



An Evaluative and Analytical Study of Websites of NIRF Ranked Top Five University Libraries (2022) in India

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ABSTRACT

In the age of information and communication technology, library services are currently the most developed and rapidly developing segment of university libraries. The library website facilitates communication with its users online. The goal of the current study is to evaluate the information found on the websites of India's top 5 (five) state and central university libraries, as determined by the NIRF rankings for 2022. The study's main focus was on the content analysis and evaluation of the websites of selected university libraries. This study was done to evaluate every area of the websites for the selected university libraries according to the set standards. However, it has been observed that the content of library websites varies. According to the rating criteria used in this study, the website of the Dr. Zakir Husain Library at Jamia Millia Islamia is the best and University Library of Calcutta University and Sayaji Rao Gaekwad Library of Banaras Hindu University are the worst. Through this study find that Jamia Millia Islamia provided the most items on its library website, earning 26 points, the highest score among the five universities under study. Jadavpur University came in second with 24 points, while Jawaharlal Nehru University came in third with 21 points. With scores of 17, Banaras Hindu University and Calcutta University were tied for fourth place. The study concluded that university libraries play an important role in higher education, research and development effectively promote

information resources and services on their website.

1. Introduction:

Academic libraries currently use the web to offer their patrons high-quality content, usually in digital format, but their most crucial function is to offer a wide range of enhanced library services. The World Wide Web has emerged as the most significant communication tool for accessing and exchanging information online in the ICT era. Almost anything, anyone, or anywhere can get information from the World Wide Web. In the 1990s, websites for libraries first became available. Academic health science libraries started creating websites as soon as Mosaic, the first web browser, was launched in 1993. (Brower, 2004). The website provides a huge selection of tools and services. The institutions or organisations have their own websites where they provide a brief overview of themselves as well as information on related topics and the services they offer. The entrance to an institution is its library. The library website, which primarily serves as an academic service and publishes information about the library's vision, mission, objectives, library hours, holidays, staff information, contact information, collection, services, WebOPAC, photo gallery, copyright information, and best practices used. To evaluate websites and the effects of design aspects and to define best practices for content creation and design, content analysis has been utilized in many different industries. Any website's most important component is that the content needs to be current, accessible, and updated properly. The website of a library is referred to as the institution's entrance via which users can access information. The analysis of library websites is a crucial procedure that needs to be carried out periodically.

Before going to the topic we should know about the academic libraries, Websites, Library websites, and NIRF ranking.

2. Academic Libraries, Websites and Library Websites:

As the name itself, Academic Libraries stated that it is dedicated to academic purposes only. The main task of an academic library is to promote education, research and provide necessary information to the communities of students, teachers and researchers. There are four types of libraries according to the library categories. Among these types of libraries, academic library is one of them. We also know that an academic library can be broadly sub divided into three categories. They are school library, university library and university library.

The emergence of the internet has made the world smaller nowadays. At our fingertips, we have quick access to any kind of information. The great world of the internet keeps changing how we communicate, how we receive and distribute information, and how we live a decent life. In this case, the website, as a tool, is critical in making public the activities of any institution. A website is also known as a site. Basically, it is the centrally located collection of audio, video, images, and documents which can be

accessed by visiting the homepage (through the internet) using any particular browser. The purpose of a website is to provide information to its users or patrons about the organization's objectives, initiatives, policies, offerings, etc.

The development of information and communication technology also makes libraries adopt information technology to provide services to its target users. A website is also necessary for a library, just like it is for any organisation. A Library website means a website owned, maintained by any particular library for the purposes of providing information about the library and its various content offerings, e-resources, policies, objectives, initiatives and procedures to its users. The aims of a library website should be:

- i. To put its users first in order to give them the greatest services.
- ii. Giving a list of the available learning resources in the library and the services it offers.
- iii. To letting individuals know how to exercise their rights to access these resources
- iv. To provide a platform to the patrons to start their search process to avoid ambiguity in accessing the resources
- v. To supplying a tool to help users become knowledgeable and capable enough to use library resources as independent learners.
- vi. To promote the library's services and resources and make them aware about it.
- vii. To improve users' ability to access library services and materials from anywhere, regardless of their physical location, and also to provide ways to get around the obstacles to using a traditional library system's resources.
- viii. To provides a single user-oriented subject-based resources and services that meet their specific needs. It also offers various resources for users working in different subjects.
- ix. To provides an efficient and effective way to access the library's vast collection of electronic resources.

3. NIRF Ranking:

The National Institutional Ranking Framework or NIRF ranking is a method approved by the Ministry of Education to rank higher education institutions in India. The NIRF framework was approved by the MHRD and released by the Hon'ble HRD Minister on 29 September 2015. This framework provides a mechanism for ranking educational institutions across the nation.

India's higher education ecosystem has grown exponentially over the years, hence the need for an effective mechanism to align their academic excellence and standards. However, ranking higher education institutions is a daunting task that requires in-depth knowledge of the Indian higher education system. To address this concern, the Ministry of Education (MOE) launched a methodology called the National Institutional Ranking Framework (NIRF) to rank higher education institutions in India. The Ministry of Education annually publishes the National Institutional Ranking Framework, or NIRF,

which aims to promote the competitive excellence of the country's higher education institutions based on parameters that broadly include: "Teaching, Learning and Resources," "Research and Professional Practices," "Graduation Outcomes," "Outreach and Inclusivity," and "Perception". NIRF Rank is useful for students pursuing higher education in India.

4. Statement of the Problem:

The traditional criteria for evaluating the content of the university library website are not suitable at the present time because technology advances so quickly. We must currently analyze the content of university libraries' webpages or websites in the light of new benchmarks. The study's main focus was on the content analysis and evaluation of the websites of India's top 5 (five) state and central university libraries according to the NIRF rankings for 2022. This study was done to evaluate every area of the websites for the selected university libraries according to the set standards.

5. Review of Related Literature:

Mani, Thirumangal and Vinodh (2017) conducted a study on content analysis of websites of engineering college libraries in Tirunelveli district of Tamil Nadu. It was noted here that some of the colleges did not provide information on the back volume journals, information about electronic theses and dissertations on their websites. It was also noticed that none of the institutions of higher education offered their Institutional Repositories (IR) service for faculty publication to disseminate working papers and other institute research outputs.

Savitha (2016) conducted a study on the websites of the Deemed University Library in the state of Karnataka. This study found that all deemed university libraries subscribed to e-journals, e-books, and e-databases, and only a small number of them offered Facebook and Twitter facilities. The study also found that the majority of deemed universities provided information about the working hours, library sections, and back volumes of journals on their websites.

Shukla and Tripathi (2011) investigated the content status of library websites belonging to academic institutions in India.

Krishnakumar and Nirmala (2014) surveyed and analyzed the library contents of 29 deemed to be universities websites of Tamilnadu.

Jange (2014) did a research on university libraries' websites in the state of Karnataka.

Kuri and Maranna (2018) assessed the status of websites of central university libraries in South India.

Gautam (2017) concentrated on the content analysis of the websites of Central University Libraries in Delhi, India.

Verma and Devi (2016) investigated on the contents of websites of central university libraries in North-Eastern State.

The same study was also done by Kumar and Mir (2017), but in that case, the area of the study was the central region of India. And Tunga (2021) did the same survey on the same topic, but here the study area was Kolkata City, West Bengal.

6. Originality/ Value:

Although there have been numerous studies on the subject of content analysis and evaluation of library websites in various academic institutions, none has looked specifically at NIRF, 2022 ranked state and central university library websites in India. From this perspective, this study is highly special in its own nature, and I think it will contribute something special to the body of knowledge.

7. Need of the Study:

The university's beating center is the library. The function of university libraries in meeting user demands is significant. They require information for both educational and research purposes, thus it is crucial that we, as librarians, save users' time and meet their needs. Members, faculties, and students of the university value their time while obtaining pertinent information. The finest tool for marketing library services and upholding Ranganathan's fourth Law is their website.

8. Objectives of the study:

The present study's aim is to know the information content of the selected university libraries' websites.

- To determine the essential or fundamental information that is made available on these university library websites;
- To become acquainted with the library's materials, services, and connections to additional sources provided by the university libraries;
- To identify the material types and essential distinguishing characteristics available on library websites;
- To develop standards for content analysis when assessing university libraries' websites;
- To know accessibility of social network sites;
- To know the structure of selected university libraries' websites

9. Scope and Limitations of the study:

The study is confined to examine the top 5 (five) state and central university libraries' websites in India according to the NIRF rankings for 2022. According to the NIRF rankings for 2022, this survey did not include any technology, deemed, or specialized universities in India. The period of data gathering took place from 1st September, 2022 to 28th September, 2022. The list of selected universities is given below as per the NIRF rankings, 2022.

Table 1: List of selected universities as per the NIRF rankings, 2022

Sl.	Name of the University	State	Score	Rank
1	Jawaharlal Nehru University	New Delhi	68.47	2
2	Jamia Millia Islamia	New Delhi	65.91	3
3	Jadavpur University	West Bengal	65.37	4
4	Banaras Hindu University	Uttar Pradesh	63.2	6
5	Calcutta University	West Bengal	62.63	8

10. Methodology:

This study adopted a survey-based research method since the information was acquired through online questionnaires from the websites of selected Indian university libraries in accordance with NIRF rankings, 2022. Based on the earlier website assessments completed by Tunga (2021), Mani & Thiruma (2017), and Kumar & Mir (2017), a checklist was created for the current study's data collection and evaluation of the online contents of the library website. According to the NIRF rankings for 2022, the present study is limited to evaluating the web contents of five (5) state and central university libraries in India, including Jawaharlal Nehru University, Jamia Millia Islamia, Jadavpur University, Banaras Hindu University, and Calcutta University. Table 3 includes the links to each library's website. Microsoft Excel is used to tabulate the data for analysis after it has been checked several times on the relevant websites.

11. Data Analysis and Interpretation:

According to the NIRF rankings for 2022, the total top 5 (five) state and central university libraries' websites in India are analyzed for the study purpose.

11.1 Top five Central and State-aided universities in India according to the NIRF rankings for 2022:

Table 2: List of selected Central and State-aided universities in India according to the NIRF rankings, 2022

Sl.	Name of the University	Abbreviation	State	Year of Establishment	Type of the University	URL
1	Jawaharlal Nehru University	JNU	New Delhi	1966	Central	https://www.jnu.ac.in/main/

2	Jamia Millia Islamia	JMI	New Delhi	1920 (became central university in 1988)	Central	https://www.jmi.ac.in/
3	Jadavpur University	JU	West Bengal	1955	State Aided	http://www.jaduniv.edu.in/
4	Banaras Hindu University	BHU	Uttar Pradesh	1916	Central	https://www.bhu.ac.in/
5	Calcutta University	CU	West Bengal	1857	State Aided	https://www.caluniv.ac.in/

Table 2 depicted the list of selected five Central and State-aided universities in India according to the NIRF rankings, 2022 with their year of establishment, type, and website URL.

Here it is also depicted that among three of all the central universities, two belongs from the state of New Delhi and one is from Uttar Pradesh. The other two universities are state-sponsored institutions located in West Bengal.

11.2 Library website profile of the five selected universities:

Table 3: Website profile of the library

Sl.	Name of the University	Name of the Library	Library Webpage	Link	Content (Linear text/ Structured)
1	Jawaharlal Nehru University	Dr. B. R. Ambedkar Central Library	Yes	http://lib.jnu.ac.in/	Structured
2	Jamia Millia Islamia	Dr. Zakir Husain Library	Yes	https://www.jmi.ac.in/studyatjamia/library/	Structured
3	Jadavpur University	Centre for Digital Library and Documentation	Yes	www.jaduniv.edu.in/122.15.82.40:990	Linear Text
4	Banaras Hindu University	Sayaji Rao Gaekwad Library	Yes	https://www.bhu.ac.in/lib/	Structured
5	Calcutta University	University Library, C.U.	Yes	https://www.culibrary.ac.in/	Structured

Table 3 reveals the library website profile of the top five Central and State-aided universities in India according to the NIRF rankings for 2022.

Only the Centre for Digital Library and Documentation, Jadavpur University library website is accessed through its own university website, which is linear in type. The content of the remaining four studied university libraries is structured. Only Dr. B. R. Ambedkar Central Library, JNU and University Library, C.U. have separate library homepages which are directly accessible by the library users.

11.3 Fundamental Information of the five selected university libraries:

Table 4: Fundamental Information of the five selected university libraries

Sl	Content on Fundamental Information	JNU	JMI	JU	BHU	CU	Total
1	Library Profile	x	✓	✓	✓	✓	4
2	Library Hours	✓	✓	x	✓	✓	4
3	Library rules and regulations	x	✓	✓	✓	✓	4
4	Membership information	✓	✓	✓	x	x	3
5	Contact Us	✓	✓	✓	✓	x	4
6	FAQ'S	✓	✓	✓	x	x	3
7	Photo Gallery	✓	✓	x	x	✓	3
8	Library Staff	x	✓	x	✓	x	2
9	Services Provided	✓	✓	✓	✓	x	4
10	Publications	x	x	✓	x	x	1
Total		6	9	7	6	4	32
Percentage (%)		60	90	70	60	40	-

Table 4 shows the fundamental information of the top five Central and State-aided universities in India according to the NIRF rankings for 2022.

90% of the fundamental information was provided by the JMI library website, while JU provided 60% of the fundamental information, followed by the JNU and BHU library websites with 60% each. It is also found that CU provided only 40% of the fundamental information, which is the lowest among all five studied university libraries.

11.4 Library Collection:

Table 5: Library Collection

Sl	Information on Collection	JNU	JMI	JU	BHU	CU	Total
1	Library Collection	✓	✓	✓	✓	×	4
2	New Arrivals	✓	✓	✓	×	✓	4
3	Book Bank Facility	×	×	×	×	×	0
4	Question Papers	×	×	✓	×	×	1
5	Digital Collection	✓	✓	×	✓	✓	4
Total		3	3	3	2	2	13
Percentage (%)		60	60	60	40	40	-

Table 5 provides the library collection of university library websites of the selected universities.

Only JU offered the information regarding question papers on its webpage, while the other four university libraries gave information on the library collection, new arrivals, and digital collection. On various sorts of library collections, JNU, JMI, and JU university libraries have contributed 60% of the information, followed by BHU and CU university libraries with 40%.

11.5 Electronic resources:

Table 6: Electronic Resources

Sl	Content on Electronic Resources	JNU	JMI	JU	BHU	CU	Total
1	E-Books	✓	✓	✓	✓	✓	5
2	E-Journals	×	✓	✓	✓	✓	4
3	E-Databases	✓	✓	✓	✓	✓	5
4	E-Thesis	✓	✓	✓	×	✓	4
5	Digital Archive	×	×	✓	✓	✓	3
6	Institutional Repository	✓	✓	✓	×	✓	4
7	Link to other websites	✓	✓	✓	×	✓	4
8	A concise view of E-resources	✓	✓	×	✓	✓	4
Total		6	7	7	5	8	33

Percentage (%)	75	87.5	87.5	62.5	100	-
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Table 6 reveals the electronic resources in library websites of the selected universities.

CU library website provided 100% information on electronic resources, followed by JMI and JU library with 87.5% information. JNU library provided 75% of the information and BHU library provided 62.5% of the information on their respective websites.

11.6 Library services:

Table 7: Library Services

SI	Content on Library Services	JNU	JMI	JU	BHU	CU	Total
1	Lending Services	✓	✓	✓	✓	✓	5
2	Reference Services	×	✓	✓	×	×	2
3	Inter Library Loan	✓	✓	✓	×	×	3
4	Reprography Services	×	✓	✓	✓	×	3
5	Help in Research Related Activities	×	×	✓	×	×	1
6	RSS Feed	×	×	×	×	×	0
Total		2	4	5	2	1	14
Percentage (%)		33.33	66.67	83.33	33.33	16.67	-

Table 7 shows information about the availability of library services.

JU Library provided 83.33%, JMI Library 66.67%, JNU and BHU Libraries 33.33% of the information about library services on their websites. It is also found that CU provided only 16.67% information, which is the lowest among all five studied university libraries. It was also discovered that none of the university libraries under investigation offered the RSS feed.

11.7 Special Features of Library Websites:

Table 8: Special Features of Library Websites

SI	Content on Special Features of Library Websites	JNU	JMI	JU	BHU	CU	Total
1	Download Forms	✓	✗	✓	✓	✓	4
2	Ask a Librarian	✓	✗	✗	✗	✗	1
3	Association with Social Networking	✗	✗	✗	✗	✗	0
4	Feedback Facility	✗	✓	✗	✗	✗	1
5	Single Window Search	✓	✓	✓	✓	✓	5
6	Remote Access/ Log in Facility	✓	✓	✗	✗	✗	2
Total		4	3	2	2	2	13
Percentage (%)		66.67	50	33.33	33.33	33.33	-

Table 8 provides the Special Features of Library Websites of the selected universities.

JNU library offered 66.67% of the information on unique aspects of library websites. JMI came in second with 50% of the information, whereas JU, BHU, and CU came in third with 33.33% of the information. Additionally, it was also noted that none of the examined university libraries were connected to social media.

11.8 Comparative checklist of university library websites:

Table 9: Comparative checklist of university library websites

Sl.	Name of the University	Contents on					Total Score (Out of 35)
		Fundamental Information (Out of 10)	Collection (Out of 05)	Electronic Resources (Out of 08)	Library Services (Out of 06)	Special Features (Out of 06)	
1	Jawaharlal Nehru University	6	3	6	2	4	21

2	Jamia Millia Islamia	9	3	7	4	3	26
3	Jadavpur University	7	3	7	5	2	24
4	Banaras Hindu University	6	2	5	2	2	17
5	Calcutta University	4	2	8	1	2	17
Total		32	13	33	14	13	-

Table 9 shows a comparison of the websites for university libraries.

According to the above chart, JMI provided the most items on its library website, earning 26 points, the highest score among the five universities under study. JU came in second with 24 points, while JNU came in third with 21 points. With scores of 17, BHU and CU were tied for fourth place.

11.9 Five point ranking scale:

Table 10: Five point ranking scale

Range of Points	Results
01 to 07	Below Average
08 to 14	Average
15 to 21	Good
22 to 28	Very Good
29 to 35	Excellent

Table 10 shows the five-point ranking scale which is used to decide the rank of the five studied universities.

11.10 Ranking of university library websites:

Table 11: Ranking of university library websites

Name of the University	Total Score out of 35	Rating Scale	Percentage (%)	Rank	Remarks
Jamia Millia Islamia	26	22 to 28	74.29%	1	Very Good
Jadavpur University	24	22 to 28	68.57%	2	Very Good
Jawaharlal Nehru University	21	15 to 21	60%	3	Good
Calcutta University	17	15 to 21	48.57%	4.5	Good
Banaras Hindu University	17	15 to 21	48.57%	4.5	Good

$$\begin{aligned} \text{Rank of CU and BHU} &= \\ 4+5/2 &= 4.5 \end{aligned}$$

JMI library got the highest total score of 26 points out of 40 points, i.e., 74.29% rated "Very Good", followed by JU library with 24 points, i.e., 68.57%, earning a "Very Good" ranking and JNU library with 21 points (i.e., 60%) rated "Good". Two universities, CU and BHU, both have university library websites that are rated "Good" with 17 points (48.57%).

12. Findings:

In this study, some merits and demerits are found after analysis and interpretation of data. The findings of the study are following:

1. Only the University Library at C.U. and the Dr. B. R. Ambedkar Central Library at JNU have unique homepages that library users can access directly. The remaining three evaluated university websites provide access to the university libraries.
2. Only the Centre for Digital Library and Documentation, Jadavpur University library website is accessed through its own university website, which is linear in type. The content of the remaining four studied university libraries is structured.
3. 90% of the fundamental information was provided by the JMI library website, whereas, CU provided only 40% of the fundamental information, which is the lowest among all five studied university libraries.
4. On various sorts of library collections, JNU, JMI, and JU university libraries have contributed 60% of the information, followed by BHU and CU university libraries with 40%.
5. Only JU offered the information regarding question papers on its webpage, while the other four university libraries gave information on the library collection, new arrivals, and digital collection.
6. Only CU library website provided 100% information on electronic resources, while BHU library provided 62.5% of the information on their respective websites, which is the lowest among all five studied university libraries.
7. It was also noted that none of the examined university libraries were connected to social media as well as offered the RSS feed service.
8. All university libraries' websites, with the exception of BHU, have links to electronic journals and e-books, etc. They also provide links to digital archives and collections of multimedia content.
9. All university libraries' websites, with the exception of BHU are providing Institutional Repository services on their library websites.
10. JMI provided the most items on its library website, earning 26 points out of 35, the highest score among the five universities under study. JU came in second with 24 points, while JNU came in third with 21 points. With scores of 17, BHU and CU were tied for fourth place.

13. Recommendations for further improvements:

1. The result shows that most university library websites are accessible through their university websites. It is recommended that libraries should create their own separate library homepages as it is considered one of the most important tools for keeping users in touch with the institutions.
2. The information about question papers, very minimum of websites only indicted. It is one of the valuable tools to provide question papers to attract more users inside.
3. The outcome demonstrates that the majority of the examined university websites do not offer a feedback facility. It is one of the most crucial instruments for connecting users with authorities and for improvement of the library. Therefore, it is advised to offer a feedback facility.
4. It was also noted that none of the examined university libraries were connected to social media as well as offered the RSS feed service. Hence, it is requested to provide the said facilities, so that users can keep themselves in touch with the institutions.
5. Have to reduce unavailable links from the websites.
6. Library websites should be interactive through remote access, Ask a Librarian services, etc.
7. The website must have a new arrival list, information about library collections and an announcement about new library related information, and so on. So that users can know it from outside of the library easily.
8. Consistent updating is required to draw new visitors to websites.
9. It would be more appreciable if the same study will be conduct using the same sample after a couple of years to verify the changes in web-based library services.
10. Regular update is necessary for attracting new users inside the websites.

14. Conclusion:

Universities are the nation's leading institutions of higher education and offer degrees and research programs in many different disciplines, and The university's beating center is the library. In order to fulfil the vision and mission of the universities, the library must facilitate the dissemination of necessary information to its users. Librarians should take care of all these things and create their own library website and link it to the university website. The university library website is the best way to find out what is or isn't in the library without actually going there. If the material does not exist in any form, how can a university borrow it from another university?

This study provides an overview of the content and design of selected university websites, and this study also reveals that different university websites differ from each other.

It is advised that the affected university websites address the issues raised by this study's findings and make the necessary changes. The concerned university's librarian must take the initiative to provide

information on the more useful and appealing library websites. It ought to catch the users' attention. Librarians can develop their web design skills and techniques through training and use of the Internet to enhance the normal work of the library. It can be better used to achieve institutional goals. Users and online visitors would be more demanding of a library website that provided more information. Universities must have a dedicated library website that will draw visitors and enable access to all the services offered to end users.

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