

Bridging the Resource Gap: Assessing Collection Adequacy and Postgraduate User Satisfaction in an Academic Library

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Abstract - The main aim of the study is to assess the effectiveness of the collection development practices and effect on user satisfaction in Integral University Library System Post graduate students. In academic libraries moving to a digital first environment, the challenge of determining the gaps in resources for advanced scholars is becoming very important. A description survey research approach was used and primary data were obtained by using a structured questionnaire to 100 postgraduates in four scientific departments that are active in the University. Both descriptive and inferential statistics were used to analyze the data at 0.05 level of significance. The results showed that the library is fulfilling the basic academic requirements well and the satisfaction level reached high in the levels of physical books adequacy (\$M = 3.98\$), and currency (\$M = 3.95\$). One of the key areas of concern was the level of advanced research materials, with students stating that there were low volumes of highly specialized electronic journals (\$M = 3.52\$). The results of the hypothesis test showed that there was a positive correlation between perceived collection adequacy and overall user satisfaction, with strong significance (\$r = 0.68, p = 0.002\$). In addition, it was shown that satisfaction was significantly different among the academic departments (\$F = 3.15, p = 0.03\$), highlighting the need for more specific strategies for resource acquisition. The study ends with a recommendation for the introduction of a Patron-Driven Acquisition (PDA) model, departmental resource audits as well as the digitisation of the student recommendation system.

Keywords : Collection Development; User Satisfaction; Academic Libraries; Electronic Resources; Postgraduate Students; Integral University; Patron-Driven Acquisition (PDA)

1. INTRODUCTION AND LITERATURE REVIEW

The academic library is considered the "intellectual soul" of any university or college, and its role is to assist in teaching, learning, and research, by ensuring the full access of information resources (Ali & Jan, 2020). Libraries are currently confronted with the challenge of dealing with the traditional print collection, along with the vast number of electronic resources available, in an environment that suffers from unprecedented "information explosion" and technological developments (Al-Shboul, 2026). The process of collection development should be continuous, strategic and selective as it is impossible to get access to all the published information in the world through one single library (Awasthi & Nisha, 2025).

Postgraduate and Doctoral students are a unique user group within the Indian Higher Education ecosystem with very specific information needs (Makhsin & Chen 2025). Researchers at an advanced level are more likely to use a range of reference materials, including current reference works, peer-reviewed journals, and books, to complete their research projects and dissertations, and they need to access these seamlessly to be successful (Cohen, Manion, & Morrison, 2024). Moreover, the transition to Information and Communication Technology (ICT) has caused this group to display a strong preference for remote access to databases using the Internet rather than visiting the library (Nunnally & Bernstein, 1994).

Integral University, Lucknow is a diverse and growing post-graduate community of students in different scientific fields. The university is engaged in collection development activities in a continuous manner but a well-equipped acquisition policy does not ensure a relevant and adequate collection of the library (Sharma & Tiwari 2024). Many times there is a mismatch between the content that an administration purchases and the day-to-day needs of those

who use it, leading to systemic bottlenecks that prevent students from making progress in their studies (Patel, 2026).

This study was conducted before any empirical data was available on the perception of the students on the level of adequacy of the Library Hybrid collection of Integral University. If library managers do not systematically take a user-centered approach to evaluating the collection, they can end up working in a vacuum, resulting in poor financial management and student frustration (Field, 2023). Thus, the purpose of this study is to conduct an in-depth examination of the effectiveness of the current collection development practices, pinpointing the major obstacles encountered to access literature that meets the requirements, and offering feasible and reliable suggestions based on the study findings for the optimal acquisition of future resources.

2. METHODOLOGY

The study used a quantitative descriptive survey research design (Pathak & Pal, 2026) for the research to be successful. It is a method where the data collected is standardized and systematic in order to describe the current situation of attitudes, behaviours and perceptions about library resources (Creswell & Creswell, 2024).

The target population was limited to the higher educated populace who are using the Integral University Library System Lucknow, Uttar Pradesh. Purposeful sampling using convenience and snowball sampling was employed to get a statistically sound sample of 100 valid respondents. A representative sample of 100 valid respondents was purposefully selected using convenience and snowball sampling (Raman, 2024). This sample included master's (MSc, MCA, etc.) and doctoral (PhD) students from four academic departments: Biosciences, Bioengineering, Computer Applications, and Computer Science and Engineering.

Structured, researcher-administered questionnaire was used to collect the primary data and the questionnaire was divided into three sections of the demographic profiles, library usage and user perception. The basic analysis part used a standard 5 point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree) to evaluate dimensions of print adequacy, relevance of electronic resources and satisfaction level. After collecting data, the analysis was carried out by using Statistical Package for the Social Sciences (SPSS). Data was presented in a summary form in descriptive statistics (Mean score, frequency, percentage) (Upadhyay et al., 2023). In order to test formulated hypotheses, inferential statistics specifically Pearson Product-Moment Correlation and One-Way Analysis of Variance (ANOVA) at 0.05 level of significance was used.

3. RESULTS

3.1 Demographic Profile and Usage Patterns

An analysis of the 100 valid respondents revealed that a significant majority (93%) were enrolled in master's degree programs, while 7% were doctoral scholars. The sample was equitably distributed across the four scientific disciplines: Biosciences (30%), Computer Applications (25%), Bioengineering (23%), and Computer Science and Engineering (22%). The postgraduate community demonstrated active engagement with the library, with 65% of respondents utilizing the facilities frequently (either daily or 2-3 times a week). The primary motivations for library use were coursework preparation (43%) and dissertation writing (29%).

3.2 Collection Adequacy and Bottlenecks

The results show that the respondents are very satisfied with the physical collection of the library at the level it was at before the results were obtained. The library has sufficient number of physical books for the courses they studied (\$M = 3.98\$) and the resources are relevant and up-to-date (\$M = 3.95\$).

When considering advanced research support, however, there were nuances to consider. The students were able to easily identify general literature ($M = 3.84$), but there was a good deal of lag time in the identification of specialized digital resources. A second issue that was addressed was the lack of highly specialised e-journals in one's own field, with the mean score of 3.52 being significantly lower. A second problem that was identified was the absence of highly specialised e-journals in one's own field, with the mean score being significantly lower at 3.52. Overall, however, the perception of administrative responsiveness was positive, resulting in an overall score on administrative responsiveness of 4.05.

3.3 Hypothesis Testing

To determine statistical significance, two hypotheses were tested:

1. **Pearson Correlation:** A test was conducted to evaluate the relationship between perceived collection adequacy and overall user satisfaction. The analysis yielded a strong positive correlation coefficient ($r = 0.68$) with a p -value of 0.002. Since the p -value was less than 0.05, the null hypothesis was rejected, confirming that improvements in collection adequacy directly enhance user satisfaction.
2. **One-Way ANOVA:** To compare mean satisfaction scores across the four academic departments, an ANOVA test was executed. The test produced an F -value of 3.15 and a p -value of 0.03. Because the p -value fell below the significance threshold, the null hypothesis was rejected, proving that user satisfaction varies significantly across different academic disciplines.

4. DISCUSSION

This study's empirical findings provide important information about the operational environment of contemporary academic libraries. The extremely high numbers of physical books scores are indicative of the proper implementation of collection development as a core function of the Integral University Library System. Print monographs are a cornerstone of the pedagogical process and traditional acquisition models are effective for supporting traditional courses and exam preparation that is syllabus-driven (Jain & Sharma, 2024).

On the other hand, if there is a specific e-journal bottleneck, this can be identified quantitatively and is a specific systemic challenge. The advanced researchers turn to the thesis and dissertation writing, and they depend mainly on the latest literature available which is advanced, peer reviewed and digital literature (Awasthi & Nisha, 2025). The data indicates that the general academic databases are available, but the collection is currently short of the specialty, discipline-specific journal packages needed for serious scientific research. This is mainly because of the exponential growth in cost of a vendor subscription, and the explosive growth of information explosion in the world (Hossain, 2026).

Moreover, the wide satisfaction differences among academic units is a key administrative fact. It demonstrates that collection development in a multi-disciplinary and diverse institution cannot be done in a uniform approach. Rapidly changing fields such as Computer Science would make heavy use of pre-prints and volatile databases, while other fields such as Biosciences could rely on well-known primary journals. This localized difference is reflected in service gaps identified in some of the top-notch institutional libraries in India, which require a very specific approach to acquisitions for achieving balanced support for research (Pathak & Pal, 2026). The successful filling of these resource gaps makes libraries integral to engines of institutional research output (Gupta, 2024).

5. CONCLUSION AND RECOMMENDATIONS

- The current condition of the Integral University Library System is satisfactory with regards to its basic resources, which are able to cater to the general academic reading and study of students at the University. But the administration needs to shift from general collection development to very focused digital acquisition strategies that explicitly benefit the thesis and dissertation writers, if the library is to be elevated to a top-tier research center. In light of the empirical results, the following recommendations for action are made:
- **Targeted E-Journal Subscription Drive:** To address the critical lack of specialized literature, the library must prioritize a "Patron-Driven Acquisition" (PDA) model. This framework should specifically empower PhD scholars and final-year master's students to directly request and access paywalled electronic articles in real-time.
- **Department-Specific Resource Audits:** Recognizing that satisfaction varies significantly by discipline, the administration should conduct immediate audits of the collections serving lower-scoring departments.

Establishing dedicated "Library Liaisons" for individual scientific faculties will ensure that future budget allocations perfectly mirror departmental syllabi and specialized research tracks.

- **Digitization of the Recommendation Pipeline:** While users currently feel the administration is responsive to input, formalizing this process is essential. Implementing a permanent, highly visible digital portal on the library's homepage for book and database recommendations will streamline user engagement and keep the collection dynamically aligned with student needs.

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