

Content Quality and Online Resource Availability on Women's University Library Portals: A Comprehensive Assessment

Nand Kishore Tailor¹, Dr. Shesh Mishra²

1. Research Scholar, Department Of Library Science, Banasthali Vidhyapith

2. Assistant University Librarian, Department Of Library Science, Banasthali Vidhyapith

Received: 15-11-2025, Accepted: 26-11-2025, Published: 31-12-2025

DOI: <https://doi.org/10.5281/zenodo.18108092>

ABSTRACT - Portals in university libraries are important in the provision of access to scholarly information as well as electronic resources in the institutions of higher learning. Nevertheless, the quality of content, ease of use and technological integration can have an impact on successful use of these portals. This research evaluates the quality of the content and online availability of resource of the women university library web sites in India, and usability, user awareness, user satisfaction, and usage of the emerging web technology. The mixed-method design is chosen containing a systematic web content analysis of 16 web sites recognized as UGC women university libraries and a user perception survey among students, research scholars and faculty members. The statistical analysis of data has been done with descriptive statistics, indexes, and graphs. It has been found that user-oriented support services, remote access support, consistency of usability and Web 2.0 tools are only limited even though most websites offer basic informational information and access to the core electronic resources. Even though user satisfaction is average or high in general, there are a number of technical and accessibility challenges. This paper concludes by noting that specific measures on content development, usability, and technological integration can be used to increase the efficiency and usability of university library portals that are women-centered.

Keywords: Women's Universities, Library Websites, Content Quality, Online Resources, Usability Evaluation, User Perception, Web 2.0 Technologies.

I. INTRODUCTION

University library portals are a fundamental digital portal to access scholarly information, electronic resources and academic services within institutions of higher learning. The growth in the use of digital resources platforms to teach and learn and conduct research has worsened the significance of stable, convenient, and properly designed library websites (Nakhumicha, 2024). Research among students and

faculty members of universities has demonstrated that content quality, accessibility of online resources, and perceived usefulness of library portals have a strong effect on the degree of their use (Apuke and Iyendo, 2018; Habiba and Islam, 2022).

Issues of quality, credibility, and reliability of online information have also added to the role of academic library websites as credible points of access to authoritative academic resources (Battineni et al., 2020; Daraz et al., 2019). Studies have shown that inadequate structure of the websites, absence of navigation, and absence of support systems tend to create complications in the assessment of digital information by the users, hence, influencing the successful use of the resources available to them (McGrew et al., 2019; Seo et al., 2021). In this regard, library portals are anticipated to prevent information overload and misinformation through the means of organized, transparent and user-oriented digital environments (Janes, et al. 2018).

1.1. Content Quality and Online Resource Availability in Library Portals

The quality of content is one of the defining factors of successful use of library portals, mainly among researchers and academic employees (CLN & CLN, 2022). Research has also found quite a range of differences in how services, instructions to access, and presentation of electronic resources are covered on university library websites, even among top-ranking institutions (Rafiq et al., 2021). Although substantial amounts of digital resources are invested, they are usually not used optimally because of inconsistencies in the structure of the content and access mechanisms (Kato et al., 2021). It has also been found that the richness of the content should be accompanied by a good accessibility tool and communication tool to boost user engagement and portal efficacy (Bhardwaj et al., 2025; Alzahrani et al., 2019).

1.2. Usability, User Perception, and Technological Integration

The quality of service and usability is critical to the perceptions and satisfaction of the user experience with library websites because elements such as clarity in navigation and responsiveness, together with service quality, can have a significant impact on the desire to remain engaged (Tijjani, 2019). It has been reported that the deployment of technology in order to increase digital literacy and interaction with users is one of the major strategies to enhance the efficiency of academic library services (Rafi et al., 2019).

Web 2.0 and new technologies have also changed library web sites into an interactive space where users can contribute and respond to the site, although it is shown that such technologies are not equally applied in academic institutions, thus restricting the chances of providing personalized and interactive services. Besides, scholarly information accessibility and relevance are becoming more and more defined in terms of indexing and discovery tools like Web of science and Scopus, which underscores the significance of organized and qualitative digital information in academic library portals (Pranckutė, 2021).

1.3. Objectives of the Study

- To survey the content and information available on the websites of libraries in Women's Universities in India.
- To examine the access information for online resources, services, and other facilities provided on women's university library websites.
- To evaluate the women's university libraries' websites in terms of their aesthetic value, correctness, currency, accessibility, and user-friendliness.
- To find out user's opinion regarding awareness and utilization library websites.
- To ascertain the user's satisfaction and problems in access of library website.
- To analyze the use and availability of emerging web technologies for development of library websites of women's Universities

II. LITERATURE REVIEW

Habiba and Ahmed (2020) tested the effect of ICT infrastructure and access systems on satisfaction of the faculty with the electronic resources subscribed to by the university. Their research showed that the availability of online resources was not enough to guarantee a successful usage, but additional elements like the ease of access, clarity of access processes, and technical trustworthiness also had a great impact on the level of satisfaction among the users. The authors noted that properly designed online platforms and facilitative access information boosted the use of electronic materials by the faculty. Their results emphasized

the significance of sound digital infrastructure and access design that is user-friendly, which can be directly applied in the context of the online resource availability and user satisfaction also considered in the current paper (Habiba, & Ahmed, 2020).

Rahman and Batcha (2023) evaluated the content of library websites of women colleges which are members of the University of Delhi. They analyzed presence of the basic and advanced content components such as library services, digital resources, policies and features of user support. The researchers determined that a majority of the websites had basic information although more sophisticated elements that were user-friendly like frequently asked questions, online help support and specific access instructions were not consistently provided. The authors came across the conclusion that the effectiveness of library websites was constrained by the absence of standardized practices in the development of the content. The study offered a good background of the current research, especially in terms of the content coverage and gaps in the academic library portal of women (Rahman, & Batcha, 2023).

Al-Qallaf and Ridha (2019) offered an overall review of academic library websites based on the design, navigation, content quality, services and use of Web 2.0 tools. Their results showed that there was a high disparity in the technological integration and the usability of websites among institutions. Whereas a number of libraries had implemented the use of social media tools and interactive applications, a number of websites were still very much informational with minimal user's engagement processes. The paper highlighted the significance of the usability, intuitive navigation and the Web 2.0 integration in enhancing user interaction and satisfaction. These lessons led to the focus of the present study on usability testing and how the emerging web technologies would impact on the websites of the women university libraries (Al-Qallaf, & Ridha, 2019).

Ajisebutu et al. (2024) examined the experiences of undergraduate users regarding library portal services using perceived usefulness and satisfaction as their measures of interest. The research indicated that end users tended to appreciate the availability of electronic resources but often suffered problems that were associated with slowness of the system, poor navigation and lack of teaching and learning aids on how to use the resource. It was found that usability of the site and accessibility to the support features had a strong effect on the user satisfaction as opposed to access to the resources alone. The authors also highlighted the necessity of constant analysis of library portals on a user-based approach. Their results supported the topicality of the use of user perception and analysis of problems concerning access, which was carried out in the current study (Ajisebutu, et al. 2024).

2.1 Research Gap

Although the academic library web sites are increasingly researched, current literature has focused much on the quality of content, ease of use, computerization or user satisfaction separately without much focus on the comprehensive assessment strategy. Previously existing research has been largely done on general university libraries or institutional settings thus women university library portals have not been extensively studied on a national scale. Furthermore, although the previous research has identified gaps in the mechanisms of access, usability and Web 2.0 adoption, little has been done to compile an objective analysis of web content with user perception data to determine how the two factors interact together to determine effects on awareness, utilization and satisfaction. The lack of standardized measurement of evaluation and insufficient focus on new web technologies also make the generalizability of the current findings even more limited. It is in these gaps that the current research paper will perform a detailed evaluation of the quality of content, online resources, usability, user awareness, satisfaction and adoption of emerging web technologies on female university library web portals in India and therefore making empirical observations on the support of user-centered and technologically informed website design.

III. MATERIALS AND METHODS

This section presents the materials and methods adopted to conduct the web content analysis and user perception survey of women's university library websites.

3.1 Methodological Framework

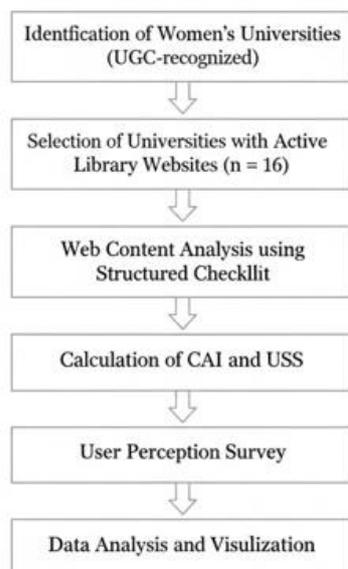


Figure 1: Methodological Framework of the Study

The figure shows the step-by-step approach taken in the assessment of the quality of the content, availability of online resources, usability, perception of the users and the adoption of web technologies emerging in the women university library websites.

3.2 Research Design

The research design embraced a mixed-method research to combine both quantitative analysis web content and user perception survey to provide a holistic evaluation of the content quality, online resource availability, usability, and technological adoption of websites of women university libraries in India. This methodology allowed the triangulation of the results based on objective assessment of websites and subjective user experience and thus increased the reliability and validity of the outcomes.

3.3 Population and Sample

The study focused only on universities of women in India which are accredited by the University Grants Commission (UGC). According to the data collected on UGC records, annual reports of the Ministry of Education, and AISHE reports, 19 universities of women are found. Among them, 16 universities have active and accessible library websites during data collection and are thus selected as final sample in analyzing web content. The universities that had their library web pages inactive or non-operational are used out to ensure consistency and data accuracy. In the case of user perception survey, the respondents are comprised of students, research scholars and faculty members affiliated to the selected women universities as they are the major users of academic library websites.

3.4 Data Sources and Materials

The two primary sources of data used in the study are:

1. Websites of the chosen women universities of libraries.
2. A questionnaire workshop-based user survey with close-ended questions and Likert scale questions to assess the levels of awareness, frequency of usage, satisfaction level, and access issues.

3.5 Web Content Analysis Instrument

The structured checklist is created according to the past studies of library websites evaluation. The checklist is analyzing five dimensions that are significant:

- (i) Content coverage,
- (ii) Availability of online resources,
- (iii) User support features,
- (iv) Usability and design attributes, and
- (v) Adoption of Web 2.0 and emerging technologies.

Each website is manually evaluated, and the presence of each feature is coded as binary data (1 = available, 0 = not available).

$$CAI = \frac{\sum_{i=1}^n C_i}{n} \times 100$$

where C_i represents the availability of the i^{th} content component and n denotes the total number of components evaluated. This index provides a standardized measure of content completeness across library websites.

3.6 User Perception Survey

The user perception survey assesses awareness, usage trends, levels of satisfaction and access related problems that are related to library websites. Administering the questionnaire is online and the subject is on free will. Anonymity of the respondents is facilitated to bring about ethical compliance and bias free responses.

User Satisfaction Score (USS)

User satisfaction is determined by a User Satisfaction Score (USS) on a Likert scale which is calculated as:

$$USS = \frac{\sum_{j=1}^m S_j}{m}$$

where S_j represents the satisfaction score given by the j^{th} respondent and m denotes the total number of respondents. This score reflects the overall level of user satisfaction with library website services.

3.7 User Perception Survey

The user survey is done to measure the awareness, usage patterns, level of satisfaction, and access related issues with library websites. The data are gathered in the form of an online questionnaire that is sent via institutional communication channels. The involvement is voluntary and respondent anonymity allowed so that to get unbiased responses.

3.8 Data Collection Procedure

Data collection has carried out in two phases:

- **Phase I: Web Content Analysis-** Direct observation is used to systematically review each of the libraries selected websites. The accessibility to all the content, resources, and technological features is checked in all the relevant web pages, hyperlinks, and sub-sections.
- **Phase II: User Survey-** The surveys have gathered and filtered. The analysis contained only valid and complete responses.

IV. DATA ANALYSIS AND RESULTS

This section shows the results of the systematic web content analysis of the websites of women university libraries and the survey of the user perception. The findings have been tabulated in accordance with the study objectives and are justified by relevant tables and figures to add clarity and interpretation in the analysis.

4.1 Content Coverage of Library Websites

The content coverage analysis indicates that most of the university library websites of women offer all the necessary information related to their libraries such as library timing, rules and regulations as well as the staff details. Nevertheless, more sophisticated and user-friendly information like descriptions of services in detail, formal library policies, frequently asked questions and user guides are not uniformly provided on the websites. This lack of evenness of distribution of content shows that there is no uniform content development and presentation practices between university libraries of women.

Table 1 shows the accessibility of key content items on the considered library websites.

Table 1: Content Coverage on Women's University Library Websites

Content Elements	Websites Providing (%)
Library overview / Introduction	93.8
Library timings	87.5
Rules and regulations	81.3
Staff details	75.0
Collection details	68.8
Library services description	56.3
Membership information	62.5
User guides / Manuals	37.5
Library policies	31.3
FAQ / Help section	25.0

The data in Table 1 show that women's university library websites largely emphasize basic informational content, with most sites providing a library overview (93.8%), library timings (87.5%), and rules and regulations (81.3%). Staff details (75.0%) and collection information (68.8%) are also reasonably well covered. However, user-oriented and instructional content is comparatively limited. Detailed service descriptions are available on only 56.3% of websites, while user guides (37.5%), library policies (31.3%), and FAQ or help sections (25.0%) appear on fewer than half of the portals. This imbalance indicates a content development gap that may restrict effective user engagement and optimal utilization of library services.

4.2 Availability of Online Resources

Provision of electronic resources is one of the fundamental roles of academic library websites. The study reveals that e-journals and e-books are available in most university library websites of women, mostly consortia-based subscriptions and institutional databases. Nonetheless, material pertaining to remote access, off-campus-login processes and instructions in the utilization of databases are also discovered as insufficient on a significant number of sites.

Table 2 provides the availability of online resources in the chosen library websites.

Table 2: Availability of Electronic Resources on Library Websites

Type of Online Resource	Availability (%)
E-journals	87.5
E-books	81.3
Online databases	75.0
Institutional repository	56.3
Open access resources	62.5
Remote / off-campus access	31.3
Database usage guidelines	37.5

As Table 2 demonstrates, the provision of core electronic resources is also a major concern of women university library websites, where e-journals (87.5%), e-books (81.3%), and online databases (75.0) have high availability. Nevertheless, the relative lack of both institutional repositories (56.3%) and open resource materials (62.5%) are indicative of uneven use of open scholarly materials. More to the point, there are access-enabling features like remote or off-campus access (31.3%) and guidelines on the usage of database (37.5) that are restricted, and this can undermine the proper use of the electronic resources, especially when there are off-campus users.

4.3 Usability and Design Evaluation

The aspects of usability and visual design are key factors in the effectiveness of library websites. The analysis showed that there was a good deal of variation of the form of navigation, consistency of layouts, and beauty across the websites. Libraries that had well-structured menus, internal search services and responsive layout exhibited high level of usability and web sites that had disorganized layout and broken links had low levels of usability.

Figure 2 shows the usability rating of the web sites of women university libraries.

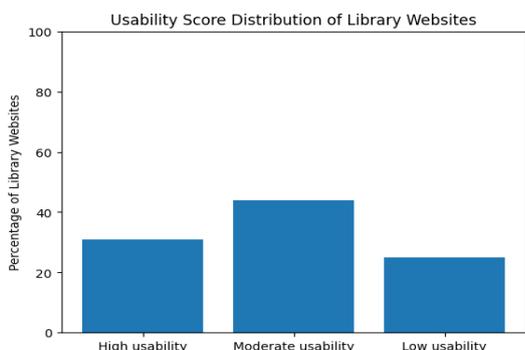


Figure 2: Usability Score Distribution of Library Websites

Figure 2 shows the distribution of the websites of the women libraries in universities by their usability scores. The middle range of usability would be the largest percentage of websites (44%), which means that simple navigation and design elements are served and there is a significant room to improve them. A lighter portion of web sites have a high usability (31%), i.e., a good interface design, clear navigation systems, and enhanced user experience. Nevertheless, a significant portion of websites (25 percent) falls into the low-usability group, pointing to significant deficiencies in layout, accessibility or technical performance. The number highlights the necessity of specific usability enhancements especially on those websites which perform poorly to make access to library services more consistent and friendlier.

4.4 User Awareness and Utilization

The analysis of user perception indicates that the level of awareness among students, research scholars and faculty members of the library websites is moderate to high. Access to academic materials was the major reason why the site is used, followed by viewing library notices and service related information. Interactive features are, however, rarely employed, mainly because of their scantiness provision on the sites.

Figure 3 gives the awareness by the user and frequency of using the library web site.

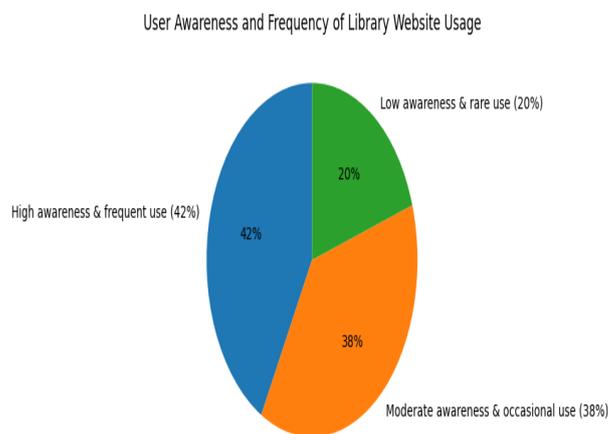


Figure 3: User Awareness and Frequency of Library Website Usage

Figure 3 shows how the users are spread in terms of their awareness and regular use of library websites. Only a large percentage of users is very aware and actively using (42%), which means that they are exposing themselves to library websites to obtain academic resources. A further 38 percent of users are moderately aware and infrequently use, which implies that they might be partially familiar with the services, but do not always use them. Nevertheless, there is

a significant disparity in user outreach and engagement as 20 percent of users are in the category of low awareness and rare use. Comprehensively, it can be stated that the figure demonstrates that the awareness level is usually rather good but still, it is required to implement specific orientation and awareness programs to transform moderate and insufficient engagement into more beneficial and adequate use of library websites.

4.5 User Satisfaction and Access Problems

The general satisfaction of users (women) with the university library websites in general is observed to be satisfying, especially when access to electronic resources is considered. However, a number of operational and technical problems are reported, which impacted negatively on the user experience and satisfaction.

Table 3 presents the distribution of user satisfaction levels.

Table 3:User Satisfaction Levels with Library Websites

Satisfaction Level	Percentage (%)
Highly satisfied	28
Satisfied	46
Neutral	15
Dissatisfied	11

As the information in Table 3 reveals, the overall user satisfaction with the websites of women university libraries, in general, is positive. A sizeable fraction of the respondents indicated that they are satisfied (46%) with the library websites, or highly satisfied (28%), and the portals are effective towards access to electronic resources and a basic library service. Nevertheless, 15 percent of users are neutral to their satisfaction and 11 percent of the users are dissatisfied citing underlying usability, accessibility, or technical challenges to influence the user experience. Though most of the users demonstrate positive perceptions, the presence of neutral and dissatisfied responses indicates that specific areas of improvement must be made on the functionality of the websites, clarity of the content, and services provided by the users to increase the overall satisfaction levels. Although overall the response is positive, several access-related issues are pointed out by users as shown in Figure 4.

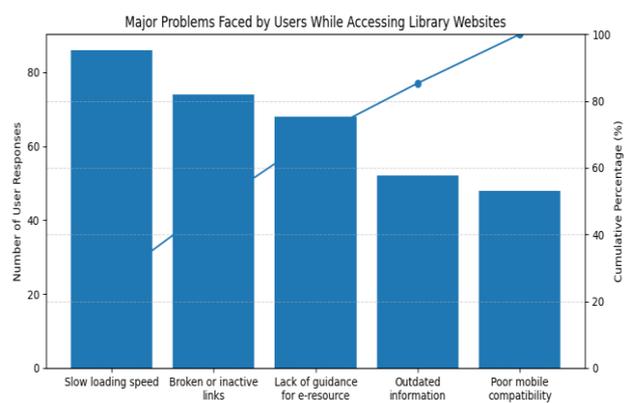


Figure 4:Major Problems Faced by Users While Accessing Library Websites

Figure 4 points out the key access-related issues that users experienced when utilizing the websites of women university libraries. The Pareto analysis shows that the most common reported issues are the high loading speed and broken or inactive links that should take up a significant share of user problems. The deficiency in e-resource usage guidance also becomes a major issue, whereas the challenges associated with the outdated information and ineffective mobile support, although less common, also influence the general user experience. The cumulative trend would indicate that fixing few serious technical problems would contribute significantly to the usability and user satisfaction of the websites.

4.6 Adoption of Emerging Web Technologies

The discussion of new web technologies shows a low usage of Web 2.0 and interactive characteristics on the websites of women universities libraries. There are few libraries that integrated the social media, feedback and real-time user support services.

The use of emerging web technologies is summarized in table 4.

Table 4:Use of Emerging Web Technologies on Library Websites

Web Technology Feature	Availability (%)
Social media links	37.5
Online feedback forms	31.3
RSS feeds / Alerts	25.0
Chat / Virtual reference	18.8
Blogs / News updates	31.3
Web 3.0 / Semantic features	12.5

Table 4 shows that the diffusion of the emerging web technologies on women university library websites is still low and unequal. Of all the tools analyzed, the most widespread feature is social media integration that is found

on 37.5% of the websites followed by online feedback forms and blogs or news updates, which can be found on 31.3% of the portals. Interactive user support features including chat or virtual reference services are also very few and only 18.8% of the sites have them. Moreover, the least adopted features are the advanced technologies related to the Web 3.0 or semantic web with 12.5 per cent. of adoption indicating little development of intelligent and personalized digital services.

Figure 5 illustrates the Web 2.0 features that are present in the analyzed websites.

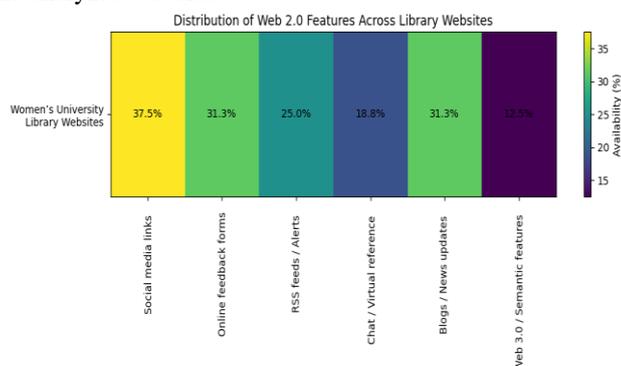


Figure 5: Distribution of Web 2.0 Features Across Library Websites

The adoption of Web 2.0 and other emerging web technologies on the sites of women university libraries is generally low and skewed as shown in figure 5. The social media links and the blogs or news updates has a relatively higher adoption rate whereas the interactive tools like chat or virtual reference services and RSS feeds are limited. The low level of Web 3.0 or semantic and such is even more evidence that most library websites are largely informational sites, which points to a high level of technological modernization and the enhancement of interaction with users.

V. CONCLUSION AND RECOMMENDATIONS

The current research offers the detailed evaluation of the quality of the provided content and availability of online resources on the portals of the university libraries of women in India as the combination of the systematic analysis of web content and the data on the perception of the target audience. The results indicate that although the majority of library websites sufficiently maintain basic and introductory information and access to the core electronic resources through online access involving e-journals and e-books, there still exist a lot of gaps in the content and information provided to the users, remote access directions, and consistency of usability and use of the emerging web technologies. The difference in the design, navigation and technical performance also affect the awareness, satisfaction and efficient use of library services by the user. The overall

user satisfaction rates are either moderate or high, but frequent problems with the loading speed, broken links, absence of instructional support, and poor interactivity of library portals inhibit the potential of the latter as dynamic scholarly information portals. The research therefore highlights the necessity of content development practices being standardized, made more usable, and integrated more technologically in order to make the effectiveness and user-friendliness of the websites of women universities libraries more effective and focused on the users.

Recommendations will be given as based on the findings:

- **Standardized Content Framework:** Move towards the standard content guidelines so that there is a standard inclusion of services, policies, frequently asked questions and user manuals.
- **Better Access Control:** Have visible guidelines on how to access the remote access and database in order to increase resource utilization.
- **Usability Improvement:** Accomplish frequent usability testing to enhance the navigation, mobile compatibility, loading speed and interface design.
- **Web 2.0 Integration:** Web 2.0 may be integrated by adding interactive tools such as feedback form, social media links, and virtual reference services to enhance interaction with the users.
- **User awareness:** Use digital literacy and orientation programs to encourage efficient use of library websites.
- **Continuous Maintenance:** Make sure that company content and links in the website are regularly reviewed and updated to avoid inaccuracy and unreliability.

REFERENCES

- [1]. Ajisebutu, A. E., Adetayo, A. J., Alawiye, M. K., & Makinde, B. O. (2024). Undergraduates' experiences with library portal services: perceptions of usefulness and satisfaction. *Digital Library Perspectives*, 40(4), 518-536.
- [2]. Al-Qallaf, C. L., & Ridha, A. (2019). A comprehensive analysis of academic library websites: design, navigation, content, services, and Web 2.0 tools. *International Information & Library Review*, 51(2), 93-106.
- [3]. Alzahrani, A. I., Mahmud, I., Ramayah, T., Alfarraj, O., & Alalwan, N. (2019). Modelling digital library success using the DeLone and McLean information system success model. *Journal of Librarianship and Information Science*, 51(2), 291-306.
- [4]. Apuke, O. D., & Iyendo, T. O. (2018). University students' usage of the internet resources for research and learning: forms of access and perceptions of utility. *Heliyon*, 4(12).

- [5]. Battineni, G., Baldoni, S., Chintalapudi, N., Sagaro, G. G., Pallotta, G., Nittari, G., & Amenta, F. (2020). Factors affecting the quality and reliability of online health information. *Digital health*, 6, 2055207620948996.
- [6]. Bhardwaj, U., Tandel, B., & Kumar, A. (2025). Assessing Accessibility and Social Media Integration in Library Websites of State Universities in Punjab and Haryana. *International Journal of Environmental Sciences*, 11(6s), 605-610.
- [7]. CLN, R. T. A., & CLN, R. C. B. (2022). CONTENT QUALITY AS DETERMINANT OF EFFECTIVE UTILISATION OF LIBRARY PORTALS BY RESEARCHERS IN SELECTED UNIVERSITY LIBRARIES IN KWARA STATE, NIGERIA.
- [8]. Daraz, L., Morrow, A. S., Ponce, O. J., Beuschel, B., Farah, M. H., Katabi, A., ... & Murad, M. H. (2019). Can patients trust online health information? A meta-narrative systematic review addressing the quality of health information on the internet. *Journal of general internal medicine*, 34(9), 1884-1891.
- [9]. Habiba, U., & Ahmed, S. Z. (2020). ICT infrastructure and access to online services: determining the factors affecting faculty satisfaction with university-subscribed resources. *International Information & Library Review*, 53(2), 112-130.
- [10]. Habiba, U., & Islam, M. E. (2022). Assessing the quality and credibility of scholarly information resources: an investigation into information behaviours of university faculty members. *The Electronic Library*, 40(3), 237-255.
- [11]. Janes, J., Young, M. E., Chen, E., Rogers, N. H., Burgstaller-Muehlbacher, S., Hughes, L. D., ... & Chatterjee, A. K. (2018). The ReFRAME library as a comprehensive drug repurposing library and its application to the treatment of cryptosporidiosis. *Proceedings of the National Academy of Sciences*, 115(42), 10750-10755.
- [12]. Kato, A., Kisangiri, M., & Kaijage, S. (2021). A review development of digital library resources at university level. *Education Research International*, 2021(1), 8883483.
- [13]. McGrew, S., Smith, M., Breakstone, J., Ortega, T., & Wineburg, S. (2019). Improving university students' web savvy: An intervention study. *British Journal of Educational Psychology*, 89(3), 485-500.
- [14]. Nakhumicha, T. A. (2024). Access And Utilization Of Information In Digital Resource Platforms For Teaching And Research By Academic Staff In Selected Public Universities, Kenya (Doctoral dissertation, Kisii University).
- [15]. Pranckutė, R. (2021). Web of Science (WoS) and Scopus: The titans of bibliographic information in today's academic world. *Publications*, 9(1), 12.
- [16]. Rafi, M., JianMing, Z., & Ahmad, K. (2019). Technology integration for students' information and digital literacy education in academic libraries. *Information Discovery and Delivery*, 47(4), 203-217.
- [17]. Rafiq, S., Ashiq, M., Ur Rehman, S., & Yousaf, F. (2021). A content analysis of the websites of the world's top 50 universities in medicine. *Science & Technology Libraries*, 40(3), 260-281.
- [18]. Rahman, A., & Batcha, M. S. (2023). Content Evaluation of Library Websites of Women Colleges in University of Delhi: A Study. *Journal of Indian Library Association Now Available at <https://journal.ilaindia.net/>*, 58(3), 1-13.
- [19]. Seo, H., Blomberg, M., Altschwager, D., & Vu, H. T. (2021). Vulnerable populations and misinformation: A mixed-methods approach to underserved older adults' online information assessment. *New Media & Society*, 23(7), 2012-2033.
- [20]. Tijjani, D. (2019). Service quality analysis of private universities libraries in Malaysia in the era of transformative marketing. *International Journal for Quality Research*, 13(2), 269-284.