

“A Comprehensive Study On Library Service Quality: Bridging User Perception Gaps And Implementing Effective Improvement Strategies”

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ABSTRACT

Purpose: This study aims to comprehensively evaluate library service quality by assessing the gap between users' perceptions and expectations across LibQual+ dimensions—Reliability, Assurance, Responsiveness, Empathy, and Tangibility. It seeks to identify effective strategies for enhancing university library services to meet the evolving needs of diverse user groups.

Methodology: Employing a Quantitative and qualitative approach, this research utilizes Random sampling to gather data from 110 participants who are users of LibQual. Data collection involves a structured questionnaire using a 5-point Likert scale to capture user opinions. Statistical tools such as Paired T-Test and Exploratory Factor Analysis are employed to analyze the data.

Findings: The study reveals significant gaps in users' perceptions and expectations across various dimensions of library service quality. Users highlight deficiencies in electronic information resources, staff responsiveness, individual attention, and inspiring study spaces. Effective strategies identified include tailored internet facilities, transparent communication through college prospectuses, and proactive user feedback management.

Conclusion: The study suggests that, prioritizing user feedback and implementing responsive strategies, libraries can bridge perception gaps and enhance service quality. Emphasizing the role of digital connectivity and information literacy programs, this study advocates continuous adaptation to meet diverse user needs effectively. The findings underscore the importance of libraries as dynamic hubs of knowledge and support in academic settings, urging proactive measures to maintain their relevance and impact.

KEYWORDS

Library service quality, LibQual+, user perceptions, expectations, effective strategies, academic libraries

Introduction

The assessment of library quality has significantly evolved from traditional metrics focused on collection size to a modern emphasis on customer-centric service delivery. In the past, the quantity and quality of a library's collection was the main factor considered when evaluating it. A larger number of books and resources were considered indicators of a high-quality library. This traditional approach, however, often overlooked the actual user experience and the effectiveness of the services provided. As noted by Nitecki (1996), evaluating libraries solely based on their holdings has become an outdated approach. The traditional metrics, while useful in

understanding the resources available, failed to capture the true essence of what made a library valuable to its users. As the needs and expectations of library users began to change, so too did the methods for assessing library quality. In particular, academic libraries have shifted their focus towards the availability and accessibility of learning resources and support services, reflecting a broader movement towards customer-centric evaluation criteria. This change is a part of a broader trend in the service sector where customer happiness and perceptions are being used more and more to gauge the quality of service.

According to **Parasuraman et al. (1991)**, the quality of service in any domain, including libraries, is ultimately judged by customers, making their perceptions and expectations paramount. This perspective is reinforced by **Petrizzellis et al. (2006)**, who assert that higher service quality directly leads to increased customer satisfaction. Consequently, libraries strive to meet specific service expectations defined by their users, aiming to fulfill their needs promptly and effectively. Understanding the dimensions of service quality as perceived by both service providers and customers is crucial. **Christou and Sigala (2002)** identify these dimensions as fundamental in defining service quality, emphasizing the importance of aligning service offerings with customer perceptions. **Nightingale (2006)** further highlights the distinction between perceived service quality from both provider and customer perspectives, laying the groundwork for models like SERVQUAL. SERVQUAL, which was created by Parasuraman et al. (1985), evaluates service quality on five different dimensions: tangibles, assurance, responsiveness, consistency, and empathy. It is predicated on the Service Quality Gaps Model. This model provided a foundational framework for the evolution of LibQUAL+, a modified version tailored specifically for libraries. LibQUAL+ was introduced in 2000 by the Association of Research Libraries with the goal of collecting, evaluating, and acting upon user input to enhance the quality of library services.

Concept of Quality in Library Services

The concept of service quality in libraries refers to the difference between the expectations and beliefs of users regarding the caliber of services they receive. According to Oldman and Wills (1977), this viewpoint places a strong emphasis on meeting customers' expectations and considering services from their point of view. As libraries expand their services, maintaining high-quality service becomes crucial. Quality in a library context can be identified by prompt and error-free services, and recently, a user-driven view has become prevalent. The main objective of libraries is to increase customer happiness and possibly surpass their expectations. A service or product's suitability for its intended use and conformity to consumer expectations are also aspects of quality. Accordingly, quality is a continuous process in which the user is crucial (**Thapisa and Gamini, 1999**). A customer-based method of measuring service quality was proposed by **Parasuraman et al. (1988)**, who identified five dimensions.

- **Reliability:** The capacity to deliver services on time and with accuracy.
- **Responsiveness:** The capacity to assist clients and offer timely support.
- **Assurance:** The expertise and civility of staff members as well as their capacity to inspire confidence and trust.
- **Empathy:** Giving each consumer individualized attention that is kind.
- **Tangibles:** The outward look of persons, equipment, physical facilities, and communication materials (**Fitzsimmons and Fitzsimmons, 2000**).

The rapid economic growth of India in the twenty-first century has prompted the establishment of quality management practices in the service sectors, including university libraries. This strategy seeks to effectively satisfy consumer needs and raise service standards. The goal of this research is to close the gaps between user perceptions and actual service delivery by performing a thorough evaluation of library service quality. By analyzing existing literature and utilizing methodologies like LibQUAL+, the study seeks to identify key areas where libraries can enhance service effectiveness and better meet user expectations. Through this research, insights will be gained into effective strategies for improving library services, thereby contributing to the ongoing discourse on enhancing user satisfaction and operational efficiency in library management.

1. Objectives

The current study titled "A Comprehensive Study on Library Service Quality: Bridging User Perception Gaps and Implementing Effective Improvement Strategies" aims to fill these research gaps. By synthesizing existing literature into a cohesive framework and focusing on the specific context of Telangana University, the study seeks to:

1. To assess the gap between users' perceptions and expectations of LibQual+ dimensions.
2. To identify the effective strategies for improving the quality of university library services.

HYPOTHESES

Null Hypothesis: There is no gap between the users' perception and expectation towards the dimension of LibQual

Alternative Hypothesis: There is a gap between the users' perception and expectation towards the dimension of LibQual

2. Scope and Methodology

The scope of this study, "A Comprehensive Study on Library Service Quality: Bridging User Perception Gaps and Implementing Effective Improvement Strategies," encompasses an in-depth analysis of LibQual+ dimensions including Reliability, Assurance, Responsiveness, Empathy, and Tangibility. Its objective is to assess the discrepancy between users' perceptions and expectations along these dimensions in university library settings. The study also identifies and suggests practical solutions that can be used to improve the general quality of library services while meeting the changing requirements and expectations of various user groups.

Research Design:

To examine the discrepancy between users' expectations and impressions of LibQual+ dimensions in university library settings, this study combines quantitative and qualitative methods. The study is based on the knowledge that quality is a continuous process in which the user is central to the process (Thapisa and Gamini, 1999). According to Parasuraman et al. (1988), the study measures service quality using the customer-based approach, concentrating on 5 important dimensions: tangibles, empathy, responsiveness, assurance, and reliability. By looking at these aspects, it also seeks to pinpoint practical methods for raising the caliber of library services.

Study Population

The study was carried out among Telangana University professors and students and was later expanded to investigate the opinions of users from other Telangana universities, such as Osmania University, Jawaharlal Nehru Technological University (JNTU), and Ambedkar University. The main objective was to evaluate the level of services offered by the Telangana University library.

Sample Size and Selection

Out of the 150 questionnaires distributed, 110 were returned, with 70 students and 40 faculty members answering. Random selection was used to choose participants from among frequent visitors of the Telangana University library. This random sampling method's benefit is that it makes it possible to analyze data according to faculty and student groups, which makes it easier to draw distinct conclusions for each group.

Questionnaire Design

The 47 structured, open-ended, and closed-ended questions in the questionnaire framework, which was based on Parasuraman and Zeithaml's (1988) variables, were intended to represent the seven main factors that determine the quality of services. Every section ended with a closed-ended question that asked respondents to rate their overall impression of the quality criteria on a five-point Likert scale, where 1 meant "Strongly Agree," 2 meant "Agree," 3 meant "Neutral," 4 meant "Strongly disagree," and 5 meant "Disagree." The measured components of service aligned with the criteria applied in a 1999 study conducted at a Botswana university library.

Statistical Tools-

The following statistical tools are considered to justify the hypothesized model:

Paired T-Test

The mean differences between paired observations, such as users' expectations and perceptions of LibQual+ dimensions, are compared using the paired T-test. This instrument facilitates the assessment of whether there is a noteworthy disparity between these viewpoints and anticipations, an essential step in formulating tactics to improve university library offerings.

Exploratory Factor Analysis

The process of determining the underlying relationships between measured variables is known as exploratory factor analysis, or EFA. By looking at users' expectations and views, this tool aids in understanding the various aspects of service quality. EFA helps to reveal the data's structure, which can guide tactics for raising the standard of library services.

3. Literature Review

Beginning in 2001, Cook and Heath explored user perspectives on the quality of library services in all ARL libraries, emphasizing the alignment of service dimensions with user expectations through qualitative interviews. Building on this foundation in 2005, Roszkowski et al. investigated the validity of LibQual+™ scores in predicting user satisfaction, favoring perceived scores over superiority gap scores based on Expectation Confirmation–Disconfirmation theory. In 2012, Rehman delved into Pakistani users' high standards for and

impressions of the caliber of library services, revealing significant discrepancies between minimum and desired service levels, particularly in physical facilities and staff attitudes. **Cristobal's 2018** study at USL College Library found high satisfaction levels correlating with user loyalty, particularly in circulation and digital services, setting a benchmark for user-centric service delivery. **Khalili, Dalili, and Hedayati Khoshemehr (2021)** extended this discourse by evaluating public libraries in Tabriz, noting gaps between met minimum expectations and unmet maximum expectations, signaling areas for service improvement. **Natesan and Aerts (2016)** validated LibQUAL+'s gap theory, affirming users' discernment between minimum, perceived, and desired service levels, crucial for refining service strategies. **Erlianti's 2020** study on gender differences at UNP Library underscored equitable service levels, with insights into enhancing inclusivity and service efficacy. **Ghaedi, Valizadeh-Haghi et al. (2020)** further explored dissatisfaction across educational levels in medical college libraries at Shahid Beheshti University, highlighting substantial gaps between perceived and expected service quality. **Dahan et al. (2016)** at UMP library found exceeding user satisfaction levels, guiding resource allocation for improved service delivery, while **Kaunda (2013)** developed tools for assessing and enhancing service effectiveness at the National Library Service of Malawi. **Chan et al. (2022)** examined the pandemic's impact on user perceptions of library apps, revealing service quality's role in influencing loyalty through brand image and satisfaction. Finally, **Manabat (2022)** demonstrated successful virtual reference service during the pandemic at Nazarbayev University Library, illustrating resilience in maintaining high service quality amidst global challenges. Together, these studies illustrate the evolution of understanding and improving library service quality, from qualitative insights to quantitative validations and adapting to contemporary digital and global challenges, shaping future directions in library service research and practice.

4. Result and Discussion

Objective 1 - To assess the gap between users' perceptions and expectations of LibQual+ dimensions.

The study aims to evaluate discrepancies between users' perceptions and expectations across various LibQual+ dimensions, including Reliability, Assurance, Responsiveness, Empathy, and Tangibility. Through this assessment, the study seeks to identify areas where user expectations are not met, thereby highlighting potential areas for improvement in university library services.

Hypothesis of the study

Null Hypothesis: There is no gap between the user's perception and expectation towards the dimension of LibQual

Alternative Hypothesis: There is a gap between the user's perception and expectation towards the dimension of LibQual.

Table – 1
Paired Samples Test of users' perceptions and expectations of Reliability in LibQual+ dimensions

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	The library provides electronic resources for information I need(Percp) - The library provides electronic resources for information I need _ (Expect)	-0.90909	1.8501	0.1764	-1.25871	-0.55947	-5.154	109	0
Pair 2	The print and/or electronic journal collections I need for work are available in the library (Percp) - The print and/or electronic journal collections I need for work are available in the library _ (Expect)	-0.77273	1.7487	0.16673	-1.10319	-0.44227	-4.635	109	0
Pair 3	The library employees possess the expertise to respond to inquiries from patrons(Percp) - The library employees possess the expertise to respond to inquiries from patrons _ (Expect)	-0.70909	1.6664	0.15889	-1.024	-0.39418	-4.463	109	0

Source – Primary data

The paired t-test results indicate a significant gap between users' perceptions and expectations of the Reliability dimension in LibQual+ dimensions. The table shows that, all the Reliability library services mean differences are negative, implying that users perceive the library services as falling short of their expectations. Specifically, the largest gap is observed in the dependability of staff handling service problems, with a mean difference of -.909. The table shows the pair's t-values are significant ($p < .001$), confirming that the gaps are statistically significant. The study results suggest that the library needs to improve its electronic resources, journal collections and staff knowledge to meet user expectations.

Table – 2
Paired Samples Test of users' perceptions and expectations of Assurance in LibQual+ dimensions

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	The personnel at the library is continuously polite(Percp) - The personnel at the library is continuously polite _ (Expect)	.73636	1.89484	.18067	3.09444	1.37829	4.076	109	.000
Pair 2	The staff at the library is always happy to assist patrons (Percp) - The staff at the library is always happy to assist patrons _ (Expect)	-.72727	1.97651	.18845	-1.10078	-.35377	-3.859	109	.000
Pair 3	Staff at the library is aware of the requirements of its patrons (Percp) - Staff at the library is aware of the requirements of its patrons _ (Expect)	-.80909	1.94651	.18559	-1.17693	-.44125	-4.359	109	.000

Source – Primary data

The paired t-test results for the Assurance dimension in LibQual+ show significant differences between users' perceptions and expectations. The negative mean differences for "willingness to help" (-0.73) and "understanding user needs" (-0.81) indicate that users perceive these aspects as falling short of their expectations. Conversely, "staff courtesy" shows a positive mean difference (0.74), suggesting that users perceive this aspect as exceeding their expectations. All pairs have significant t-values ($p < .001$), confirming the gaps are statistically significant. These findings suggest that while staff courtesy meets or exceeds expectations, improvements are needed in staff willingness to help and understanding user needs to fully align with user expectations.

Table – 3
Paired Samples Test of users' perceptions and expectations of Responsiveness in LibQual+ dimensions

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	The library staff is always available to answer inquiries from patrons (Percp) - The library staff is always available to answer inquiries from patrons _ (Expect)	- .89091	1.88838	.18005	- 1.24776	-.53406	- 4.948	109	.000
Pair 2	The staff at the library attends to each person individually (Percp) - The staff at the library attends to each person individually _ (Expect)	- .91818	1.82305	.17382	- 1.26269	-.57367	- 5.282	109	.000
Pair 3	The library provides user-friendly resources that let me locate information on my own (Percp)- The library provides user-friendly resources that let me locate information on my own _ (Expect)	.97273	1.88893	.18010	6.32968	2.61577	5.401	109	.000

Source – Primary data

The paired t-test results for the Responsiveness dimension in LibQual+ reveal significant differences between users' perceptions and expectations. The negative mean differences for "staff readiness to respond" (-0.89) and "individual attention" (-0.92) indicate that users perceive these aspects as below their expectations. In contrast, the positive mean difference for "easy-to-use access tools" (0.97) suggests that users find this aspect exceeding their expectations. All pairs have significant t-values ($p < .001$), confirming the statistical significance of these gaps. These results suggest that while the library's access tools meet or exceed expectations, improvements are needed in staff responsiveness and individual attention to better aligns with user expectations.

Table – 4
Paired Samples Test of users' perceptions and expectations of Empathy in LibQual+ dimensions

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	The library staff consistently responds dependably to patron service issues (Percp) - The library staff consistently responds dependably to patron service issues_ (Expect)	-.92727	1.83097	.17458	-1.27328	-.58127	-5.312	109	.000
Pair 2	Staff at the library gives patrons confidence (Percp) - Staff at the library gives patrons confidence_ (Expect)	-.80909	1.77906	.16963	-1.14529	-.47290	-4.770	109	.000
Pair 3	The staff at the library attends to each person individually (Percp) - The staff at the library attends to each person individually_ (Expect)	-.94545	1.62456	.15490	-1.25245	-.63846	-6.104	109	.000

Source – Primary data

The paired t-test results for the Empathy dimension in LibQual+ indicate significant gaps between users' perceptions and expectations. The negative mean differences for "dependability in handling problems" (-0.93), "instilling confidence in users" (-0.81), and "individual attention" (-0.95) highlight that users perceive these aspects as falling short of their expectations. All pairs have significant t-values ($p < .001$), confirming the statistical significance of these discrepancies. These findings suggest that the library needs to enhance its staff's dependability, ability to instill confidence, and provision of individual attention to better meet user expectations in the Empathy dimension.

Table – 5
Paired Samples Test of users' perceptions and expectations of Tangibility in LibQual+ dimensions

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	The library's contemporary technology makes it simple for me to obtain the information I need (Percp) - The library's contemporary technology makes it simple for me to obtain the information I need _(Expect)	-.90000	1.93921	.18490	-1.26646	-.53354	-4.868	109	.000
Pair 2	The library has comfortable, friendly areas (Percp) - The library has comfortable, friendly areas _(Expect)	-1.02727	1.69435	.16155	-1.34746	-.70709	-6.359	109	.000
Pair 3	The library has areas that encourage learning and research (Percp) - The library has areas that encourage learning and research _(Expect)	-1.08182	1.58625	.15124	-1.38158	-.78206	-7.153	109	.000

Source – Primary data

There are notable differences between users' expectations and perceptions, according on the paired t-test results for the LibQual+ Tangibility dimension. The negative mean differences for "modern equipment" (-0.90), "comfortable and inviting locations" (-1.03), and "space that inspires study and learning" (-1.08) show that users perceive these aspects as below their expectations. All pairs have significant t-values ($p < .001$), confirming the statistical significance of these gaps. These findings suggest that the library needs to improve its modern equipment, create more comfortable and inviting locations, and provide spaces that inspire study and learning to better meet user expectations in the Tangibility dimension.

Table – 6
Paired Samples Test of users' perceptions and expectations of LibQual+ dimensions

		Paired Differences					T	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Reliability_Percp - Reliability_Expt	-.88182	1.55470	.14823	-1.17562	-.58802	-5.949	109	.000
Pair 2	Assurance_Percp - Assurance_Expt	-.79091	1.80263	.17187	-1.13156	-.45026	-4.602	109	.000
Pair 3	Responsiveness_Percp - Responsiveness_Expt	-1.04545	1.74201	.16609	-1.37465	-.71626	-6.294	109	.000
Pair 4	Empathy_Percp - Empathy_Expt	-.80000	1.57270	.14995	-1.09720	-.50280	-5.335	109	.000
Pair 5	Tangibility_Percp - Tangibility_Expt	-1.15455	1.75147	.16700	-1.48553	-.82356	-6.914	109	.000

Table reveals significant differences between users' perceptions and expectations across all five LibQual+ dimensions. For Reliability, the mean difference is -0.88182 ($t = -5.949$, $p < .000$), indicating users perceive reliability to be significantly lower than expected. Assurance shows a mean difference of -0.79091 ($t = -4.602$, $p < .000$), suggesting a gap between perceived and expected assurance. Responsiveness has the largest mean difference of -1.04545 ($t = -6.294$, $p < .000$), indicating substantial unmet expectations in responsiveness. Empathy presents a mean difference of -0.80000 ($t = -5.335$, $p < .000$), and Tangibility has a mean difference of -1.15455 ($t = -6.914$, $p < .000$), both showing significant perception gaps. These results indicate that the Telangana university library needs to enhance its services to meet user expectations, particularly in responsiveness and tangibility, which have the largest discrepancies.

Objective 2 - To identify the effective strategies for improving the quality of university library services
Objective 2 of this study focuses on identifying effective strategies aimed at enhancing the quality of university library services.

Through applied Exploratory Factor Analysis (EFA), survey and qualitative data will be analyzed to uncover underlying patterns and relationships among variables, thereby revealing strategies that can optimize service delivery and meet user expectations effectively.

Table - 7
KMO and Bartlett's Test of effective strategies for improving the quality

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.840
Bartlett's Test of Sphericity	Approx. Chi-Square	363.234
	df	36
	Sig.	.000

Source – Primary data

The KMO and Bartlett's Test results show that the data is suitable for factor analysis. A Kaiser-Meyer-Olkin (KMO) score of .840 indicates that the sample size is adequate. The findings of Bartlett's Test of Sphericity demonstrate that the variables are correlated and appropriate for identifying workable strategies to improve university library services, with a Chi-Square value of 363.234 and 36 degrees of freedom. The significance of the test is $p < .001$.

Table - 8
Component Matrix of effective strategies for improving the quality

	Component	
	1	2
Internet resources for various user communities.	.798	
Programmes for information literacy.	.751	
Automation of the library using common digital applications.	.745	
Displaying the most recent arrivals and forwarding a list of them to academic departments.	.711	
Organizing book talks.	.679	
Clippings from newspapers are periodically displayed on the notice board.	.668	
Adequate disclosure of library resources in the college prospectus.		-.548
Organizing book exhibitions on various occasions.	.597	
Suggestion box and timely response.		.612
Extraction Method: Principal Component Analysis.		
a. 2 components extracted.		

Source – Primary data

The Component Matrix analysis is displayed in the table, which highlights important and practical tactics for raising the standard of university library services. The internet facilities customized for various user groups (.798), information literacy initiatives (.751), and the computerization of library operations using common digital software (.745) are the components with the largest loading on Component 1.

This underscores the transformative role of the internet in modernizing library systems globally, offering 24/7 access and linking users to specialized resources worldwide. Information literacy programs empower individuals to effectively seek, evaluate, and utilize information, supporting personal, educational, and professional goals across various domains. These strategies collectively enhance service delivery, making libraries more accessible, dynamic, and responsive to the evolving needs of users in today's digital age. The Component 2 analysis highlights specific strategies for improving university library services, such as including sufficient library information in the college prospectus (-0.548) and maintaining a suggestion box with timely responses (0.612). This underscores the importance of actively seeking and addressing user feedback, including suggestions, opinions, and complaints. By responding promptly and positively to user input, libraries can enhance user satisfaction levels and ensure that services meet the diverse needs of their users effectively. This approach not only fosters a user-centric environment but also promotes optimal utilization of library resources and services. Therefore, the role of these high-impact strategies is pivotal in creating a user-friendly, resource-rich, and interactive library environment, ultimately improving the general standard of services provided by university libraries.

5. Findings

1. The study found that users perceive a significant gap in the availability of electronic information resources, with a mean difference of -0.909. This suggests that the library's existing selection of digital materials is inadequate to meet the demands of its patrons, suggesting a need for enhancing the digital collection to better align with users' expectations for comprehensive electronic resources.
2. It highlights a positive gap in the consistent courtesy of library staff, with a mean difference of 0.736. This suggests that users generally find the staff courteous, meeting or even exceeding their expectations in this aspect.
3. It identifies a significant negative gap in the library staff's readiness to respond to users' questions, with a mean difference of -0.891. This indicates that users feel the staff is not prompt or responsive enough to queries, falling short of their expectations.
4. Users perceive a notable negative gap in the individual attention provided by library staff, with a mean difference of -0.945. This suggests that the staff's attention to individual needs does not meet user expectations.
5. The study finds a sizable deficiency in the area of the library that promotes learning and study, with a mean difference of -1.082. Users feel that the current library environment does not meet their expectations for providing inspiring and conducive spaces for academic pursuits.
6. The library quality dimensions at Telangana University are characterized by negative mean scores, indicating that the library's services are failing to meet user expectations. The dimensions of responsiveness and tangibility

exhibit the largest discrepancies, highlighting critical areas requiring significant improvements to better align with user needs.

7. The dimension of responsiveness shows the largest mean difference of -1.04545, pointing to substantial unmet expectations. Similarly, the tangibility dimension has a mean difference of -1.15455, further emphasizing significant perception gaps. These findings suggest an urgent need for the university library to enhance its physical facilities and service promptness to improve overall user satisfaction.

8. The study identifies that providing tailored Internet facilities to different user groups, with a positive gap of 0.798, significantly enhances access to global resources and supports 24/7 availability.

9. If sufficient details regarding the library are contained in the college prospectus, the research reveals a sizable negative gap, with a mean difference of -0.548. This suggests a need for improved transparency and communication with prospective users.

10. The study highlights the importance of maintaining a suggestion box with timely responses, with a positive gap of 0.612. This underscores the importance of proactive user feedback management to enhance service responsiveness and user satisfaction.

6. Limitations and Research Gaps

Based on the previous studies reviewed, several gaps in the research on library service quality have been identified. These include variations in methodologies used to measure service quality, differences in user demographics affecting perceptions, and the need for context-specific studies tailored to different types of libraries (e.g., academic, public, medical). While some studies focus on specific dimensions of service quality such as reliability and empathy, others explore broader aspects like digital service satisfaction and user loyalty in the context of evolving technological landscapes. The current study titled "A Comprehensive Study on Library Service Quality: Bridging User Perception Gaps and Implementing Effective Improvement Strategies," the gap lies in synthesizing existing literature into a cohesive framework that addresses both user perceptions and exception in specific to Telangana university. Furthermore, there is a significant gap in systematically evaluating the effectiveness of proposed improvement strategies in diverse library environments to enhance service quality comprehensively.

7. Conclusion

This comprehensive study on library service quality at Telangana University has identified significant gaps between users' perceptions and expectations across various dimensions of the LibQual+ framework. The findings indicate that the university library's current services fall short in several critical areas, necessitating urgent improvements to better meet user needs and enhance overall satisfaction. The availability of electronic information resources was found to be seriously lacking, underscoring the necessity of a larger digital collection in order to meet users' expectations for all-inclusive electronic resources. While users generally appreciate the courteousness of the library staff, there are substantial gaps in staff responsiveness and individual attention. These areas require targeted interventions to improve the promptness and personalized support provided by the staff. The library environment has also been identified as needing significant enhancement. Patrons feel that there is a significant void in the library's layout that encourages learning and study, underscoring the necessity of creating more conducive and inspiring physical spaces to support academic pursuits. The dimensions of responsiveness and tangibility exhibit the largest discrepancies, suggesting an urgent need for the university library to enhance its physical facilities and improve service promptness. Addressing these issues is crucial for improving overall user satisfaction.

Effective strategies identified in the study include providing tailored Internet facilities to different user groups, which significantly enhances access to global resources and supports 24/7 availability. But there is also a need for increased openness and communication, especially when it comes to providing the college prospectus with sufficient information on the library. The study also underscores the importance of maintaining a suggestion box with timely responses. This proactive user feedback management is essential for enhancing service responsiveness and user satisfaction. It concluded that, the Telangana University library must prioritize addressing the identified gaps to align its services with user expectations. By expanding digital resources, improving staff responsiveness and personalized attention, enhancing the physical library environment, and fostering transparent communication and proactive feedback mechanisms, the library can significantly improve its overall service quality. These efforts will not only meet but potentially exceed user expectations, fostering a more satisfying and productive academic environment for all library users.

8. Future Research Scope

Suggestions for future research to enhance university libraries' service quality are made in light of the current study. The study advises focusing on the role of technological advancements in the delivery of library services. Additionally, it recommends incorporating interdisciplinary approaches by collaborating with experts in fields such as information science, psychology, and education. Through a variety of viewpoints and approaches, this interdisciplinary collaboration can enhance the research and produce a more thorough knowledge of how

university libraries might improve service quality.

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