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Web Content Analysis of National Institute of Pharmaceutical Education and Research (NIPERs) Library Websites in India: An Evaluative Study

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Abstracts

Purpose: The primary goal of this research is to evaluate the web content of the National Institute of Pharmaceutical Education and Research (NIPERs) website using parameters taken from conventional library websites. The standard evaluation method is used worldwide, and it is suggested that the library website be updated.

Approach/ Methodology: This study employed observation to evaluate 07 NIPERs library websites in India, utilizing a 100-item checklist organized into seven components to assess the availability of the library website's resources and services. The complete NIPERs library website was evaluated from August 10 to August 25, 2021. According to the findings, each of the 07 NIPERs library websites did not match all of the study's requirements.

Scope of the Study/ Limitations: In this study, I created 100 checklists to evaluate the 07 NIPERs Library website, which had seven sections and analyzed the data in table 10, which included tables 3 to 9 (T3 to T9), to determine the score and rank of the NIPERs library website.

Findings: NIPER Ahmedabad library took first place, followed by NIPER Raebareli in second place, NIPER Mohali in third place, NIPER Guwahati in fourth place, NIPER Kolkata in fifth place, NIPER Hajipur in sixth place, and NIPER Hyderabad in seventh place. This paper's findings will be used to improve and update the NIPERs Library website.

Keywords: Web Content, Content Analysis, Library Website, NIPERs, India

1. Introduction:

Academic libraries constantly adopt new technologies to provide library services such as circulation, acquisition, and periodical services. The implementation of information systems improves library services for patrons. For the delight of their readers, the library website requires high-quality information. The website's material includes music, video, photos, and text, among other things.

The library website's rich web content or links enable complete user access. As a result, the library web content updates from time to time and provides current information for their users, making the library website more practical and easier to access.

The website comprises web pages, photographs, videos, and other forms of digital material. It is usually focused on a specific topic, such as education or news. In terms of the institute website, it is highly significant for the institute community and serves as the primary source of information for potential students seeking information about academic programs and colleges as part of the admissions decision-making process.

The Institute website is a powerful instrument for disseminating information about the institute's operations, including courses, admissions, syllabi, exams, fees, faculty, rules and regulations, placements, research and publications, library facilities, resources, and services.

The library website serves as the public face of the library's resources and an open platform for the community. A well-designed library website is a reflection of the library and the services it offers. In today's world, institute libraries use their websites to expand their services and resources. Any institution's library website is critical in giving access to the library's services and resources. While designing a website based on customer demand, libraries should adhere to the standards. A website's content can be delivered in various ways, the most popular and accessible text.

Content analysis is a research approach for the objective, methodical, and quantitative description of the evident communication content. It is defined as a method of observation and document analysis and a method of document analysis. The content of the Institute library websites was analyzed using many criteria, including general information, about the library, library resources, services, collection, contact information, RSS feeds, and librarian chats, among others. The primary goal of the institute library website evaluation is to direct users to be reliable and correct information.

2. Statement of the problem:

The National Institute of Pharmaceutical Education and Research (NIPERs) is a Nationally Important Organization. In India, there are now seven NIPERs. NIPER offers Master's and Ph.D. degrees in 15 fields, catering to the pharmaceutical industry's different needs.

Medicinal Chemistry, Natural Products, Traditional Medicine, Pharmaceutical Analysis, Pharmacology & Toxicology, Regulatory Toxicology, Pharmaceutical Technology (Biotechnology), Pharmaceutical Technology (Formulations), Pharmaceutical Technology (Process Chemistry), Pharmaceutics, Biotechnology, Pharmacy Practice, Clinical Research, Pharmacoinformatics, Pharmaceutical Management Each NIPER includes a library website with information about the library and links to resources like as e-books, e-journals, and e-databases. The majority of the libraries have a public access catalog (WebOPAC) and various tools and services available to their patrons. The library website's Content must be updated and maintained to give current information to library users. Therefore, the problem statement is *"Web Content Analysis of National Institute of Pharmaceutical Education and Research (NIPERs) in India: An Evaluative Study."*

3. Review of Literature:

Manjunatha K. S.(2016), This research aims to examine the contents of eight unique library websites in Bengaluru, Karnataka. The Indian Institute of Astrophysics (IIA), Indian Institute of Horticultural Research (IIHR), Indian Plywood Industries Research and Training Institute (IPIRTI), Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), National Aerospace Laboratories (NAL), National Centre for Biological Science (NCBS), and Raman Research Institute (RRI) Library are among the libraries.

Julie M. Still (2001) In this research paper, the author more emphasizes the visual display of information the author has taken from 150 library websites examined. Most of the libraries provide other library resources and library catalogs to access the information of the other

library. The library provides remote access to the library, but the material provided online is less in quantity.

Devi, K.(2017), In the present study, the author describes all the aspects of the web content analysis and describes the origin of the web content analysis, which is extracted from webometrics, bibliometrics, and scientometrics Infometrics all the study is interrelated to each other. Nowadays, the webpage is an excellent source to disseminate information.

Sandeep K.(2017) This research paper analyzed the accessibility of the library resources of the central university central zone. The web page provides the user-friendly to interact with each other. In this paper, design the checklist, which consists of collecting the library resources and services of the library. All the basic facilities the library provides are arranged in the checklist form and analysis of the data to improve the library website.

Rahman A. (2020), The accessibility, accuracy, currency, and user-friendliness of 10 selected library websites of colleges connected with the University of Delhi are examined in this paper. It goes on to talk about the services and features that the websites have to offer. The information was gathered from the selected colleges using a well-structured checklist. According to the findings, most college libraries have included information on their websites about introductions, library personnel, library hours, and membership. However, according to the survey, none of the library websites/web pages have social networking facilities, feedback, or regular updates. None of them include question papers, news clippings, user manuals, or single-window searches.

4. Objectives of the Study:

The main objectives of the study are:

- ❖ To identify, analyze and evaluate the web contents of NIPERs library websites of India using standard evaluation criteria.

- ❖ To unearth the extent to which the library-related information, services, and resources are made available in NIPERs library websites for the benefit of the users.

- ❖ To rank the NIPERs library websites based on their respective features and facilities using standard principles followed globally.

- ❖ To suggest suitable measures for the improvement of existing NIPERs library websites of India.

5. **Methodology:**

In library and information science, content analysis is a standard method for analyzing a library's website. This research is based on a web content analysis of India's National Institute of Pharmaceutical Education and Research (NIPERs) library website. All NIPERs in India can be found on the Ministry of Chemicals and Fertilizers' official website (pharmaceuticals.gov.in) (GoI). All of the library websites additionally link to the NIPERs Institute's specific library webpage.

From August 5 to August 25, 2021, the NIPERs Library website was verified and appraised. Table 1 shows the web pages of the 07 NIPERs library websites used in this study. In this study, I categorized 100 checklists into seven categories, as shown in Table 2.

Table1. List of National Institute of Pharmaceutical Education and Research (NIPERs) with their Library URL

S.No.	Name of Institute	Name of the Library	URL of the Library Website
1	NIPER, Mohali	Library & Information Center	http://www.niper.gov.in/lic.htm
2	NIPER, Ahmedabad	NIPER-Ahmedabad library	https://libnipera.wordpress.com/
3	NIPER, Hajipur	Library	https://niperhajipur-opac.l2c2.co.in/
4	NIPER, Hyderabad	Library Information Center	http://www.niperhyd.ac.in/Facilities_NIPER_Hyderabad.html
5	NIPER, Kolkata	Library	https://niperkolkata-opac.l2c2.co.in/cgi-bin/koha/opac-main.pl
6	NIPER, Guwahati	NIPER Guwahati central library	https://www.niperguwahati.ac.in/library.html
7	NIPER, Raebareli	Library	http://niperraebareli.edu.in/library.html

Table 2 shows the total number of items in the checklist (100). Accessibility has 05 items, Navigation and Link of Resources has 26 things, Authority and currency have 05 items, Library General Information has 30 items, User support and resource discovery tool has 12 items, Library Service has 16 items, and Web 2.0 has 06 items within the seven separate topics.

Table 2. Checklist SectionSection Heading with no. of Items

S.No	Checklist Section Heading	No of Item
1	Accessibility	5
2	Navigation and Link to Resources	26
3	Authority and Currency	5
4	Library General Information	30
5	User support and resource discovery Tool	12
6	Library Services	16
7	Web 2.0 Tool	6
	Total checklist Item	**100**

6. Data Analysis and Interpretation:

In this study, I used the observation method to assess the features and web content of India's 07 NIPERs Library website. The data analysis is presented in a tabular format.

6.1 Accessibility of NIPERs Library Website

Web accessibility refers to the user's ability to navigate and understand the library website's library web content.

The accessibility attribute of the NIPERs Library websites is shown in Table 3. It was discovered that 71.42 percent of libraries have a library link on the institution's homepage, and 28.57 percent have a library link beneath the facilities section of the institution's website, with all libraries utilizing only English. The institution's website is only three clicks away from the library's website.

Table3. Accessibility of NIPERs Library Website (n=07)

S.No.	Items	Frequency	Percentage
1	Library Link on Institution website Home Page	5	71.42
2	Library Link under Facilities on Institution website	2	28.57
3	Library Website accessible in Both Hindi and English Language	0	0
4	The library website is accessible in English language only	7	100
5	The library website is not more than three clicks away from Institution Website	7	100

6.2 Navigation and Links in NIPERs Library Website

Any library website must have a navigation system. Table 4 shows the 26 items in the navigation and link part of the current study. It was discovered that 85.71 percent of libraries have a home page link on every library webpage, 71.42 percent have a home page link on the Institution logo, 85.71 percent have a link to the parent institution, 42.85 percent have a link to library consortia, 42.85 percent have a link to E-Journals, 14.28 percent have a link to E-Newspaper, 42.85 have the full-text database, 42.85 have the Open Access Resources.

Table 4. Navigation and Links in NIPERs Library Website (n = 07)

S.NO.	Items	Frequency	Percentage
1	Home page link on every Library web page	6	85.71
2	Home page link on Institution Logo or Library Name or Header image	5	71.42
3	Link to parent institution Home page from Library Website	6	85.71
4	Links to Bibliographic Databases	0	0
5	Links to Consortia	3	42.85
6	Links to E-Books	0	0
7	Links to E-Journals (A-Z)	3	42.85
8	Links to E-Newspapers	1	14.28
9	Links to E-Resources Fair Use Policy	0	0
10	Links to E-Thesis and Dissertations	0	0
11	Links to Full-Text Databases	3	42.85
12	Links to Institutional Repository	2	28.57
13	Links to Library Android Apps	0	0
14	Links to National Digital Library	0	0
15	Links to NPTEL Video Lectures	0	0
16	Links to Open Access Resources	3	42.85
17	Links to other Libraries/Institutions	1	14.28
18	Links to Patents/Standards Databases	0	0
19	Links to Remote Access	0	0
20	Links to Research Information Management	0	0
21	Links to Research Support Tools	0	0
22	Links to Social Networks	1	14.28
23	Links to Subject/Resource/Research Guides	0	0
24	Links to Union Catalog of e-Resources	2	28.57
25	Links to WEB OPAC	5	71.42
26	Use of Graphics	7	100

6.3 Authority and Currency of NIPERs Library Website

The publisher of the domain-named website is referred to as the Authority. It plays a crucial function in providing accurate information. The term "currency" relates to how frequently information on a website is updated. The Authority and currency of the NIPER Library Website are shown in Table 5. I discovered that every library website contains copyright information, every library has a Disclaimer, and every library has a webmaster's name, address, and library website link.

Table 5. Authority and Currency of NIPERs Library Website (n = 07)

S.No.	Items	Frequency	Percentage
1	Copyright Information	7	100
2	Date of up-dating of Website	0	0
3	Disclaimer	7	100
4	The proper domain name of the library	0	0
5	Webmaster Name, Address and Link	7	100

6.4 Library General Information in NIPERs Library Website

The virtual version of the actual library is general library information. It includes information about the library, the most recent research publication on the homepage, the library advisory committee, the library budget, the library collection, the library's contact information, the library's floor plan layout, library membership, and the library's IT infrastructure, among other things.

Table 6 demonstrates that 57.14 percent have library information, 14.28 percent have the most recent research publication, 14.28 percent have the library floor plan and layout, 71.42 percent have library hours information, and 85.71 percent have library IT Infrastructure, among other things.

Table 6. Library General Information in NIPERs Library Website (n = 07)

S.No.	Items	Frequency	Percentage
1	About the Library	4	57.14
2	Latest Research Publications on the Home page	1	14.28
3	Library Advisory Committee	0	0
4	Library Budget	0	0
5	Library Collections	7	100
6	Library Contact information	7	100
7	Library Events Calendar	0	0
8	Library Floor Plan and Layout	1	14.28
9	Library Hours	5	71.42
10	Library IT Infrastructure	6	85.71
11	Library Loan Privileges and Overdue Fines	0	0
12	Library Location using Google Map	0	0
13	Library Membership	3	42.85

14	Library Name with Institute Logo	2	28.57
15	Library News and Events	1	14.28
16	Library Newsletter	0	0
17	Library Organisational Chart	0	0
18	Library Photo Gallery	4	57.14
19	Library Registered Vendors	0	0
20	Library Resources	4	57.14
21	Library Rules/Policy	0	0
22	Library Sections	3	42.85
23	Library Services	5	71.42
24	Library Team	4	57.14
25	Library Video Gallery	0	0
26	Library Vision and Mission Statement	0	0
27	No. of Registered Users	0	0
28	Previous Years Question Papers	0	0
29	Visitors Counter	1	14.28
30	Website developed platform information	7	100

6.5 User Support and Resource Discovery Tools in NIPERs Library

To make it easier and faster to obtain important information, we need better user support and resource discovery features on the library website.

Table 7 demonstrates that 42.85 percent give download forms, 42.85 percent provide an e-journal search gateway, 57.14 percent provide a site map, and 85.71 percent supply a library's web OPAC service.

Table 7. User Support and Resource Discovery Tools in NIPERs Library Website (n = 07)

S.No.	Items	Frequency	Percentage
1	Ask a Librarian	0	0
2	Download Forms	3	42.85
3	e-Journal Search Gateway	3	42.85
4	Frequently Asked Questions (FAQs)	0	0
5	Google Custom Search	0	0
6	Library Guide / Brochure	0	0
7	Live Chat	0	0
8	Online Feedback Mechanism	0	0
9	Single Window Search	0	0
10	Site Map	4	57.14
11	Site Search	0	0
12	WEB OPAC Search Interface	6	85.71

6.6 Services provide through NIPERs Library Website

NIPERs Library offers both print and electronic library services to its consumers. Table 8 lists all of the library services offered by NIPERs. All libraries provide circulation, document delivery, and reprographics services; 42.85 percent of libraries provide current awareness services; 42.85 percent provide interlibrary loan services; 28.57 percent provide news clipping services; 28.57 percent provide reference services; 28.57 percent provide research support services, and 85.71percent provide Web OPAC services.

Table 8. Services provided through NIPERs Library Website (n = 07)

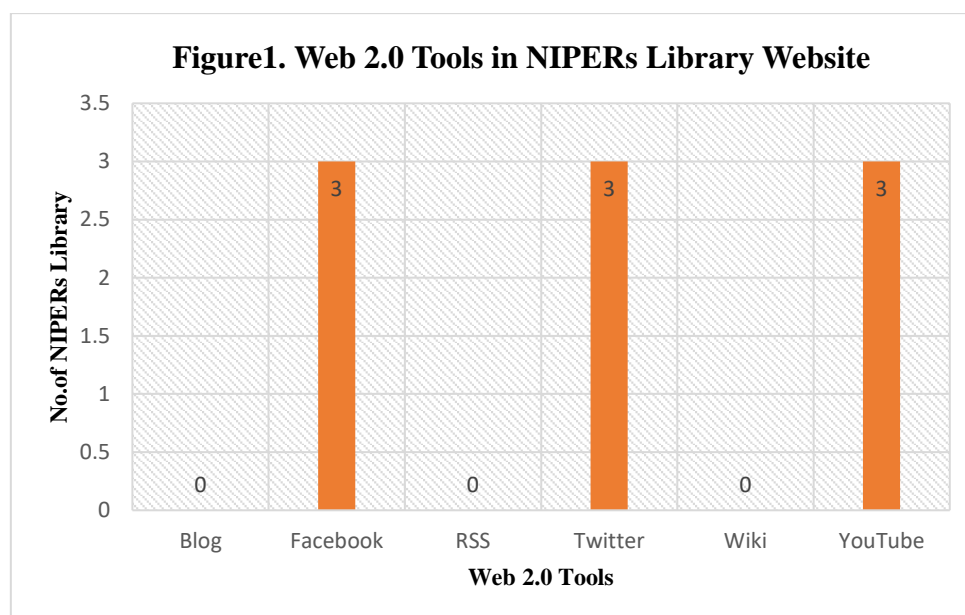| S.No.	Items	Frequency	Percentage
1	Book Bank Facility	0	0
2	Children Library	0	0
3	Circulation Service	7	100
4	Current Awareness Service / New Arrivals	3	42.85
5	Document Delivery Service	7	100
6	E-mail Alert Service	0	0
7	Facility for users with Disability	0	0
8	InterLibrary Loan	3	42.85
9	News Clipping Service	2	28.57
10	Online Book Recommendation System	0	0
11	Reference Service	2	28.57
12	Remote Access Service	0	0
13	Reprographic Service	7	100
14	Research Support (Plagiarism check)	2	28.57
15	User Orientation/Education Service	0	0
16	WEB OPAC Service	6	85.71

6.7 Web 2.0 Tools in Library Website

The NIPERs library has used the Web 2.0 tool to distribute information about library resources and services in marketing and promote and enhance them.

Table 9 shows the 42.85 percent Library using the social media Facebook, Twitter and YouTube.

Table 9. Web 2.0 Tools in NIPERs Library Website (n = 07)

S.No.	Items	Frequency	Percentage
1	Blog	0	0
2	Facebook	3	42.85
3	RSS	0	0
4	Twitter	3	42.85
5	Wiki	0	0

| 6 | YouTube | | | | 3 | | | 42.85 | |

Figure1. Web 2.0 Tools in NIPERs Library Website

6.8 Ranking of NIPERs Library Websites

Table 10. Ranking of NIPERs Library Websites (Tn = 100)

S.No.	Name of Institution	T3 (5)	T4 (26)	T5 (5)	T6 (30)	T7 (12)	T8 (16)	T9 (6)	Total Score (100)	Rank
1	NIPER, Ahmedabad	3	11	3	14	2	8	0	41	1
2	NIPER, Raebareli	3	11	3	10	2	6	3	38	2
3	NIPER, Mohali	3	8	3	11	4	6	0	35	3
4	NIPER, Guwahati	3	4	3	8	3	7	3	31	4
5	NIPER, Kolkata	3	6	3	8	2	4	0	26	5
6	NIPER, Hajipur	3	5	3	7	2	4	0	24	6
7	NIPER, Hyderabad	3	3	3	7	1	4	3	24	7

In this study, I created 100 checklists to evaluate the 07 NIPERs Library website, seven sections. I analyzed the data in table 10, which included tables 3 to 9 (T3 to T9), to determine the score and rank of the NIPERs library website.

NIPER Ahmedabad library took first place, followed by NIPER Raebareli in second place, NIPER Mohali in third place, NIPER Guwahati in fourth place, NIPER Kolkata in fifth place, NIPER Hajipur in sixth place, and NIPER Hyderabad in seventh place.

7. Findings of the study

According to the data analysis, the following are the significant findings of the study-

- ❖ All the NIPERs Library does not fulfill all the criteria which are designed for the study.
- ❖ All the NIPERs Library have the circulation service and document delivery service and used the graphics in the library website.
- ❖ Most of the NIPERs Library have the Web OPAC service to be aware of the library resources effortlessly.
- ❖ Most of the libraries provide general library information.
- ❖ Based on the present study NIPER Ahmedabad Library have the 1st rank, NIPER Raebareli has the 2nd rank, NIPER Mohali has the 3rd rank, and NIPER Hyderabad has the 7th rank.

8. Conclusion and suggestions

The library website serves an essential purpose for its users by allowing them to share library information. In this study, I looked at the 07 NIPERs library website and conducted a content analysis of the website, divided into seven categories. The first SectionSection deals with the NIPERs library website's accessibility; none of the library's resources are available in Hindi.

The following suggestions are to improve or upgrade the NIPERs library websites in India based on the finding of the study:

- ❖ All the NIPERs libraries should develop their library website with a proper domain name and link to the home page of the institute website for those users who are aware of the library facility and resources of the library.

- ❖ All NIPERs libraries should disseminate the information by using the social networking site Web 2.0 tools.

- ❖ All the NIPERs libraries should follow the standard guideline for the library website development by following the rules of W3C.

- ❖ All the NIPERs library websites should design the library website in Hindi and English language.

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