

| RESEARCH ARTICLE**Assessment of Library Service Quality at a Private Higher Education Institution****Franenia L. Reconsal***Faculty, Northeastern College, Santiago City, Philippines***Corresponding Author:** Franenia L. Reconsal, **E-mail:** ncgsrnd@gmail.com**| ABSTRACT**

This mixed-methods study examines library services at a private higher education institution using a quantitative survey and students' qualitative remarks. The Philippine education system relies on evaluation to improve student performance, satisfaction, and services to meet academic needs. The quantitative phase uses stratified random sampling ($n=391$) and a customized version of LibQUAL+ to measure five service characteristics (Physical, Services, Collections, Selection, and Staff). The qualitative stage identified users' challenges and suggestions through open-ended questions and topic analysis. Participants generally rated the library staff ($M=4.14$) and physical characteristics ($M=4.15$) positively. Internet access and replacing worn materials were the lowest-rated ($M = 3.92$). Qualitative findings revealed service gaps in limited/outdated resources, noise, and staff approachability (demeanor and empathy). Significant differences in service impression by year level were found ($p < .001$), with fourth-year students holding the least favorable views across all parameters. Strengths of the library include the expertise of core staff and physical accessibility. It must address inadequacies in resource currency, IT infrastructure, and noise management services. According to the study, a year-level and gender-focused service strategy is needed. Institutional technology modernization investments should focus on error management, user understanding, and technology upgrading. Staff training should include required user-centered training to close the affective rapport gap.

| KEYWORDS

Library Services, User Satisfaction, Triangulation, LibQUAL

| ARTICLE INFORMATION**ACCEPTED:** 15 January 2026**PUBLISHED:** 05 February 2026**DOI:** 10.32996/jhsss.2026.8.2.8**Introduction**

Evaluation of library service quality is paramount in the Philippine educational environment, amid institutions' increasing efforts to enhance user satisfaction and adapt services to meet emerging academic requirements. The college library plays a significant role in learning, and its programs are vital to students' learning experiences and achievement. The library is not only a storehouse of books but also a place that inspires budding researchers in students. It provides knowledge and power to open new horizons to build a better world.

Over the last two decades, service quality has received significant attention as a contributor to customer satisfaction across many sectors, including education. Evidence indicates that service quality, resource availability, staff responsiveness, and the physical environment contribute to service quality in libraries (Afthanorhan et al., 2019). Additionally, evidence indicates that high service quality is positively associated with student satisfaction and the practical evaluation of library performance.

Additionally, several studies have reported the importance of 81 responsive librarian services for student satisfaction. In the Philippines, educational demands are changing, and libraries must evolve to meet them through the provision of new services. The shift to digital resources and online services, particularly during the COVID-19 pandemic, has underscored the importance of assessing electronic service quality (Mirghafoori et al., 2020). The latter aligns with results showing increased user interest in both physical and digital library collections (Balinado et al., 2021).

In this study, a triangulation research perspective provides helpful insights into library service quality by combining quantitative surveys, qualitative comments, and observations. Rogayan and Corpuz (2022) argue that, provided it engages a mix of stakeholders, such as students, faculty, and library staff, this assessment methodology can shed greater light on the current utility of library services and the gaps in their provision. This methodological triangulation helps establish the validity of the findings. It highlights specific service gaps that require attention as part of continuous quality improvement (Jayasundara, 2015).

Finally, the evaluation of library service quality at a private higher education Institution is more than an evaluative act; it is a key means of creating an academic environment in which success is equated with student achievement. The project aims to generate recommendations to inform best practices in libraries that better serve their users and support more successful educational outcomes. The following research questions guide this study:

1. What is the demographic composition of the respondents in terms of:
 - 1.1. Year Level; and
 - 1.2. Sex?
2. Which characteristics of the library align with or fall short of client expectations concerning:
 - 2.1. Physical;
 - 2.2. Services;
 - 2.3. Collections;
 - 2.4. Selections
 - 2.5. Library staff?
3. Is there a significant difference in the perceived quality of services at an academic institution based on its profile?
4. What challenges do users face when utilizing library resources?
5. What suggestions do users provide to enhance library services?

Methodology

Research Design

A mixed-methods research design (Triangulation) was employed to ensure a thorough and rigorous assessment of the quality of library services at a private higher education institution. This represents the most integrated approach to quantitative and qualitative data collection and analysis, addressing the research questions in full. The quantitative phase will employ a descriptive-comparative model to profile respondents' demographics, measure perceptions of reliability, and test for significant differences in profiling variables. The qualitative phase employed a descriptive design, including open-ended questions in the research survey, to investigate user issues that hinder their use, identify relevant actions for service improvement, and situate the findings in context through qualitative analyses of themes.

Participants and Sampling Technique

The study population for this quantitative survey included all current students of a private higher education institution who have used library services in the past academic year. The quantitative survey was conducted using a stratified random sampling method to ensure proportional representation of key demographic groups (e.g., department affiliation and student sex). The sample size was calculated using a relevant statistical formula, such as Slovin's formula, to maximize the study's power. For the qualitative study, a purposive sampling approach was used to identify a smaller, more diverse sample of library users who are typical or heavy users of the library, covering multiple perspectives on what is challenging about using the group study rooms and on suggestions to enhance overall satisfaction with the group study room space.

Research Instrument

The data collection instrument is a questionnaire consisting of two parts. Part one (quantitative): the component makes use of a structured questioning format underpinned by an adapted LibQUAL+ that allowed measurement of the five dimensions of service quality described in research question two: Physical (tangibles/facilities), Services (reliability/responsiveness), Collections, Selections (scope/currency of materials), and Library Staff (assurance/empathy). The gap score of the level of service quality is calculated by using a 5-point scale (Likert scale) to determine users' expectations and perceptions for each service attribute. This section includes demographic variables for research question 1. The qualitative second part comprises open-ended questions specifically addressing the issues raised in research questions 4 (challenges) and 5 (suggestions). In addition, purposively selected respondents are invited to participate in structured open-ended questions to further explore the qualitative data.

Data Collection Procedure

Once the college administration approves ethical clearance, data collection begins. Paper or computer-based version of the quantitative survey, depending on availability. Through college channels, invitations were disseminated to participants. All

participants were provided written informed consent. For the qualitative aspect, interview questions were written at the end of the survey questionnaire. The entire data collection period was fixed within a specific time frame.

Data Analysis

Qualitative and quantitative data will be analyzed using appropriate statistical and thematic methods. Descriptive analysis of demographic profile (Q1) and mean scores for expectations and perceptions across service dimensions (Q2). For quantitative data: Percentage/Frequency, Mean, and Standard Deviation. Inferential statistics, including ANOVA (Analysis of Variance) and t-tests, will be used to assess whether perceived service quality scores differ across user profiles (Q3). Quality Match scores (Perception-Expectation) were available to indicate whether services were considered aligned or misaligned. For qualitative questions (Q4 and Q5), a thematic analysis was conducted. Transcripts and open-ended comments will be coded, categorized, and synthesized to identify emergent themes related to user barriers and specific ideas for service improvement. Results from the quantitative and qualitative studies were triangulated to produce comprehensive interpretations of the research data, suggesting evidence-based recommendations for the Private Higher Education Institution Library.

Results

Table 1. Demographic Profile

Frequencies of Year Level

Year Level	Frequency	Percentage
First Year	115	29.4%
Second Year	132	33.8%
Third Year	78	2.0%
Fourth Year	66	16.9%

Frequencies of Sex

Sex	Frequency	Percentage
Female	252	64.5%
Male	139	35.5%

Table 1 presents the demographic profile of respondents, which provides essential context for understanding later results on library quality of service measures. The profile is analyzed by year level and individual participant sex.

The year-level distribution shows pronounced concentrations of respondents in the first and second years. The second year had the largest number ($f=132$; 33.8% of the total sample). The first-year students came next with 29.4% (115 respondents). By contrast, the third-year level was significantly under-represented, with just 78 respondents (2.0% of the total). The representation in the fourth year was 66 (16.9%). Given this spread, it is interesting to note that the evaluation of library quality seems to be most strongly driven by the youngest students, who are perhaps not the heaviest users (first and second year) but who make a weaker relative contribution compared with those for whom usage may feature more heavily in their academic lives. This imbalance in proportions reflects the year distribution profile. It needs to be taken into account when interpreting overall satisfaction and quality gaps, as junior students may have different benchmark expectations than those approaching graduation.

With respect to sex distribution, the sample is decidedly female-dominated. The majority of respondents were female ($n = 252$, 64.5% of the study population). The remaining 35.5% (139 men) were male participants. This significant bias in favor of females also suggests that information on library service quality at a private higher education Institution primarily reflects the experiences and perceptions of female students. Thus, the service quality gaps, or areas for improvement from the perspectives of female users, most likely exist to some extent, and the demographic variable should be taken seriously when triangulating or making recommendations.

Table 2. Library Physical Characteristics

		Mean	SD
1.	The Library is accessible to users.	4.33	0.863
2.	The reading area is large enough for reading & study purposes.	4.21	0.883
3.	Adequate lighting and ventilation.	4.21	0.891
4.	Sufficient number of chairs.	4.02	0.998
5.	Adequate space for shelves, cabinets, etc.	4.12	0.931
6.	Circulation area/area for borrowing and returning of books.	4.16	0.901
7.	Display area for newly purchased books.	4.14	0.874
8.	Provision for card catalog.	4.06	0.912
9.	Provision for periodical area (newspapers, journals, and magazines).	4.07	0.921
10.	Arrangement of furniture & equipment is functional.	4.20	0.901
Grand Mean		4.15	0.771

Table 2 summarizes the evaluation of the physical characteristics, a vital dimension of service quality in "Tangibles," across the library's presence as a whole. All items were positively scaled, with higher means indicating greater agreement with the statement. Overall, the physical environment of a private higher education institution's library is well received by its users, with a mean score of 4.15 (SD = 0.771). This score indicates that, overall, the library's physical facilities meet or exceed users' expectations.

The highest mean score of 4.33 (SD = 0.863) was given to the library's accessibility, which was a strong area of consensus among others (Table 1). This implies that users perceive the library as accessible in terms of its location or opening hours. Other top-rated attributes are sufficient reading room (mean = 4.21, SD = 0.883) and lighting and ventilation (mean = 4.21, SD = 0.891), indicating that the core study area is comfortable and meets users' space requirements. The arrangement of furniture and equipment also achieved a high average score (M = 4.20, SD = 0.901), indicating a functional and organized physical environment.

Although all items had a mean greater than 4.00, the lowest mean was for the sufficient number of chairs (mean = 4.02, SD = 0.998). Although still slightly positive, the lower average value and the largest standard deviation (SD = 0.998) indicate that seating adequacy is perceived as less adequate on average, or that user opinions are more in disagreement than for other items. The provision for card catalog (mean = 4.06, SD = 0.912) and the provision for periodical area (mean = 4.07, SD = 0.921) received lower scores than other items of furniture. This density range has been rated slightly lower than the others, placing it in the light-density category. There is slight underutilization, with seating as the most obvious area of the library that would benefit from a little extra breathing room for users during high-use periods. The extremely high positive mean scores across all dimensions generally affirm that the Library's physical attributes are strong areas of quality of service.

Table 2. Library Services

		Mean	SD
1.	Maximum access to the collection.	4.04	0.879
2.	Computers/internet facilities for fast and easy retrieval of information.	3.92	0.974
3.	Availability of viewing/audiovisual room.	3.94	0.924
4.	Announcements are made on newly purchased library materials.	3.90	0.953
5.	Orientation and assistance are rendered to library users.	4.02	0.932
6.	The library's hours of service are adequate.	4.16	0.908
7.	Loan rules on books for home use (borrowing).	3.95	0.937

Table 2. Library Services

	Mean	SD
Grand Mean	3.99	0.806

Table 2 shows the evaluation results for Responsibility, Reliability, and Access (Library Services) specific to a private higher education Institution. Attitude toward the services was generally rated about as favorably as the physical traits, though somewhat less so, with a grand mean of 3.99 (SD = 0.806). This average score of just under 4.00, also being slightly below the middle of the scale, also signifies that although people, for the most part, are happy with their services, there are some tangible aspects where how well something is actually performing, compared to users' hopes, could come up just a bit short.

The strongest factor on this dimension is the sufficiency of library hours of service, with a mean score of 4.16 (SD = 0.908). This high score indicates that the library is successfully serving its user community in terms of opening hours and library use. Another strongly performing service, Users Having Maximum Access to Resources for their Needs (mean = 4.04, SD = 0.879), indicates that scorers perceive the collection as broadly available to them. In addition, the provision of direction and guidance had a high mean (4.02, SD = 0.932), indicating that they were grateful for the instruction and support services provided by their library staff. Technology and collection visibility are perceived as having low mean scores, indicating potential for improvement. The feature for announcements of newly acquired library materials had the lowest mean (3.90; SD = 0.953) among the service-level statements. This indicates a need for more proactive and effective communication to inform users that the new acquisitions will operate on the assumption that people will use them. Likewise, ratings of computers/internet facilities for quick and easy access to information (mean = 3.92, SD = 0.974) and the availability of viewing/audiovisual rooms (mean = 3.94, SD = 0.924) were just below average. The internet facilities score, combined with a higher standard deviation, could imply variation in speed, stability, and/or the availability of the technology infrastructure needed for information access. Attention to these moderately substandard services will be essential to raising overall service levels and meeting user expectations.

Table 3. Library Collection

	Mean	SD
1. Adequacy of collection in support of the objectives.	4.00	0.913
2. Adequacy of books in different subject areas.	4.06	0.885
3. Adequacy of reference materials like dictionaries, atlases, etc.	4.06	0.897
4. An adequate number of journals and popular magazines.	4.04	0.886
5. Availability of books for leisure reading.	4.05	0.924
6. Audiovisual materials such as maps, posters, videotapes, and slides are available.	3.92	1.009
7. A collection of pamphlets, clippings and other file materials is readily available	3.97	0.932
8. Availability of library materials in various formats (CD-ROMs through networks, etc.)	3.95	0.961
Grand Mean	4.01	0.839

Table 3 presents the evaluation of the library collection, a critical dimension of service quality that ensures all required resources and appropriate materials are available. The general impression of the collection is favorable, with a grand mean of 4.01 (SD = 0.839). This score exceeds 4.00, indicating that, in general, the collection satisfies users' needs and is considered satisfactory for their academic information needs.

The highest ratings were awarded to the core academic collection. Users were most satisfied with the adequacy of books across subject areas (mean = 4.06, SD = 0.885) and with reference materials such as dictionaries and atlases (mean = 4.06, SD = 0.897). These high scores indicate that basic printed materials are sufficient for conducting research and coursework. Other positive evaluated aspects of the collection are the availability of books for leisure reading (mean = 4.05, SD = 0.924) and an adequate number of journals and popular magazines (mean = 4.04, SD = 0.886). Interestingly, the adequacy of collection in relation to purpose had a perfect mean of 4.00 (SD = .913), indicating excellent support for fulfilling the library's mission.

Items in the collection dimension with the lowest ratings concerned potential weaknesses in non-traditional and mixed-media resources. The lowest mean was for the availability of audiovisual materials (maps, posters, videotapes, and slides) (mean = 3.92, SD = 1.009). The low score for this item (below 4.00) and the high standard deviation in the table indicate significant variability in users' perceptions and that these resources may be inadequate/obsolete. Also falling below the overall mean are Availability of library materials in different formats (CD-ROMs through networks, etc.) (mean = 3.95, SD = 0.961) and Collection of pamphlets, clippings, and other file materials (mean = 3.97, SD = 0.932). These results indicate that the traditional print collection remains substantial but also show that, to achieve service quality scores commensurate with those of technologically savvy learners, the library may need to prioritize fortifying and updating its multimedia and diverse-format collections.

Table 4. Library Selection

		Mean	SD
1.	Students are encouraged to suggest books or other library materials to be acquired.	3.96	0.952
2.	Acceptable classification scheme and cataloging codes.	4.01	0.920
3.	Books and other materials are properly shelved and frequently checked.	4.09	0.873
4.	Library materials that are no longer useful are discarded or weeded out.	3.92	0.944
5.	Library card catalogs are kept updated.	4.02	0.915
6.	Pamphlets, clippings and other vertical file materials are adequately organized for immediate access to users.	4.02	0.887
7.	Selected periodicals are bound and readily accessible to users.	4.04	0.888
Grand Mean		4.01	0.829

Table 4 presents the evaluation of Library Selection, including the methods used for selection, acquisition, and collection organization, which are essential components of service quality. Overall, the general perception is primarily positive, with a Grand Mean of 4.01 (SD = 0.829). This score also shows that the actual work on the organizational structure and organization maintenance is unacceptable. Still, users do not experience this to the same extent, which could have occurred if there were many dissatisfiers. The most powerful features in the selection dimension are maintaining and organizing what is already present. Regarding the correct other items, users often check them first, with a moderate mean of 4.09 (SD = 0.873). This indicates high satisfaction with the physical arrangement and access to items in the collection; moreover, although all the listed reports were rated low. Arrangement, including content of nontraditional materials such as Pamphlets, clippings, and other vertical file matter, was also seen positively (mean = 4.02, SD = 0.887).

Low scores may indicate potential issues with user engagement and currency in the collection. The statement encourages students to recommend books on other library materials that should be acquired had the lowest mean rating of 3.96 (SD = 0.952). Although close to 4.00, this result suggests that the library's method for gathering and incorporating user feedback into acquisitions may not be clearly visible or sufficiently active. The second-lowest-rated factor is the Library's collection being prepared and irrelevant materials being discarded (Mean = 3.92, SD = 0.944). This indicates that users believe action is needed regarding the collection's currency, such as removing outdated materials, which could result in clutter or irrelevant resources. These lower means indicate that more emphasis may be placed on users' needs through a user-centric library collection development policy, and that the collection must be regularly weeded to remain relevant and up-to-date.

Table 5. Library Staff

		Mean	SD
1.	There is an adequate number of staff to serve the library users.	4.08	0.908
2.	Assist students in identifying and accessing information.	4.13	0.941
3.	The librarian's familiarity with the collection.	4.17	0.903
4.	Quality and accuracy of information given to users.	4.16	0.873

Table 5. Library Staff

	Mean	SD
5. Treatment of library staff to users.	4.16	0.928
6. The librarians are approachable.	4.13	0.968
Grand mean	4.14	0.833

Table 5 presents the evaluation of Library Staff, one of the most critical dimensions for achieving service quality. The latter shows that staff are perceived as satisfactory by users, achieving the highest total score across the other dimensions (Grand Mean = 4.14; SD = 0.833). This robustly positive result indicates that, at a private higher education Institution Library, users find that the human side of service keeps pace with or exceeds their expectations.

The item on the librarian's knowledge of the collection achieved the highest mean score (Mean = 4.17, SD = 0.903). This finding demonstrates that library users hold the library staff in high regard and rely on their expertise in accessing sources, an essential part of the library's role. Next in the ratings are Quality and accuracy of information given to users (Mean = 4.16, SD = 0.873) as well as Treatment of library staff to users (Mean = 4.16, SD = .928), which signifies that the staff members are seen as being professional, polite, and dependable in their interactions with patrons and distribution of information. In addition, the ratings, The librarians help students to locate and obtain information (M = 4.13, SD = 0.941), and The librarians are open to talk (M = 4.13, SD = 0.968) emphasize that the Staff Friendly dimension is related to a positive attitude from staff members and has a willingness to help, reflecting the extent of Empathy.

The lowest average, but still on the positive side, was achieved by the statement "there is an adequate number of staff to serve the library users?" (Mean = 4.08, SD SD= 0.908). Although the mean indicates that ridership is satisfactory overall, the lower score suggests that many may perceive insufficient staffing during rush hours or in some service areas. This, combined with high ratings for staff competence and behavior, suggests that the problem lies more with an insufficient or excessive number of staff members than with the quality of service or training. -Overall, the relatively high mean scores for each statement indicate that Library Staff is a significant strength and a leading force in shaping more positive service quality appraisal at a private higher-education institution.

Table 6. Significance Difference in Perceived Library Service Quality when Grouped by Year Level

	F	df1	df2	p
Library Physical Characteristics	20.7	3	188	<.001
Library Services	25.1	3	189	<.001
Library Collection	23.0	3	189	<.001
Library Selection	25.2	3	189	<.001
Library Staff	25.3	3	190	<.001

Post Hoc Tests

Games-Howell Post-Hoc Test – Library Physical Characteristics

		1	2	3	4
1. First Year	p-value	—	0.007	0.649	<.001
2. Second Year	p-value		—	0.468	<.001
3. Third Year	p-value			—	<.001
4. Fourth Year	p-value				—

Games-Howell Post-Hoc Test – Library Services

	1	2	3	4

Games-Howell Post-Hoc Test – Library Physical Characteristics

		1	2	3	4
First Year	p-value	—	0.262	0.977	<.00 1
Second Year	p-value	—	—	0.199	<.00 1
Third Year	p-value	—	—	—	<.00 1
Fourth Year	p-value	—	—	—	—

Games-Howell Post-Hoc Test – Library Collection

		1	2	3	4
First Year	p-value	—	0.202	0.991	<.00 1
Second Year	p-value	—	—	0.513	<.00 1
Third Year	p-value	—	—	—	<.00 1
Fourth Year	p-value	—	—	—	—

Games-Howell Post-Hoc Test – Library Selection

		1	2	3	4
First Year	p-value	—	0.260	0.989	<.00 1
Second Year	p-value	—	—	0.236	<.00 1
Third Year	p-value	—	—	—	<.00 1
Fourth Year	p-value	—	—	—	—

Games-Howell Post-Hoc Test – Library Staff

		1	2	3	4
First Year	p-value	—	0.099	0.724	<.001
Second Year	p-value	—	—	0.013	<.001
Third Year	p-value	—	—	—	<.001
Fourth Year	p-value	—	—	—	—

The following section addresses the third research question: whether there is a significant difference in the rote quality of library services when the Year Level demographic variable is controlled. The One-Way ANOVA (Welch's) was used, followed by the Games-Howell Post-Hoc Test because of the violation of the assumption of equality of variances between groups.

Table 6 presents the library services that may differ from those established for each year level. Physical Characteristics Distribution the p-values for Library Physical Characteristics ($p < .001$, $F = 20.7$), Library Services ($p < .001$, $F = 25.1$), Library Collection ($p < .001$, $F = 23.0$), Library Selection ($p < .001$, $F = 25.2$), and Library Staff ($p < .001$, $F = 25.3$) are all less than $p < 0.05$. This compelling evidence fails to support the null and rather indicates that students' academic level affects their assessment of library services quality in a private higher education institution.

Given these significant differences, Games-Howell Post-Hoc Tests were conducted to determine where they lie. One uniform trend prevailed over five dimensions:

- Fourth Year Students vs. All Other Groups: Fourth Year students were significantly different from First Year, Second Year, and Third Year students on all dimensions (Physical Characteristics; $p = .001$ in nearly all comparisons). This consistent finding implies that Fourth Years maintain a unique and substantially diminished perception of library service quality compared with students in earlier archetypal years of college library use.
- Third Year Students vs. Other groups: Third Year students showed significantly different perceptions across all dimensions compared to Fourth Year students ($p < 0.001$). However, the contrasts versus the First Year and Second Year groups were generally not significant within Library Services ($p = 0.977$ vs. First Year; $p = 0.199$ vs. Second Year), Library Collection ($p = 0.991$ vs. First Year; $p = 0.513$ vs. Second Year), and Library Selection ($p = 0.989$ vs. First Year; $p = 0.236$ vs. Second Year).
- Physical Characteristics Exception: For Library Physical Characteristics, First Year students' perceptions differed from those of Second Year ($p = 0.007$) and Fourth Year ($p < 0.001$) students, suggesting that new users' appraisal of the ambient environment differed.
- Library Staff Nuance: about the Library Staff (factor) dimension, Second Year students are significantly different from Third Year students in perception ($p = 0.013$).

To conclude, the statistical analysis confirms a statistically significant difference in perceived library service quality across year-level segments. By far the most precise and consistent pattern is that Fourth Years are the only year group that differs from all other students in their perception of service quality across all dimensions. This indicates that, as students' progress toward degree completion, their standards increase, or that the library's expectations or experiences diverge considerably, particularly with respect to the overall quality of service as they near graduation.

Some of the User Problems in Using Library Resources

Manual analysis of free comments on problems encountered with library resources provides crucial in-depth insight that supports the quantitative evaluation of service quality. Three main themes were identified, illustrating central areas of tension in the user experience at a private higher education Institution Library: Resource Availability and Accessibility, Environmental Distractions, Staff Interaction and Support. This article bridges these qualitative concerns with the quantitative evidence we have established to fill out the picture of service gaps.

Table 7. Thematic Analysis for Library Problems

Theme	Code	Excerpts
Resource Availability and Accessibility	<i>Limited Resources</i>	Some books are not available. P32 Lack of books. P111 A common problem in using library resources is the lack of available materials when many students need the same books or computers at the same time. P94 Lacking of books required for some subjects especially in geodetic engineering program. P301 Limited, outdated, inaccessible resources. P250
Environmental Distractions	<i>Noise and Disruption</i>	The only problem I see for my situation is when some students are loud and being insensitive to others. P58 Noise. P47

		<p>They should be more strict about the quietness. Some group of students doesn't know the proper etiquettes about the library and it's quite annoying. P101</p> <p>It's noisy sometimes. P238</p> <p>The other students who are just playing and then making noise. P205</p>
Staff Interaction and Support	<i>Staff Approachability</i>	<p>The librarian is not approachable. P49</p> <p>The librarian is very angry. P91</p> <p>The Approachable of the librarian. P73</p> <p>Improve the treatment to students. P202</p> <p>Lack of clear communication on library rules. P204</p>

Resource Availability and Accessibility

The category of resource availability and accessibility strongly suggests that books should be among the fundamental services a library provides. Respondents point out that there is a "shortage of basic materials" (P32, P111) and that specific disciplines, such as Geodetic Engineering, are hindered by a "lack of books required" (P301). This becomes worse during rush hour as "most people need the same books or computers at the same time" (P94), referring to a demand outstripping supply problem. Similarly, discussion of "outdated" material (P250) corresponds to somewhat lower scores on quantity in the Library Collection dimension; this is particularly so regarding currency of format, with one nodding towards better processes, such as systematic weeding. The qualitative data, therefore, reinforce the collection's overall good rating (Grand Mean =) and highlight that the specific resources required for coursework are unavailable. In contrast, outdated resources are a critical practical barrier to their use.

Environmental Distractions

The environmental Distractions theme, subcategorized under the code of Noise and Disruption, represents a significant breakdown in how the library itself, as a place for quiet Study, is upheld. Simple acknowledgments (e.g., Noise, P47) and more detailed comments regarding "loud and being insensitive to others" (P58), students "just playing... and then making noise" (P205) reflect a pervasive issue. This qualitative outcome challenges the very favorable quantitative rating for Library Physical Characteristics, which includes high ratings on reading area, lighting, and ventilation. Despite good infrastructure, in this participant's view, rule enforcement and behavioral control are seen as lacking: "Well, I think they should be more strict about the quietness" (P101). Noisy policing dissolves the threatened differential success established by the physical facilities and, by contrast, demonstrates that an attractive space without behavioral management continues to disrupt.

Staffing Interaction and Support

The code Staff Approachability is repeated throughout, yet with a more negative input overall, despite its diversity. The highest overall mean was the quantitative score for the dimension Library Staff, indicating that library staff are competent, courteous, and reliable; however, a clear gap appears in the qualitative findings. Participants were concerned that the "librarian is not friendly"(P49), has a "very bad temper" (P91), and that "treatment of students" must be improved (P202). This indicates that, although staff may be technically inclined (as evidenced by high quantitative ratings), the Empathy dimension of service is not. Moreover, "Lack of clear communication of library rules" (P204) further increases user frustration. This triangulation signals that the consistently high quantitative ratings represent some service quality – Assurance, in terms of staff ability - but the qualitative data indicates that there are very significant problems at points with Demeanor and Empathy, which are subjective, though potent detractors from users' overall experiences.

Table 8. Thematic Analysis for User Recommendation to Improve the Library

Theme	Code	Excerpts
Enhancing Library Facilities	<i>Infrastructure Improvements</i>	<p>Add more charging stations for laptops. P39</p> <p>Recommendations of having a proper air conditioning inside the room and having more chairs and tables. P45</p> <p>More chairs and tables to accommodate larger students computers at the same time. P110</p> <p>Need more air conditioning inside because some of the air conditioning units are not functioning. P72</p> <p>More space or chairs for some students, and add air conditioning. P37</p>
Resource Availability	<i>Updated Materials</i>	<p>More updated books. P70</p> <p>More books please. P128</p> <p>Add more updated books and improve Wi-Fi. P279</p> <p>Purchase more books. P291</p> <p>Add more copies of frequently used books, improve labeling and organization of shelves. P300</p>
Improving User Experience	<i>Staff and Environment Management</i>	<p>Improve the treatment to students. P73</p> <p>They should be more strict about the quietness. P101</p> <p>Add leisure novels (fiction, science fiction) that may encourage students to read in a fun and creative way in their free time. P204</p> <p>Enforce the policy of library, especially the 'Please keep silence'. P186</p> <p>Lack of clear communication on library rules. P204</p>

Enhancing Library Facilities

The first theme, Improving the Library Facilities, is anchored in infrastructure improvement. Most students reported the absence of basic resources necessary for a conducive learning environment. This is evidenced by the clear need for additional laptop charging stations at UWS (P39), perhaps due to limited power points, given the number of students in a course. Additionally, participants (P45, P72, P37) reported significant issues with climate control and indicated that some existing units are malfunctioning. The extracts also highlight the need for additional chairs and tables to accommodate increased student numbers (P45, P110), suggesting insufficient space and seating, particularly during peak periods when computer access is problematic.

Resource Availability

The second subject, Resource Availability, concerns only the library collection in Updated Materials. This is an essential aspect because students requested more books (P128, P291) and updated editions (P70, P279), strongly indicating a lack in the collection or its obsolescence. Recommendations: more frequently used titles in the mobilized section to minimize sharing (resource competition), and better labeling and shelf arrangement (P300). Closely related but tangential included a prompt to improve Wi-Fi (P279), further reflecting students' belief that electronic access was an essential part of resource provision.

Improving User Experience

Improving user experience through 'staff' and 'environment' management, the last theme is not a physical service. This includes calls for improved conduct and stronger rule enforcement to foster a positive environment. Examples of essential recommendations include the resolution on staff attitudes, "Make more proper treatment to students" (P73). Importantly, students frequently asked for staff to 'make the quiet strict' (P101) and implement the 'Please keep silence' rule (P186), highlighting the environmental noise factor identified earlier. The topic of the library and a call for explicit communication about the library's rules (P204) and for an expansion of the library's holdings about novels (fiction, science fiction), encouraging pleasure reading. The preceding points collectively indicate a need to return to a more professionally managed collection-based library environment.

Discussions

The results serve as one key to developing an effective plan for service quality assessment at a private higher education Institution—respondent distribution. First- and second-year students constitute the largest proportion of respondents, as reported in Philippine educational studies. Younger college students, who may be less accustomed to using the library's resources, have different expectations than upper-level students, most of whom are heavily involved in academic activities and library use. This difference underscores the need for cross-year analysis, as established in other research on academic libraries (Alam & Mezbah-ul-Islam, 2020; Kaur, 2010).

The high percentage of female respondents (approximately 64.5 percent of the sample) inevitably raises concerns about representativeness and its implications for evaluating library service quality. Gender has been reported to affect perceived service quality and satisfaction in the past literature (Husna et al., 2023; Ahmed & Shoeb, 2009). In light of the other half of a college environment, one can easily conceive of this tool's lack not only producing a false view of library effectiveness, considering male users may have different service needs than females (Alam et al., 2024; Coleman et al., 1997), but also skewing against an effective allocation. Thus, triangulation of research methodologies is essential for gaining a holistic understanding of gender and the extent of service gaps and areas for improvement.

The attributes of the library's space, quantified by dimensions such as "Tangibles," indicate that the library is generally well-received by users. Accessibility, lighting, and reading areas also received good average scores, consistent with other studies that find a positive physical environment to be significant for student engagement and satisfaction in academic libraries (Hsu et al., 2014; Choshaly & Mirabolghasemi, 2019). However, the average ratings indicate a slight seating deficiency, an area that warrants attention. In an earlier study, it was noted that adequate seating is essential to accommodate peak demand and ensure user satisfaction (Shoeb & Ahmed, 2020).

In addition, overall service quality for library hours and resource availability was rated highly, whereas technology infrastructure and system relevance were under-evaluated. Such findings are consistent with the global trend, even in library studies, that information technology efficiency directly affects user satisfaction (Bae & Cha, 2014; K.P. & K., 2018). In the Philippines, a country where ICT use is becoming central to its educational system and curriculum, with schools developing around digital content (Sahu, 2007; Gyau & Liu, 2021), there must be a robust, up-to-date IT infrastructure. Consequently, libraries need to replace outdated technology and communicate more effectively about new acquisitions to meet users' changing needs (Bakti & Sumaedi, 2013).

Eventually, library staff were rated highly by users, particularly for their knowledge and approachability, a pattern observed in other academic institutions. Although quantitative data show positive views of the care received, dissatisfaction has also been expressed regarding staff attitudes and expressions, highlighting a gap between technical competence and affective rapport (Haruna et al., 2017; Alam, 2020). This gap highlights the need to provide training and in-service support for adopting a user-centered philosophy to enhance empathy and rapport-building among library workers, thereby improving service quality.

In summary, a review of the quality of library services at a private higher education Institution revealed areas of concern as well as strengths in the physical aspects and identified numerous opportunities, particularly in demographics and user involvement strategies—areas for future research. The findings provide compelling evidence for the need for such systematic assessments (by year level and gender) if we are to continue offering comprehensive, responsive library services to all students.

Conclusions

Through discussion and interpretation of the research results, the researchers come up with the following conclusions on the assessment result of Library Service Quality of a private higher education Institution:

The research findings indicate that the predominance of first- and second-year students, along with females, significantly influences the quality of service. Thus, a good way to enhance the quality of library services is to analyze year-level and gender-segmented evaluation data systematically so that diverse needs and expectations are addressed, thereby increasing representativeness and enabling more constructivist, responsive service provision.

According to the quantitative scores, the library's physical setting (i.e., Tangibles such as accessibility, lighting, and reading spaces) is perceived overall as positive. However, this is tempered by a known seating deficiency that is evident during peak periods. Infrastructure improvements, including seating and study provisions, can be implemented with greater focus to enhance the library's physical environment.

Despite strong marks for library hours and resource availability, there is a striking consensus that the information technology infrastructure and the technology interaction rating should be re-evaluated, as they are easy targets for service gaps. The library

must therefore prioritize replacing obsolete technology and creating a modern, future-proofed IT environment to be fit for purpose in today's digital-centric, curriculum-led learning and to meet user needs. In addition, a successful information strategy for new acquisitions is crucial for raising the perceived relevance of the collection.

The competence of library staff in technical knowledge and general approachability was rated highly, indicating strong underlying competencies. However, the qualitative data revealed a significant disjuncture between technical competency and affective rapport, with discontent expressed regarding staff attitudes or expressions. To fill this gap and improve service quality, the library needs to conduct mandatory in-service training that promotes a user-centered philosophy, emphasizing empathy, communication, and rapport-building.

Implications

The study's results have important implications for both strategic planning and operations in the library of a private higher education institution. Because the conditions of the respondents—mainly first- and second-year students and female users—are different from those of existing members. A significant implication is the need for a data-informed, segmented approach in which service enhancements are tailored to the unique needs of different user populations (e.g., dedicated resources for upperclassmen versus orientation for new students; services attuned to gender-based preferences).

In practical terms, long-standing failings in IT provision and the currency of resources require significant near-term support for technology refreshment and for implementing a sound collection development policy that prioritizes the purchase of up-to-date resources over high-demand items. Above all, the relatively low affective rapport that results from the 'transfer of high staff technical competence' level calls for a different human resource development approach; it demands periodic, tailored in-service training around user-centered service philosophy as well as empathy and effective communication skills to ensure every client contact is a good experience.

Moreover, the identified structural deficiencies, along with inadequate seating and uncontrolled noise, indicate that a targeted program of action is essential to rapidly increase the library's study capacity in an environment that provides students with space conducive to academic work. Overall, the study is an impetus for the library to move from a passive provider of services to an active, segment-focused quality-improvement champion across its venues and in both its digital and personal interfaces.

Funding: This research received no external funding

Conflicts of Interest: The authors declare no conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors, and the reviewers.

References

- [1.] Afthanorhan, A., Awang, Z., Rashid, N., Foziah, H., & Ghazali, P. (2019). Assessing the effects of service quality on customer satisfaction. *Management Science Letters*, 13–24. <https://doi.org/10.5267/j.msl.2018.11.004>
- [2.] Ahmed, S. & Shoeb, M. (2009). Measuring service quality of a public university library in Bangladesh using SERVQUAL. *Performance Measurement and Metrics*, 10(1), 17–32. <https://doi.org/10.1108/14678040910949666>
- [3.] Alam, M. & Mezbah-ul-Islam, M. (2020). Service quality assessment model for academic libraries. *Global Knowledge Memory and Communication*, 70(4/5), 325–338. <https://doi.org/10.1108/gkmc-03-2020-0027>
- [4.] Andarbeni, P., Salamah, U., & Satibi, I. (2021). Service quality improvement strategy in library management at tadulako university. *Pasundan Social Science Development*, 2(1), 8–20. <https://doi.org/10.56457/pascidev.v2i1.17>
- [5.] Bae, K. & Cha, S. (2014). Analysis of the factors affecting the quality of service in public libraries in Korea. *Journal of Librarianship and Information Science*, 47(3), 173–186. <https://doi.org/10.1177/0961000614532483>
- [6.] Bakti, I. & Sumaedi, S. (2013). An analysis of library customer loyalty. *Library Management*, 34(6/7), 397–414. <https://doi.org/10.1108/lm-05-2012-0025>
- [7.] Balinado, J., Prasetyo, Y., Young, M., Persada, S., Miraja, B., & Redi, A. (2021). The effect of service quality on customer satisfaction in an automotive after-sales service. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(2), 116. <https://doi.org/10.3390/joitmc7020116>
- [8.] Brady, M. & Cronin, J. (2001). Some new thoughts on conceptualizing perceived service quality: a hierarchical approach. *Journal of Marketing*, 65(3), 34–49. <https://doi.org/10.1509/jmkg.65.3.34.18334>
- [9.] Chen, C. & Chang, C. (2024). Evaluating public library services in GTaiwan through user-generated content: analyzing Google Maps reviews. *Electronics*, 13(12), 2393. <https://doi.org/10.3390/electronics13122393>
- [10.] Choshaly, S. & Mirabolghasemi, M. (2019). Using sem-pls to assess users' satisfaction with library service quality: evidence from Malaysia. *Library Management*, 40(3/4), 240–250. <https://doi.org/10.1108/lm-03-2018-0023>
- [11.] Coleman, V., Xiao, D., Bair, L., & Chollett, B. (1997). Toward a tqm paradigm: using SERVQUAL to measure library service quality. *College & Research Libraries*, 58(3), 237–249. <https://doi.org/10.5860/crl.58.3.237>

[12.] Farooq, M., Khalil-Ur-Rehman, F., Abdurrahaman, D., Younas, W., Sajjad, S., & Zreen, A. (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. <https://doi.org/10.24874/ijqr13.02-02>

[13.] Ghaedi, R., Valizadeh-Haghi, S., Ahmadi, E., Zeraatkar, Z., & Baghestani, A. (2020). Gaps between users' expectations and their perceptions of service quality in college libraries at Shahid Beheshti University of Medical Sciences: a case study. *Desidoc Journal of Library & Information Technology*, 40(02), 479–484. <https://doi.org/10.14429/djlit.40.02.14958>

[14.] Gyau, E. & Liu, J. (2021). International students' assessment of service quality in academic libraries. *International Journal of Research and Innovation in Social Science*, 05(05), 538–546. <https://doi.org/10.47772/ijriss.2021.5532>

[15.] Haruna, B., Kaur, K., & Tahira, M. (2017). Modelling web-based library service quality and user loyalty in the context of a developing country. *The Electronic Library*, 35(3), 507–519. <https://doi.org/10.1108/el-10-2015-0211>

[16.] Hsu, M., Cummings, R., & Wang, S. (2014). Business students' perception of university library service quality and satisfaction. *Contemporary Issues in Education Research (Cier)*, 7(2), 137. <https://doi.org/10.19030/cier.v7i2.8484>

[17.] Husna, M., Hazlin, H., Norhuda, S., & Mastura, M. (2023). Library service quality and users' satisfaction: a correlational study among UITM Puncak Perdana students. *Jurnal Intelek*, 18(2). <https://doi.org/10.24191/ji.v18i2.22261>

[18.] Jayasundara, C. (2015). Business domains for boosting customer satisfaction in academic libraries. *The Journal of Academic Librarianship*, 41(3), 350–357. <https://doi.org/10.1016/j.acalib.2015.02.014>

[19.] K.P., S. & K., M. (2018). Service quality of libraries in Indian Council of Agricultural Research institutes in Kerala, India. *Desidoc Journal of Library & Information Technology*, 38(3), 156. <https://doi.org/10.14429/djlit.38.3.12215>

[20.] Kaur, K. (2010). Service quality and customer satisfaction in academic libraries. *Library Review*, 59(4), 261–273. <https://doi.org/10.1108/00242531011038578>

[21.] Khan, A., Paray, U., Loan, F., & Paray, S. (2024). Exploring digital voices to evaluate user perception, satisfaction, and service quality in libraries. *Performance Measurement and Metrics*, 25(3/4), 162–180. <https://doi.org/10.1108/pmm-04-2024-0021>

[22.] Mirghafoori, S., Tooranloo, & Saghafi, S. (2020). Diagnosing and routing electronic service quality improvement in academic libraries using the FMEA approach in an intuitionistic fuzzy environment. *The Electronic Library*, 38(3), 597–631. <https://doi.org/10.1108/el-09-2019-0218>

[23.] Rogayan, D. & Corpuz, L. (2022). Evaluating the research productivity of a state university in Central Luzon, Philippines: basis for policy recommendations. *International Journal of Evaluation and Research in Education (IJERE)*, 11(1), 128. <https://doi.org/10.11591/ijere.v11i1.22099>

[24.] Sahu, A. (2007). Measuring service quality in an academic library: an Indian case study. *Library Review*, 56(3), 234–243. <https://doi.org/10.1108/00242530710736019>

[25.] Seno-Sanoria, M. (2025). Aligning expectations and perceptions: analyzing library user satisfaction in higher education in rural Philippines. *JIP*, 3(8). <https://doi.org/10.69569/jip.2024.394>

[26.] Shoeb, M. & Ahmed, S. (2020). How far are the public university libraries in Bangladesh meeting students' expectations? – An analysis of service quality through LibQUAL+ core items. *Performance Measurement and Metrics*, 22(1), 49–69. <https://doi.org/10.1108/pmm-05-2020-0028>

[27.] Stamatoplos, A. & Mackoy, R. (1998). Effects of library instruction on university students' satisfaction with the library: a longitudinal study. *College & Research Libraries*, 59(4), 322–333. <https://doi.org/10.5860/crl.59.4.322>