

# **A STUDY OF E-LIBRARY WEB-BASED COURSES FOR ACADEMIC LIBRARY SERVICES IN UNIVERSITY**

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## **ABSTRACT**

This paper focuses on the use of web-based library services by users in different sections of the university libraries in India and examines how some of the University libraries provide web access to their collections and user support for that access and the problems faced by users in accessing web-based library services. Findings show that many of the surveyed university libraries are yet to exploit full potential of the web forms, and lagging behind in effective use of library website. A few libraries offer innovative web-based library services in different sections. The paper highlights the current state of web-based library services against which they can benchmark their own web-based library services by university librarians in India. They will also learn how the unique web-based library services enhance the quality of web-based library services in Web 2.0 environment and suggests the new approaches for effective use of web-based library services.

**Keywords** - Web, Library services, University libraries, India.

## **INTRODUCTION**

The traditional methods of offering library and information services have changed greatly in recent years because of the development and application of new technology, especially the Internet and web technologies. The demands and expectations of users have also changed considerably. In this changed scenario, more and more libraries in the world over are exploring and offering new web-based library services such as Web catalogues, “Web search engines, Web forms etc. to satisfy the library and information demands of its users” (Syed, 2002). Library users value the services that they access from their desktops because the services save time (Ahmed, 2007) and users expect to access through the Internet at their convenience (Kanamadi and Kumbhar, 2006). Because of their popularity with the users, an overwhelming attention is being given to the web-based information services in libraries (Krishnamurthy and Chan, 2005).

## **WEB-BASED LIBRARY SERVICES**

For this study, Web-based Library Services means, library services provided using Internet as medium and library website as a gateway with the help of integrate library management system. On the user perspective, web-based library services such as: online textbooks, databases,

tutorials and a virtual library of links to other useful resources. It provides the unique service of linking to full-text articles, integrating library house-keeping operations, library policies, staff listings, etc. for timely help. According to White (2001), it can be defined broadly as ‘an information access service in which users ask questions via electronic means e.g. email or web forms. The present paper looks at the web-based library services provided by different libraries in different sections and their use by users. The purpose of the study was to learn what type of webbased library services were used in different sections and how they were used (i.e. users’ skills in effective use). In addition, the study aims to highlight the problems faced by the users in accessing web-based library services, their opinions on web-based library services, and expectations in web 2.0 environment.

### **REVIEW OF RELATED STUDIES**

Web-based library services that are modified versions of existing services and technology-driven library services (Arora,2001) or transformed from traditional library services incorporating new services that are peculiar to web environment (Moyo,2004) and underlines its significance for changes in the library information systems paradigms (Cordeiro and Carvalho,2002). The acceptability of web-based interfaces to the Library OPAC is much greater because web interfaces are familiar to the users with its graphical and navigational interfaces.

Users today are accustomed to the dynamic and interactive nature of the Web, as well as social networking tools. Many of them use Web tools to find the information they need (Wang, 2009). It is very imperative for university libraries and librarians to design, develop, enhance, implement, and deliver world class web-based library services, resources, and instructions at the fingertips of library users and “devoting resources to strengthen support in the core areas of teaching and research” (Reddy, 2004) and identify the relevant information and web services based on the user feedback and improve the existing services (Ganesan and Pandian,2004) using web technology as the delivery mode (Bhatnagar and Deshmukh, 2006) and developing country like India where resources are limited, funds are invariably for the library (Parida,2004). Thus making the “right” decision is an almost omnipresent sword of Damocles in library service planning (Decker and Hermelbracht, 2006). Few research studies of types of web-based library services exist, but one exception is a study by Schubert and Ee-Peng (1998), integrated web-based inter-library loan (ILL) system to replace and enhance the existing manual-based ILL system and the trend towards electronic delivery of articles in ILL (Walton,2008); web-based document delivery service is a value added service available to the users (Chandra, 2002); innovative reference services and other cutting edge digital products such as podcasting and wikis (Lukasiewicz,2007); Chat reference is a synchronous way of communication which has special advantages compared with e-mail (Nielsen and Hummelshøj, 2008); Introduction of an instant messaging (IM) reference service fitting into the existing range of help services (Hvass and Myer, 2008); Web forms are becoming increasingly widespread because they facilitate interactivity and can be presented in a more warm, personal way than a simple e-mail link (Dewald,1999). Feldman and Strobel (2002) recommend that for advancing web-based services

it is essential to initiate self-service circulation or librarian-mediated online reference. These innovative services are made possible because of the web (Tobin and Kesselman, 2002).

Libraries have always changed the pace of that change somehow feels faster now than ever before (Casey and Savastinuk, 2007). Academic libraries are quickly becoming the major players in adopting and incorporating Web 2.0 applications into their services compared with other types of libraries (Xu, Ouyang and Chu, 2009). For example, RSS feeds can inform library users about new library activities, while blogs enable the library to aggregate knowledge from users (Kim and Abbas, 2010; Schrecker,2008) and setting up a subject-based blog provides constructive resources to assist readers with researching and utilizing this technology (Blair and Level,2008). Web-based library tutorials are the hallmark of good web-based instruction (Dewald, 1999) and provides realistic learning arenas (Su and Kuo, 2010). Virtual library tours are also using new technologies and replace image maps on main campus websites (Bhatnagar,2005). Furthermore, potential of web services offer many advantages to the library community, but the majority of these advantages will only be realized if web services are standardized (Wusteman, 2006), but, the key issues involved with opportunities, challenges, and future developing trends of delivering dynamic and distributed web-based library information resources, services, and instructions for library users in the digital age (Lillie,2006). It is clear that libraries continue to offer unique and valuable services to their clientele. However, mere provision of such web-based services is not an end in itself. There is an imperative need for libraries to exercise proper awareness, necessary orientation and training of such newly introduced serviced in order to create a positive environment for change (Syed,2002). The present study takes a broad view of web-based library services to makes sense given the relatively recent creation of the web. Finally, the paper will focus on the imperative need for enhancing the quality of web-based library services in Web 2.0 environment and training programs for creating a positive environment for change.

**FREQUENCY VISIT OF LIBRARY**

This is the most important and basic aspect related to the appraisal of the usefulness of webbased library services, because, most of the e-resources are internet protocol based and accessed full text in the university library or university LAN. Here an attempt has been made to find out the frequency visit of university libraries by the users (Table 1).

**Table 1: Frequency visit of library**

<b>Frequency</b>	<b>Faculty</b>	<b>Research Scholars</b>	<b>P.G. Students</b>	<b>Total</b>
Daily	49 (8.16%)	144 (24%)	130 (21.66%)	323 (53.83%)
Weekly	83 (13.83%)	40 (6.66%)	55 (9.16%)	178 (29.67%)
Occasionally	46 (7.66%)	08 (1.33%)	12 (2%)	66 (11%)
Fortnightly	12 (2%)	02 (0.33%)	03 (0.5%)	17 (2.83%)
Monthly	10 (1.66%)	06 (1%)	00 (0%)	16 (2.67%)

It is evident from Table 1 that 53.83 percent visit the university library daily, followed by 29.67 percent once in a week, 11 percent occasionally, 2.83 percent fortnightly, and only 2.67 percent use the university library once in a month. A selectively higher percentage among research

scholars and P.G. students visit the university libraries daily which is indicative of their zeal to use library facilities in their day to day studies. The frequency visit to university library depends upon the nature of library's e-collections, organization, maintenance and services. It is also revealed at the time of the study that the availability of library services ( e-journals and databases are available in intranet only) are free, which gives them the latest up-to-date literature of their relevant field is the main reason for daily frequency visit to university library by the respondents. It seems that being in the library environment influences respondents of awareness of the resources available to them. Moreover, the web technologies have changed expectations of respondents, their patience, and their willingness to accept web-based library services that are available on demand and are an answer to the expectations of the users.

### **USE OF WEB-BASED LIBRARY SERVICES**

The traditional methods of offering library and information services have changed greatly in recent years because of the development and application of new technology. The demands and expectations of users have also change considerably. In the changed scenario, more and more university libraries in India are exploring and offering new web-based library services such as Web OPAC, web search engines, web forms, etc. to satisfy the users. Table 2 presents the usage of different web-based library services by the respondents.

**Table 2: Use of web- based library services**

<b>Description</b>	<b>Faculty</b>	<b>Research Scholars</b>	<b>P.G. Students</b>	<b>Total (n=600)</b>
Yes	158 (26.33%)	157 (26.16%)	125 (20.84%)	440 (73.34%)
No	42 (7%)	43 (7.16%)	75 (12.5%)	160 (26.66%)

It is observed from the data in Table 2 that 73.34 percent respondents are using the various webbased library services in their respective university libraries, and remaining 26.66 percent respondents are not using the web-based library services. An open-ended question to respondents regarding the reasons for using web-based library services reveals that the library users value the services that they access from their desktops because the web-based library services save lot of time and traveling cost. They also appreciate being able to access services at their convenience, without being restricted by the university library's hours of operation, this finding is also consistent with the findings in recent studies (such as: Mirza and Mahmood,2009; Pathak, Mishra and Sahoo, 2008; Bhatnagar ,2005).

### **Use of Web-based library services**

Web-based library services in study libraries have far reaching effect on the quality of services. These web-based library services are presented seven sections, such as: reference, acquisition, circulation, cataloguing, periodicals, inter library loan/document delivery, and miscellaneous. Table 3 presents data about the extent of web-based library services used by the respondents in different services.

**Table 3: Use of web-based library services by users**

<b>Description</b>	<b>Faculty</b>	<b>Research Scholars</b>	<b>P.G. Students</b>
<b>Reference</b>			
Electronic document delivery service	125 (20.83%)	137 (22.83%)	129 (21.5%)
Web-based reference tools	93 (15.5%)	98 (16.33%)	99 (16.5%)
Electronic current awareness service	92 (15.33%)	96 (16%)	97 (16.16%)
Electronic research guides	70 (11.66%)	72 (12%)	79 (13.16%)
Online current awareness bulletins	34 (5.66%)	49 (8.16%)	56 (9.33%)
Electronic SDI services	57 (9.5%)	67 (11.16%)	55 (9.16%)
CREDO reference (X-refer plus)	63 (10.5%)	48 (8%)	50 (8.33%)
Virtual reference desk/Ask-a-librarian	44 (7.33%)	41 (6.83%)	47 (7.83%)
<b>Acquisition</b>			
List of new arrivals online	135 (22.5%)	150 (25%)	147 (24.5%)
Provision of alert services-like new additions	89 (14.83%)	87 (14.5%)	100 (16.66%)
Electronic indexes	117 (19.5%)	96 (16%)	99 (16.5%)
Electronic reserves	45 (7.5%)	45 (7.5%)	45 (7.5%)
Finding aids (other than OPAC)	16 (2.66%)	35 (5.85%)	58 (9.66%)
<b>Circulation</b>			
Knowing circulation data-(issue/return) online	147 (24.5%)	143 (23.83%)	149 (24.83%)
Knowing availability of – particular document online	122 (20.33%)	131 (21.83%)	138 (23%)
Reservation of documents online	76 (12.66%)	85 (14.16%)	66 (11%)
Status of reserved documents online	57 (9.5%)	62 (10.33%)	58 (9.66%)
Canceling of reservation online	47 (7.83%)	45 (7.5%)	48 (8%)
Online request for renewal of loan	45 (7.5%)	39 (6.5%)	44 (7.33%)
User account status online	45 (7.5%)	52 (8.66%)	51 (8.5%)
Online posting of overdue details	29 (4.83%)	39 (6.5%)	30 (5%)
<b>Cataloguing</b>			
Searching Web OPAC	181(30.16%)	172 (28.66%)	176 (29.34%)
Accessing e-journals	172 (28.67%)	171 (28.5%)	172 (28.66%)
Accessing online databases	158 (26.33%)	153 (25.5%)	159 (26.5%)
Accessing digital collections	127 (21.16%)	106 (17.67%)	111 (18.5%)
Searching multiple catalogues-with single command	22 (3.67%)	23 (3.84%)	35 (5.84%)
<b>Periodical section</b>			
Electronic article delivery	134 (22.33%)	109 (18.16%)	124 (20.66%)
Article alert service	122 (20.33%)	110 (18.33%)	115 (19.16%)
Open J-gate	121 (20.16%)	104 (17.33%)	117 (19.5%)
Pro-active web-based TOC	27 (4.5%)	50 (8.33%)	48 (8%)

**ILL/Document delivery**

Electronic document delivery	132 (22%)	123 (20.5%)	110 (18.33%)
ILL based services	60 (10%)	54 (9%)	52 (8.66%)
ILL request web form	36 (6%)	36 (6%)	39 (6.5%)
Online inter library loan service	13 (2.16%)	21 (3.5%)	34 (5.66%)

**Miscellaneous**

e-mail based services	151 (25.16%)	157 (26.16%)	137 (22.83%)
Online staff list	118 (19.66%)	117 (19.5%)	114 (19%)
Online Feedback form	110 (18.33%)	105 (17.5%)	120 (20%)
Online library news	103 (17.16%)	121 (20.16%)	106 (17.66%)
Online subject gateways	111 (18.5%)	109 (18.16%)	93 (15.5%)
Online contact addresses	97 (16.16%)	108 (18%)	107 (17.83%)
Online library holidays list	168 (28%)	69 (11.5%)	70 (11.66%)
Web-based FAQ	102 (17%)	92 (15.3%)	97 (16.16%)
Online helpdesk services/Ask-a-Librarian	91 (15.16%)	95 (15.83%)	81 (13.5%)
Online general library policies	78 (13%)	67 (11.16%)	77 (12.83%)
Online integrated push-based – services (e-mail based)	61 (10.16%)	63 (10.5%)	59 (9.83%)

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Web-based library tutorials	51 (8.5%)	57 (9.5%)	52 (8.66%)
Information about special exhibits	46 (7.66%)	45 (7.5%)	67 (11.16%)
Web-based user education/virtual-library tour	53 (8.83%)	47 (7.83%)	55 (9.16%)
Online in-house library bulletins	52 (8.66%)	47 (7.83%)	47 (7.83%)
Library blogs	44 (7.33%)	28 (4.66%)	59 (9.83%)
Online mailboxes for user-comments or suggestions	52 (8.66%)	35 (5.83%)	39 (6.5%)
Library forums (e-mail based)	36 (6%)	46 (7.66%)	43 (7.16%)
Online map of the library	28 (4.66%)	37 (6.16%)	55 (9.16%)
Change password online	32 (5.33%)	37 (6.16%)	46 (7.66%)
Online library chat	09 (1.5%)	26 (4.33%)	34 (5.66%)
Library wiki	02(0.33%)	01 (0.16%)	01 (0.16%)

**Note:** Multiple answers were permitted and Figures in parentheses indicate the percentage.

As indicated in Table 3, it is interesting to note that web-based services are being utilized by all categories of respondents and a majority utilize electronic document delivery services under each group, namely, faculty, research scholars and P.G. students. The rank correlation co-efficient for faculty and research scholars, research scholars and P.G. students and the faculty and P.G. students were found to be 0.88, 0.98 and 0.83 respectively. While looking at the values of correlation co-efficient, it can be summarized that faculty and research scholars and the faculty

and P.G. students opined more or less in a the similar manner as regards the difficult web-based services that are to be used in reference section. But there is a high degree of rank correlation co-efficient between the faculty and research scholars.

As shown in Table3, the majority of respondents are browsing through the list of new arrivals online (72 percent). The rank correlation co-efficient between the faculty and the P.G. students is 0.95, as it indicates the high correlation between them regarding the web-based services used in acquisition. It is evident from Table 3 that 73.16 percent of the respondents are knowing the online circulation data (issue/return); 65.16 percent respondents prefer to know availability of a particular document online; 37.82 percent respondents prefer to reserve their documents online; 29.49 percent respondents visit the library website to know the online status of their reserved documents; 23.33 percent respondents visit the library website to cancel their books reservation online; 21.33 percent respondents visit the website to send the renewal request of loan online; 24.66 percent respondents visit the library website to know the their user account status online; and 16.33 percent respondents visit the library website to know the posting of overdue details online. It can be inferred that among the web-based library services in the circulation, knowing circulation data is the preferred service by all categories of web users.

**PROBLEMS IN ACCESSING WEB-BASED LIBRARY SERVICES**

There are a number of obstacles to use web-based library services by users. The problem generally includes one, lack of skilled professionals, inadequate computers access, insufficient time, lack of library orientation, and lack of systems. To accomplish the above, a question was put to the respondents to state as to what problems or limitations they experienced while using the web-based library services in their libraries and responses received from them are furnished in Table 4.

**Table 4: Problems in accessing web-based library services**

<b>Problems</b>	<b>Faculty</b>	<b>Research Scholars</b>	<b>P.G. Students</b>
Slow internet connectivity	97 (16.16%)	109 (18.16%)	114 (19%)
Insufficient time	91 (15.16%)	92 (15.33%)	89 (14.83%)
Inadequate computers access	99 (16.5%)	90 (15%)	82 (13.66%)
Lack of systems	67 (11.16%)	86 (14.33%)	108 (18%)
Lack of Library orientation	95 (15.83%)	77 (12.83%)	72 (12%)
Lack of skilled professionals	64 (10.66%)	65 (10.83%)	63 (10.5%)

**Note: Multiple answers were permitted and Figures in parentheses indicate the percentage.**

Table 4 indicates that the slow internet connectivity (53.32%), is the major problem in accessing the web-based library services and 45.32% stated that insufficient time, followed by inadequate computers access (45.16%), lack of systems (43.49%), lack of library orientation (40.66%), and lack of skilled professionals (31.99%) are some of the problems faced by the users while

accessing the web-based library services in their respective libraries. The major contributory factor is very low bandwidths (Madhusudhan, 2007). It is a problem that affects web-based library services access in many universities in India. Further, an open-ended question asked about other problems reveals that frequent interruption in internet connectivity is the major overcome. The problems are almost similar, but their relative place changes slightly between one category of users to another category of users.

**OPINION ON WEB-BASED LIBRARY SERVICES**

Connectivity is the critical technical factor for browsing web-based library services. The problem of slow access to the Internet also affects users’ access and use of web-based library services of the library. To improve the present web-based library services and develop new web-based library services, there is a need to rate the existing services. In this context, a question was put to the respondent users to rate the web-based services rendered by their libraries and responses received from them are presented in Table 5.

**Table 5: Opinion on web-based library services**

<b>Opinion</b>	<b>Faculty</b>	<b>Research Scholars</b>	<b>P.G. Students</b>	<b>Total (n=600)</b>
Good	70 (11.66%)	77 (12.83%)	86 (14.34%)	233 (38.83%)
Very Good	78 (13%)	68 (11.34%)	49 (8.16%)	195 (32.5%)
Satisfactory	25 (4.16%)	37 (6.17%)	39 (6.5%)	101 (16.83%)
Excellent	20 (3.34%)	12 (2%)	21 (3.5%)	53 (8.84%)
Unsatisfactory	07 (1.16%)	06 (1%)	05 (0.3%)	18 (2.96%)

It is inferred (Table 5) that very good rating had been given by the faculty by a relatively higher percentage among them, while both research scholars and P.G. Students have given a relatively higher percentage to good in their rating. Excellent had been mentioned by 10 percent by faculty and P.G. students, while it is 6 per cent for research scholars. From the discussion it can be concluded that good (38.83%) is the highest rating for web-based library services, followed by very good (32.5%), satisfactory (16.83%), excellent (8.84%), and unsatisfactory (2.46%) is the lowest rating among five ratings.

**CONCLUSION**

Web-based library services will become more widespread and sophisticated as the web becomes common place throughout the world, and to be successful players in the e-world. Libraries must continue to address the web design and implementation issues. As we actively transfer library services, our central purpose remain the same, to serve and teach users to find, evaluate, and use information effectively. The librarians should be expert to hold the hands of the users who are moving towards new communication paradigm a shift from face to face human contact to human machine interaction, from paper to electronic delivery, from text centered mode to multimedia



and from physical presence to virtual presence. Despite these changes in communication technology, the reference interview will remain at the heart of the reference transaction. To meet these challenges the librarians may play a leadership role in providing better web-based library services facilities to their current techno savvy users. The survey has revealed that study university libraries in India are lagging behind in providing web forms to users in different web-based library services, which are effective tools for library user interaction and communication. It is hoped that study libraries will attend to this lacunae by developing web forms in each web-based library service. Findings show that many of the surveyed university libraries are yet to exploit full potential of the web and continually develop an effective web-based information literacy programs to provide a high degree of interactivity and flexibility to enhance the use of web-based library services they offer to the users. Our research is significant because it represents one of the earliest works to shed light on the current level of adoption and use of web-based library services in select university libraries in India and the ways in which individual web-based applications in different sections the study libraries has been used are examined. Lastly, it should also be noted that this research has limitations. Since it surveyed users from only twenty universities, the users may not accurately represent the whole population. For future research, a broad study should include more university libraries that offer the full range of web-based library services and report the problems faced by users while using them, as well as expanding the study to other libraries in order to gain a broader perspective on the effective use of web-based library services.

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