

Assessing Accessibility and Social Media Integration in Library Websites of State Universities in Punjab and Haryana

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ABSTRACT

This paper focuses on evaluating the user experience of library websites of state universities of Punjab and Haryana from Northern Indian region. The study aims to explore and analyze the general features, features of the URL of the homepage and the integration of social media features on these platforms. The research utilizes a checklist method to gather data to examine the general features, website accessibility and use of information dissemination tools. The findings of this research are anticipated to obtain valuable findings for optimizing the design and functionality of library websites in Northern Indian State Universities. The study contributes to the broader discourse on enhancing user experiences in digital library environments and foster greater accessibility and usability for students, faculty and researchers alike.

Keywords: Content Analysis, Library Websites, State Universities, Checklists, Websites Accessibility, Social Media.

INTRODUCTION

In the case of academia digital libraries have emerged as main hubs for accessing scholarly resources and information. As integral centers of learning and research the state universities in India have witnessed a paradigm shift in the way of information dissemination and utilization (Bhattacharya & Sharma, 2007). The rising expectations of users and growing significance of digital resources demands for comprehensive examination of the user experience provided by library websites (Kim, 2011). The traditional role of libraries as physical repositories of knowledge has expanded into the digital realm. As a result it has introduced new challenges and opportunities. As the library websites serve as gateways to vast collections of academic materials so require seamless navigation (Ullah et al., 2023), intuitive search functionalities and efficient content organization (Okhovati et al., 2017). Understanding the current state of these digital interfaces is imperative to address potential gaps and enhance the overall user experience. This research is grounded in the recognition that the usability and effectiveness of library websites significantly impact the academic pursuits of users. This research explores the unique context of Northern Indian State Universities, particularly focusing on the study of Punjab and Haryana, The aim is to uncover insights into the specific challenges and strengths of library websites in this region. The goal of this research is to bridge the existing gaps in knowledge and inform actionable improvements. We plan to provide a sound understanding of the user experience landscape through analyzing the general features (Al-Qallaf & Ridha, 2018), homepage URL characteristics (Nielsen, 2002) and integration of social media on library websites,. In turn, it may contributes to the formulation of targeted strategies for enhancing usability, optimizing information access and fostering effective communication within the academic community. Therefore, the

exploration of library website user experience in Northern Indian State Universities is not only a scholarly endeavor but also a practical one with direct implications for the efficiency and inclusivity of digital learning environments. This research aligns with the evolving needs of academic institutions and seeks to offer valuable insights that may guide future developments in digital library services.

RESEARCH METHODOLOGY

This study employs a robust research design to systematically investigate the user experience of library websites of State Universities in Northern Indian states of Punjab and Haryana. The design encompasses various components, ensuring a comprehensive and insightful exploration of the research objectives.

- *Selection of Universities:* The choice of universities is carefully considered to provide a representative snapshot of the State Universities of Punjab and Haryana serving as a pertinent case study. The selection criteria aims to capture a nuanced understanding of the region and it includes state universities established through respective states university act on or prior to 2018.
- *Sampling Criteria:* To ensure relevance and inclusivity of current study the sampling criteria is clearly defined. The universities are selected based on roles, disciplines and experience levels, striking a balance between feasibility and representativeness. The multidisciplinary state public universities established before at least five years are included in the study (Urmila et al., 2024).
- *Data Collection:* A multifaceted approach to data collection involves usability testing and expert evaluations. The checklists are designed to gather insights into general features, homepage URL accessibility and social media integration (Raward, 2001).
- *Variables and Metrics:* Key variables such as URL features, social media integration etc. are considered. The metrics used for assessment are total scores, chosen carefully to ensure the correctness of the findings, facilitating a comprehensive evaluation of the library website user experience (Bhardwaj et al., 2023)

- Table 1: List of Universities with Web address and Website Scores

Name of University	Url	Score (%) (Max=38)
Guru Nanak Dev University	https://gndu.ac.in	63.2
Punjabi University	http://www.punjabiuniversity.ac.in/	57.9
Panjab University	https://puhcd.ac.in/	73.7
Kurukshetra University	https://www.kuk.ac.in/	52.6
Maharishi Dayanand University	https://mdu.ac.in/	68.4
Chaudhary Devi Lal University	https://www.cdлу.ac.in	39.5
Bhagat Phool Singh Mahila Vishwavidyalaya	http://bpsmv.ac.in/	42.1
Indira Gandhi University	https://www.igu.ac.in/	44.7
Chaudhary Bansi Lal University	https://cblu.ac.in	42.1
Chaudhary Ranbir Singh University	https://crsu.ac.in/	42.1
Shri Vishwakarma Skill University	https://svsu.ac.in/	73.7
Gurugram University	https://gurugramuniversity.ac.in/	44.7

SCOPE OF THE STUDY

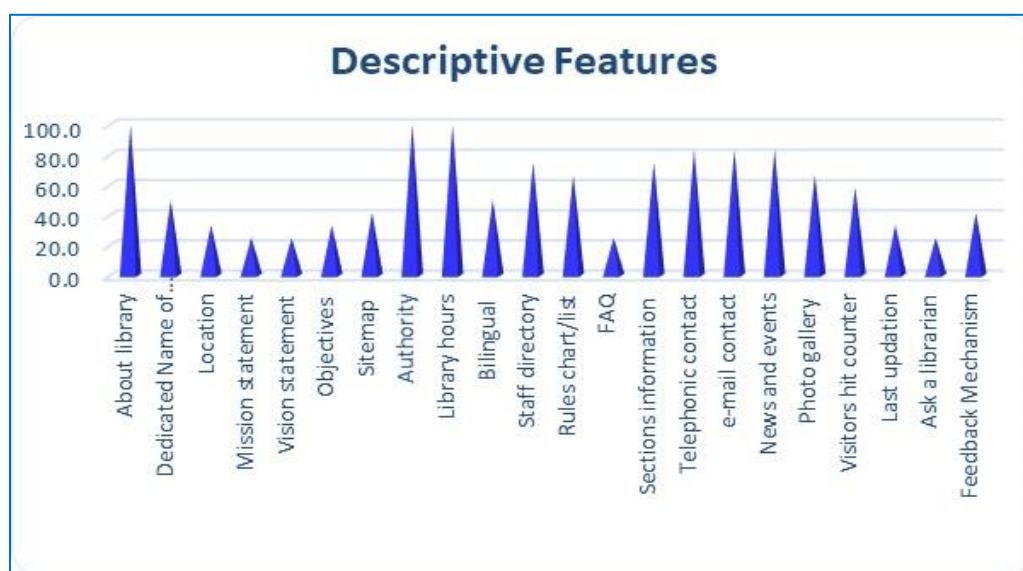
There different types of academic institutions or universities in India such as IITs, IIMs, Central Universities, Deemed Universities, State Public Universities, State Private Universities, Agriculture Universities, Medical and Health Universities, Sports Universities, Technical Universities and others. Among all these types of universities, the state public universities (state Government universities) providing multidisciplinary education are primarily at the core of academia meant to provide affordable education to masses. A library website plays the key role in the current time of digital advancement in ensuring effortless access to scholarly resources and information. This study centers on assessing the user experience of library websites in Northern Indian State Universities, placing particular emphasis on the library websites of state universities of Punjab. The research seeks to evaluate the basic features (Kumar & Bhardwaj, 2023), homepage URL characteristics and the incorporation of social media features on these platforms (Bhardwaj et al., 2025).

DATA ANALYSIS

Descriptive Features

The graph depicting descriptive features of state university library websites in Punjab and Haryana highlights notable variations in the availability and presentation of essential content. Core elements such as Library Hours, Staff Directory, Authority, and Sitemap are prominently featured across most websites, indicating a focus on basic operational transparency and navigational clarity. Moderate inclusion is observed for institutional elements like About Library, Mission and Vision Statements, and FAQ, suggesting partial attention to organizational identity and user guidance. The sparsely implemented user-interactive features such as Ask a Librarian, Feedback Mechanism, and Last Updated information reveals a gap in responsiveness and dynamic engagement. Additionally, the inconsistent presence of Bilingual Support points to limited inclusivity in serving a linguistically diverse user base. While contact information is reasonably provided, tools for showcasing activities and updates—such as Photo Galleries, News and Events, and Visitor Counters—are unevenly applied. Overall, the analysis underscores the need for a more balanced and user-centered approach to content development, ensuring both informational completeness and interactive functionality in library websites.

Figure 1: Descriptive Features of Library Websites



Accessibility Features

The graph illustrating website accessibility features of state university library websites in Punjab and Haryana reveals a mixed level of commitment to inclusive digital design. A relatively high percentage of libraries ensure consistent accessibility features and indicates an awareness of basic accessibility norms. Similarly, links under other menus and direct links on parent university websites are fairly common also suggest efforts to maintain navigational continuity across institutional platforms. However, the presence of audio descriptions or text-to-speech options and explicit mentions of website compliance with accessibility standards is significantly low. This reflects a limited adherence to advanced web accessibility guidelines and a lack of formal recognition of compliance protocols. The findings suggest that while foundational accessibility measures are somewhat in place, more sophisticated and inclusive design elements remain underutilized. Enhancing these aspects is crucial to ensuring equitable access for all users, particularly those with disabilities, and aligns with global standards for digital inclusivity in higher education.

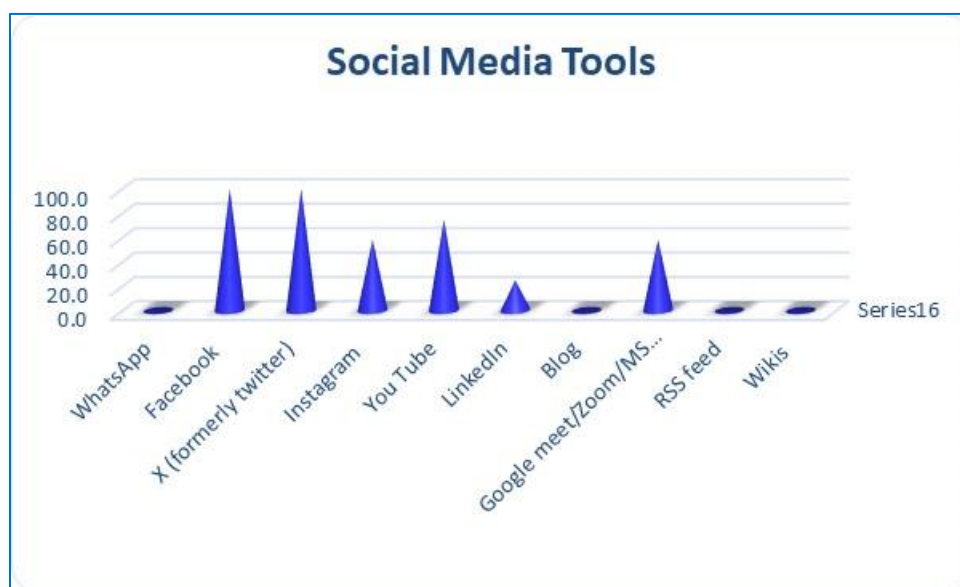
Figure 2: Accessibility Features of Library Websites



Social Media Tools

The graph shows social media tool integration across state university library websites in Punjab and Haryana highlights selective adoption patterns. Facebook and X (formerly Twitter) emerge as the most widely used platforms, indicating that libraries prioritize these for real-time communication and outreach. Instagram and YouTube also show moderate levels of use, suggesting a growing trend toward visual and multimedia engagement. Though platforms such as LinkedIn, Google Meet/Zoom/MS Teams and blogs are used less frequently yet pointing to underutilization of professional networking and synchronous communication tools. Moreover RSS feeds and wikis are almost absent from library websites, which indicates a gap in dynamic content syndication and collaborative knowledge-sharing environments. The findings imply that while efforts toward digital engagement through social media exist, there remains considerable scope for diversifying the tools used to enhance interactivity, visibility, and user participation in library services.

Figure 3: Integration of Social Media on Library Websites



FINDINGS

The content analysis of library websites across twelve state universities in Punjab and Haryana reveals both strengths and critical gaps in digital presence and user engagement:

- Most university library websites provide basic descriptive content such as information *About the Library*, *Library Hours*, *Staff Directory*, and *Rules & Regulations*. However, advanced user-oriented features like *Bilingual Access*, *Authority Information*, *Ask a Librarian*, and *Feedback Mechanism* are inconsistently available. This indicates partial compliance with user-centric website design.
- The majority of websites include direct links from the university homepage and some consistent accessibility features. Nonetheless, *audio descriptions*, *text-to-speech options* and *explicit website compliance declarations* are rare that in turn limits the inclusiveness for differently-abled users.
- Platforms like Facebook, X (formerly Twitter), and YouTube are moderately utilized. The professional and collaborative platforms like LinkedIn, wikis, and RSS feeds are mainly absent, shows limited efforts toward academic networking and content dissemination.
- Among the institutions analyzed, Panjab University and Shri Vishwakarma Skill University emerged as the top performers. They reflected a relatively high level of digital maturity and user-centric web presence. These universities demonstrate well-structured content, integration of key accessibility features, and active use of social media tools to facilitate user engagement.
- Guru Nanak Dev University and Maharishi Dayanand University also performed above average. This indicates an appreciable effort in delivering accessible and content-rich library interfaces. Punjabi University and Kurukshetra University showed moderate compliance with content and usability standards, reflecting scope for strategic enhancement in areas such as accessibility compliance and interactive services.
- In contrast, several universities have scored below the halfway mark which highlight areas of concern. Chaudhary Devi Lal University, Bhagat Phool Singh Mahila Vishwavidyalaya, Chaudhary Bansi Lal University, Chaudhary Ranbir Singh University, and Gurugram University displayed

limited integration of key features, indicating a need for significant development in both content structure and user-oriented functionalities. The findings suggest that these universities are yet to adopt comprehensive digital strategies that align with modern academic information needs.

CONCLUSION

This study underscores the evolving but uneven landscape of digital library services among state universities in Punjab and Haryana. While a foundational digital presence is evident in the form of basic descriptive features, the analysis reveals a fragmented and often superficial approach to accessibility and user engagement. Key components essential for an inclusive and dynamic digital experience—such as multilingual support, consistent accessibility features, and interactive communication tools—remain insufficiently implemented. The limited integration of social media platforms and the absence of advanced accessibility mechanisms highlight a gap between institutional digital infrastructure and the evolving expectations of a diverse academic user base. Such gaps may hinder the broader goals of knowledge dissemination, user satisfaction, and academic collaboration in a digitally connected environment. Hence, there is an urgent need for a strategic, policy-driven framework that promote uniformity, accessibility, and responsiveness in the design and management of library websites. Institutional administrators and web development teams must prioritize user-centricity, adhere to national and international web accessibility standards, and ensure the regular evaluation of website performance. Strengthening digital library interfaces through thoughtful content structuring, multilingual inclusivity, and the integration of academic social tools significantly enhance user experience and scholarly engagement.

ACKNOWLEDGEMENT: The authors sincerely thank both anonymous reviewers for their insightful comments and constructive suggestions, which significantly enhanced the clarity of the manuscript.

REFERENCES