



Assessing University Library Websites: A Comparative Study of Jawaharlal Nehru University and University of Delhi

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Abstract

This study employs qualitative and quantitative criteria to assess the content of the Jawaharlal Nehru University (JNU) and University of Delhi (DU) library websites. The qualitative evaluation focuses on eight key homepage features. At the same time, the quantitative assessment uses a checklist of 117 items related to multimedia, general information, services, resources, my library, Web 2.0/Library 2.0, and user experience. A five-point rating scale was used to provide numerical ratings and rank the features. The study reveals that both library websites lack responsiveness and mobile presence, highlighting the need for redevelopment using content management systems to enhance accessibility. The JNU library website scored 68 out of 117 (58.1%), and the DU library website scored 58 out of 117 (50.4%), ranking Average. This research underscores the necessity for regular updates, compatibility checks, and user feedback mechanisms to improve library websites. It is a standard criterion for other library websites to evaluate their progress and adapt to the Information and Communication Technology (ICT) era.

Keywords: Websites, Evaluation, University Libraries, India, Library Website, JNU, DU.



Introduction

Library websites are vital digital hubs within modern academic institutions as gateways to extensive knowledge and resources. In today's advanced technological landscape, websites play an essential position in helping instructional endeavours by granting students, educators, and researchers the handy right of entry to various instructional materials. These online structures permit customers to navigate large repositories of sources encompassing conventional texts and cutting-edge multimedia, facilitating self-directed studies and making sure people live abreast of the trendy improvements of their respective disciplines. Academic library websites supply precious sources, including virtual catalogues, studies aids, quotation utilities, streamlining facts retrieval methods, and improving instructional efficiency. By democratizing information, getting the right of entry, and inspiring a spirit of inquiry and collaboration, those websites align with the undertaking of instructional establishments to domestic excellence and highbrow improvement inside the virtual era. Given the escalating dependence on virtual gear and the fast technological progress, library websites have developed into integral property for handing over facts and offerings to students, college members, researchers, and numerous stakeholders.

Delhi's Central Universities are renowned research and learning institutions in India with a wide range of academic offerings and a thriving academic community. These universities' affiliated libraries are vital to providing instruction, learning, and research endeavours by providing an extensive array of materials, such as books, journals, databases, and digital collections. The library website is the primary portal for users to access resources, conduct information searches, and utilize other library services. However, the vital role that library websites play in making information and services accessible makes it necessary to review and appraise the usability and quality of these platforms.

Review of Related Literature

Academic communities rely heavily on library websites to give them access to information resources, services, and tools. It is vital to evaluate the efficacy and usefulness of those websites to ensure their alignment with consumers' facts requirements. In this study, the researcher searched the literature for the usage of number one critical phrases associated with the topic, such as "internet site," "university library internet site," "internet site assessment," "website



assessment checklist," and "university library." The retrieved literature was screened, and the applicable situation and cutting-edge e-book were selected. After that, the screened literature was well reviewed and offered in narrative form, in line with the preceding. For instance, Panda and Chakravarty (2024) reveal that "websites have become among the most popular and useful means of disseminating information. It must be accessible to ensure equal access and equal opportunities for people with diverse abilities. Access to information and communications technologies over the Web is a basic human right in many countries. Many laws and treaties are also enforced to strengthen the rights of disabled persons."

Gohain, Mishra, and Mera (2023) found that "there needs to be more information regarding design factors, and many web pages contain graphics to attract users. However, a significant shortcoming is the absence of update dates. Nevertheless, there is room for improvement in these areas. Further research is necessary to address the deficiencies identified, and suggested recommendations can be employed to enhance the quality of library websites."

Shashidhara (2023) revealed that "libraries use their websites to provide users with various services beyond just lending books. The study indicates that libraries embrace the digital age and are committed to providing users with various resources and services. While the traditional role of libraries as repositories of books and information remains important, libraries are expanding their offerings to meet the changing needs of their users. Through their websites, libraries connect with their communities and provide access to resources that enrich and enhance their lives."

Campoverde-Molina, Luján-Mora and Valverde (2023). "The changing information landscape of e-information, wherein the role of traditional librarians has drastically changed, has merely been proclaiming librarians as Internet or Knowledge or Content. Managers will only be of value if justification is done in true spirit by creating comprehensive and pertinent library websites on their own or through web admins".

Hilala and Singh (2022) reveal that "digital access from anywhere to support the immediate need for user information. Accessibility of websites is a serious issue, as information is communicated



via the website. This is the best way to make the information available to users in a well-structured and classified form. However, this could have a negative effect if there are too many accessibility issues with the website”.

Gupta and Walia (2022) reveal that the library’s general information is the “primary that should be available on all the websites. However, only a few library websites under study scored full in the section on general library information. Most libraries mentioned information about rules and regulations and e-resource collection, library timing, library print collection, and library services, library membership, telephone number information, email addresses, and library staff/ team, and only a few libraries had feedback forms, purchase suggestions/recommendation form, usage statistics, and FAQs”.

Gupta (2022). Library websites “play an essential role in receiving, disseminating, and updating information about libraries and filing the law of library science in the modern age. Most library websites are not up to date; hence, they require frequent updates for the betterment of library services and the 24*7 accessibility of users. The library website needs to provide more details about the library's services and collections”.Paswan and Verma (2021) evaluated the “websites of seven National Institutes of Pharmaceutical Education and Research Libraries using a standardized checklist of 100 items across various categories. They noted that none of the library's resources were available in Hindi. Their recommendations include Developing library websites for all NIPERs with a proper domain name and linking them to the institute's homepage for users familiar with library facilities and resources. Social networking sites and Web 2.0 tools can be used to disseminate information effectively. Adhering to standard guidelines for library website development, following W3C rules. Designing all NIPER library websites in Hindi and English to cater to a broader audience”.

Bharati and Madhusudhan (2019) investigated the “websites of JNU and BHU university libraries using a checklist of 170 items encompassing qualitative and quantitative characteristics. These included multimedia features, general information, library services, resources, Web 2.0 functionalities, currency, accuracy, relevance, organization, structure, maintenance, user interface, search capabilities, and informative feedback and support features. They observed that



the JNU Library homepage is more visually appealing than the BHU library website". The checklist utilized in this study was directly adopted from the referenced article, maintaining its original form without any alterations.

Devi and Verma (2019) emphasized that "library websites should include contact information so that users can easily reach out with queries or issues. They stressed the importance of placing a direct link to the library website on the institution's homepage to facilitate easy access to information and prevent confusion in locating the library link. This approach enhances the delivery of information and services to users appealingly."

Singh and Gautam (2016) revealed that the "Jawaharlal Nehru University library website is the best, and the South Asian University library website is the worst according to evaluation criteria. Through this study, researchers found that Jawaharlal Nehru University library websites provide the best products and services than other central university library websites in Delhi".

Objectives of the Study

- i) To identify content features on the library websites of Jawaharlal Nehru University (JNU) and the University of Delhi (DU), India.
- ii) To establish criteria for content analysis of the studied library websites.
- iii) To assess the content features of the library websites using specifically designed criteria to determine validity, reliability, and usability.
- iv) To compare and rank the content features of the studied library websites based on these criteria.

Scope of the Study

The present study focuses on two top Central Universities in Delhi, India, selected based on "the National Institute Ranking Framework (NIRF) 2023: Jawaharlal Nehru University (JNU), ranked 2nd, and the University of Delhi (DU), ranked 11th" (NIRF, 2023).

Methodology

The study adopted a manual evaluation method incorporating qualitative (08) and quantitative (117) data. Based on previous related literature, a carefully designed checklist was used to achieve the study's objectives. The aim was to explore web-based library content through qualitative and quantitative evaluation features.

The qualitative evaluation covered descriptive information about the library websites. The quantitative evaluation criteria encompassed multimedia features, general features, library services, library resources, My Library, Web 2.0/Library 2.0, currency, accuracy, relevance features, organization and structure features, link and maintenance, user interface, search, and informative feedback and support. Data was collected by exploring the contents of the library websites and analyzed using MS Excel in June 2024. Each item was assigned a maximum score, and the scores obtained were recorded to rank the websites. "The evaluation checklist utilized in this study was adopted from Bharti and Madhusudhan's (2019) research, with its original structure carefully maintained without alteration."

Data Analysis and Interpretation

Data analysis spanned from January 2024 to May 2024. Qualitative and quantitative data were collected using evaluation checklists. Each feature was indicated with a "√" for Yes or a "×" for No, with one point assigned for each feature present on the library website. The total score for the website is the sum of all marked cells for that specific library webpage.

Qualitative Evaluation

The qualitative section consists of eight checkpoints pertaining to the library websites, designed to capture and document descriptive data. Valuable insights are gathered primarily from the website's homepage (Table 1).

Table 1
Descriptive Features

Sl. No.	Particulars	JNU	DU
i)	"Library Name"	√	√
ii)	"Address"	√	√



iii)	“Type/Genre: Academic”	✓	✓
iv)	Fax Number	✓	×
v)	Phone Number	✓	✓
vi)	Email	✓	✓
vii)	Language: Hindi/ English	Both	Both
viii)	Language of site content	English	English
	Total	8/8 (100%)	7/8 (87%)

Note: JNU=Jawaharlal Nehru University, DU= University of Delhi, ✓ = Yes; ×= No.

“(Courtesy: Adopted from Bharti and Madhusudhan, 2019).

Table 1 presents the qualitative features of the JNU and DU library websites. Standard elements such as library names, addresses, phone numbers, and email IDs are displayed on the homepage of both sites. These checkpoints have also been referenced in studies by Verma and Devi (2016), Mahalakshmi (2015), Madhusudhan and Ahmed (2013), and Bharti and Madhusudhan (2019).

The other features, such as an academic network (.ac), were available in both URLs. In both Libraries' websites, the site's language is bilingual (English and Hindi), and the content language is trilingual (English, Hindi, and Urdu). The qualitative analysis section of the checklist does not assign numerical values, so these aspects are not factored into the final ranking of JNU and DU library websites. However, understanding the details of these sites when browsing and contacting them is crucial for obtaining additional information.

Quantitative Evaluation

This evaluation included dichotomous questions addressing various features of the checklist. The analysis of these features is presented in the subsequent tables.

Multimedia Features

Multimedia features, encompassing sound, video, animation, and images alongside text, are vital components of any website. High-quality visual design, audio/video clarity, and high-definition photos enhance user engagement and encourage website visits. Well-designed multimedia

elements contribute significantly to the overall aesthetics of a website. Table 2 outlines 18 multimedia-related checkpoints, addressing various aspects such as audio, video, animations/GIFs, and graphic/icon/image features.

Table 2
Multimedia Features

Sl. No.	Particulars	JNU	DU
Audio			
i)	Audio content is available.	×	×
ii)	"Textual descriptions of external audio files are provided."	×	×
iii)	"Audio icons are distinctly labelled."	×	×
iv)	"File size of external audio files is provided."	×	×
Video			
v)	Video content is available.	✓	✓
vi)	"Video icons are clearly labelled."	×	✓
vii)	"Information about external video files"	✓	×
viii)	"File size of external video files provided"	×	×
Animations/GIF files			
ix)	"Animations/GIF feature available."	✓	✓
x)	"Animations/GIFs utilized to augment websites"	✓	✓
xi)	"Animations/GIF files suitable for websites"	✓	✓
xii)	"Animations/GIF files enhance the website experience".	✓	✓
xiii)	"Animations/GIF files do not cause disturbances."	✓	×
Graphic/Icon /Image			
xiv)	"Graphics/Image show the content."	✓	✓
xv)	"Graphics/Image suitable to information content"	✓	✓



xvi)	“Icons/Images and other graphical representations are used constantly.”	✓	✓
xvii)	“Proper textual information for external images provided”	✓	✓
xviii)	Mentioned File size for external images	×	×
	Total	11/18 (61.1%)	10/18 (55.55%)

*Note: JNU=Jawaharlal Nehru University, DU= University of Delhi, ✓= Yes; ×= No.
“(Courtesy: Adopted from Bharti and Madhusudhan, 2019).*

Table 2 indicates that animation/Graphics Interchange Format (GIF) files and graphics/icons/image files are crucial components of library websites. In contrast, audio and video elements received significantly lower scores in the survey. As defined by Whatis (2018), GIF is a "file extension for an animated raster graphics format frequently used for web images". JNU and DU utilize GIFs and image features to enhance their websites, ensuring they are prominently displayed. However, neither library provides information on the file sizes of images or GIFs.

General Features

Table 3 compares the general features of the JNU and DU library websites, showing that both include standard elements such as a homepage, staff information, operating hours, rules and regulations, and contact details. However, the JNU library website offers additional features like Frequently Asked Questions (FAQ), a sitemap/floor map, news, and events.

However, both library websites need visitor counters and newsletters despite referencing visitor statistics on their main pages to demonstrate user activity. Out of 16, JNU covered 14 (87.5%), followed by DU covered 11(61%) general features prescribed in a checklist. As a result, it was found that DU library websites need to improve and add more features to enhance their website.

Table 3
General Features

Sl. No.	Particulars	JNU	DU
i)	“Home”	✓	✓
ii)	“Mission”	✓	✓
iii)	“Staff Information”	✓	✓
iv)	“Opening Details”	✓	✓
v)	“Library rules and regulation”	✓	✓
vi)	“News and Events”	✓	×
vii)	“Contact Information”	✓	✓
viii)	“Frequently Asked Questions”	✓	×
ix)	“Annual Reports”	✓	✓
x)	“Floor Map/ Sitemap”	✓	×
xi)	“Newsletter”	×	×
xii)	“Visitor Number /Web Counter”	×	×
xiii)	“Library History”	✓	✓
xiv)	“Library Committee/Advisory Committee”	✓	✓
xv)	“Photo/ Video Gallery”	✓	✓
xvi)	“Other Information”	✓	✓
	Total	14/16 (87.5%)	11/18 (61.11%)

Note: JNU=Jawaharlal Nehru University, DU= University of Delhi, ✓ = Yes; ×= No

“(Courtesy: Adopted from Bharti and Madhusudhan, 2019).

Library Services

University library websites provide library services to their users. Library services offered through websites may include features such as new arrivals, interlibrary loan (ILL)/document delivery service (DDS), plagiarism detection tools, newspaper clippings, and 'ask a librarian' services. Table 4 compares the web-based library services on the JNU and DU websites.



Table 4
Library Services

Sl. No.	Particulars	JNU	DU
i)	“New Arrival List”	✓	✓
ii)	“ILL/ DDS”	✓	✓
iii)	“Information Literacy”	×	✓
iv)	“Citation Style Tools”	×	×
v)	“Online Institutional Tutorials”	×	×
vi)	“Information Desk”	✓	×
vii)	“Anti-Plagiarism Checking”	✓	✓
viii)	“Web Search Tips”	×	×
ix)	“Newspaper Clippings”	✓	×
x)	“Photocopying Service”	✓	×
xi)	“Ask-a-Librarian Service via email”	✓	✓
xii)	“Ask-a-Librarian Service via call”	✓	×
xiii)	Other Services	✓	✓
	Total	09/13 (69.23%)	06/13 (46.15%)

Note: JNU=Jawaharlal Nehru University, DU= University of Delhi, ✓ = Yes; ×= No

“(Courtesy: Adopted from Bharti and Madhusudhan, 2019).

Table 4 shows library services such as plagiarism and inter-library loan/document delivery services, which are common on both library websites. Still, JNU provides services such as an information desk, newspaper clippings, photocopying, and a librarian service via phone. Information about information literacy is only given by DU. JNU contains 09 (69.23%) of 13 library services, and DU covers only 06 (46.15%) of 13 services on its website. It was observed that both universities need to enhance the services provided on their library websites.



Library Resources

With the highest number of checkpoints, this section focuses on the web-based library resources available on the JNU and DU websites. Table 5 outlines key e-resources and links, serving as a checklist to determine which library website includes these resources.

Table 5
Library Resources

Sl. No.	Particulars	JNU	DU
i)	“Links to Electronic Journals “	✓	✓
ii)	“Links to Bibliographic Databases”	✓	✓
iii)	“Links to Subject Guides”	✓	✓
iv)	“Web Resource Portal (English language)”	✓	✓
v)	“Web Resource Portal (Hindi and Sanskrit language)”	✓	✓
vi)	“Online Public Access Catalogue (OPAC)”	✓	✓
vii)	“Links to Union Catalogue”	×	×
viii)	“Rare collections (special journal)”	✓	✓
ix)	“E-Theses and E-Dissertation”	✓	✓
x)	“Links to Open Access (OA) Resources”	✓	✓
xi)	“Links to Other Reference Sites”	✓	✓
xii)	“Links to Electronic Books”	✓	✓
xiii)	“Links to Institutional Repository (IR)”	✓	×
xiv)	“Links to Bound Volumes”	✓	✓
xv)	“Links to Search Engines”	×	×
xvi)	“Links for Digital Library Consortia (ShodhSindhu)”	✓	✓
xvii)	“Other Library Collections”	✓	✓
xviii)	“Book Recommendation”	✓	✓
xix)	“Privacy Policy”	×	×



xx)	“Links to the Librarian's Homepage”	×	×
xxi)	“Webmaster Address”	×	×
xxii)	“Promotional Materials for the Library”	✓	✓
xxiii)	“Services for Faculty Members”	×	×
xxiv)	“Book Reviews and Other Resources”	×	✓
xxv)	“Recruitment Cell”	×	✓
xxvi)	“Links to the Specific Subject”	✓	✓
xxvii)	“Information for Persons with Disabled”	×	×
xxviii)	“Remote Access Information”	✓	✓
	Total	19/28 (67.85%)	20/28 (71.42%)

Note: JNU=Jawaharlal Nehru University, DU= University of Delhi, ✓ = Yes; ×= No

“(Courtesy: Adopted from Bharti and Madhusudhan, 2019).

Table 5 highlights several common resources found on both the JNU and DU library websites, including links to e-journals, bibliographic databases, Web OPAC, union catalogues, rare collections, open access (OA) resources, reference sites, e-books, institutional repositories (IR), and search engines. However, features such as subject guides, English-language web resource portals, electronic theses and dissertations, and links to back/bound volumes are also present on both sites.

The JNU library website, however, needs more information on book reviews and recruitment cells. Additionally, key resources like privacy policies, links to the librarian's homepage, library promotion materials, book reviews, resources for disabled users, and remote access details are absent from both websites. In contrast, Ganaee and Rafiq (2016) found that a "jobs" page was one of the most frequently provided features on university library websites. JNU met 67% of the criteria, while DU fulfilled 71%.



My Library

Liu (2008) describes "My library space as a comprehensive information environment designed for individual users, offering a unified set of information technology tools. Some library websites feature personalized spaces known as my library or my search space, consolidating access to user accounts, course reserve materials, library alerts, databases, citation tools, and search preferences/results into a single location."

Table 6
My Library

Sl. No.	Particulars	JNU	DU
i)	"My Library Records"	✓	×
ii)	"Links for Renew Books"	×	×
iii)	"Links for Reserve A Book"	×	×
iv)	"Latest Information for Users"	✓	✓
v)	"Article of Users' Interest Feature"	×	×
vi)	"Users' Book Location"	×	×
vii)	"User Preference Books/Journals"	✓	✓
viii)	"Information related to Library Membership Cards"	✓	×
ix)	"Research Guides and Tools"	✓	✓
x)	"Suggestions and Recommendations for New e-Books/e-journals and Databases"	✓	✓
xi)	"Visitors Chart"	×	×
xii)	"Assistance in Recovering Full-text Documents"	×	×
xiii)	"List of Digital Lectures"	×	×
	Total	06/13 (46%)	04/13 (30.76%)

Note: JNU=Jawaharlal Nehru University, DU= University of Delhi, ✓ = Yes; ×= No

“(Courtesy: Adopted from Bharti and Madhusudhan, 2019).”



Table 6 illustrates that 'My Library Record' features are primarily designed for users to access transaction records—such as checked-out books, due dates, and accumulated fines—using their membership ID and password. The data reveals that JNU provides 46% of these features on its library website, while DU offers 30%.

Web/Library 2.0

"People most frequently use web/Library 2.0 tools. With it, the dissemination of information gets easier for many audiences" Devi and Verma (2019). Table 7 details the Web 2.0 tools available in the studied library websites.

Table 7
Web/ Library 2.0 Features

Sl.No.	Web/Library 2.0 Features	JNU	DU
i)	“Blogs”	×	×
ii)	“RSS Feeds”	×	×
iii)	“Wikipedia”	×	×
iv)	“Social Networking Sites (SNS)”	×	×
v)	“Google Plus”	×	×
vi)	“Social Tagging and Bookmarking”	×	×
vii)	“File Sharing”	×	×
viii)	“Video Sharing”	×	×
ix)	“Calendaring”	×	×
x)	“Image Sharing”	×	×
xi)	“Library Virtual Tour”	×	×
xii)	“QR code for Mobile Phone”	×	×
xiii)	“Folksonomies”	×	×
xiv)	“Collaborative Authoring”	×	×
xv)	“Weather Details”	×	×
xvi)	“Podcasts”	×	×
xvii)	“YouTube”	×	×
xviii)	“Mobile Library Icon”	×	×



xix)	“PlumX Metrics”	×	×
xx)	“Instant Message”	×	×
	Total	0/20 (0%)	0/20 (0%)

Note: JNU=Jawaharlal Nehru University, DU= University of Delhi, ✓ = Yes; ×= No

“(Courtesy: Adopted from Bharti and Madhusudhan, 2019).

Table 7 illustrates that both university library websites incorporated non-Web 2.0 features. The focus of Web 2.0 is on interoperability, usability, and user-generated content, which may turn a static library website into a dynamic, interactive platform.

User Interface

The user interface is where “criteria for internet-based information sources differ most from other sources. A user interface is a system by which users interact with a machine. The user interface includes hardware (physical) and software (logical) components. User interfaces exist for various systems and provide a means of input (allowing the user to manipulate a system) and output (allowing the system to indicate the effects of the users' manipulation)” (Madhusudhan and Ahmed, 2013).

The user interface feature section covers navigational tools, a homepage link on every page, an under-construction page indicator, any informational elements (text, symbols, images, etc.), and usability features, among other aspects.

Table 8
User Interface Features

Sl.No.	User Interface Features	JNU	DU
i)	“Navigation Aids are clearly labelled.”	✓	✓
ii)	“Provides a way to return to the home page from each site page.”	✓	✓
iii)	Indicates any under-construction pages.	✓	×
iv)	Displays information such as text, symbols, graphics, and images cohesively.	✓	✓
v)	It has a visually appealing aesthetic that is not	✓	✓



	cluttered or busy.		
vi)	“Links to the page title and a clear page identity.”	✓	✓
vii)	Allows users to perform all tasks offered by the system quickly.	✓	✓
viii)	Ensures easy navigation to accomplish desired tasks.	✓	✓
ix)	Web pages load quickly	✓	✓
	Total	09/09 (100%)	08/09 (88.88%)

Note: JNU=Jawaharlal Nehru University, DU= University of Delhi, ✓ = Yes; ×= No

“(Courtesy: Adopted from Bharti and Madhusudhan, 2019).

Table 8 shows that all navigational aids are clearly labelled, with symbols, graphics, and text distinctly marked, and the webpage layout is well-defined on both sites. However, some pages on the DU website are still under construction. As noted by Inal (2018), 'usability evaluation has become one of the most critical aspects of website design and development.' The table also highlights that both library websites feature aesthetically pleasing designs with consistent page headings, easy-to-use functions, and fast page loading times. JNU scored 100 per cent, while DU scored 88.88 per cent.

Total Score and a Rating Scale of the Study Websites

Table 9 presents the cumulative scores for the university library websites under study based on data from Tables 2 to 8. A five-point rating scale was developed according to the total number of checkpoints each library website achieved out of 117 quantitative assessment points. The rating scale is as follows: (i) 94-117 Excellent, (ii) 71-93 Above Average, (iii) 47-70 Average, (iv) 24-46 Below Average, and (v) 01-23 Needs Improvement.

Table 9
Total Score of the Studied Websites

Table No.	Total score of the websites	JNU	DU
02	Multimedia Features (18)	11	10
03	General Features (16)	14	11



04	Library Services (13)	09	06
05	Library Resources (28)	19	20
06	My Library Features (13)	06	04
07	Web/ Library 2.0 Features (20)	00	00
08	User Interface Features (09)	09	08
	Total (117)	68/117 (58.1%)	59/117 (50.4%)
		Average	Average

Note: JNU=Jawaharlal Nehru University, DU= University of Delhi.

Table 9 shows that the JNU library website achieved a higher score (58.1%) than the DU library website (50.4%). The study's findings align with Bharati and Madhusudhan (2019), who concluded that the JNU website is "above average," and Singh and Gautam (2019), who identified the Jawaharlal Nehru University library website as the best with varied degrees. The JNU website offers more features than DU, but areas such as Web 2.0 tools and my library features require improvement at both universities. Both universities, classified as central universities, received an average ranking.

Suggestions

- i) Both JNU and DU library websites need to embed more features and tools of Web 2.0 technology, which can significantly positively impact satisfaction levels, accessibility of resources, and user engagement.
- ii) Link duplication could be minimized by strategically putting links. It might increase the connection number and further lower the size.
- iii) Links could be grouped under broad categories to allow users to view the pages with just one click. There ought to be no broken or redundant links. Whenever necessary, acronyms and abbreviations must be stated. This would enhance the website's usability and appearance.
- iv) JNU and DU library websites need more responsiveness and mobile presence. There is an urgent need to re-develop a responsive website using content management systems to



improve the accessibility and mobile presence in the *'information-on-the-go' environment*.

Conclusion

The study assessed the quantitative and qualitative qualities of both JNU and DU library websites, revealing significant strides in developing bilingual (English, Hindi) platforms that effectively provide essential information such as addresses, phone numbers, and detailed staff information. Both libraries utilize video content and suitable graphics to enhance the user experience, offering valuable services, including new arrival lists, interlibrary loans/document delivery services, plagiarism-checking tools, and librarian contact options via email.

Notable differences and areas for improvement were identified. JNU offers comprehensive features, including floor maps, news, events, and newspaper clippings. At the same time, DU compensates for the lack of some elements by providing suggestions for new e-books and e-journals. Both universities highlight web-based resources, such as electronic journals, bibliographic databases, and rare book collections, and offer user-centric features like research guides and personalized recommendations.

Despite these advancements, both library websites have areas requiring attention and Improvement. The user interfaces are generally clear, but DU's website has some under-construction pages, indicating ongoing development needs. Regarding overall performance, JNU's library website scored 68 (58.1%), securing the first position, while DU's library website scored 59 (50.4%), placing it second. While both universities have made commendable contributions, there is room for enhancement to serve their academic communities better.

Additionally, both JNU and DU websites lag in utilizing Web 2.0 features. These capabilities, often referred to as library websites 2.0, include social networking platforms like Facebook and other modern utility structures, which are crucial in the web world. The studied library websites must regularly update content with fresh announcements, resources, and services. Ensuring compatibility with various browsers before uploading any media and gathering feedback and suggestions will enable library authorities to understand user needs better and tailor their offerings. Structures for remote access to digitized materials should also be included to maximize the library's collections and websites. Further research is necessary to address the deficiencies



identified, and suggested recommendations can be employed to enhance the quality of library websites.

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