

CONTENT ANALYSIS OF CENTRAL UNIVERSITY LIBRARY WEBSITES IN INDIA: A STUDY

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ABSTRACT

Libraries are playing an important role in supporting and disseminating information services through their websites. A study of these websites will help to identify the content available on them so that the evaluation may help improve the existing sites to provide rich and relevant information to the library users. For content analysis of university library websites, a checklist was prepared for data collection. The checklist comprised of general information, nature of links, collection, services, social networking sites, and application of web 2.0 technology and so on. The investigator selected 13 university library websites for the study on the basis of content available on the websites.

The study revealed that majority of the university library websites in India provides informative link to contacts, news and events. The libraries should present different contact information (librarians, technical experts, circulation desk, digital services etc.) on their websites. A few websites provide opportunity for user interaction in the form of feedback. A few library websites provide links to mission statement, location, sitemap, and library tour. A good number of the libraries provide the library hours, library rules and membership. These are very useful features for quick access of pages. About fifty percent of the libraries provide some information of their history on their websites.

The use of graphics on academic library websites attracts and motivates library patrons to enter the site and examine its content. Another important aspect to be considered is the currency which includes the uploading date which should be mentioned on the library websites to make the users aware of the currency regarding the material they are using for their research and other purposes.

Keywords: *content analysis; web content analysis; evaluation of websites*

1. INTRODUCTION

The web was designed as an information space with the purpose for enhancing human-human communication. Web pages are a presentation of information which can be displayed in carefully chosen media most appropriate for the content. Web

pages can be static or dynamic in nature meaning that the content remains the same each time someone visits the webpage or it is taken from a database which is updated regularly.

The content and its presentation is the most important part of any website. The content of a websites can be presented in different forms, the most common and accessible being text and graphics.

1.1 WEB-BASED LIBRARY SERVICES

The various web-based library services include web-based table of contents, article alert service, electronic article delivery, open J-gate and index to journal articles. Other web-based library services, includes online staff lists, online suggestion forms, online library news, online library holidays lists, online in-house library bulletins, web based user education/virtual library tours, online integrated push-based services (e-mail based), online helpdesk services/Ask-a-librarian, e-mail-based services, online library chat, library forums (e-mail based), web-based FAQ, library blogs, library wiki, online contact address, online subject gateways, online mailboxes for user comments or suggestions, change password online, online general library policies, information about special exhibits, web-based library tutorials, and online map of the library.

2. METHODOLOGY

2.1 Selection of the Problem

The problem selected for the present study is “Content Analysis of Central University Library Websites in India: A Study”. The problem deals with overall assessment of contents of university library websites in India on the basis of introduction, purpose, scope, types, features etc.

2.2 Need and purpose of the Study

A website is a collection of related web pages, images, video or other digital assets that are addressed through a common uniform resource locator (URL), consisting of a domain name, or IP address to a Internet protocol based network. These sites are used by educators for both professional development and as a teaching tool. Website is one of the important tools to publish the activities of the library. Websites provide details of programmes, library facilities and resources. Information contains location, sitemap, library hours, library rules, news & events, membership, library tour, FAQ, date of updating, contact, feedback, and administrative activities, nature of links, collection, services, social networking sites, and application of web 2.0 technology .

The study attempts to evaluate the contents of these web pages with the purpose to study the information available on the library websites, services and facilities provided on the websites to improve the existing sites for providing rich and relevant information to the users.

2.3 Objectives of the study

The objectives of the study are as follows:

1. To analyze the contents of central university library websites in India.
2. To find out the services and facilities provided on the websites.
3. To know about the accuracy, currency, accessibility, and user friendliness.
4. To suggest measures for improvement of central university library websites.

2.4 Significance of the study

The significance of the study lies in the fact that library is the heart of any university that recognizes the intellectual life and scholarship of academia and researchers. The study attempts to evaluate the contents of library websites of central universities in India and its contribution to the global knowledge base. The result of this study will help to illustrate the overall content, coverage and the features of library websites in Indian universities.

3. DATA COLLECTION

The investigator surfed through the UGC websites for the list of Indian central universities. Investigator found that there were 42 central universities in India. With the help of university websites homepages, investigator identified the library web pages of universities. For content analysis of university library websites, a checklist was prepared for data collection. The checklist comprised of general information, nature of links, collection, services, social networking sites, and application of web 2.0 technology and so on. The investigator selected 13 university library websites for the study on the basis of content available on the websites during the July25-Aug30, 2012. The collected data are organized and tabulated.

4. DATA ANALYSIS AND INTERPRETATION

Data collected through a checklist through internet surfing for contents of central university library websites in India are organized and tabulated.

Table -1 shows the general information content of central university library websites in India. General information contains history, mission statement, location, sitemap, library hours, library rules, news & events, membership, library tour, FAQ, date of updating, contact, feedback, and administrative activities.

The general information about the history of a library is quite important for the users. The library websites provide the establishment year, name of the library, name of the people who inaugurated the library. Library of AMU, BHU, EFLU, JMIU, MANUU, NEHU and PU show history on their websites. The analysis is that 53.84 percent of central university libraries in India provide their history on the websites.

Mission statement provides the objective of the library regarding its services to user as well as staff. The objective of the library shows the goal of the library. IGNOU, HU and KU provide mission statement on their library websites. 23.07 percent of the central university libraries in India show mission statement on their websites.

Table 1: General Information

Name of the University	History	Mission Statement	Location	Sitemap	Library Hours	Library Rules	News& Events	Membership	Library Tour	FAQ	Date of Updation	Contact	Feedback	Administrative Activity
AMU	✓	x	✓	x	✓	✓	x	x	x	x	✓	✓	✓	✓
BBRAU	x	x	✓	✓	✓	✓	✓	✓	x	x	x	✓	✓	x
BHU	✓	x	x	x	✓	x	x	✓	x	x	x	✓	x	x
DU	x	x	x	x	✓	✓	x	✓	x	x	✓	✓	x	x
EFL	✓	x	x	x	✓	x	x	✓	x	x	x	✓	✓	x
HU	x	✓	x	x	✓	✓	✓	✓	x	x	✓	✓	x	✓
IGNOU	x	✓	x	x	✓	✓	x	✓	x	✓	✓	✓	✓	x
JMIU	✓	x	x	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	✓
JNU	x	x	✓	✓	✓	✓	✓	✓	x	x	x	✓	✓	x
KU	x	✓	x	x	x	✓	x	✓	x	x	x	x	x	x
MANUU	✓	x	x	✓	✓	✓	x	✓	x	✓	✓	✓	✓	✓
NEHU	✓	x	✓	x	x	✓	x	✓	✓	✓	✓	✓	x	x
PU	✓	x	x	x	✓	✓	✓	✓	x	x	✓	✓	✓	x

Library websites of AMU, BBRAU, JNU and NEHU include the location information. It is expressed that 30.76 percent of library websites contains the information of location of libraries. BBRAU, JMIU, JNU and MANUU have the information of site map on their library websites. Study shows that 30.76 percent library websites provide sitemap.

AMU, BBRAU, BHU, DU, EFLU, HU, IGNOU, JMIU, JNU, MANUU and PU provide library timing information their library websites. 84.64 percent university library websites provide information of library hour or library timing. It is very good sign that Most of the central university library websites in India contains the information about library hour. AMU, BBRAU, BHU, DU, HU, IGNOU, JMIU, JNU, KU, MANUU, NEHU and PU provide the information of library rules on their library websites. It is revealed that the central university library websites (84.64 percent) provides the library rules.

News and events provide information about the activity of the library. Events that have taken place or upcoming events are mentioned on the library websites. It tells the user about future programs of the library. BBRAU, HU, JMIU, JNU, KU and PU contain the information about news and events on their library websites. 38.46 percent of the central university library websites provide the news and events information.

BBRAU, BHU, DU, EFLU, HU, IGNOU, KU, JMIU, JNU, MANUU, NEHU and PU give the information on their library websites. 92.30 percent of the libraries show membership information on their websites. NEHU provides the information about the library tour. Only one central university library websites in India shows the library tour information which is a very poor sign for Indian universities. Library tour is not an ignoring point for any library to cope with the services of the library.

Frequently asked questions are listed questions and answers, all supposed to be commonly asked in some context, or the other pertaining to a particular topic. In the library, there are some questions and answers. With help of this FAQ, some user can easily know any general query just looking the FAQ. That is why FAQ helps the users to get the general information of their need and save the time of the user as well as library staff. IGNOU, JMIU, MANUU and NEHU provide the information about FAQ. 30.76 percent of the library websites gives the list of FAQ.

Currency of the library websites indicates accuracy and authenticity. It enhances the use of library websites. DU, HU, IGNOU, JMIU, MANUU, NEHU and PU shows the date of updating information. 53.84 percent of the library websites provides the information of last updation.

There are several ways/forms of information of contacts including librarian, deputy librarian, assistant librarian and staff. This is also very useful for the user. With the help of the contacts a user can contact the library staff. AMU, BRAU, BHU, DU, EFLU, HU, IGNOU, JMIU, JNU, MANUU, NEHU and PU provide the contact of library' staff on their library websites. Most of the central university library websites in India show the contact of their staff. Percentage of library websites which gives contact information is 92.30%.

AMU, BBRAU, EFLU, IGNOU, JMIU, JNU, MANUU and PU provide the feedback on their library websites. Near about 61.53% of central university library websites in India show the feedback. AMU, HU, JMIU and MANUU provide the information of administrative activity. It is expressed that 30.76 percent library websites in India show the administrative activity.

Table 2 shows the library collection information on their web pages of the central universities in India. In table, Collection includes the information about books, Audio Video, Journals, Microform, Maps, Manuscripts, Photographs, Dissertation and Project.

Table 2: Library Collection

Name of the University	Books	Audio/ Video& CD/DVD	Journal	Microform	Maps	Manuscripts	Photographs	Dissertation	Projects
AMU	✓	✓	x	x	x	✓	x	x	x
BBRAU	✓	x	✓	x	x	x	✓	x	✓
BHU	✓	x	✓	x	x	✓	✓	✓	x
DU	✓	✓	✓	x	x	✓	x	✓	x
EFL	✓	x	✓	x	x	x	x	✓	x
HU	✓	✓	✓	x	x	x	x	✓	✓
IGNOU	✓	✓	✓	✓	x	x	✓	x	x
JMIU	✓	✓	✓	✓	x	✓	x	✓	x
JNU	✓	✓	✓	x	✓	x	x	✓	✓
KU	✓	✓	✓	x	x	x	x	✓	x
MANUU	✓	✓	✓	x	x	x	x	✓	✓
NEHU	✓	x	✓	x	x	x	x	x	x
PU	✓	x	✓	x	x	x	✓	✓	x

AMU, BBRAU, BHU, DU, EFLU, HU, IGNOU, JMIU, JNU, KU, MANUU, NEHU and PU provide information of books on their library websites. All the libraries of central university in India consist of books information on their websites. AMU, DU, EFLU, HU, IGNOU, JMIU, JNU, KU and MANUU provide audio/video information. 61.53 percent library websites have the information of audio/video.

BBRAU, BHU, DU, EFLU, HU, IGNOU, JMIU, JNU, KU, MANUU, NEHU and PU provide information of journals. 92.30% of the libraries have the journal information on their websites. IGNOU and JMIU contain the microform information on their library websites. Only 15.38% library websites shows the information of microforms in India which is very low. AMU, BHU, DU and JMIU consist the information about manuscripts on their library websites. Library websites in India have manuscripts information which is 30.76 percent. BBRAU, BHU, IGNOU and PU provide the information on photographs. 30.76 percent central university library websites have photograph information. BHU, DU, EFLU, HU, JMIU, JNU, KU, MANUU and PU provide information about dissertations. 69.23% of central university library websites in India contains dissertation information. BBRAU,

HU, JNU and MANUU project information on their library website. 30.76% library websites in India provide project information.

Table 3: Library Services

Name of the University	OPAC	Issue & Return Service	Document Delivery Service	Reference Service	Bibliographic Service	Reprographic Service	Indexing Service	Service For Researcher	Reading Room	Links	Training & Guidance
AMU	✓	x	x	x	x	x	x	x	x	x	x
BBRAU	x	✓	x	✓	x	✓	x	x	x	x	x
BHU	✓	x	✓	x	x	✓	x	x	x	x	x
DU	✓	✓	x	x	✓	✓	x	x	x	✓	x
EFL	✓	✓	✓	x	x	✓	✓	x	x	x	✓
HU	✓	✓	✓	x	x	x	x	x	✓	x	x
IGNOU	✓	✓	x	x	✓	✓	✓	x	x	x	✓
JMIU	✓	✓	x	✓	x	✓	x	x	x	x	x
JNU	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	x
KU	x	✓	x	x	x	✓	x	x	x	x	x
MANUU	✓	✓	x	x	✓	✓	✓	x	✓	✓	x
NEHU	✓	✓	✓	✓	✓	✓	x	x	✓	✓	x
PU	✓	x	✓	x	x	x	x	x	✓	x	x

Table 3 provides the information of library services on their websites of the central university in India. Under the services, there are several points which have been taken. These include OPAC, library loan, document delivery service, reference service, bibliography, reprography, indexing, service for researcher, reading room, links, and training & guidance. An Online Public Access Catalog (often abbreviated as OPAC or simply Library Catalog) is an online database of materials held by a library or group of libraries. Users search a library catalog principally to locate books and other material physically located at a library. AMU, BHU, DU, EFLU, HU, IGNOU, JMIU, JNU, MANUU, NEHU and PU provide the OPAC information on their library websites. It is revealed that 84.64% of the library websites in India gives the information about OPAC.

BBRAU, DU, EFLU, HU, IGNOU, JMIU, JNU, MANUU and NEHU contain loan information on their websites. 76.92% central university library websites in India shows the information of loan.

The term document delivery may also be used for a related service, namely the supply of journal articles and other copies on a personalized basis, whether these come from other libraries or direct from publishers. The remote user demands the library for the required material. The library sends the material via post, e-mail etc in this service. The end user is usually responsible for any fees, such as costs for postage or photocopying. BBRAU, EFLU, HU, JNU and NEHU provide the information of DDS. 46.15% of the library websites in India gives the document delivery service.

The reference desk or information desk of a library is a public service counter where professional librarians provide library users with direction to library materials, advice on library collections and services, and expertise on multiple kinds of information from multiple sources. BBRAU, JMIU, JNU and NEHU provide reference service on their library websites. It is expressed that 30.76 percent of the library websites in India shows reference service.

Bibliographic services basically are those which guide the users of the libraries to their required documents in the form of a list of documents available in the libraries. It is time shaving service in the library. DU, IGNOU, JNU, MANUU and NEHU contains information on bibliography services on their library websites. It is revealed that 38.46 percent library websites have bibliography service.

BBRAU, DU, EFLU, IGNOU, JMIU, JNU, MANUU and NEHU provide reprographic information on their library websites. 76.92% of the library websites in India have the reprography service.

EFLU, IGNOU, JNU and MANUU provide indexing service information on their library websites. 30.76 percent of the central university library websites in India shows the information about indexing service. DU and JNU provide this service for research scholars on their library websites. Only 15.38% of the library websites provides service for researchers. This data shows the poor services for the researcher scholars.

HU, JNU, MANUU, NEHU and PU provides for reading room information on their library websites. It is expressed that 38.46% of library websites have information about reading rooms given on their websites.

Link analysis is a measure of the quality and relevance of a set of Links. This analysis is meant to assist in determining websites that promote a given website and measure popularity. Link popularity measures how many other sites indexed in the same search engine have links to one's site by the number of links to that particular site. On the library webpage there are different links, they connect to consortia, subject gateway, institutional repository etc., MANUU and NEHU have links on their library web pages. It is revealed that 23.07% of library websites in India include link on home page.

EFLU and IGNOU show the information of training and guidance on their library websites. 15.38 percent of library websites in India provide the training and guidance information.

Table 4 shows the information about e-books, e-journals, online database, intranet, online seminars, and institutional repository under the e-resources.

E-books or electronic book is a book-length publication in digital form, consisting of text, images, or both, and produced on, published through, and readable on computers or other electronic devices. Due to electronic format it solves the space problem in the library. In one time, several users can concern the same book on their PCs. AMU, BHU, EFLU, HU, IGNOU, JNU, MANUU, NEHU and PU provide the e-books information on their library websites. It is revealed that 69.23% of the library websites in India gives the information about e-books.

Table 4: E-Resources

Name of the University	E-Books	E-Journals	Online Database	Intranet	Online Seminars	Institutional Repository
AMU	✓	✓	✓	x	x	x
BBRAU	x	✓	✓	x	x	x
BHU	✓	✓	✓	x	x	x
DU	x	✓	✓	x	x	x
EFL	✓	✓	x	x	x	x
HU	✓	✓	✓	x	x	x
IGNOU	✓	✓	✓	✓	x	✓
JMIU	x	✓	x	x	✓	x
JNU	✓	✓	✓	x	x	x
KU	✓	✓	x	x	x	x
MANUU	x	x	✓	x	x	x
NEHU	✓	✓	✓	x	x	x
PU	✓	✓	✓	x	✓	✓

E-Journals or Electronic journals are usually published on the web. E-journals provide current information to the user. For the research scholars, E-journals are very helpful e-resource for their research purpose. AMU, BBRAU, BHU, DU, EFLU, HU, IGNOU, JMIU, JNU, KU, NEHU and PU show the e-journal information. 92.30% of library websites provide for e journal information.

An online database is a database accessible from a network, including from the Internet. It differs from a local database, held in an individual computer or its attached storage, such as a CD. Any remote library user can access the information through online database via internet. Online database are used for various activities of handling of information, such as resource sharing, reference service, abstracting and indexing services, easy retrieval of information. AMU, BBRAU, BHU, DU, HU, IGNOU, JMIU, JNU, MANUU, NEHU and PU provide online database on their library web pages. 76.92% of Indian central university library websites have online database. IGNOU provides the intranet information on their website. Online Seminars are conducted via internet. JMIU and PU conduct online seminars through their websites.

An institutional repository is an online locus for collecting, preserving, and disseminating - in digital form - the intellectual output of an institution, particularly a research institution. For a university, this would include materials such as research journal articles, before (preprints) and after (post prints) undergoing peer review, and digital versions of theses and dissertations, but it might also include other digital assets generated by normal academic life, such as administrative documents, course notes, or learning objects. IGNOU and PU have their own institutional repository on their library homepage. Only 15.38 percent of the library websites shows institutional repository.

Table 5 includes applications of web 2.0 technology in libraries.

When reaching out to students, academic librarians should take advantage of reference and social networking tools. One way that librarians can accomplish this is by embedding the ask-a-librarian feature within their library Facebook page. These social networking tools will help students to access library resources and librarians.

Table 5: Web 2.0 Applications

Name of the University	Social Networking Sites	RSS
AMU	x	x
BBRAU	x	x
BHU	x	x
DU	x	x
EFL	x	x
HU	x	x
IGNOU	✓	x
JMIU	x	✓
JNU	x	x
KU	x	x
MANUU	x	x
NEHU	x	x
PU	x	x

IGNOU contains social networking sites on its library websites. Only one library website in India has provisions for the social networking.

RSS allows users to avoid manually inspecting all of the websites they are interested in, and instead subscribe to websites such that all new content is pushed onto their browsers when it becomes available. Only library website of JMIU provides RSS facility.

5. FINDINGS

Libraries seemingly make use of their websites to expose and market their services and sources to potential users. Library websites serve for instruction, and highlights the importance of libraries about library sources, databases and general use. The librarians understand that staying relevant in the information age, which is evolving dynamically; demands that they adapt their services to the patrons who use modern technological applications and therefore use new technology for the library website. University library websites face a new reality. Libraries are aware of both the great competition caused by the growth of Internet resources and new searching and sharing tools that attracts library users, and familiarizes with the new technological applications and platforms in order to market their collections and services to the customers.

Site description was completely changed from a text-only version into graphic versions. This change is easily understood, given the tremendous technological evolution over the last decade that enables web designers to use graphics, such as banners or library pictures, on the library websites. Internet users are no longer accustomed to a text-only version, but are familiar with the use of colorful graphics on various websites. Thus, the use of graphics on library academic websites attracts

and motivates library patrons to enter the site and examine its content. Regarding currency which includes the updating date, the research findings present a picture of a flawed situation.

The study revealed that majority of the university library websites in India provide informative link to contacts, news and events. The libraries should present different contact information (librarians, technical experts, circulation desk, digital services etc.) on their websites. A few websites provide opportunity for user interaction in the form of feedback. A few library websites provide links to mission statement, location, sitemap, and library tour. A good number of the libraries provide the library hours, library rules and membership. These are very useful features for quick access of pages. About half of the libraries provide some information on their history in their websites.

The library resources category reveals an interesting picture. The libraries offered a far more limited scope of resources, focusing more on bibliographic databases. Majority of the websites provide links to OPAC. The websites should simple and advanced searching facilities. The websites should limit the links included in a text and should provide links to as many documents as possible online. The websites should include links to the homepage and to every webpages of the site so that visitors can navigate through the site with ease. The links should be clearly identified and point towards the right destination. The libraries should ensure that the websites navigation is easy to use and consistent.

All the libraries present their collection on their websites. Majority of the websites provide detailed information in their collection like books, CDs/DVDs, journal and newspapers. A few of the websites provide information about their manuscripts, and microform collection, rare and general collection. It is found that among the e-resources provided on the websites, e-books and e-journals have more links whereas databases have fewer links. The websites should handle multimedia documents through multimedia interfaces. The images should be attractive and optimized for the use of websites. The websites should limit the use of flash. Users may get attracted and enjoy the reading flash, but it will reduce the downloading speed and search engines tend to skip right over it. The libraries should provide multilingual interfaces in their websites for the different category of users. The websites should be compatible on all the major browsers like Internet explorer, Firefox, Opera, etc. this is because the website should be functional and accessible to users across the world using a variety of browsers.

Libraries seem to face the challenge of making their libraries visible by promoting their services on the Web 2.0 platform, and by providing user centered services via Web 2.0 facilities. Libraries adopt Web 2.0 applications focusing on the users which emphasize the user-centered attitude. It is interesting to follow the new tendencies emerging from the study, focusing on the adoption of e-resources, Web 2.0 use, a user-centered approach, and a wide access to various resources. It is revealed that only three libraries have deployed one or more web 2.0 technologies, RSS and social networking sites are the most used services. The libraries should use web 2.0 applications such as RSS and social networking sites such as Facebook to promote their websites. The growing power of social networking is evident from

the time spent by readers on sites such as facebook. The websites should provide the collaborative forum for discussion and sharing of information for library users. The central university library websites should exploit the emerging internet technologies to attract and increase its users.

6. CONCLUSION

Although university libraries are constantly developing new kinds of services, according to this study, it's not to a satisfactory extent. New library services described in the recent literature, like research services, administrative services, conference and events services, data services, counseling services cannot be recognized well from the library Web pages, and were present only at a small number of library Web pages. One of the reasons for such a low representation is stated as the limitation of the study, which is lacking semantics.

When reaching out to the students, university librarians should take advantage of reference and social networking tools. These social networking tools help students to access library resources and contact library staff. Social networking tools are increasingly used in the information environment. It is crucial for librarians to understand how these social networking tools work and learn how to use them in order to better serve their library users.

Because library websites compete with a host of other Internet services and organizations for clientele, they must capture and motivate the user; provide useful, innovative, and interactive services and products; give the library some form of identity; and encourage repeat visitation while holding the interest of users and simplifying their tasks.

REFERENCES

1. Beard, J. and Yaprak, A. (1989). Language implications for advertising in international markets: A model for message content and message execution. A paper presented at the 8th International Conference on Language Communication for World Business and the Professions. Ann Arbor, MI.
2. Berelson, B. (1971). Content analysis in communication research. New York: Hafner Publishing Company.
3. Budd, R. W., Thorp, R.K., and Donohew, L. (1967). Content analysis of communications. New York: Macmillan Company.
4. Carley, K. (1992). Coding choices for textual analysis: A comparison of content analysis and map analysis. Unpublished Working Paper.
5. Carney, T. F. (1972). Content analysis: A technique for systematic inference from communications. Winnipeg, Canada: University of Manitoba Press.
6. De Sola Pool, I. (1959). Trends in content analysis. Urbana, Ill: University of Illinois Press.
7. Duncan, D. F. (1989). Content analysis in health education research: An introduction to purposes and methods. *Health Education*, 20 (7).

8. Gottschalk, L. A. (1995). Content analysis of verbal behavior: New findings and clinical applications. Hillside, NJ: Lawrence Erlbaum Associates, Inc.
9. Krippendorff, K. (1980). Content analysis: An introduction to its methodology Beverly Hills, CA: Sage Publications.
10. Margam, Madhusudhan and Nagabhushanam, V. (2012). Web-based library services in university libraries in India: an analysis of librarians' perspective. *The Electronic Library*, 30(5) 569 – 588
11. Moeller, L. G. (1963). An introduction to content analysis--including annotated bibliography. Iowa City: University of Iowa Press.
12. Smith, C. P. (Ed.). (1992). Motivation and personality: Handbook of thematic content analysis. New York: Cambridge University Press.
13. Solomon, M. (1993). Content analysis: a potent tool in the searcher's arsenal. *Database*. 16(2), 62-67.
14. Weber, R. P. (1990). Basic content analysis (2nd ed.). Newbury Park, CA: Sage Publications.
15. http://en.wikipedia.org/wiki/Web_page

Annexure I

List of selected university library websites in India

- Aligarh Muslim University (<http://www.amu.ac.in>)
- Babasaheb Bhimrao Ambedkar University (<http://www.bbauindia.org>)
- Banaras Hindu University, Varanasi (<http://www.bhu.ac.in/bhulibrary/index.html>)
- English and Foreign Language University (<http://www.efluniversity.ac.in>)
- Indira Gandhi National Open University, New Delhi (<http://www.ignou.ac.in>)
- Jamia Millia Islamia , New Delhi (<http://www.jmi.nic.in/zhl/zhlibrary.html>)
- Jawaharlal Nehru University, New Delhi (<http://www.jnu.ac.in/main.asp?sendvol=library>)
- Maulana Azad National Urdu University (<http://www.manuu.ac.in>)
- North Eastern Hill University, Shillong (<http://www.nehu.ac.in/library.html>)
- Pondicherry University, Pondicherry (<http://www.pondiuni.org/facil.html>)
- University of Delhi, Delhi (<http://crl.du.ac.in>)
- University of Hyderabad, Hyderabad (<http://www.uohyd.ernet.in>)
- University of Karnataka (<http://www.cuk.ac.in>)

