in different formats... The Internet and its successor technologies will have the essential features of a massive library system, where people can roam through the electronic equivalent of book stacks, with assistance from the electronic equivalent of reference librarians. In short, one major reason why characteristics of the Internet are so compatible with those of universities is that some of the Internet's most significant capabilities resemble, and dovetail with, the capabilities of university research libraries. Just as the research library is an extremely powerful instrument for learning, so too is the Internet..." Internet is considered as a great information source to the academic and research community and also a great information tool to the library and information centres to supplement their information support to the user community.

Technical education in India got the requisite impetus following the establishment of Regional Engineering

Colleges in India, now elevated to the status of Deemed Universities and have been rechristened National Institutes of Technology to provide technical leadership, which aims to impart teaching and research in different branches of engineering, to maintain high standard in education and training, and to promote co-operation with industry and other technical institutions serving as an effective link between Indian Institutes of Technology and State Engineering Colleges. As on date, there are seventeen National Institutes of Technology in different states of India. No previous studies were reported on National Institutes of Technology pertaining to impact of information technology on library activities and services. An attempt has been made to understand and evaluate the use of the Internet as an information source and study the impact of Internet on libraries of National Institutes of Technology in India.

Objectives of the study

- To understand the perceptions of Internet technology by library professionals;
- To identify the purpose of using Internet by library;
- To explore the use of Internet services and its impact on library activities and services;

Table 1 - Perception of Internet technology by libraries (N=10)

Perception of Internet technology	No. of NIT Libraries	Percentage
Attractive service in the library	4	40%
Image building for library	7	70%
Wealth of huge current information	9	90%
Huge information but difficult to obtain	-	-
Great reference value	9	90%
Communication tool	10	100%
Substitute to library	1	10%
Supplement to the library	10	100%
A mechanism to save time	8	80%
Enhances knowledge	7	70%

- To identify the search strategy adopted for searching information by libraries;
- To know the level of satisfaction towards Internet and evaluate the features of Internet as an information source;
- To understand the difficulties in using the Internet and;
- To make comparisons between Internet vs library.

Methodology

As the seventeen National Institutes of Technology are spread across the country, the questionnaire method (Annexure I) was found to be more feasible and was used for eliciting information from the NIT libraries. Out of 17 questionnaires distributed to the librarians of NITs in India, ten libraries that responded, were the NITs at Calicut, Durgapur, Jaipur, Jalandhar, Kurukshetra, Nagpur, Rourkela, Surat, Surathkal and Warangal.

Data analysis and interpretation

Perception of Internet technology by libraries

The perception of Internet technology by the libraries is shown in Table 1. It is observed from the table that, all the libraries perceive Internet as a communication tool (100%) and see it as a supplement to the online library (100%). The librarians further describe Internet as – Wealth of huge current information (90%) and ‘great reference value’ (90%) and ‘a mechanism to save time’ (80%), ‘image building for library’ (70%) and ‘attractive service in the library’ (40%).

However, on the other hand, majority of libraries do not consider Internet as a substitute to library (10%). Rather they consider it as supplement to the library. These results indicate professional’s faith in librarianship, and indicates the significance of Internet supplementing library activities and services for accessing information.

The study by Abdoulaye and Majid², investigates users’ perceptions of the importance of the Internet in reference work. Users of the study felt that the Internet has contributed positively to reference work and has enhanced their effectiveness and efficiency. However, a majority of them disagreed that the Internet should completely replace traditional reference tools. Respondents also felt that reference librarians should possess good computing and Internet use skills for providing effective reference services.

Purpose of using Internet

Internet has made tremendous impact on library and information services by offering new models for information delivery and providing access to variety of information sources. Thus, Internet has been treated as an integral part of library activities and services and can be used successfully in house keeping operations, extending Internet/E-mail facilities and providing information services such as CAS, reference services, electronic document delivery, alert service, hosting web pages, subscribing e-journals, e-databases etc. The various purposes of using Internet by libraries is depicted in Table 2.

It is revealed from the table that, the major purposes of using Internet is for e-mail service, accessing online databases and hosting home page. Accessing e-journals,

Table 2 - Purpose of using Internet by library (N=10)

Purpose	Scale					Mean
	1	2	3	4	5	
In-house library activities	3	3	2	2	-	2.3
Internet/E-mail service	-	-	1	2	7	4.6
Current awareness service	2	3	2	3	-	2.6
Reference service	-	2	2	2	4	3.8
Means of communication	-	-	-	4	6	4.6
Current alert service	4	2	1	-	3	2.6
Forum for discussion	5	3	2	-	-	1.7
Literature search	1	2	3	1	3	3.3
Hosting a home page	-	-	1	8	1	4.0
Online databases	-	-	2	5	3	4.1
Downloading programs	5	1	2	1	1	2.2
Access to catalogues	-	1	4	4	1	3.5
Subscribe e-journals	-	1	2	4	3	3.9
Purchase online books	2	3	2	2	1	2.7
Getting reprints	3	4	3	-	-	2.0
Average Mean						3.16

(1) Not at all (2) To a little extent (3) To some extent (4) To a greater extent (5) To Full extent

reference services, access to catalogues and undertaking literature search are also given as reasons for using the net.

As a whole, the purpose of using Internet by libraries can be measured statistically at an average of 3.16, which shows very moderate purpose of using Internet. There are a few studies, which have also studied the purpose of using Internet. Internet is heavily used for performing various library functions, which includes reference, work, classification and cataloguing; document delivery; and subscription to online periodicals (Saeed and others, 2000)³.

Use of Internet services and tools

The Internet is changing the process of knowledge creation and dissemination, thus metamorphosing the roles of various intermediaries. The library which had traditionally performed an invaluable role in the scholarly communication process, now finds itself at crossroads. Emergence of Internet technology, offering various tools and services like WWW, e-mail, FTP, Telnet, discussion forums, newsgroups, online databases etc., have changed the ways of performing traditional functions and therefore, necessitated the librarians to make use of these facilities frequently in the library

activities and services. These Internet services and tools are not only supporting the in-house activities of library in building strong information base but also help to meet the academic and research needs of user community. Hence, it was felt necessary to know how frequently the Internet services are used.

Internet services frequently used by libraries of NIT are depicted vide Table 3. Among the Internet services, e-mail, online databases and WWW are the most frequently used Internet services by the librarians. The Internet services - discussion forum, newsgroups, chatting, FTP, freeware/shareware, Telnet and Gopher are rarely used Internet services for the library activities and services.

Thus, on an average, the frequency of using Internet services by librarians is 2.58, which clearly shows that, the Internet services are used occasionally and rarely to support their routine activities in the library and to serve clientele.

All the librarians in Malaysia, as against the results in the present study, are using World Wide Web (WWW) with a majority using it at-least once a day, while 97.3% used e-mail, 62% of respondents used Telnet, 31.5% used FTP and 28.2% used newsgroups (Singh, 1998)⁴.

Table 3 – Use of Internet services and tools (N=10)

Frequency of Internet	Scale					Mean
	1	2	3	4	5	
www	-	-	2	4	4	4.2
E-mail	-	-	1	1	8	4.7
Newsgroups	3	5	1	1	-	2.0
Discussion Forum	3	3	3	1	-	2.2
FTP	7	1	-	1	1	1.8
TELNET	8	1	-	-	1	1.5
Freeware/ Shareware	5	3	1	1	-	1.8
Chatting	4	3	2	1	-	2.0
Online databases	-	1	1	2	6	4.3
Gopher	8	1	1	-	-	1.3
Average Mean						2.58

(1) Never (2) Rarely (3) Occasionally (4) Frequently (5) Almost Everyday

Internet use in library activities and services

With the advent of Internet, the field of publishing is undergoing changes. More and more publishers, both commercial and professional bodies, individuals and institutions are shifting from print media to electronic media. Today large numbers of information sources are available on the Internet. It has become difficult to say, what is not available on the Internet. Since the libraries are involved in acquiring, organizing and delivering the information to their end users, they have to fall in line with the changing mode of publishing and needs of users. The traditional methods hitherto used by the librarians have found new application areas. Table 4 shows the use of Internet in library activities and services.

The results indicate that, the libraries make use of Internet mainly for identifying latest books (100%) and journals (60%) in acquisition and serials control activities of library. Online catalogues (70%) have been used for organization and retrieval activity of NIT libraries. It further indicates that, Internet is used by NIT libraries for extending information services i.e., Internet (100%), library catalogues (100%), e-mail (90%), online databases (80%), resource sharing (70%) and hosting home pages (70%). On the other hand, Internet is less used for extending services like content alert services (30%), CAS/SDI (30%) and discussion forums (10%).

Thus, the overall results show that Internet is used for LIS activities and services to a little extent and needs to

explore the options of Internet technology for successful application in routine activities and services of the library.

Internet can be used to enhance the value and effectiveness of library and Information services, including periodicals, technical services and virtual library activities and services. It also demonstrates the Internet's use in web bookstores, web based library catalogues and for use of e-mail (Rao and Prasanna, 2001)⁵.

Search strategy of libraries

The net, with its ever-growing resource base, contains rich information on a wide spectrum of knowledge – one can even say that the net is a living library where one can find up-to-date information on any subject. Search engines for retrieving information on the Web, smoothen net surfing and make netizens life less troublesome. Sometimes, using search engines is often difficult, perhaps partly because of the problem of formulating queries specific enough to find relevant pages. Some information needs, however, are intrinsically more difficult to satisfy due to problems of semantics.

Librarians have been considered as 'Search Intermediaries' because of the special searching skills. This has forced the investigator to elicit information-searching methods adopted for searching information on the net.

Table 4 - Use of Internet in library activities and services (N=10)

Areas of application	Opinions of REC/ NIT libraries	Percentages
Book acquisition		
Identifying latest books	10	100%
Ordering books	2	20%
Online bookshops	6	60%
Serials control		
Identifying new Journals	6	60%
Subscribe e-journals	4	40%
Current contents	2	20%
Cataloguing/ classification		
Online catalogues	7	70%
Information services		
Internet	10	100%
E-mail	9	90%
Content alert services	3	30%
Discussion forums	1	10%
Resource sharing	7	70%
CAS/ SDI	3	30%
Hosting of home page	7	70%
Online databases	8	80%
Library catalogues	10	100%

Search strategy adopted for searching information on the Internet is shown in Table 5. It is noted from the table that, all the libraries of NIT are making use of search engines (100%) for searching information on the net. Among the search engines, Google is the most preferred search engine and has been ranked number one by seven libraries and ranked second by three libraries. Subsequently, Yahoo has been rated first best by three libraries and second best by six libraries. Besides, the different methods adopted for searching information are, obtaining information from colleagues (70%), browsing web sites regularly (50%) and using subject gateways (40%). However, participation in seminar or conference, exhibitions, product fares, publications and magazines, are less used for finding

Table 5 - Search strategy of libraries (N=10)

Search Strategy	Opinions of NIT Libraries	Percentages
Search Engines	10	100%
Google	7R1, 3R2	
Yahoo	3R1, 6R2	
Khoj	2R2	
Browsing web sites regularly	4	40%
Personal communication	4	40%
Participation/Seminar/Conference	3	30%
Information obtained from colleagues	7	70%
Exhibitions/ Product fares	2	20%
Information obtained from publications/Magazines	2	20%
Follow up references	5	50%
Through discussion forums	2	20%
Subject Gateways	4	40%

(R1) Rank 1 (R2) Rank 2

information on the Internet. It is thus inferred from the study that, search engines are the ultimate mode of searching information and colleagues assist in getting the desired information.

Among the various search engines, majority of the librarians in Malaysia used Yahoo (45.8%), Infoseek (18.1%), Webcrawler, Excite, Megellan and Altavista for finding information on the net, which contributed to enhance efficiency in their workplace (Singh, 1998)⁶.

Problems of Internet during surfing

Internet offers innumerable avenues and prospects for the library and information centres to deliver the information products and services effectively and efficiently as compared to traditional modes. This technology has helped to build a strong image for the library as it supplements the library collection and provides one stop point to meet the complex needs of users. But at the same time, there are problems while surfing the net, which includes frequent disconnection, delay in access, virus transfer and eruption of unwanted links etc. The various problems encountered by the libraries while browsing the Internet and is shown in Table 6.

Table 6 - Internet problems encountered during surfing (N=10)

Problems encountered	Scale					Mean
	5	4	3	2	1	
Getting connected	1	4	3	1	-	3.2
Low bandwidth	-	3	3	3	1	2.8
Frequent disconnection	3	4	3	-	-	4.0
Virus Transfer	2	4	3	1	-	3.7
Power fluctuation	4	3	3	-	-	4.1
Lack of training	1	3	3	2	1	3.1
Pop-up ads / screens	1	2	5	2	-	3.2
Unwanted web-links	3	4	2	1	-	3.9
Average Mean						3.5

(5) Not at all (4) To a little extent (3) To some extent (2) To a greater extent (1) To full extent

As indicated from the table, the main problems of Internet are low bandwidth, lack of training, pop-up ads / screens and getting connected. However, other problems of Internet viz., power fluctuation, frequent disconnection, unwanted web-links and virus transfer are problems to a very little extent.

Satisfaction towards Internet services

Proficiency of library professionals in identifying, selecting, collecting, organizing, maintaining and disseminating information has led to the concept of subject gateways on the Internet. Library professionals have a greater role to play in collecting and organizing information on the Internet and optimize the Internet services in their routine activities and services. In this context, an analysis of the level of satisfaction of the librarians towards Internet, as collector, organizer and evaluator was felt essential. Satisfaction towards Internet services, by the librarians of NIT is depicted in Table 7.

The level of satisfaction for Internet has been assigned using scaling techniques at five levels i.e., one (not at all), two (to a little extent), three (to some extent), four (to a greater extent) and five (to full extent). It is seen from the results that, almost all the libraries are fully satisfied with e-mail, WWW and online databases. Followed by this, libraries have also indicated satisfaction at level 3 and 4 to the discussion forums, freeware/ shareware and chatting. However, FTP, newsgroups and Telnet indicated less satisfaction for the librarians. On the other hand, libraries are not satisfied with Gopher.

On an average, the level of satisfaction towards Internet services is 3.29, showing satisfaction to some extent. Further, the respondents have indicated satisfaction to a greater extent with mean to the current state of Internet to support library activities and services.

Evaluative features of Internet as an information source

The traditional role of a librarian is to identify, evaluate, select and organize information sources. Internet like any other information source needs to be evaluated by the librarian, in order to judge the quality or appropriateness of information. Since the Internet is like a Pandora's Box, where anyone can put information at any point of time, evaluating Internet resources is desirable. There are various methods of evaluating information sources either print or non-print sources. Some of the criteria followed by librarians are accuracy, authority, objectivity, currency, coverage, etc. This has led the investigator to identify the opinions from the librarians of NIT regarding the evaluative features of Internet as an information source. The features of Internet are depicted in the Table 8.

For each feature of Internet, a five level satisfaction scale is adopted indicating lowest satisfaction at level one as 'poor', two - 'fair', three - 'good', four - 'very good' and highest level of rating at five as 'excellent'. Almost all the features of Internet have yielded more or less same results, showing the features of Internet as good and very good at level three and four. Among the various features, usefulness, comprehensiveness, uniqueness and accessibility are the features that have been rated as nearly very good by the libraries of NIT in India.

Table 7 - Satisfaction levels towards Internet services (N=10)

Level of Satisfaction	Scale					Mean
	1	2	3	4	5	
WWW	-	-	-	4	6	4.6
E-mail	-	-	-	3	7	4.7
Newsgroups	1	5	3	1	-	2.4
Discussion Forum	-	1	4	2	3	3.7
FTP	2	4	1	3	-	2.5
TELNET	3	3	3	1	-	2.2
Freeware / Shareware	-	2	3	3	2	3.5
Chatting	-	2	4	3	1	3.4
Online databases	-	1	3	5	3	4.6
Gopher	7	3	-	-	-	1.3
Average Mean						3.29
Current state of Internet to support library activities and services	-	-	2	6	2	4.0

Table 8 - Internet as an information source - features of Internet (N=10)

Features of Internet	Scale					Mean
	1	2	3	4	5	
Ease of use	-	2	4	3	1	3.3
Accessibility	-	2	3	3	2	3.5
Speed and quickness	1	3	5	1	-	2.6
Uniqueness	-	1	4	3	2	3.6
Usefulness	-	-	3	6	1	3.8
Flexibility	1	3	3	2	1	2.9
Hypertext links	-	2	3	4	1	3.4
Organized information	-	4	2	2	2	3.2
Content of information	-	2	4	3	1	3.3
Comprehensiveness	-	1	3	4	2	3.7
Timeliness	1	2	3	2	2	3.2
Average Mean						3.31

Thus as a whole, the average mean of the features of Internet is 3.31 indicating at level three plus shows positive attitude from the librarians. This result is substantiated by Scarlett⁷ who remarks "Internet is improving its ability to retrieve information efficiently but negative points emphasized are poor quality of information on the net, extreme disorganization, worries about security, speed and copyright".

Internet vs. Library

The potential of Internet technology for libraries in using Internet as an information and research source, in supporting the aspirations of library and users, is well recognized. Thus, Internet and library has become two

sides of a same coin as both deal with information, content management and dissemination.

Merely conceiving the Internet as an information solution to the society at large and a substitute or supplement to library will not serve the purpose, unless and until one understands the potentials and weaknesses of Internet with respect to library. Hence, an effort to differentiate between library and Internet, from the point of view of librarians of NIT is made. The preference of Internet over library is shown in the Table 9.

The results clearly depict that, the features of Internet – convenience, comprehensiveness and ease of use have advantage over library except accessibility, which has

Table 9 - Internet Vs. Library (N=10)

	Internet	Library	Both
Internet is advantageous over Library			
Yes	8	-	-
No	-	2	-
Internet Vs. Library			
Convenience	3	2	5
Accessibility	4	5	1
Comprehensiveness	5	2	3
Ease of use	6	1	3
Internet Replaces Library			
Yes	-	-	-
No	10	-	-

slight edge in favor of library. Among the various features, ease of use (60% against 10%) has strong plus point for Internet against library, as per the opinion of librarians. On the whole, 80% of librarians agreed that, Internet is advantageous over library.

However, all the respondents have stated that Internet is not going to replace traditional libraries rather, Internet supplements library activities and services. Herring (2001) enlists 10 reasons 'Why the Internet is No Substitute for a Library'⁸.

Conclusion

The results indicate that the libraries of NIT acknowledge the significance of Internet in library activities and services. The librarians have to reorient themselves, think creatively and adopt the new technology to generate services and resources where skills of structuring and organizing resources are put to its best use. The libraries are making use of Internet services mainly WWW and e-mail and efforts have to be made to understand and utilize the significance of newsgroups, discussion forum, FTP, TELNET, freeware/shareware and chatting services for the benefit of library activities and services. Further, skills and techniques for

Internet use should be learnt by undergoing training and constant use of Internet so that, the library activities can be used better in the interest of the institutional goals. This will reconfirm the findings of the study that the Internet is not going to replace traditional libraries but supplements the library activities and services.

References

1. Rudenstine N L, The Internet and higher education, Harvard Conference on the Internet and society, 29-31 May 1996.
2. Abdoulaye K and Majid S, Use of the Internet for reference services in Malaysian academic libraries, *Online Information Review*, 24 (5) (2000) 381-388.
3. Saeed H et al, Internet use in university libraries of Pakistan, *Online Information Review*, 24 (2) (2000) 154-160.
4. Singh D, The use of Internet among Malaysian librarians, *Malaysian Journal of Library and Information Science*, 3 (2) (1998) 1-10.
5. Rao N L and Prasanna M K, Use of Internet for improving library services, *SRELS Journal of Information Management*, 38 (1) (2001) 15-30.
6. Op Cit, Singh D
7. Scarlett J, Internet use survey, *Law Librarian*, 28 (2) (1997) 101-106.
8. Herring M Y, Ten reasons why the Internet is no-substitute for a library, *American Libraries*, April (2001) 76-78.

ANNEXURE I

1. Name and address of the Institution :

2. URL address :

Internet Usage

3. Do you have Internet facility in the Library?

Yes () No ()

If Yes, answer the following else go to last question 18.

4. What terms does 'Internet' describes for Library (Please tick)

- Catching service to Library
- Image building for library
- Wealth of huge current information
- Huge information but difficult to obtain
- Great reference value
- Communication tool
- Substitute to library
- Supplement to library as online library
- A mechanism to save time
- Enhances knowledge
- Others (Pl. specify) _____

5. Indicate the purpose of using Internet (Please circle one close to frequency)

	Not at all	To a little extent	To some extent	To a greater extent	To full extent
In-house Library activities	1	2	3	4	5
Internet/E-mail service	1	2	3	4	5
Current Awareness Service	1	2	3	4	5
Reference Service	1	2	3	4	5
Electronic Document Delivery	1	2	3	4	5
Means of Communication	1	2	3	4	5
Current Alert service	1	2	3	4	5
Forum for discussion	1	2	3	4	5
Literature search	1	2	3	4	5
Hosting a home page	1	2	3	4	5
Accessing online databases	1	2	3	4	5
Downloading programs/file	1	2	3	4	5
Access to catalogues	1	2	3	4	5
Subscribe e-journals	1	2	3	4	5
Purchase online books	1	2	3	4	5
Getting reprints	1	2	3	4	5
Others (Pl. specify) _____	1	2	3	4	5

6. Which of the following information sources is preferred by users for searching information on Internet or Library or both (Please tick mark for each of the following)

Information Sources	Internet	Library	Both
Books	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encyclopaedias	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scientific Journals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bibliographies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Abstracting & Indexing Journals (INSPEC/COMPENDEX)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conference papers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research/Project Reports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dissertation/Theses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Patents/ Standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. How frequently do you provide Internet services (Pl. circle one closest frequency for each of the following)

	Never	Rarely	Occasionally	Frequently	Almost everyday
WWW	1	2	3	4	5
E-Mail	1	2	3	4	5
Newsgroups	1	2	3	4	5
Discussion Forum	1	2	3	4	5
FTP	1	2	3	4	5
TELNET	1	2	3	4	5
Freeware/Shareware	1	2	3	4	5
Chatting	1	2	3	4	5
Online databases	1	2	3	4	5
Gopher	1	2	3	4	5
Others _____	1	2	3	4	5

(Pl. specify)

8. Use of Internet in Library in-house activities and Services

8.1 For, which of the following areas do you use Internet in Library (Please tick mark)

Book Acquisition

- Identifying latest Books
- Ordering Books
- Online Bookshops
- Others (Pl. specify) _____

Serials/ Journals Control

- Identifying new Journals
- Subscribe e-journals
- Current contents
- Others (Pl. specify) _____

Cataloguing / Classification

- Online catalogues
- (Viz: OCLC/INFLIBNET etc.)
- Others (Pl. specify) _____

Information Services

- | | |
|------------------------------|--------------------------|
| Internet | <input type="checkbox"/> |
| E-mail | <input type="checkbox"/> |
| Content Alert services | <input type="checkbox"/> |
| Discussion Forums | <input type="checkbox"/> |
| Resource Sharing | <input type="checkbox"/> |
| CAS/SDI | <input type="checkbox"/> |
| Hosting of home page | <input type="checkbox"/> |
| Online access to databases | <input type="checkbox"/> |
| Access to library catalogues | <input type="checkbox"/> |
| Content pages of journals | <input type="checkbox"/> |
| Others (Pl. specify) | _____ |

SEARCH STRATEGY

9. How do you find/search information on the Internet ? (Pl. tick all that apply and rank accordingly)

- | | |
|--|--------------------------|
| Using Search Engines | <input type="checkbox"/> |
| Browsing web sites regularly | <input type="checkbox"/> |
| Personal communication | <input type="checkbox"/> |
| Participation/Seminar/Conference | <input type="checkbox"/> |
| Information obtained from colleagues | <input type="checkbox"/> |
| Exhibitions/ Product fairs | <input type="checkbox"/> |
| Information obtained from publications/Magazines | <input type="checkbox"/> |
| Follow up references | <input type="checkbox"/> |
| Through discussion forums | <input type="checkbox"/> |
| Subject Gateways | <input type="checkbox"/> |
| Intelligent Guessing | <input type="checkbox"/> |
| Others (Pl. specify) | _____ |

10. If you are using search engines for providing information, mention the popular search engines used and rank the top 3 search engines based on retrieval efficiency

Search Engines	Rank (Retrieval efficiency)
Yahoo	[]
Altavista	[]
Google	[]
Rediff	[]
Hotbot	[]
Khoj	[]
123India	[]
NLSEARCH	[]
Lycos	[]
Webcrawler	[]
Others	_____
(Pl. specify)	

SATISFACTION/EVALUATION

11. What are the problems do you normally encounter in providing Internet the services to the users (Please circle one close to the frequency for each of the following)

	Not at all	To a little extent	To some extent	To a greater extent	To full extent
Getting connected	1	2	3	4	5
Low bandwidth	1	2	3	4	5
Frequent disconnection	1	2	3	4	5
Virus transfer	1	2	3	4	5
Power fluctuation	1	2	3	4	5
Lack of training	1	2	3	4	5
Pop-up ads / screens	1	2	3	4	5
Unwanted web-links	1	2	3	4	5

12. What is your level of satisfaction for the following Internet services (Pl. circle one close to the frequency for each of the following)

	Not sure	Dissatisfied	Less satisfied	Satisfied	Fully satisfied
WWW	1	2	3	4	5
E-Mail	1	2	3	4	5
Newsgroups	1	2	3	4	5
Discussion Forum	1	2	3	4	5
FTP	1	2	3	4	5
TELNET	1	2	3	4	5
Gopher	1	2	3	4	5
Chatting	1	2	3	4	5
Online databases	1	2	3	4	5
Freeware / Shareware	1	2	3	4	5
Others	1	2	3	4	5
(Please specify)					

13. Are you satisfied with current state of Internet to support library activities and services

Not sure	Dissatisfied	Less satisfied	Satisfied	Fully satisfied
1	2	3	4	5

14. How would you rate Internet on each of the following features as a source of Information? (Tick mark at appropriate column)

	Poor	Fair	Good	Very Good	Excellent
Ease of use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accessibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed & quickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Uniqueness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Usefulness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flexibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hypertext links	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Links to other sites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Organised	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Content of information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comprehensiveness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timeliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Do you feel Internet has advantages over libraries(Pl. tick)

	Yes ()	No ()	
If 'Yes', Please tick			
	Internet	Library	Both
Convenience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accessibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comprehensiveness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Do you feel, Internet is going to replace Traditional Libraries in future

Yes () No () Not sure ()

If 'Yes' , justify

If 'No' , indicate the reason

17. We appreciate any further comments/ suggestions for effective and efficient use of Internet as Information source.

18. Mention the reasons for not accessing Internet for providing service

- Facility is not available ()
- Not useful ()
- No demand from users ()
- Lack of training ()
- Financial constraints ()
- Others (Please specify) _____