

## Reaching Out Users with Web-Based Resources and Services: A Study of Libraries of Indian Institutes of Technology (IITS)

**Udita Negi**

Assistant Librarian

Doon University

Dehradun (India)

E-mail: udibi74@gmail.com

***Abstract** - Internet and associated technologies especially WWW has opened up new vistas for providing information resources and services to the users who consider themselves as technology savvy and are interacting with information resources virtually. This new web environment has incredible ramification on how user services are planned and executed. The purpose of the study was to find out the awareness, use, opinion and problems faced by the users of IIT in accessing web-based resources and services. The study found majority of users of the IIT libraries are aware of the existing web-based library resources and services but they are not effectively utilizing the web-based resources and services.*

**Keywords:** E-resources, Web services, Web Technology, IIT, India

### 1. Introduction:

Libraries are facing a new generation of online users who are technologically savvy (Thomas and McDonald,2005)<sup>1</sup> and are more inclined to access the web for resources and services as compared to traditional printed resources and services. Users experience of technology-based services like banking transactions, online reservation, etc. have also created an expectation in them for getting access to library services at his/her desktop and mobile devices for 365x24 at anytime and anywhere.

Library users admire these services in the light of fact that they can access these resources and services from their desktop at their convenience, thereby saving valuable time. The growing expectation from users necessitated the development of the web interface or library websites. They have started equating the presence of websites with the physical library. Library websites have totally changed the concept such as ‘time-honoured’ and scholarly visits to physical libraries with that of desktop access to library resources and services available virtually online.

Academic libraries are among the thousands of organizations that are utilizing such innovative tools “to create home pages, as starting points or gateways for information” (Arora, 2001)<sup>2</sup> by providing useful, innovative and interactive resources and services to meet the student’s and faculty’s research and educational needs and to promote “the image of the librarians as the Internet expert” (Madhusudan, 2012)<sup>3</sup>. A home page gives the library an opportunity to express its own mission and philosophy.

The websites of the academic libraries provide information about libraries and their services and also “access to online catalogue, electronic databases, subject resources, library instruction/ tutorial and digital collections” (Liu,2008)<sup>4</sup>. This has changed the role of an academic librarian from mere custodian of information to a guide to information. Thus, it is imperative for libraries to adopt these latest web technology in providing web-based library resources and services to fulfill the expectation of IT savvy users. The purpose of the study

was to find out the awareness, use, opinion and problems faced by the users in accessing web-based resources and services.

## **2. Review of Literature:**

Moyo (2004)<sup>5</sup> revealed that libraries are providing services to meet the changing needs of their patrons in electronic libraries which has resulted in increased use of electronic information resources (Bhatnagar, 2005)<sup>6</sup>. Ganesan and Pandian (2004)<sup>7</sup> recommend that the merely providing web-based resources and services to users is not complete solution to the user's needs; users expected better presentation and organization of information so that it can best attract user attention and fulfills their information needs (Hiong, 2001)<sup>8</sup>. Libraries should take systematic user centric approach for the development of website (McGillis and Toms, 2001)<sup>9</sup>. Training and promotion should be organized by library to create awareness among users about the availability of online databases and the library diverse services (Sinh and Nhung, 2012)<sup>10</sup> so that it create affirmative environment for change (Ahmed, 2002)<sup>11</sup>. Islam and Hossain (2013)<sup>12</sup> identified that websites are not fully utilized for marketing library resources and services.

Madhusudhan and Nagabhushanam (2012)<sup>13</sup> pointed that most of the surveyed University libraries are still not been able to leverage the full potential of the web-forms and are not effectively using web forms should give emphasis on web based information literacy program to enhance the use of web services. Balaji and Kumar (2011)<sup>14</sup> revealed that the most of technological University libraries are still working in the conventional library set up and there has been a relatively low rate of dispersal of web information services. Anaraki and Babalhavaeji (2013)<sup>15</sup> assisted administrators of the University libraries in developing a more complete understanding of student's electronic information needs and barriers that may inhibit their optimal use. Vijayakumar M, Kannappanavar and Mestri (2009)<sup>16</sup> advocated to form an educational network specialized among the IIT libraries.

## **3. Objectives of the Study:**

The present study examined utilization of web-based resources and services in Indian Institutes of Technology (IITs) of India. Therefore, the study had following objectives to investigate:

- To study the awareness and use of web-based library resources and services among the users of IIT libraries;
- To study the opinion of users about the web-based library resources and services and problems faced by them.

## **4. Methodology:**

The study focused on users of seven Indian Institutes of Technology (IITs) IIT Khargpur(1951), IIT Bombay(1958), IIT Madras(1959), IIT Kanpur(1959), IIT Delhi(1961), IIT Guwahati(1994), IIT Roorkee(2001) in India. The survey method was used to conduct the study. Questionnaire was used as a tool for data collection. The design and content of the questionnaire was assisted by the work of Madhusudan(2012) and Borasky(1999)<sup>17</sup>. Questionnaires were framed in keeping in view of the stated objectives of the study which is related to various aspects of web-based library resources and services. A random sample was drawn for selection of respondents from each of the seven selected IITs. The purpose of drawing a random sample was to take a representative population of users per IIT. Total

seven hundred questionnaires were distributed among users out of which six hundred fifty user's questionnaire were received back and analyzed.

## 5. Data Analysis and Interpretation:

### 5.1: Awareness:

**Table 5.1: Awareness**

Awareness	Total (N=650)
Yes, use them regularly	122(18.8)
Yes, use them sometime	379(58.3)
Yes, use online journals only	37(5.7)
Yes, but never used	69(10.6)
Never heard	43(6.6)

Note: Figures in parenthesis indicate percentage

The data presented in table 5.1 shows the overall awareness among users about availability of resources and services through websites. It is clear that most of the users responded yes and use them sometime(58.3); It is worth mentioning that only small fraction of users never heard (6.6) about the availability of resources and services through websites. The study reveal that majority of the users are aware with web-based resources and services.

**5.2: Frequency of Visit to Library Websites:** Web technology has not only changed library functioning but has also influenced the perception of users towards library services. The library websites have become gateway to the resources and services. So it is necessary to know the frequency of users visit to library websites. Data pertaining to frequency of visit to library websites was collected and presented in the table

**Table 5.2: Frequency of Visit to Library Websites**

Frequency of visit to library	Total (N=650)
Daily	234(36.0)
Weekly	213(32.8)
Fortnightly	57(8.8)
Monthly	60(9.2)
Occasionally	86(13.2)

Note: Figures in parenthesis indicate percentage

Table 5.2 shows the overall frequency of visit of users to library websites. The poor counts of daily library website visit by the users revealed that it is due to lack of awareness of users for different web-resources and services that are offered by the libraries or unawareness about the benefits of these resources and services or absence of dynamic contents on the website. The same finding with little variation is highlighted by (Madhusudan and Nagabhushanam, 2012) and (Kanamadi and Kumbar, 2006)<sup>18</sup>. This study highlights the importance of web-based literacy programmes for effective use of web-based resources and services.

**5.3. Use of Web-resources and services:** With the advent of internet and web technology the traditional method of offering library resources and services is changed. The demand and expectation of users is also changed accordingly. With this changed environment libraries are exploring and offering web resources and services. In this section information was sought regarding the use of resources and services through websites.

**Table 5.3: Use of Web-resources**

Web-resources	Total (N=650)
E-books	334(51.3)
E-Theses/dissertations	101(15.5)
Open Access Journals	166(25.5)
CD-ROM Databases	31(4.7)
Institutional Repository	80(12.3)
Online Subject Gateway	32(4.9)
E- Journals	363(55.8)
E- Databases	145(22.3)
Video Library	50(7.6)
E-Newspaper Clipping	15(2.3)
Patents/Standards	52(8.0)

Note: Multiple answers permitted and Figures in parenthesis indicate percentage

The Table 5.3 shows the overall use of web-resources by the users of IIT libraries. It is inferred that e-books (51.3) and e-journals (55.8) are most preferred resources among users whereas e-newspaper clipping service (2.3) is least preferred. The high percentage of usages of e-books and e-journals shows the importance of these resources among users.

#### 5.4: Web-based services:

**Table 5.4: Use of Web-based services**

Web Services	Total(N=650)
Document Delivery Service	122(18.7)
Web-based Reference Tools	203(31.2)
Ask a Librarian	80(12.3)
Online Current Awareness Bulletin	74(11.3)
Real time Digital Reference Service /Online Chat	20(3.0)
Inter-Library Loan based Services	29(4.5)
List of New Arrivals	340(52.3)
Status of User Account	153(23.5)
Access to Web-OPAC	310(47.7)
Access to Subscribed E-journals	103(15.8)
Access to E-journals through Consortium	113(17.3)
Access to Institutional Repository	31(4.7)
Access to Online Databases	130(20)
Access to Union Catalogue	15(1.7)
Access to Electronic Indexes	61(9.3)
Federated Search	9(1.0)
Link to External Resources	67(10.3)
Article Alert Service	51(7.8)
Change Password Online	233(35.8)
Staff List	121(18.6)
Map of the Library/Site Map	123(18.9)
E-mail based Services	165(25.4)
Feedback Form	62(9.5)
Contact /Address	100(15.4)
Library Holidays List	119(18.3)
FAQ	79(12.5)
General Library Policies	69(10.6)
Web-based User Education/Library Tutorials	36(5.5)

Suggestions Box	62(9.5)
Library Advisory Committee	28(4.3)
Photo Gallery	70(10.8)
Information about Special Exhibition/Seminars	58(8.9)
Virtual Library Tour	26(4.0)

Note: Multiple answers permitted and Figures in parenthesis indicate percentage

With regard to use of web services the greatest percent 52.3 of users declared that list of new arrivals are most preferred services followed by web-OPAC (47.7) and change password online(35.8). It is evident from above data that least preferred service among users was federated search. Federated search is nothing but a single window search for all resources of the library. There is no need to search resources individually. These platforms are EBSCO discovery, Jgate, etc. The low uses of this may be attributed to user’s preference for other resource discovery tool such as google, etc for searching resources and services of the library or lack of awareness of importance of these tools. It is followed by real time Digital Reference Service /Online chat (3.0) and suggestion box (9.5).

**5.5: Availability of Training Programme:**

**Table 5.5: Training**

<b>Yes</b>	<b>No</b>
22.6	77.4

The above table 5.5 clearly indicates that only 22.6% users responded that training is provided by libraries. In spite of training programme provided by library, users were not aware with these tools. The probable reason might be that users do not attended orientation/training.

**5.6: Problems Faced**

User might face difficulty in accessing web-based resources and services that may result in under utilization of resources. To ensure maximum utilization of web resources and services, it is important to ascertain the problems faced by them. To accomplish above, a question was asked to users about what problems or limitations they face while accessing and utilizing resources and services. Data was collected in this context and presented same in the Table 5.6

**Table 5.6: Problems Faced**

<b>Problems Faced</b>	<b>Total 650</b>
Lack of Awareness	238(36.7)
Late Response	38(5.8)
No Response	44(6.7)
Lack of Promotion	104(16)
Slow Internet Connectivity	79(3.1)
Lack of Updateness	97(14.9)
Navigation/Interface	74(11.3)
Lack of Training/Orientation program	415(63.8)

Note: Multiple answers permitted and Figures in parenthesis indicate percentage

Table 5.6 shows the overall opinion of users in facing problems in accessing web-based library resources and services. It is inferred from the above that lack of training/orientation

program is the major obstacle faced by users in using web-based resources and services. This indicates that they are not totally aware of the benefits of the web-based services and are also not aware of different web-resources and services offered to them by the libraries. This is evident from the fact that users have cited lack of training/orientation as principal reason for not using these services effectively and efficiently.

**5.7 Opinion:** To improve the existing web-based resources and services rendered by libraries and enhance the services in future, there is a need to take opinion from users. In this context question was put to respondents to rate the web-based resources and services on the basis of satisfaction level and responses received are presented below in the Table 5.7

**Table 5.7: Opinion**

<b>Opinion</b>	<b>Total 650</b>
Excellent	76(11.7)
Very Good	77(11.8)
Good	287(44.2)
Satisfactory	186(28.6)
Un-Satisfactory	24(3.7)

Table 5.7 shows the overall opinion of users in facing problems in accessing web-based library resources and services. It is inferred from the above that lack of training/orientation program and lack of awareness are major obstacles faced by users in using web-based resources and services.

## 6. Suggestions

Based on the findings of the study, the following suggestions are made for improving and effectively utilizing the web-based resources and services in the libraries of the Indian Institutes of Technology of India.

- It is found that the users of IIT libraries are aware of the presence of web-based library resources and services but these resources and services are not utilized fully. This is also revealed from the frequency of library website visit.
- In order to fully utilize the range of web-based resources and services offered by libraries in the electronic environment, library users require both information literacy skills and technology literacy skills. Library should organize orientation program/training/workshop for them.
- Libraries of IITs can integrate their web-resources and services mutually that may benefit the entire IIT community. This was also recommended by IIT users.

## Conclusion:

With the emergence of the Internet and web technology, there is an increasing demand of web-based library resources and services from the users. To support this growing demand there is a need to upgrade the current library infrastructure facilities in order to transform conventional library resources and services to online information resources and services for providing better services to the library users. It is very important for libraries to design, develop and deliver high quality web-based library resources and services. The findings of the studies show that users are aware of the resources and services provided by the library, but they are not fully utilizing resources and services extended to them. In order to maximize their use, the libraries should give emphasis on users' training and orientation programmes.



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