

**SATISFACTION LEVEL ON WEB BASED LIBRARY RESOURCE &
SERVICES AMONG LIBRARY & INFORMATION SCIENCE
RESEARCH SCHOLARS OF CENTRAL UNIVERSITIES IN NORTH
INDIA : A STUDY**

ABSTRACT

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ABSTRACT

A University library is the heart of a university and it plays an important role to support education and research works. And library serves as research centers in the University. During the last decade library resource centers and information services, in general, have made a great stride able to play a leading role in society. Information and technology have introduced many changes in library activities. These, along with a library that manages information have to integrate the necessary technological changes to adapt to the new challenges, for this they have made important investments in technology to update their infrastructure the current WWW information service is important and in continuous evolution. In the present time need accurate, precise, and systematic information. The previous methods of library and information services have changed greatly in recent years because of the development and application of new information technologies, especially the internet and web technologies. The Web has enabled library services to be offered 24X7, beyond the normal library hours to be accessed by the users from anywhere from a range of devices such as tabs, laptops, desktops, and smart phones. This has not only saved users time but also have provided the users the convenience to effectively and efficiently use library services without frequently visiting the library. The web 2.0 or participative web has opened up a new environment for the library and improve library services, procedure and operation and empower users by allowing them to create and content management of services. Thus, libraries must adopt these latest web technologies in providing

The University Library websites provide information on the resources and services of the library by allowing access to all digital collections, such as online databases, online sources, topic materials, library directions, and new arrivals. This has helped significantly the information scientists incorporate the four aspects of a library from information acquisition, information organization, retrieval of information to users, and preservation of library online information on their homepage. Web 2.0 technologies have provided new opportunities for developing library facilities, infrastructure, and operations, and motivated users by designing and maintaining resources.

The main purpose of the study was web-based library resources and services in the central universities libraries in North India. The study clearly brought out the assessment of the interaction and of satisfaction of research scholars with web-based library resource and services from the Central Universities Libraries. Also, the study purpose of the study was to

find out the problems faced by the Researchers to accessing web-based library services, their opinion on web-based library services, and expectations of Web-Based Library Resource and Services on the web 2.0 environments.

Statement of the Problem

The present study is conceived under the title “Satisfaction level on web-based library resource & services among library & information science research scholars of a central universities in north India: a study” therefore, the purpose of the study is to analyze how to web-based resources and services effects the scholars learning ability and how media and digital literacy would be fruitful for empowering research scholars with their critical thinking and problem-solving skills for making them carefully use of library web-based resources and services.

Definition of Important Keywords

Web-Based Library Resources and Services

In the context of library Web-based library resources and services are such types of resources and services provided through the web or the internet. The web facilitates and library staff to extend services beyond posted library hours. Web improves library visibility of the library system, and users become aware of the library up to date. The library can use the web to deliver more effective databases and full-text web services and promotes the image of the librarians as the internet expert. It also promotes the status of the library as an innovative, progressive, and integral to the dedication to excellence in education and research. Web-based library services offer services such as more online textbooks, databases, tutorials, and a virtual library of links to other useful resources. And it also provides the exclusive service of linking to full-text articles, integrating libraries' house-keeping operations, library policies, staff listings, etc for the timely help.

Need for the study

In the present time library the emergence of new trends and technology creates new challenges for a library to fill the demand of their users; web-based information services have put a wide impact on the provision of library and information services. The present study aims to investigate the satisfaction level of web-based library resources and services in the central universities libraries in North India and also assesses its satisfaction level convenience of use among the research scholars of library and information science.

This research was primarily aimed at discovering the following advantages, such as:

- The analysis was focused on the current situation and the result can be used for reorganizing web-based library services for users.
- Needs for new web-based services after collecting feedback from users which could satisfy university library users ' requirements.
- Evaluation of new web-based services after collecting feedback from users which could satisfy university library users ' needs.

This study is to provide suggestions on how to develop the existing web-based services to better support university library users to navigate in the new data-rich world.

Objectives of the Study

The present study evolution of the satisfaction level on web-based resource and services among library and information science research scholar of central universities libraries in north India: A study. Therefore, the study has the following objectives to examine:

1. To identify and analyze Web-based library resource and services offered through the websites of central university libraries.
2. To find out the availability of web technologies and its application for effective use of Web-based library resources and services.
3. To know the level of satisfaction among the research scholars under the study.
4. To know the awareness and use of Web-based library resources and services among the research scholar of central university libraries.
5. To find out the problem faced in using Web-based library resources and services.

Hypotheses of the Study

The Following hypothesis formulated of this study:

1. Selected central university libraries have adequate infrastructure for Web-based resources and services for LIS research scholars;
2. All the central university libraries are providing Web-based library resources and services according to the need of LIS research scholars;
3. LIS research scholars have sufficient awareness about web-based library resources and services;
4. LIS research scholars of the selected university are satisfied with Web-based library resources and services.

Scope and Limitation of the Study

The scope of the study is limited to the research scholars of the central universities library in North India. The Study was cover those central universities who running regular mode

library and information science at central university North India, to find out the satisfaction on Web-based library resource & services among library and information science of research scholar in central universities library in North India, like Haryana, Delhi, Himachal Pradesh, Jammu & Kashmir, Uttarakhand, Punjab, and Uttar Pradesh. The Scope of the study is following the topic of the study following University Libraries was covered under the study.

Name of University in Offered Library and Information Science Course

Name of Library	Name of the University	Established Year	Place of Location
Maulana Azad Library	Aligarh Muslim University	1857	Uttar Pradesh
Gautam Buddha Central Library	Babasaheb Bhimrao Ambedkar University	1996	Uttar Pradesh
Sayaji Rao Gaekwad Library	Banaras Hindu University	1916	Uttar Pradesh
Central Library	University of Allahabad	1887	Uttar Pradesh
Delhi University Library system	University of Delhi	1922	New Delhi, Delhi
Dr. B. R. Ambedkar Central Library	Jawaharlal Nehru University	1969	New Delhi, Delhi
Dr. Zakir Husain Library	Jamia Millia Islamia University	1920	New Delhi, Delhi
Central Library	Central University of Haryana	2009	Haryana
Central Library	Central University of Himachal Pradesh	2009	Himachal Pradesh
Central Library	Central University of Jammu	2009	Jammu
Central Library	Central University of Kashmir	2009	Kashmir
Central Library	<i>Central University of Punjab</i>	2009	Panjab
---	Indira Gandhi National Open University	1985	New Delhi, Delhi
Central Library	Hemwati Nandan Bahuguna Garhwal University	1973	Uttarakhand

These Eight universities are offered Library and Information Science course, these are, the University of New Delhi, Delhi, Central University of Kashmir, Ganderbal, Kashmir, *Central University of Punjab*, Bathinda, Panjab, Muslim University, Aligarh, Uttar Pradesh, Banaras Hindu University, Varanasi, Uttar Pradesh, Central University of Jammu, Trikuta Nagar, Jammu, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh, Indira Gandhi National Open University, Delhi.

Research Methodology of the study

Research methodology has become an important aspect of human activity. It provides a dependable solution to problems and resolves conflicts. The research methodology is a way to systematically solve the research problem; it may be understood as a science to studying how the research is done scientifically.

In this study, two types of methods were adopted for data collection

- The questionnaire and
- The interview

The questionnaire was structured to keep the specified goals in mind. There are close-ended as well as open-ended questions in the questionnaire. Two sets of semi-structured questionnaires were formulated to collect primary data. For the web-based library services survey of the selected central universities, one collection of questionnaires was intended for the librarian. And the second questionnaire was prepared for research scholars to evaluate their library using resources and services, satisfaction with the library's various web-based resources and services, and to gather their views on web-based information services.

There were formulated two questionnaires

- Questionnaire for Librarian
- Questionnaire for Research scholar

The research scholar questionnaire divided into various sections:

- **Section: 1 Web-Based Library Resources:** This section having twelve questions regarding the awareness and use of web-based library resources and services.
- **Section: 2 Web-Based Library Services:** This section having seven questions regarding web-based library services in the various section in the library.
- **Section: 3 General Web-Based Library Resources and Services.** This section contains four questions.

The study is based on Web-based library resource and services in central universities library in North India with special reference to accessibility to the library and information science research scholars. The study will investigate how web-based resources and services in libraries are helpful to the academic environment and the use of web-based services by the researchers. The research is based on the study method. The study will be conducted among the library and information science research scholars in the central universities in North India. A stratified random sampling method will be used for this study. The questionnaire is the main tool proposed for data collection in this study. Other tools like observation and interviews will be also supporting the study. Statistical analysis of the questionnaire will use the data SPSS (Statistical Package for Social Sciences). Percentage, chi-square test, ANOVA, and correlation analysis are some of the statistical techniques will use in SPSS for analyzing and interpretation the data.

Development of Study Instrument

Measure the satisfaction of the web-based library service again using the five-point Likert style scale (i.e. 1= highly satisfy, 2= satisfy, 0= neutral, -2= dissatisfy, -1= strongly dissatisfy).

Data analysis

The data collected were analyzed with the aid of MS Office (Excel). The methods used to evaluate the user data were chi-square checking. The citation and references are provided in the format of the APA, edition 6. To help the analysis, other instruments including observation and interviews were used.

Major Findings

1. To identify and analyze Web-Based Library Resources and Services offered through the websites of Central University Libraries.

Availability of Web-based open access Resources

Study results on web-resources availability show that some widely accessible web-resources in all university libraries are e-books, e-journals, E- thesis/dissertation, E-news clipping open-access journals, academic archives, e-databases, Intuitional repository gateway, and patents/standards.

Availability of Web-based Resources

Results on the availability of web resources indicate that certain widely accessible web resources in all university libraries are Emerald insight, Elsevier, JSTOR, scholarly archives, Springer, Google Scholar, ProQuest, EBSCO, and LISA.

Accessibility of full-text Online Database

Results on the availability of web resources indicate that certain widely accessible full-text online database resources in all university libraries are Cambridge university press, Economics & political weekly, JSTOR, Emerald, Springer, Science direct, Projects mouse, and Taylor & Francis.

Availability of Web-based Services

Web-based Reference/Information Services

The findings to web-based reference/information availability Services show that libraries have various reference and information resources, but it has been noted that all university libraries have introduced knowledge distribution and current awareness resources, Virtual reference des/ask-a librarian, Inter-library loan web-based services, Current awareness services, Selective dissemination of information, Document delivery service and Online current awareness bulletin.

Web-based Acquisition Services

Findings of the study reveal that web-based acquisition services, it is found that all university libraries provide some common services such as a list of new arrivals, Alert services for new arrivals, Request for document and acquisition policies, etc.

Web-based Circulation Services

Results on web-based circulation services show circulation services provided to users by All university libraries like provide User accounts, circulation (issue/return), Reservation of document, Renewal of loaned document, Interaction with the user for the query, Circulation policy, Posting of overdue details of the user.

Web-based Cataloguing Services

Findings of the study with observe to the availability of web-based cataloguing services like web-OPAC, Union catalogue, subscribed e-journal through the consortium, subscribed e-journal, electronic indexes, and Download multimedia files.

Search Technique use Accessing Web-based Library Resources

The study found that all libraries provide the facility to search techniques by Keyword, Controlled vocabulary or subject, Field-specific, Proximity location, Truncation, Boolean operator.

Web-based Periodical Services

Findings on the availability of Web-based library periodical services suggest Status of recommendation journal, Article Alert services, Recommendation for the subscribed new journal, E article delivery, Identify the most cited paper in the various field online, these services offered by library online and vice versa.

Miscellaneous Web-Based Library Resources

On the availability of miscellaneous web-based resources on the Internet, the findings revealed that all libraries provide E-mail Based service, Feedback form, FAQ, Library holidays, Library news, Map of the library, Helpdesk services, Exhibition/seminar/conferences, Photo gallery, and Library forums.

2. To find out the availability of web technologies and its application for effective use of Web-Based Library Resources and Services.

Web-based Resources

Finding of study with regard to the availability of technique to access web-based resources, the study reveals that the Boolean operator searching technique (79.55%) scholars are the most preferred search technique to searching web-based resources. Followed by maximum (64.28%) respondents are satisfied to use this technique. It was noted that scholars found the

Controlled vocabulary or subject (40.91%) as the least preferred services among search techniques.

Web-based Acquisition Services

Finding of study with regard of availability of technique to access web-based services, study reveals that majority of (77.27%) scholars us to access web-based services through List of new arrival, and (70.59%) is satisfied to use this technique, while only (8.82%) scholars are dissatisfied.

Web-based Circulation Services

With regard to Web-based Circulation Services, findings of the study reveal the Issue/return services (75%) is the preferred service among scholars, while circulation policy (36.36%) as the least preferred services among various services.

3. To know the level of satisfaction among the Research Scholars under the study.

Satisfaction with overall Web-based Library Resources

The findings of the study with regard to satisfaction level with resources, findings reveal that maximum (72.72%) scholars are satisfied with web-based resources. it was noted that only (4.54%) scholars were dissatisfied with the web-based resources.

Satisfaction with overall Web-based Library Services

The findings of the study with regard to satisfaction level resources, findings reveal that maximum (70.45%) scholars are satisfied with web-based services. it was noted that only found (2.27%) scholars dissatisfied with the web-based resources.

Rate of scholar's satisfaction with Library Infrastructure

The findings of the study with regard to satisfaction level on library infrastructure. The study reveals that (61.36%) scholars are satisfied with library services, Followed by the majority of (68.18) scholars are satisfied with library resources, and (56.81%) scholars are satisfied with library basic infrastructure.

4. To know the awareness and use of Web-Based Library Resources and Services among the Research Scholar of Central Universities Libraries.

Awareness of Web-based Library Resources and Services

➤ Awareness of scholars regarding the availability of web-based library resources and services, findings reveal that (100%) scholars are aware of web-based library resources and services.

University Library offers Web-based Library Resources

- The study revealed that the maximum number of research scholars used Elsevier i.e. (90.90%), whereas the majority of scholars (57.5%) are satisfied, while at least (7.5%) of scholars dissatisfied.
- The study revealed that research scholars used Emerald insight (88.63%) whereas the majority of (64.10%) scholars are satisfied, while (17.96%) of scholars are highly satisfied and least (7.69%) of scholars are dissatisfied.
- From the study, it is found that (86.36%) of research scholars use JSTOR further it is observed that the majority of (57.89%) scholar is satisfied and (10.52%) scholars are dissatisfied.
- The study reveals that (72.72%) of scholars use Springer for the required information, whereas (75%) of scholars are satisfied to use it. While (12.50%) of scholars are dissatisfied.

Use of various Web-based Library Resources

- The study revealed that majority of (90.90%) research scholar is preferred to use e-journals provides by the library, whereas most of (60%) scholars are satisfied, while (30.55%) scholars are highly satisfied and only (7.5%) research scholars is dissatisfied
- It was noted that scholars found the various web-based resources (27.27%) as the least preferred E-patents /standards resources among various resources, and 25% of research scholars are satisfied, while (66.66%) of scholars are dissatisfied

Access and satisfaction with Open Access Resources

- The study revealed that majority of (97%) research scholar is preferred to use Shodhganga, whereas the majority of (62.79%) of scholars are satisfied, while (4.65%) of scholars are neutral.

Use of Web-based library in Reference Services

- Findings with regard to the use of Web-based library services in the reference section, the study revealed that the majority of (54.54%) of respondents is used Current awareness services whereas (54.16%) respondents is satisfied, (20.83%) respondents is neutral. It is further noted that Virtual reference services (29.54%) is the least preferred service among scholars.

Use of Web-based Acquisition Services

- Findings of study with regard to web-based acquisition services reveal that (77.27%) of scholars use to find the list of new arrivals online useful in knowing the new titles added to the collection under web-based acquisition services in the libraries whereas (70.59%)

scholars are satisfied. The study also found that Alert services for new arrivals (27.27%) are the least preferred service and (66.66%) of scholars are satisfied.

Use of Web-based Circulation Services

➤ With regard to web-based circulation services, findings of the study reveal that issue/return (75%) is the preferred service among scholars, and (84.84%) of scholars are satisfied. It was noted that users found the circulation policy online (36.36%) as the least preferred service among various services, whereas (50%) of scholars is satisfied.

Use of Web-based Cataloguing Services

➤ With regard to web-based Cataloguing services, findings of the study reveal that OPAC (86.36%) is the preferred service among scholars, and (73.68%) of scholars are satisfied.

5. To find out the problem faced in using Web-Based Library Resources and Services.

Problems faced using Web-based Resources

The study revealed that the majority of (17.77%) of scholars have a lack of ICT infrastructure.

Problem faced to accessing of Open Access Resources

➤ Findings of the study with regards to accessing web-based resources that the majority of (25%) of scholars access only subscribes resources, while (15%) of scholars face problem due to Insufficient information.

Reasons for not satisfied with Web-based Library Resources

➤ Findings of the study with regards to not satisfied with Web-based resources that the majority of (36.36%) of respondents are not satisfied, while (3.63%) of researchers faced Technical problems.

Problem faced using Web-based Library Services

Findings of the study with regards to not satisfied with Web-based services that the majority of (16.47%) respondents were not satisfied with web-based services due to technical problems, while (9.41%) not satisfied due to Lack of probability in contrast with original print materials.

Hypotheses Testing

The Following hypotheses formulated of this study:

Selected Central University Libraries have adequate infrastructure for Web-Based Resources and Services for LIS Research Scholars;

The above hypothesis accepted as the libraries have adequate infrastructure for providing web-based library resources and services (table 5.1.1, 5.1.2, 5.1.3. and 5.3.12)

Table 5.1.1 Availabilities of Hardware

S.N.	Hardware	BBAU	AMU	BHU	DU	CUH
1	Printer	✓	✓	✓	✓	✓
2	CCTV Camera	✓	✓	✓	✓	
3	Bar code printer	✓	✓	✓	✓	
4	Scanner for digitization	✓	✓	✓	✓	
5	LCD Projector	✓	✓	✓	✓	
6	FAX	✓	✓	✓	✓	
7	Web camera	✓	✓	✓	✓	✓
8	Power backup	✓	✓	✓	✓	
9	Multifunction printer	✓	✓	✓	✓	
10	Web server	✓	✓	✓	✓	✓
11	Database server	✓	✓	✓	✓	

Table 5.1.1 shows that hardware tools available in the library majority of the library have It infrastructures such as a printer, CCTV camera, Bar code printer, scanner for digitization, LCD Projector, Fax, Web camera, Power backup, Multifunction printer, Web printer, and a Web server. However, it is noticed that the CUH libraries have an only printer and web camera

All the Central University Libraries are providing Web-Based Library Resources and Services According to the need of LIS Research Scholars;

The above hypothesis is proved and accepted as all central university libraries are providing web-based library resources and services. Further, it is also found that libraries are also providing different types of web-based resources and services and maximum scholars are use and satisfied (table 5.2.5, 5.2.6, 5.2.8, 5.2.11, 5.3.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6 and 5.2.9)

LIS Research Scholars have sufficient awareness about web-based library resources and services;

Table 5.2.1 reveals that though all the scholars are aware of the existing web-based library resources and service and they are effectively utilizing the web-based resources and services (table 5.2.5, 5.2.6, 5.2.8, 5.2.11, 5.3.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6 and 5.2.9) this indicates that they are maximum aware of web-based. This is evident from the fact that scholars have cited well use of training/orientation programmed (5.3.12) thus hypothesis is proved and accepted.

LIS research scholars of selected university are satisfied with Web--based library resource and services.

The above hypothesis is proved and accepted as maximum research scholars are satisfied with library provide web-based resources and services (Table 5.1.9, 5.2.14, 5.3.7, 5.2.5, 5.2.6, 5.2.8, 5.2.11, 5.3.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6 and 5.2.9).

6.5 Conclusion

The conventional method of providing library services has been changed with the advent of the Internet and online technologies. The World Wide Web provides libraries great opportunities to provide their customers with information and facilities online, which in print media is difficult. Academic libraries are at the forefront of technical progress. They are also at the forefront of incorporating technology and exploiting the capabilities of emerging technology in delivering innovative and integrated services. Librarians must learn required library management skills and abilities Principles and procedures. Librarians need to acquire sufficient technical training to provide them with the skills they need to promote better services in a new climate. Study results indicate that libraries make good use of web technology capacity. Users' demand and preferences have shifted with new technologies emerging. They need to learn how to use web application software like Blog, RSS streams, Instant Messaging, a wiki to boost and update your library Services and infrastructure. The research results indicate that users are aware of the resources and services offered by the library, and the majority of scholars use the resources and services given to them. The outcome of this research offers descriptive information to librarians interested in either building or developing websites and resources for libraries. They will also learn how modern and improved library resources can be used using the specific features of web application software.

6.6 Suggestions

The following recommendations are made to improve and efficiently use the web-based tools and facilities in the libraries of the central university libraries, based on the results of the report.

1. Libraries should promote the use of web-forms by their users. These web-forms are an important medium of communication and interaction between the library and the users.
2. Libraries should develop periodic and continuous user-oriented programmed Assessing and reviewing websites and tools and facilities (Online and Offline) to observe effectively use.
3. To make good use of the variety of Web-based tools and services available Users of electronic library system libraries need both Competencies in computer literacy and in technology literacy. The library should organize a program like orientation programmed / training/workshop orientation for them.
4. Libraries should organize conferences/workshops/training on a regular basis Profit from library employees to remind them of the latest technology so that They will establish expertise in network-based delivery of resources and Facilities
5. The professional staff should be promoting effective online support for question formulation and adjustment.
6. Libraries need to create their website, Web designing applications are widely available through using such tools, the IT department reliance will be minimized and they will be able to upgrade their website in real-time.
7. The library should promote their services through the use of new creative resources like Facebook forum, twitter, library blog, etc. for best use of its services and Facilities.
8. Real-time digital reference service/online chat is found to be offered by A few bibliothèques. These are the means of offering a reference service at any time. And everywhere. For real time comparison, the Instant Messaging service can be used Hey, operation.
9. In order to review and evaluate websites and tools and facilities (both online and offline) to observe the correct usage, libraries should develop daily and ongoing user-oriented evaluation policies. This will enable academic librarians to be familiar with user requirements and will strengthen and build new tools and services as a result. Libraries may use online resources such as Google analytics, easy counters, etc. to track website usage.

10. Students should add a credit-based course at the initial level to make resources more used by the library. In order to create a supportive atmosphere for improvement, these courses should be augmented with web-based training tutorials.
11. Users of central university libraries have been found to be aware of the availability of web-based library resources and services, but these resources and services are not completely used. This is because the users may not have attended the library-organized orientation program/training/workshop.