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Awareness and Utilization of LibQUAL+ for Effective Library Management in the Digital Environment

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Abstract

Faculty, scholarly researchers, and students in universities and various other academic institutions are becoming increasingly used to the characteristics and services of physical as well as digital libraries in the digital era. Librarians are needed to have an extensive knowledge of the various digital resources and services that are being utilized for education and research in the modern information ecosystem. Furthermore, librarians play a vital role in promoting users to properly access and make the best use of digital library resources, as well in promoting awareness and supporting the establishment and maintenance. Libraries should use digital library management tools and assessment frameworks, particularly LibQUAL+, to accomplish these goals in order to improve service quality and guarantee effective information delivery.

Keywords: Digital Library, LibQUAL, Digital Awareness.

1.1 Introduction

The main role is physical libraries are knowledge collection, storage, arrangement and retrieval process. The main of library function are learning and giving out of information. In this digital era different function of libraries are digital selection, scanning, cropping, uploading, formatting of data, and arrangement of data through metadata for retrieval information. Digital resources includes all types of non-printed materials, e-books, e-journals, online databases, research papers, e-classes, e-learning, etc. Information technology has change at every level, so libraries highly affected in present digital era. Day by day there is a decrease in the reading habit by the users, in this context librarian should be familiars to all types of digital resources to

maximize use of digital resources that may fulfils user needs.

The rapidity of transform has produced an innovative librarian setting in requisites of his services as well as tricks. These “innovations contact the roles, competencies, skills and knowledge of LIS professionals”. There are many institutes in Kano districts than the districts of the Kano state. Now, it is necessary for the institutes or universities to maintain UGC/AICTE/ GTU/ NAAC norms and implement best practices to provide best services to students. Government as well as management, trust and organization yearly allocate financial provision for smooth functioning of the institute. As a part of librarian responsibility, there is a need to create awareness among the staff and students for maximum use of institutional resources

especially library resources in a digital and physical form.

One of the key tools used by libraries to evaluate service quality and enhance library management practices is LibQUAL+, developed by the Association of Research Libraries (ARL). LibQUAL+ is a widely recognized assessment tool designed to measure library service quality from the perspective of library users. It provides libraries with valuable insights into user perceptions and expectations, enabling them to identify areas of strength and areas for improvement.

Despite the growing importance of LibQUAL+ in library management, there is a gap in the literature regarding the awareness and utilization of this tool in the digital age. It is essential to understand how libraries are leveraging LibQUAL+ to adapt to digital trends, enhance service quality, and optimize user experiences. Therefore, this study aims to investigate the awareness and use of LibQUAL+ in library management in the digital world.

1.2 Statement of the Problems

This study revolves around the lack of comprehensive understanding regarding the awareness and utilization of LibQUAL+ for efficient library management in the digital environment. While LibQUAL+ offers valuable insights into user perceptions and expectations, it is unclear how libraries are incorporating this feedback into their management practices, particularly in the context of digital transformation. Therefore, there is a need to explore the extent to which libraries are aware of LibQUAL+ and how they utilize it to enhance library services and user experiences in the digital environment.

1.3 Research Questions

1. What is the level of awareness among librarians regarding LibQUAL+ as a

tool for library management in the digital environment?

2. How do libraries utilize LibQUAL+ data to improve service quality and user experiences in the digital environment?
3. What are the challenges and barriers faced by libraries in implementing LibQUAL+ in the digital environment?

1.4 Research Objectives

1. To assess the awareness levels of librarians regarding LibQUAL+ as a tool for library management.
2. To explore the extent to which libraries utilize LibQUAL+ data for improving services in the digital environment.
3. To identify challenges and barriers faced by libraries in implementing LibQUAL+ in the digital environment.

2.1 Literature Review

LibQUAL+ is a standardized library assessment instrument developed by the Association of Research Libraries in collaboration with Texas A&M University to measure users' perceptions of library service quality. It focuses on user-centered evaluation rather than traditional metrics such as collection size or circulation statistics (Cook et al., 2001; Kyrillidou, 2009).

The tool assesses service quality across three key dimensions: Effect of Service, Information Control, and Library as Place, which collectively provide insights into user satisfaction and expectations, in the digital era, LibQUAL+ has evolved into a critical tool for evaluating both physical and digital library services, enabling libraries to align their services with user needs.

2.2 Awareness of LibQUAL+ in the Digital Environment

Awareness of assessment tools like LibQUAL+ plays a significant role in their adoption and effective utilization. Studies

indicate that awareness of digital tools among librarians and users is often limited, particularly in developing countries, which affects their level of use (Adeleke et al., 2023). Similarly, research on electronic resource usage reveals that lack of awareness and training significantly reduces the adoption of digital library tools and services. Many users rely on informal sources such as peers rather than structured awareness programs, indicating gaps in library communication strategies (Patel et al., 2021). This suggests that despite the global recognition of LibQUAL+, its awareness among library staff and users in some regions remains insufficient, thereby limiting its full potential in library management.

2.3 Use of LibQUAL+ in Digital Library Management

LibQUAL+ is widely used to: Assess user satisfaction, identify service gaps, Improve digital resource delivery, Support evidence-based decision-making. The instrument enables libraries to compare minimum, perceived, and desired service levels, helping managers identify deficiencies and allocate resources effectively (Kyrillidou & Cook, 2009).

In digital libraries, LibQUAL+ supports: Evaluation of access to electronic resources, Assessment of online services and databases, Improvement of virtual user experience. Studies show that LibQUAL+ data can be used to predict users' future library usage and academic success, making it a strategic tool for library planning and sustainability (Nitecki, 2020). Furthermore, integration of LibQUAL+ with other digital evaluation tools (e.g., WebQual) enhances the assessment of digital library platforms and user satisfaction (Rahman et al., 2023).

2.4 Importance of LibQUAL+ in the Digital World

In the context of digital

transformation, LibQUAL+ contributes to:

- User-centered service delivery, performance measurement of digital services, continuous quality improvement, and strategic planning and policy formulation.
- Digital libraries rely heavily on user feedback to remain relevant, and LibQUAL+ provides structured data for evaluating electronic services, databases, and remote access systems.
- Additionally, the growing dependence on digital libraries has increased the need for reliable assessment tools that capture user expectations and experiences in online environments (Alenezi, 2025).

2.5. Challenges Affecting Awareness and Use of LibQUAL+

Despite its usefulness, several challenges hinder the effective use of LibQUAL+:

Low awareness and training among library staff and users, high cost of survey implementation, complexity in data analysis and interpretation. Limited customization for specific library contexts. Studies also highlight that inadequate digital literacy and poor infrastructure in developing countries contribute to low utilization of digital assessment tools (Adeleke et al., 2023).

2.6. Strategies for Improving Awareness and Use

To enhance the adoption of LibQUAL+ in the digital world, the literature suggests: Organizing training and workshops for librarians, integrating LibQUAL+ into library education curricula, promoting awareness through library orientation programs, leveraging social media and digital platforms for user engagement. These strategies can improve both awareness and utilization, leading to better service delivery and user satisfaction.

The literature reveals that LibQUAL+

is a powerful tool for evaluating library service quality, especially in digital environments. However, its effectiveness depends largely on the level of awareness and proper utilization by library professionals and users. Enhancing awareness, providing training, and addressing implementation challenges are essential for maximizing its impact in modern library management.

3.1 Research Methodology

This study employed a mixed-methods research approach to investigate the awareness and utilization of LibQUAL+ for effective library management in the digital environment. The research design will include both quantitative surveys and qualitative interviews to gather comprehensive data from librarians and library administrators.

1. Quantitative Phase: A survey questionnaire will be distributed to librarians to assess their awareness levels regarding LibQUAL+ and its utilization in library management. The survey will include Likert scale questions and multiple-choice items to collect quantitative data on awareness, usage, and perceptions of LibQUAL+.
2. Qualitative Phase: In-depth interviews will be conducted with library administrators to explore their experiences, perspectives, and challenges

related to the implementation of LibQUAL+ in the digital age. The interviews will be semi-structured and will allow for open-ended discussions to gather rich qualitative data.

3. Data Analysis: Quantitative survey data will be analysed using descriptive statistics to assess awareness levels and identify patterns and trends. Qualitative interview data will be analysed thematically to identify key themes, issues, and insights related to the use of LibQUAL+ in library management.

By employing a mixed-methods approach, this study aims to provide a comprehensive understanding of the awareness and utilization of LibQUAL+ for effective library management in the digital environment, addressing both quantitative trends and qualitative insights.

4.1 Results of the Study

Using LibQUAL library:

The distribution of faculties, students and research scholars according to their use of digital library (Daily, Weekly, Monthly, Exam Time and occasionally) is shown in Table 1. The percentage of users varied with 13.79% (Daily), 45.69 % (Weekly), 23.28 % (Monthly), 6.03 % (Examination time) and 11.21 % (Occasionally) using the digital library.

Table1. Frequency of LibQUAL+ for Library Management

Frequency	Number of Respondents	Percentage
Daily	16	13.79
Weekly	53	45.69
Monthly	27	23.28
Exam Time	07	6.03
Occasionally	13	11.21
Total	116	100

Faculty, students and research scholar’s familiarity with digital resources:

The distribution of faculties, students and research scholars according to their familiar to use of digital resources is shown in Table 2. It is evident that 84.48% familiar to digital resources, while 15.52% answered non- familiar.

Table 2. Familiarity of the LibQUAL+ users to digital resources

Use	Number of Respondents	Percentage
Familiar	98	84.48
Non familiar	18	15.52
Total	116	100

Types of Digital Resources:

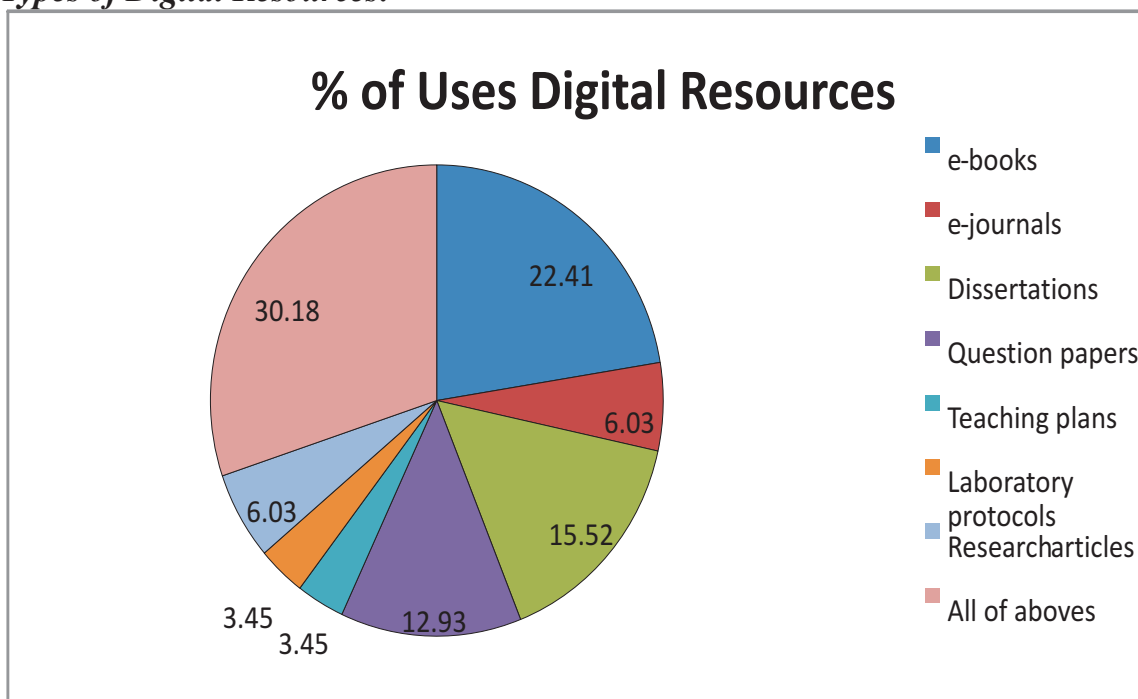


Figure 1. Types of Digital Resources used by the users

Figure 1 depicts types of digital resources used by the users. It is evident that e-books (22.41%), e-journals (6.03%), dissertations (15.52%), question papers (12.93%), teaching plans (3.45%), laboratory protocols (3.45%), research articles (6.03%) and all types of digital resources used by faculty members, students and research scholar (30.18%).

Digital Resources access locations used by the users within LibQUAL

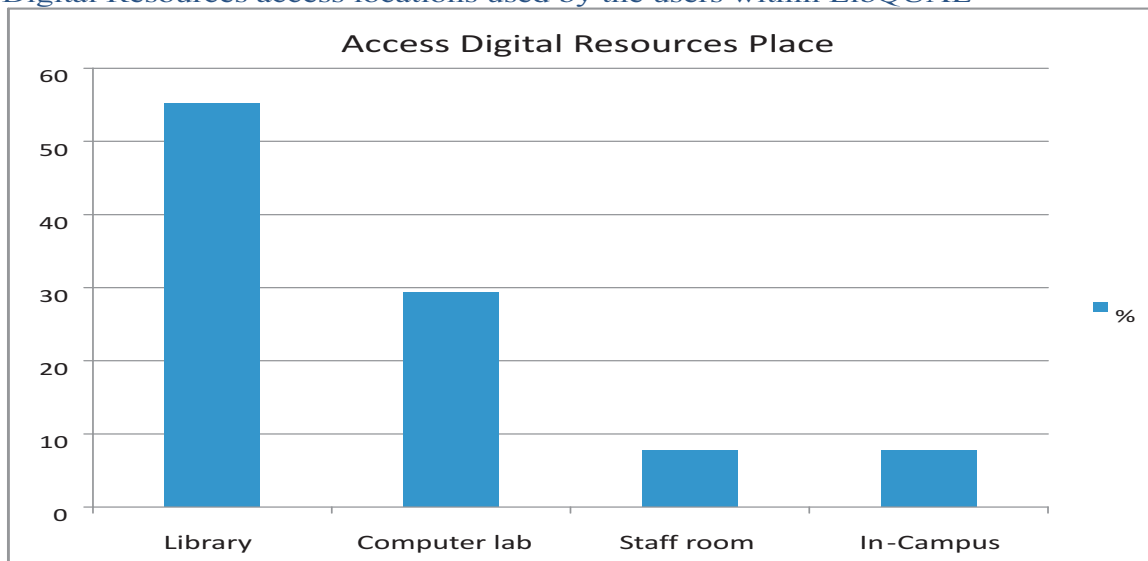


Figure 2. Digital Resources access locations used by the users within LibQUAL

Figure 2 highlights the place within LibQUAL where the digital resources accessed by the library users. At the library place (55.17%), computer lab (29.31%), staff room (7.76%) and in campus (7.76%) accessed the digital resources.

Awareness methods for LibQUAL+ Digital Resources:

Table 3 summarizes the digital resources utilization by the ARIBAS library users through different means. These methods increase awareness among the library users. The different methods used and their responses are presented in Table 3.

Table 3. Awareness methods

Variables	Number of Respondents	Percentage
Orientation program	53	45.69
Workshop	23	19.83
Mail	22	18.97
Variables	Number of Respondents	Percentage
Social media	09	7.76
Personal information	07	6.03
None of response	02	1.72
Total	116	100

From the analysis it was clear that Orientation programs (45.69%), workshops (19.83%), mail (18.97%), social media (7.76%), personally information (6.03%) and none of response (1.72%).

5.1 Discussion of the Findings

LibQUAL+ is a widely used survey tool designed to assess library service quality from the perspective of users. It has been adopted by numerous libraries worldwide, including academic, public, and special libraries.

Awareness and Utilization:

High Awareness: Many librarians and library administrators are aware of LibQUAL+. Its reputation as a standardized and reliable assessment tool has contributed to its widespread recognition. **Widespread Use:** LibQUAL+ is frequently used in academic libraries, particularly in North America and Europe. Its use is also growing in other regions, including Asia and Latin America.

5.2 Diverse Applications of LibQUAL+

Libraries use LibQUAL+ for various purposes, including:

- **Strategic Planning:** Identifying areas for improvement in library services.
- **Benchmarking:** Comparing library performance with peer institutions.
- **Resource Allocation:** Justifying budget requests and allocating resources effectively.
- **User Satisfaction:** Measuring user satisfaction with library services.
- **Accreditation:** Demonstrating compliance with accreditation standards.

5.3 Benefits of Using LibQUAL+:

- **Standardized Methodology:** Provides a consistent framework for assessing library service quality, allowing for meaningful comparisons across

institutions.

- **Comprehensive Assessment:** Covers a wide range of library services, including collections, staff, facilities, and technology.
- **User-Centered Approach:** Focuses on user perceptions and expectations, ensuring that library services meet the needs of the community.
- **Data-Driven Decision Making:** Provides quantitative and qualitative data that can be used to inform decision-making and improve library services.
- **Benchmarking Opportunities:** Allows libraries to compare their performance with peer institutions, identify best practices, and set goals for improvement.
- **By implementing these recommendations,** libraries can leverage LibQUAL+ effectively to enhance service quality, optimize user experiences, and demonstrate their commitment to continuous improvement in the digital age.

5.4 Challenges and Limitations

Despite its relevance in assessing library service quality, LibQUAL+ presents several challenges and limitations in practical application:

- **Cost Implications:** The financial cost associated with administering, processing, and analyzing LibQUAL+ surveys can be a significant constraint, particularly for libraries with limited budgets.
- **Time Commitment:** Implementing a LibQUAL+ survey requires considerable time and human resources, from survey design to data collection and analysis.
- **Complexity of Data Interpretation:** The analysis and interpretation of LibQUAL+ data can be complex and

may require specialized analytical skills or expertise to generate meaningful insights.

- **Limited Flexibility:** The standardized structure of LibQUAL+ may restrict the ability of libraries to fully customize the survey according to their specific institutional contexts or unique user needs.

Overall, while LibQUAL+ remains a valuable tool for library management in the digital environment, these limitations must be carefully considered to ensure its effective implementation and optimal utilization.

Recommendations

Based on the findings of the study on awareness and utilization of LibQUAL+ for effective library management within the digital environment, the following recommendations are proposed to enhance service delivery and user satisfaction:

1. **Enhance Awareness and Capacity Building:** Libraries should intensify efforts to raise awareness among librarians and staff about the importance of LibQUAL+ as a service quality assessment tool. Regular training programs, workshops, and professional development initiatives should be organized to build staff capacity in its application and interpretation.
2. **Integrate LibQUAL+ into Strategic Planning:** Library management should incorporate LibQUAL+ outcomes into strategic planning processes. User feedback should inform policy formulation, service improvement strategies, and resource allocation decisions.
3. **Strengthen Data Analysis and Reporting:** Libraries should invest in advanced data analysis tools and

techniques to extract actionable insights from LibQUAL+ data. Approaches such as data mining, predictive analysis, and sentiment analysis can support evidence-based decision-making.

4. **Promote Collaboration and Knowledge Sharing:** Libraries should engage in collaborative networks, consortia, and professional associations to share best practices, experiences, and innovations in LibQUAL+ implementation and library service improvement.
5. **Encourage User Engagement and Feedback:** Libraries should actively involve users in service evaluation through multiple feedback channels such as surveys, focus group discussions, and suggestion systems. This will complement LibQUAL+ data and provide a more holistic understanding of user needs.
6. **Improve Digital Literacy Skills:** Libraries should prioritize the development of users' digital literacy competencies to enhance their ability to effectively access and utilize digital resources. Training programs, tutorials, and user education initiatives are essential in this regard.
7. **Foster a Culture of Continuous Improvement:** Library management should promote a culture that values continuous assessment and improvement. LibQUAL+ findings should be used as a basis for innovation, service enhancement, and operational efficiency.
8. **Monitor and Evaluate Impact:** Libraries should establish mechanisms for continuous monitoring and evaluation of LibQUAL+-driven initiatives. Measuring user satisfaction, service performance, and key indicators

will ensure accountability and guide future improvements.

Conclusions

In conclusion, the study has provided valuable insights into the awareness and utilization of LibQUAL in library management in the digital environment. Through a mixed-methods research approach encompassing surveys and interviews, the study has explored the levels of awareness among librarians, the utilization of LibQUAL data, and the challenges faced by libraries in implementing this tool.

The findings of the study indicate that while there is a moderate level of awareness of LibQUAL among librarians, there is room for improvement in terms of utilizing LibQUAL data for service improvement initiatives. Libraries are facing challenges such as limited resources, data analysis capabilities, and staff training, which impact their ability to leverage LibQUAL effectively.

Despite these challenges, the study underscores the importance of LibQUAL as a valuable tool for assessing service quality, enhancing user experiences, and informing strategic decision-making in library management. Libraries are encouraged to invest in increasing awareness, training, and data analysis capabilities to maximize the utility of LibQUAL and drive continuous improvement in service delivery.

Moving forward, it is essential for libraries to foster a culture of collaboration, innovation, and user engagement to effectively utilize LibQUAL and adapt to the evolving needs and expectations of users in the digital age. By prioritizing user feedback, embracing data-driven decision-making, and fostering a commitment to excellence, libraries can enhance their relevance and impact in serving their communities.

In conclusion, the study highlights the significance of LibQUAL as a tool for enhancing library management practices and

underscores the importance of ongoing efforts to maximize its potential in improving service quality and user satisfaction in the digital environment.

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