Web-Content Analysis Of Central University Libraries: A Relative Study Between North-Eastern Hill University And Rajiv Gandhi University In Terms Of Library Resources And Services

Priyanka Laskar

Assistant Librarian, Calcutta Institute of Technology

&

Guest Teacher, Department of Library and Information Science,

West Bengal State University

Abstract:

The paper is an investigative study to unveil the resources and services of two Central University Libraries. Scope of the study covers North-Eastern Hill University Central Library and Rajiv Gandhi University Central Library. A brief introduction about the concerned universities and their libraries are narrated at the beginning. Exhaustive literature search of the relevant published literature has been done. To evaluate and compare the web content accessibility as well as availability of both libraries. Research methodology encompasses exploring both primary data and analysis of the secondary literature. Web content analysis methods are used to draw comparisons between the different variables. A thorough analysis of all the parameters has been done. Results are presented in fifteen tables. In the 16th table, a comparative score-sheet has been presented based on the total score of evaluation of the selected libraries. Findings of the study revealed that North-Eastern Hill University library is more technological advanced and make available with more resources and services compare to Rajiv Gandhi University library.

Keywords: Academic Libraries; Central University Libraries; E-resources; Library Resources; Library services; Library websites; North-Eastern Hill University; Online services; Rajiv Gandhi University; Web content analysis.

1. Introduction:

The World Wide Web offers a great wealth of information, as well as the opportunity for people to express themselves and exchange ideas; this makes it a potentially great place to accomplish research on many topics therefore the use of Internet increasingly for educational purposes (Khatri & Baheti, 2013). So the libraries have own challenge to catch the attention of users and convince them. In this challenging condition for the existence, modern library should adopt the concept 'If users will not come to the library, library should go to the users' (Laskar & Chakraborty, 2021). In the contemporary age, Internet has brought tremendous change in information technology; the functioning of the libraries has shifted from traditional functioning to use modern ICT and Artificial Intelligence (Mandrekar & Rodrigues, 2021).

Website of any institution plays a vital role in today's environment; it is not only providing necessary information but also to understand the nature of institution (Panneerselvam, 2015). Website can contain single or thousand pages and made available online. Library website is a kind of library agent which offers all library resources and services and to tell its story to its community without physically visit in the library (Laskar & Chakraborty, 2021).

Today Internet and Web becomes an essential part of everyday life to exchange and assemble information in fastest and easiest way. The information demands of users and researchers are mounting day-by-day. So it is important to study the reliability and accessibility of websites to gratify their users. That reason inspired author to conduct the comparative study to analyse the web content of North-Eastern Hill University (NEHU) central library to Rajiv Gandhi University (RGU) central library in terms of library resources and services. The study evaluated the web content accessibility and availability along with the status of online facilities provided by selected university libraries.

The study tries to identify which university library is more advanced as well as more updated. Moreover which one provides additional resources and facilities to their users, also to make appropriate suggestion to upgrade their existing system.

1.1 *North-Eastern Hill University Central library:*
NEHU established by an act of the Indian Parliament on 19 July 1973. It is the first central university of North-eastern region situated in Meghalaya, India (About NEHU, 2023). The central library of NEHU was started in 1973 at Shillong. The library started computerisation of house-keeping operations in 1989 using the CDS/ISIS package. (North-Eastern Hill University Library, 2022).

1.2 *Rajiv Gandhi University Central library:*

RGU was established in 1984 by Late Smt. Indira Gandhi, in north eastern state, Arunachal Pradesh, India (Rajiv Gandhi University, Arunachal Pradesh, 2023). The Central library of RGU was established in the year 1984. The library has the collection of 64437 books and other resources. (Library - Rajiv Gandhi University, Arunachal Pradesh, 2023).

2. Review of related literature:

In 2016, Devi & Verma did a comparative study between Mizoram University and NEHU in respect of website design and content features. Three point rating scale, structured checklist and Microsoft excel were used to evaluate these websites. The result revealed that out of 69, NEHU got highest point i.e. 59 and MZU got 47 point.

Verma & Devi (2015) evaluated the contents of North-eastern central university library websites of India. Result revealed that all the concerned library web pages are different from each other in several aspects. Authors suggested that websites should be updated, and made more informative, easily accessible and authentic.

Das & Gayan (2017) accomplished a comparative study on web content analysis of various national library websites in South Asia. The findings showed that all libraries had their own websites. The study also provided some suggestions for the betterment of library websites.

Still (2001) formed an evaluative study on content design of English speaking countries university library websites. The result revealed that all websites designed with their own database and catalogue and maximum library had limited information regarding library materials and remote access.

Madhusudhan & Nagabhushanam (2012) investigated the web-based library services of 20 university libraries in India. The findings showed that few libraries provided innovative web-based library services.

Roy & Barooah (2019) conducted a study on selected North-eastern university libraries to know the importance of e-resources to provide quality library services. The study revealed e- resources should be well organized; budget needed to promote ICTs, coordination facilities should be done via consortium, requirement of user orientation and professional training programs.

Laskar & Chakraborty (2021) evaluated Tripura University (TU) and Mizoram University (MU) libraries website in terms of their resources and services. Findings disclosed that MU library was more technologically advanced but TU library offered more resources and services.

Banker & Sharma (2018) conducted an evaluative study on Gandhinagar and Ahmedabad district university library websites and their web-pages to examine the content and structure of websites. Authors suggested that evaluation of library websites must be done frequently to scrutinize the contents and structure of websites and keep updated.

Okhovati et al. (2016) investigated the usefulness of the central library websites of Iranian medical science universities. It used the heuristic method to scrutinize the websites. After analysis three list of usability problems and 668 heuristic violations were identified.

3. Statement of the problem:

Due to the exploitation of ICT products and the mounting demand of huge knowledge in users, the role of libraries and librarians in meeting the needs of the users in digital environment should be properly investigated (Laskar & Chakkroborty, 2021).

This study therefore investigates:

- The current scenario of NEHU and RGU libraries.
- Web based library resources and services of NEHU and RGU.
- The status of web-content of NEHU and RGU libraries.

4. Research questions:

- ➢ Which kind of online facilities is being provided by NEHU and RGU libraries?
- ➢ Which university library makes available more resources and services?
- ➢ Which university library is more advanced?
- ➢ Which university library website is more developed and updated?

5. Objectives of the study:

The main objectives of the research study are:

- To reveal a clear picture of the current scenario of NEHU and RGU libraries.
- To evaluate and compare the web content accessibility as well as availability of both libraries.
- To discover which one is the more advanced library between the two universities.
- To know which library website provides more resources and services.
- To provide suggestions to improve existing library system.

6. Significance of the study:

This study will play the most important role to present an overview on NEHU and RGU libraries status in respect of their web content accessibility and availability. Thus, the findings from this research study could be supportive for making best policy to upgrade their present system to meet the needs of users.

7. Methodology:

This research study is based on descriptive and analytical survey along with observation method. The study data comprise of a set of questionnaire that includes 45 questions. Data has been collected from the librarians or library professionals of NEHU and RGU Ccentral library. Additionally, secondary sources like the web pages of the concerned libraries as well as their annual reports have been scanned. Review of the related literature is also done to get the idea from previous work. Collected data were presented in tabular form and Microsoft-excel along with check list method were used for analysis of the data. Results are presented in 15 tables followed by table 16 presenting the score sheet. Interpretations are also presented at the end.

8. Data collection and analysis:

Table 8.1: Name of universities with establishment year, place and website link

Name of the Universities	Year of establishment	Place	State
North-Eastern Hill University (NEHU)	1973	Shillong	Meghalaya
Rajiv Gandhi University (RGU)	1984	Itanagar	Arunachal Pradesh

Table-8.1 showed the establishment year, place and state of NEHU and RGU. It was found that NEHU is the oldest university, situated at Shillong, Meghalaya that started in 1973 and RGU is established in 1984 at Itanagar, Arunachal Pradesh.

Table 8.2: Universities with their website and library web page link

University	University websites	Library web page link
NEHU	https://www.nehu.ac.in/	www.nehu.ac.in/library/index.html
RGU	https://rgu.ac.in	www.rgu.ac.in/library/

Table-8.2 illustrated the link of university websites of NEHU and RGU along with their central library web page links.

Table 8.3: Working days of university libraries

University	Working days	Closed days
NEHU	6	Sunday & National Holidays
RGU	6	Sunday & National Holidays

Table-8.3 showed that both libraries provided their services from Monday to Saturday. And both libraries were closed on Sunday, national holidays and university holidays.

Table 8.4: Collection of library resources available in websites

Name of the Items	NEHU	RGU
General books	290000	64400
Reference books	20,000	3,000
Print magazines/ General periodicals	14	10
Print journals (national and international)	267	92
Back volumes	15,000	5,500
Newspapers	15	17
CD/DVDs	500	___
E-Journals	12,000	10,000
Theses	2,000	343
Dissertations/ project works	3,000	353
Bound volumes	30,000	___
Computers	100	___
VHS cassettes	50	___
E-books	___	15,617

Table-8.4 showed the collection of library resources of NEHU and RGU reflected in their websites. It confirmed NEHU library had more collection of general books, reference books, general periodicals, printed journals, back volumes, e-journals, theses and dissertations or project works. And RGU had more collection of newspapers and e-books.

The table also revealed, NEHU didn't provide any information regarding e-books via website where RGU library websites didn't provide information regarding collection of CD/DVDs, bound volumes, computers and VHS cassettes.

Table 8.5: Information about annual reports of both universities

University	Latest update year	Report no.
NEHU	2021-2022	48
RGU	2021-2022	35

Table-8.5 showed that both university libraries provided their updated annual reports as last updated year was 2021-2022. The latest report no. of NEHU was 48 and RGU was 35.

Table 8.6: General library facilities/services of both universities

General services	NEHU	RG U
Membership	Yes	Yes
Circulation	Yes	Yes
Reference	Yes	Yes
E-resources	Yes	Yes
E-mail	Yes	Yes
SMS	Yes	Yes
Multimedia	Yes	Yes
Internet	Yes	Yes
Intranet	Yes	Yes
Photocopying and printing	Yes	Yes
Publication and research support	Yes	Yes
Online reservation of books	Yes	No
Online renewal of issued book	Yes	No
Institutional publications	Yes	Yes
Library forms download	Yes	Yes

Table-8.6 confirmed a variety of general services of selected libraries. It demonstrated that both libraries provided some facilities - membership, circulation, reference, e- resources, E-mail, SMS, multimedia, internet and intranet facility, institutional publications, photocopying and printing, publication and research support service and facility to download various library forms. However, only NEHU offered online reservation and renewal of books.

Table 8.7: Special library facilities of both universities

Special facilities	NEHU	RGU
OPAC	Yes	Yes
Web OPAC	Yes	Yes
Plagiarism check	Yes	Yes
Provide important links	Yes	Yes
Covid-19 support service	No	Yes
Search facility	Yes	Yes
Links to external search engine	Yes	Yes
Free trial access of resources	Yes	No
Brail facilities	Yes	No
Institutional Publications	Yes	Yes
Single Search Box	No	Yes

Table-8.7 showed special library facilities available in NEHU and RGU. Both central university libraries provided some special services such as OPAC, Web OPAC, plagiarism check service, external inks, search facility, links to external search engine and institutional publications. Only NEHU provided free trial access of resources and brail facilities. And only RGU offered single search box facility.

Table 8.8: Library management software used by both University

University Name	Library management software
NEHU	Koha
RGU	Koha

Table-8.8 discover NEHU and RGU both library used Koha open source integrated library management system.

Table 8.9: Current awareness services available in university libraries

Different CAS	NEHU	RGU
New arrivals	Yes	No
News	Yes	Yes
Upcoming event alert	Yes	Yes

Tables-8.9 presented the current awareness services of NEHU and RGU libraries. It showed, NEHU provided new arrivals services, news and upcoming event alert. And RGU library provided only news and upcoming event alert.

Table 8.10: Communication information services available in library websites

Aspects	NEHU	RGU
Contact no. of staffs	Yes	Yes
E-mail Id	No	Yes
Events	Yes	No
FAQs	Yes	No
Feedback	No	Yes
Job vacancy	Yes	Yes
Login page	Yes	Yes
Postal address	Yes	No
Inquiry and help desk	Yes	Yes
Ask a librarian	Yes	No

Table-8.10 showed different communication information services available in both university library websites. It revealed, both libraries provided same services as contact no. of staffs, login page, inquiry and help desk service and job vacancy information. Although only NEHU library offered FAQs (Frequency Asked Questions) facility, events, ask a librarian facility and postal address of universities. And RGU library provided E-mail Id of staffs and feedback facility.

Table 8.11: Online facilities available in selected libraries

Facilities	NEHU	RGU
Remote access	Yes	No
Online database service	Yes	Yes
Institutional repository	Yes	No
Digitization service	Yes	Yes
Open access directory	Yes	Yes

Table-8.11 showed that both university libraries provided online facilities through their websites as online database services, digitization services, and open access directory facility, although only NEHU offered remote access facilities and institutional repository services.

Table 8.12: Technology based services available in both libraries

Different technology basedservices	NEHU	RGU
Barcode	Yes	Yes
RFID	Yes	No
Security based service (CCTV)	No	Yes

Table-8.12 demonstrated the different technology based services of selected libraries. It showed that NEHU used Barcode and RFID technology and RGU endow with Barcode as well as CCTV facilities.

Table 8.13: Different aspects available in university website

Aspects	NEHU	RGU
Page title appears in the top	Yes	Yes
Home link in every page	Yes	Yes
Date of update	Yes	Yes
Page under construction	Yes	No
Library section	Yes	Yes
Copyright year	Yes	Yes

Table-8.13 showed different aspects available in university website. It revealed that both university website designed with 'page title appeared in the top', 'copyright year', 'home link in every page', 'date of update', and 'library section'. But only NEHU website designed with 'page under construction'.

Table 8.14: Basic information provided by library websites

Types of basic information	NEHU	RGU
General information	Yes	Yes
Library rulesand regulations	Yes	Yes
Library map/ location	Yes	Yes
Library dashboard	Yes	No
News and announcement	Yes	Yes

Table-8.14 illustrated some basic information provided by library websites. It revealed that both websites contained general information, library rules and regulations, library map/ location, news and announcement. But only NEHU website encompassed with library dashboard.

Table 8.15: Important external inks provided by libraries

External Links	NEHU	RGU
UGC	Yes	Yes
INFLIBNET	Yes	Yes
SWAYAM	No	Yes
SWAYAM PRABHA	No	Yes
National Cyber Crime Reporting Portal	No	Yes
DeLCON	Yes	No
NIRF	Yes	Yes
Tenders	No	Yes
e-PG Pathshala	No	Yes
NDL	Yes	Yes
Sodhganga	Yes	No
e-Shodh Sindhu	Yes	No
MoE	Yes	No
National Portal of India	Yes	Yes
NAAC	Yes	Yes
ICSSR	Yes	No
ICHR	Yes	No
Shodh Gangotri	Yes	No
National Knowledge Network	Yes	No

Table-8.15 disclosed important external links provided by selected libraries. It showed both library websites provided some important links as UGC, INFLIBNET, NIRF, NDL, National Portal of India and NAAC. Although NEHU provided DeLCON, Sodhganga, e-Shodh Sindhu, MoE, ICSSR, ICHR, Shodh Gangotri and National Knowledge Network. And RGU provided links of SWAYAM, SWAYAM PRABHA, National Cyber Crime Reporting Portal, different tenders and e-PG Pathshala.

Table 8.16: Total score of evaluation of selected libraries

Score adapted from table 1 to 15

Table Number	Check list	NEHU	RGU
Table-8.1	2	2	2
Table-8.2	2	2	2
Table-8.3	2	2	2
Table-8.4	14	13	10
Table-8.5	2	2	2
Table-8.6	15	15	13
Table-8.7	11	9	9
Table-8.8	2	2	2
Table-8.9	3	3	2
Table-8.10	10	8	6
Table-8.11	5	5	3
Table-8.12	3	2	2
Table-8.13	6	6	5
Table-8.14	5	5	4
Table-8.15	19	14	11
Total Score	**101**	**90**	**75**

Table-8.16 confirmed the total score adapted from table 8.1to table 8.15. It showed that out of total 101 check lists NEHU library obtained highest scores i.e. 90 and RGU library obtained 75.

9. Major findings

The investigation showed that –

- NEHU library had more collection of resources and it is technologically advanced than RGU library.

- Both library websites make available their updated annual reports.

- NEHU library offers more facilities through their website

- Although both libraries provide number of special services, NEHU is endowed with more services.

- Both libraries utilize Koha open source integrated library management system.

- While NEHU offer Current Awareness Services as new arrivals, news and upcoming event alert but RGU library provides only news and upcoming event alert.

- NEHU provided additional online facilities compare to RGU.

- NEHU has Barcode and RFID facilities and RGU has Barcode as well as CCTV facilities.

- Both university website designed with 'page title appeared in the top', 'copyright year', 'home link in every page', 'date of update', and 'library section'. Only NEHU website designed with 'page under construction'.

- NEHU website contained general information, library rules and regulations, library map/ location, news and announcement along with librarydashboard.But only RGUwebsitenot available with librarydashboard.

- Both University library websites provided important links to UGC, INFLIBNET, NIRF, NDL, National Portal of India and NAAC. Although NEHU endow with DeLCON, Sodhganga, e-Shodh Sindhu, MoE, ICSSR, ICHR, Shodh Gangotri and National Knowledge Network. RGU provided links of SWAYAM, SWAYAM PRABHA, National Cyber Crime Reporting Portal, different tenders and e-PG Pathshala.

- Table 8.16 concluded that out of 101 check lists NEHU library obtained highest scores i.e. 90 and RGU library obtained 75.

10. Conclusion and suggestions:

From the above findings it was clearly concluded that NEHU library was more advanced compare to RGU library. And NEHU library web page provided more resources and services through their website. Finally out of 101 check lists NEHU obtained 90 scores and RGU obtained 75. Although both central libraries are trying their level best to develop their existing system but they need appropriate plan and policy to upgrade their online services in a productive manner, moreover both university websites should be more interactive and informative.

On the basis of whole study, some suggestions are put forward:

- University libraries should be more upgraded with the use of ICT.

- Governments need to take responsibility to arrange quality improvement programs and ICT based training for library professionals.
- University libraries need to increase their e-resources to satisfy the modern users.
- Adequate financial support should be circulated to university libraries for better utilizing of ICT services.

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