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Content Analysis of Library Websites of National Institute of Pharmaceutical Education and Research (NIPER's) Institutes of India: An Evaluative study

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Abstract

The study undertook to examine the library websites of the National Institute of Pharmaceutical Education and Research (Niper), which are situated in different parts of the country and identified as of national importance for pharmacy education in India. Based on previous studies, a standard checklist was prepared to know the contents and services of the websites through an online survey and observation method. To investigate the presence and absence of content that is provided by library websites in the selected websites. The study resulted that selected Nipers 7(100%) provided introductory information about the library/history and listed print/e-journal lists. 6 (86%) of the Nipers websites provided information on databases like Scopus, Drugdex, Rexys, and Scifinder. 5(71%) Nipers listed information about core collection, back/bound volumes and remote access facility. Niper Ahmedabad used CMS WordPress for their development of a library website and it has been an ideal library website among the Niper libraries. None of the Nipers provided feedback, FAQ's, RRS feeds, or ask a librarian mechanism that collects responses and queries from the patrons. Based on over all findings, Niper Ahmedabad secured the highest rank compared to other nipers with a score of thirty four (34) out of fifty five (55). The study recommends performing such evaluation studies at regular interval will enables institutes to update their websites frequently enough to meet user expectations.

Keywords: Content analysis, Content Evaluation, Websites, Library Website, Niper's. Library resources.

1. INTRODUCTION

From last decade evolutions of new age gadgets have made information searching in fingertip. Due to the advancement of information and communication technology and the Internet. Today's educational and research organization use website has primary gateway for basic communication mediums and library websites are not exception too. Where, library websites supports huge role in disseminating information to outreach the users behind the walls of the libraries through remote places. Based on targeted users libraries are collecting relevant information, organizing the collection and displaying the content in systematic order had made library website more prominent place to access information at one place in this internet age. In present digital era educational institutions have been investing huge sum on e-resources that have made library websites to general purpose to specific purpose one. Similarly, the evolutions of e-resources in various forms and platforms have created high demands among the users to find required information in a single window search to reach the required information destination (M.M. 2006). The libraries and librarians have been facing greater challenge in creating digital environment to meet the user needs in shortest possible time (R. K. Verma 2011). Where, library websites have greater demand to being more futuristic by utilising the web 2.0 and web 3.0 technologies features and to be more interactive one.

Like other higher education in Indian pharmaceutical education was steadily emerging and had have created high demands among the Indians. Soon the government of India established seven Niper institute institutes across the country and announced them has national importance for pharmacy education The first Niper library was established from SAS Nagar in 1992 and became full-functioning from 1995. It gained the status of National library and Information Centre in Pharmaceutical Sciences, which supported academic and research activities and provided services for faculty, students, researchers and pharmacy professional across the country to meet the deserved objectives and goals. Selected institutes had respective library websites, and varieties of information were provided on their library websites. However, the information offered by these library websites does not appear to be consistent. As a result, the author's selected Niper library websites and recognized common elements present in the Nipers websites for the study.

2. CONTENT ANALYSIS

Analysing content refers to systematic reviewing of content presented to audience on specialized themes and sub-themes on targeted audience under specialized communication platforms to know the products and services. Content analysis is a method of evaluating whether information is provided or not on a certain piece of content under the mentioned heading. Similarly, content analysis of websites evaluates the links between websites (N. Kumar and Verma 2018). According to Berelson (Prior 2020) "content analysis is a research technique for the objective, systematic and quantitative description of the manifest content of communication".

3. REVIEW

Many studies have been conducted on the basics of library website using usability studies, evaluative studies and content analysis of library websites. (Rahman and Sadik Batcha 2020) analysed the contents of library websites of selected ten colleges affiliated with Delhi University. The study was carried out on the basis of four criteria: accessibility, accuracy, currency and user-friendliness. Where, the majority of library websites provided basic information on introduction, library hours, library staff and library membership. There were no social networking sites, feedback link and single-window search features on any of the library websites. The researchers suggested developing dynamic and interactive website using 2.0 and 3.0 technologies. An evaluative study was carryout by (V. Kumar and Yadav 2020) to know how efficient are (National Institutional Ranking Framework) NIRF listed top ten university library portal by using standard checklist through observation method. The selected universities under study have all provided introductory information about the libraries and its collection. The majority of the university lacks in providing information services to bibliography and indexing service. The library authorities are least bothered about implementing social networking sites, RSS feeds and feedback mechanism in their websites. The researcher opined to formulate national minimum framework for university portal must underlay minimum mandatory content for its users and should consider has one of the decisive evaluation criteria under process of 'National Accreditation and Assessment Council (NAAC) & National Institutional Ranking Framework (NIRF)'.

(M. K. Verma and Devi 2016) conducted a study on IIMs library websites using 112 criteria under 10 main headings and used web page analyser tool to measure the size of the webpages and loading time of the webpages. The findings of the study reveals that majority of IIMs webpages were accessible under quick links and facilities links. IIM Ranchi had the largest webpage size of 5474207 bytes and IIM Kozhikode had the top downloading speed of 462.44s. The majority of IIMs had copyright statements but lacked information to provide maintenance information for the websites. On their respective websites, the majority of IIMs provided information about library, physical collection, print journals and e-resources. Some IIM libraries' websites lack specialised library services and value-added services such as book recommendations, visitor counters, and new arrivals. A similar study was performed by (Bulla and Hadagali 2020) to analyse the content and performance grade of central universities of India. The authors used GTmetric tools to record the fully loaded time, total page size and page speed source of the library websites. Only 33 central universities were provided links to library websites out of 47. The remaining 13 central universities did not created dedicated library website /webpage on their respective websites. The study resulted that 97 % of libraries provide information on about the library, website sponsor and list of free based e-resources. Some of the above average criteria were web OPAC, FAQ's/ feedback/ ask a librarian and search option facility.

(Barman 2021) undertook a study to examine the content analysis of the top ten agricultural university library websites in India, which were listed by the ICAR (Indian Council of Agricultural Research) ranking system 2019 and ranked them on the basis of five point ranking scale (Excellent, Very Good, Good, Average, Needs Improvement). The study resulted that 100% of library websites provided information on print resources, e-resources,

ICT based service and Web OPAC. 90% of websites listed information regarding digital library, reference library, and user education programs. G B Pant University of Agriculture and Technology placed 1st rank with an excellent rating with a total score of 34. The only drawback that surveyed websites lacks in providing web 2.0 services and that was the only recommendation provided by the researcher. (Brahma and Verma 2022) evaluated content analysis of national library websites of Asia contingent using standard check list with 34 criteria. The study resulted majority of the national libraries have dedicated library websites. The global language 'English' was offered by all the national libraries and used interpretative graphics, animation and text for better representation websites and to attract users. The entire respective website provided statement of responsibility of library staff. Further, it was found that majority of the national libraries of Asia provided basic information about library, library hours, library news /updates/ events and links to web OPAC features. The 85% of libraries provided copyright statement in their website and lacked in providing maintenance details and only 22% of websites provide no visitor information. The National Library of Bahrain had the highest download speed with 56k connection rate and National Library of Kyrgyzstan had maximum size of the website in bytes.

(Devi and Verma 2018) examined and analysed the web contents of the library websites/web pages of Indian Institutes of Technology (IITs).The primary data was obtained via a survey and observation approach from the respective library websites/web pages of 19 IITs, where 128 criteria were constructed. According to the analysis only four IITs had dedicated library webpage and one having a dedicated library page. Very a small portion of the IIT library's websites/webpages contains information on the collections, services, value-added services, and links to Web 2.0 technologies. (Geetha, Mamatha, and Farhana 2013) intended to investigate research scholars and faulty member to know the attitude and perception towards using library portal of Kuvempu University using survey method. The study resulted that 85% respondent's used library portal out of which 70% respondents felt research was the main reason to visit the library portal.

(N. K. Verma and Shukla 2018) surveyed the usability features of IIM library website of India using standard parameters and online automated tools. The study found that IIM libraries websites were simple and very basic and had common usability features among the respective websites. Brahma and Verma(Brahma and Verma 2018) under took selected websites of public library of India using webometric analysis. To examine the domain authority, number of webpages, links and calculate the web impact factor from selected libraries.

4. OBJECTIVES

- To examine the methods used for developing library website of NIPER institutes.
- To find the general information available on the library websites.
- To identify the types of collection procured by the libraries and services provided against the library collection to the users.
- To recommend suggestions to improve the library website of the NIPER institutes.

5. SCOPE

To analyse the content analysis of library websites of National Institute of Pharmaceutical Sciences and Research (NIPER) institutes of India. The scope of study limited to total of seven nipers list by (https://pharmaceuticals.gov.in/nipers) Niper-Mohali, Niper-Ahmedabad, Niper-Hajipur, Niper-Hyderabad, Niper-Kolkata, Niper-Guwahati and Niper-Raebareli, which are situated in different parts of the country.

6. METHODOLOGY

The present study is focused on content analysis of nipers library websites. A survey and observation research methods were opted for the study. A checklist was prepared based on previous studies on website analysis. The selected niper websites were scanned thoroughly between January to March 2022 (listed in Appendix 1) and the content of items were classified into two parts with their presence has check mark (✓) and in their absence ballot x mark (✗) were used. The collected data was prepared in tabular form and calculated with simple calculation methods using microsoft excel.

7. ABOUT NIPER INSTITUTE

At global level Indian pharm industries impacted and have become global leader in generic drugs. To archive the top most leadership position in drug discovery and development and continuously excel in their formulations. The government of India found that it's very critical to find bunch of human resources /talent pools that is necessary and set up National Institutes of Pharmaceutical Education and Research (NIPER) institutes. The first nipers institute was established at SAS nagar, Mohali as a registered society under society of registered act 1860, subsequently got statutory recognition by the parliament under NIPER act, 1998 and declared has national importance[15]. In second phase six other nipers Ahmedabad, Guwahati, Hajipur, Hyderabad, Kolkata and Raebareli were introduced during 2007-08. Except niper Hajipur rest other nipers participated in NIRF ranking process conducted by Ministry of education government of India. Where, Niper-Mohali placed fourth rank in the listing of pharmacy institutes category, followed by Niper-Hyderabad placed sixth rank; Niper-Ahmedabad got tenth rank; Niper-Raebareli thirteenth rank; Niper-Guwahati nineteenth rank respectively.

8. DATA ANALYSIS AND INTERPRETATION

Table 1 Classification of domain extension used by NIPER's

Sl.No	Domain	Total (7)%
1	.ac.in	4 (57)
2	.edu.in	2 (29)
3	nic.in	1(14)

Domain name, generally refereed has "domain extension" that typical used by organization to register their websites under different domain names. Where, the top-level part of a domain

name is called has domain extension. Generally domain naming system helps in easy to remember, easy to pronounce and are brandable that are included with the organization names. The table 1 shows the 3 varieties of domain extension have been used by the nipers institutes under study. The highest of 4(57.14%) Niper Ahmedabad, Hajipur, Hyderabad, and Guwahati institutes used academic India (ac.in) has their registered domain name for their institution websites, followed by 2(28.57%) Nipers Kolkata and Raebareli institutes were used education India (edu.in) domain and 1(14.29%) Niper Mohali is the only institute used National Informatics Centre (nic.in) domain name, where it is allotted only to Indian government agencies for registration of their website and webhosting.

Table 2 Visibility of library website/webpage URL's

NIPER Location	MOH	AHM	HAJ	HYD	KOL	GUW	RAE	Total(7)%
The Libraries have separate website	✗	✗	✗	✗	✗	✗	✗	Nil
Used Separate HTML page	✓	✗	✗	✓	✗	✓	✓	4(57)
Directly Used Web OPAC Webpage	✗	✗	✓	✗	✓	✗	✗	2(29)
Used Content Management System	✗	✓	✗	✗	✗	✗	✗	1(14)

However, none of the institute have created separate website for niper library websites. The table 2 highlights the visibility of the URL displayed in address bar of the browsers, which were linked by the library website links of niper institutes. The majority of 4(57%) Nipers Mohali, Hyderabad, Guwahati and Raebareli used traditional coded html pages for their dedicated library webpage for their library websites. Followed by 2(29%) Niper Hajipur and Kolkata used koha library web opac page has their library website and the entire information related library have updated through opac page. Only 1(14%) Niper Ahmedabad used popular open source content management system wordpress for the creation of library website and hosting domain for their website. It's a good sign that libraries are shifting towards using free CMS for developing library website, because it gives more flexibility in creating a website using both free hosting and readily available themes. CMS reduces burden of manually coding and designing of the webpages, where wordpress provides drag and drop customisation tools for creating webpages and website within no time. Due its emergence library professional can easily develop their own library website without any dependence on the IT staff/programmers, where CMS gives more freedom and flexibility for library professional to add relevant contents without waiting or wasting much of the time.

Table 3 Accessibility of library links / websites

NIPER Location	MOH	AHM	HAJ	HYD	KOL	GUW	RAE	Total(7)%
Direct link on Home page has Library/ Central	✗	✓	✗	✗	✗	✗	✓	2(29)

Library								
Link under Facilities/Central Facilities menu	✓	✗	✓	✓	✓	✓	✗	5(71)

Websites are mirror of education institutes, where it provides complete profile about respective institutes in the form websites according to relevant departments and facilities in the form icons, menu and drop down menu. Likewise in nipers libraries are integral part of the organisation, where it supports academic curriculum and research. The presence of library menu through institution homepage supports library users to use information resources with easy within few clicks of search. Based on two criteria are listed in table 3 were the accessibility of library webpage/website under separate menu on homepage and accessibility of library webpage/website link under facilities/central facilities menu. Only 29% (2) of Niper Ahmedabad and Raebareli has direct link has library/central library on their respective institute homepage. Rest 71% (5) Niper Mohali, Hajipur, Hyderabad, Kolkata, and Guwahati have library webpage link under the facilities/ central facilities menu in their respective institute websites.

Table 4 General Information about library

NIPER Location	MOH	AHM	HAJ	HYD	KOL	GUW	RAE	Total(7)%
About the Library/History	✓	✓	✓	✓	✓	✓	✓	(100)7
Mission/Vision/objectives	✗	✗	✓	✗	✗	✗	✗	(14)1
Library working hours	✓	✗	✓	✗	✓	✗	✓	(57)4
Library Rules/Regulations	✗	✗	✓	✗	✓	✗	✗	(29)2
Library staff/ Contact Info	✗	✓	✓	✗	✓	✓	✗	(57)4
Library Membership	✓	✗	✓	✗	✓	✗	✓	(57)4
Infrastructure	✓	✗	✗	✗	✗	✗	✗	(14)1
Library Sections/Blocks	✓	✗	✗	✗	✗	✓	✗	(29)2
About library automation package	✓	✓	✓	✗	✓	✗	✗	(57)4
OPAC link	✓	✓	✓	✗	✓	✗	✗	(57)4
Core Collections	✓	✓	✓	✓	✗	✗	✓	(71)5
Miscellaneous Collections	✓	✓	✗	✗	✗	✗	✗	(29)2
Magazines and Newspapers	✓	✗	✓	✓	✗	✗	✓	(57)4
Services	✓	✓	✗	✗	✗	✗	✓	(43)3
New Arrivals	✗	✓	✗	✗	✗	✗	✗	(14)1
Photo Gallery	✗	✓	✗	✓	✗	✓	✓	4(57)
Disabled Section/ Service	✗	✗	✗	✗	✗	✗	✗	Nil
LIC Committee	✗	✗	✗	✗	✓	✗	✗	(14)1
Total	10	9	10	4	8	4	7	

The data prepared in table 4 specifies the basic details provided by Niper library websites, where all the Nipers 7(100%) provided introductory information about the library/history, 5(71%) Niper Mohali, Ahmedabad, Hajipur, Hyderabad and Raebareli displayed information related to library core collections. Average number of 4(57%) Nipers Mohali, Hajipur, Kolkata and Raebareli library websites has given information related to library working hours and library membership. 4(57%) nipers Ahmedabad, Hajipur, Kolkata and Guwahati provided information about contacts of library staff. 4(57%) Niper Mohali, Ahmedabad, Hajipur and Kolkata hyperlinked OPAC page on their website and 4(57%) Niper Mohali, Hajipur, Hyderabad and Raebareli mentioned information about magazines and newspapers. The 4(57%) Niper Ahmedabad, Hyderabad, Guwahati and Raebareli used image files like photos to display different sections of the library. However, 3(43%) Niper Mohali, Ahmedabad and Raebareli library websites displayed information regarding library services, 2(29%) niper Hajipur and Kolkata listed library rules and regulations for the users and 2(29%) Niper Mohali and Ahmedabad displayed information about miscellaneous collections. 1(14%) Niper Hajipur listed mission/vision statement, 1(14%) Niper Ahmedabad have displayed new arrivals and 1(14%) Niper Kolkata provided information on LIC committee. None of the nipers provided information on disabled section/ service.

Table 5 Research Collection of library

NIPER Location	MOH	AHM	HAJ	HYD	KOL	GUW	RAE	Total(7)%
Print/E-Journals	✓	✓	✓	✓	✓	✓	✓	7(100)
Databases	✓	✓	✓	✓	✓	✗	✓	6(86)
DELNET	✓	✗	✗	✗	✗	✗	✗	1(14)
Thesis/Dissertation	✓	✓	✓	✗	✓	✗	✓	5(71)
Back/Bound Volumes	✓	✓	✓	✓	✓	✗	✗	5(71)
Abstracts	✓	✓	✗	✓	✗	✗	✗	3(43)
Technical Reports	✓	✗	✗	✗	✗	✗	✓	2(29)
IR (Institutional Repositories)	✗	✓	✗	✗	✗	✗	✓	2(29)
Faculty Publications/IRINS	✗	✓	✓	✗	✓	✗	✓	4(57)
Recent Publications	✗	✓	✗	✗	✗	✗	✓	2(29)
Patents	✗	✓	✗	✗	✗	✗	✓	2(29)
Total	7	9	5	4	5	1	8	

Research collection of institute reflects the importance of research and extended support for research community to perform productive activates, through patents, research articles and thesis/dissertation for their academic and research excellence. Table 5 highlights the research collections procured by niper libraries that were listed in the library websites. Overall 7(100%) websites have listed print/e-journal list, followed 6(86%) niper Mohali, Ahmedabad, Hajipur, Hyderabad, Kolkata and Raebareli websites provided information and hyperlinks to the database like scopus, drugdex, reaxys and scifinder. 5(71%) niper Mohali, Ahmedabad, Hajipur, Hyderabad and Kolkata provided details about back/bound volumes collections.

5(71%) niper Mohali, Ahmedabad, Hajipur, Kolkata and Raebareli displayed information availability on thesis and dissertations in their websites. 4(57%) niper Ahmedabad, Hajipur, Kolkata and Raebareli listed faculty publication or directly linked IRINS (Indian Research Information System) for publication profiles of faculty members of respective institutes. 3(43%) niper Mohali, Ahmedabad, Hyderabad and Raebareli provided information related abstracting databases on their websites. Only 2(29%) niper Ahmedabad and Raebareli highlighted links of Institutional Repositories (IR) on their websites, 2(29%) niper Mohali and Raebareli provide information on technical reports collection, further both the 2(29%) niper Ahmedabad and Raebareli provided information on recent publication and patents information. Only 1(14%) niper Mohali subscribed DELNET subscription for their institute.

Table 6 Library Services of Library Websites

NIPER Location	MOH	AHM	HAJ	HYD	KOL	GUW	RAE	Total(7)%
Single window search	✗	✗	✗	✗	✗	✗	✗	Nil
Remote access	✓	✓	✓	✗	✓	✗	✓	5(71)
User manual	✗	✓	✗	✗	✗	✗	✗	1(1)
Newspaper clipping	✓	✓	✗	✓	✗	✗	✗	3(43)
CD-ROM Database	✓	✗	✓	✗	✗	✗	✗	2(29)
ILL/document delivery	✓	✓	✗	✗	✗	✗	✗	2(29)
CAS	✗	✓	✗	✗	✗	✗	✓	2(29)
SDI	✗	✓	✗	✗	✗	✗	✓	2(29)
Reprographic	✓	✓	✓	✗	✗	✓	✗	4(57)
Plagiarism checker	✗	✓	✓	✗	✗	✗	✗	2(29)
Citation Tools	✗	✗	✓	✗	✗	✗	✗	1(14)
	5	8	5	1	1	1	3	

The dissemination of information through different platforms with specialized services to users community are functional part of library services and it is need of the day. The table 6 comprehend all the major services performed and listed out in their respective niper library websites. The highest number 5(71%) of Nipers Mohali, Ahmedabad, Hajipur, Kolkata and Raebareli provided remote access facility to access the subscribed e-resources and database of institutes. 4 (57%) Niper Mohali, Ahmedabad, Hajipur and Guwahati provided reprographic service, 3(43%) Niper Mohali, Ahmedabad, and Hyderabad provided newspaper clippings to their users. 2(29%) niper Mohali and Hajipur had procured CD-ROM databases and Niper Ahmedabad and Hajipur provides service on plagiarism/similarity index, niper Mohali and Hajipur have provision of IIL/document delivery, Niper Ahmedabad and Raebareli both provided CAS and SDI services. Only Niper Hajipur 1(14%) has availability of citation tools like mendeley and Zotero. None of the libraries provided single window search to their website for easy retrieval of information to users.

Table 7 Currency and Web 2.0 technologies of Library Websites

NIPER Location	MOH	AHM	HAJ	HYD	KOL	GUW	RAE	Total(7)%

Last update	✓	✗	✗	✗	✗	✗	✓	2(29)
Copyright	✓	✓	✓	✓	✓	✓	✓	7(100)
Navigation	✓	✓	✓	✗	✓	✗	✓	5(71)
Counter	✗	✓	✗	✗	✗	✗	✗	1(14)
Site Map	✗	✗	✓	✗	✓	✗	✗	2(29)
Registration/ Login	✓	✓	✗	✗	✗	✗	✓	3(43)
Direct Link	✓	✓	✓	✗	✓	✗	✓	5(71)
Download forms	✓	✗	✓	✗	✗	✗	✓	3(43)
Social networking	✗	✓	✗	✗	✗	✗	✗	1(14)
Leave Comment	✗	✓	✗	✗	✗	✗	✗	1(14)
Feedback	✗	✗	✗	✗	✗	✗	✗	Nil
FAQ's	✗	✗	✗	✗	✗	✗	✗	Nil
Ask a Librarian	✗	✗	✗	✗	✗	✗	✗	Nil
RRS feed	✗	✗	✗	✗	✗	✗	✗	Nil
Keyword Search	✗	✓	✗	✗	✗	✗	✗	1(14)
	6	8	5	1	4	1	6	

The data was analysed on various features based on evaluation of currency and web 2.0 features on library website/webpages that have been indicated in table 7. Selected Niper institutes under the study have all copyright information on their respective websites, followed by 5(71%) Niper Mohali, Ahmedabad, Hajipur, Kolkata and Raebareli have proper navigation and direct link from their websites. 3(43%) Niper Mohali, Ahmedabad and Raebareli needed registration/login credentials to use their e-resources and database from their websites. 3(43%) Niper Mohali, Hajipur and Raebareli have download forms links for availing membership for internal and extremal users in their respective libraries. Niper Ahmedabad has counter, SNS, leave comment facility in their respective website to reach the user request to its library website. None of the libraries found feedback; FAQ's, RRS feed and ask a librarian mechanism that collects response and queries from the uses, where it helps to find drawbacks of the website and can be updated at regular interval according the user needs.

Table 8 Ranking of library websites of Niper Institutes

Particulars	AHM	MOH	HAJ	RAE	KOL	HYD	GUW
General Information (18)	9	10	10	7	8	4	4
Research Collection (11)	9	7	5	8	5	4	1
Library Services (11)	8	5	5	3	1	1	1
Currency and Web 2.0 features (15)	8	6	5	6	4	1	1
Total Parameters (55)	34	28	25	24	18	10	7
Ranking of Institutes	1	2	3	4	5	6	7

The table 8 concludes the ranking of Niper institutes based on the obtained score points under four heading with total of 55 parameters. It is observed that Niper Ahmedabad secured first

rank with score of thirty four (34), followed by Niper Mohali placed second rank with twenty eight (28) Score, third rank placed by Niper Hajipur with score of twenty five (25) and Niper Guwahati placed last position with score of seven (7) respectively.

9. CONCLUSION AND SUGGESTIONS

Since the last decade, libraries and library websites have changed their perception of how to reach their patrons by implementing modern ICT technologies and the World Wide Web by developing their own library websites. Today's library websites serve a purpose and enable library users to browse the website 24/7 throughout the year as per their needs. The Niper institutes are of national importance and are managed by the government of India in accordance with the NIPER Act of 1998. So, the Niper institute should provide a separate library website with an attractive interface to provide all the library services to its users. The website URL and name of the website should be mnemonic in nature for easy remember and the website keywords should appear in the search engine within a few keystrokes of search. The library website should be easily navigable and should be user-friendly to use. The Niper's should develop their library website with dynamic webpages instead of static webpages with limited graphics using traditional html-coded scripts. The use of a content management system can be prompted by the development of websites that are free and easily customisable with readily available themes and plugins. Niper Ahmedabad used WordPress for their development of library website and has been an ideal library website among the Niper libraries. The Niper's website should adopt web 2.0 and 3.0 technologies for more interactive features through their websites like instant chat, RSS feeds, ask a librarian, and blogs should be made available to patrons to have direct conversations and interactions with the system. The libraries should highlight their institution research productivity using Institutional repositories and should consider one of the decisive criteria that should be reflected in their library websites to access the scholarly published literature. The research ends with the suggestion that more evaluation studies be done on a regular basis to keep library websites up-to-date and meet the needs of their users, as well as to set up quality digital environment for the delivery of library services.

10. REFERENCES

1. Barman, Dhiru. 2021. "Ranking of Library Websites of Agricultural University of India: A Study." *Library Philosophy and Practice* 2021(May).
2. Brahma, Krishna, and Manoj Kumar Verma. 2018. "Evaluation of Selected Universities Library Websites Listed by National Institutional Ranking Framework (NIRF) during the Year 2017 : A Webometric Analysis." 7(3): 173–80.
3. Web Content Analysis of National Libraries' Websites in Asia: An Evaluation. 2022. *International Journal of Information Science and Management* 20(1): 427–48.
4. Bulla, Shivanand D., and Gururaj S. Hadagali. 2020. "Analysis of Central Universities' Library Websites in India: A Study." *Journal of Indian Library Association* 56(3): 40–51.
5. Devi, Ksh. Krishna, and Manoj Kumar Verma. 2018. "Web Content and Design Trends of Indian Institute of Technology (IITs) Libraries' Website: An Evaluation."

COLLNET Journal of Scientometrics and Information Management 12(2): 165–81.

6. Geetha, M., K. R. Mamatha, and Farhana. 2013. "Use of Library Portal by Research Scholars and Faculty Members at Kuvempu University: A Survey." *DESIDOC Journal of Library and Information Technology* 33(6): 509–15.

7. Kumar, Nilesh, and Shilpi Verma. 2018. "Content Analysis of Library Websites of NAAC Acredited 'A' Grade University in Central Zone of India: A Study." *Library Waves* 4(2): 68–77. http://www.sgbau.ac.in/.

8. Kumar, Vinit, and Sheel Bhadra Yadav. 2020. "How Efficient Are University Library Portals of NIRF Ranked Indian Universities?: An Evaluative Study." *DESIDOC Journal of Library and Information Technology* 40(1): 351–58.

9. M.M., Letha. 2006. "Library Portal: A Tool for Web-Enabled Information Services." *DESIDOC Bulletin of Information Technology* 26(5): 11–16.

10. Prior, Lindsay. 2020. "Content Analysis." *The Oxford Handbook of Qualitative Research* (2008): 541–68.

11. Rahman, Azizur, and M. Sadik Batcha. 2020. "Content Analysis of Library Websites of Select Colleges of Delhi University: A Study." *DESIDOC Journal of Library and Information Technology* 40(4): 247–52.

12. Verma, Manoj Kumar, and Ksh Krishna Devi. 2016. "Web Content and Design Trends of Indian Institutes of Management (IIMs) Libraries Website: An Analysis." *DESIDOC Journal of Library and Information Technology* 36(4): 220–27.

13. Verma, Nitesh Kumar, and Akhandanand Shukla. 2018. "Usability Analysis of Indian Institutes of Management Libraries Websites : An Evaluative Study." *Journal of Advancements in Library Sciences* 5(1): 23–32.

14. Verma, R K. 2011. "Evaluation Indicators of Library Websites of Selected Research Institutions in India." *Annals of Library and Information Studies* 58(June): 139–50.

Appendix-1

Institute Location	Year of formation	Short Abbreviation	Library URL
NIPER (Mohali)	1998	MOH	http://www.niper.gov.in/lic.htm
NIPER (Ahmedabad)	2007	AHM	https://libnipera.wordpress.com/
NIPER (Hajipur)	2007	HAJ	https://niperhajipur-opac.l2c2.co.in/
NIPER (Hyderabad)	2007	HYD	http://www.niperhyd.ac.in/Facilities_NIPER_Hyderabad.html
NIPER (Kolkata)	2007	KOL	https://niperkolkata-opac.l2c2.co.in/cgi-bin/koha/opac-main.pl
NIPER (Guwahati)	2008	GUW	https://niperguwahati.ac.in/library.html
NIPER (Raebareli)	2008	RAE	http://niperraebareli.edu.in/library.html