A Study on the Perceptions of Library Collections in Arts and Science Colleges in Coimbatore, Tamil Nadu

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Abstract

This study investigates the perceptions regarding library collections in 28 Arts and Science colleges in Coimbatore, Tamil Nadu. The research aims to evaluate the adequacy, accessibility, and relevance of library resources in supporting the academic and research needs of students and faculty. Several resources, including textbooks, journals, e-books, and digital content, are examined to determine their alignment with the educational requirements. The study also explores the use of modern technologies in enhancing library services, such as digital catalogue and online databases. Through surveys and interviews with students, faculty, and library staff, the research provides insights into the strengths and areas of improvement for library collections. The findings offer valuable recommendations for enhancing library services to support better academic growth and research development in Arts and Science colleges in Coimbatore, Tamil Nadu.

Keywords: Library Collections, Arts and Science Colleges, Library Usage, e- resources.

1. Introduction

Library collections in Arts and Science colleges play a crucial role in supporting the academic and research needs of students and faculty. These collections typically consist of a wide variety of resources, including textbooks, reference materials, journals, e-books, and multimedia content, all customized to meet the diverse curriculum requirements across disciplines. In Arts and Science colleges, the library serves as a centre for learning, fostering an environment conducive to academic growth. The quality, relevance, and accessibility of library resources are essential for enhancing the overall educational experience, encourage independent research, and facilitating critical thinking. As technology continues to evolve, libraries are increasingly integrating digital resources and online databases, ensuring students and faculty have access to the latest information and research materials in their fields. Therefore, an evaluation of library collections in these institutions is important to assess their effectiveness in supporting the academic objectives and research aspirations of the college community.

1.1 Definition of Library Collection Arts and Science Colleges

A library collection in arts and science colleges consists of curate resources that meet the academic, research, and informational needs of students, faculty, and staff. This collection includes print and digital materials such as textbooks, journals, e-books, online databases, multimedia resources, and particular materials like dissertations and research papers, covering disciplines such as literature, sciences, and the arts. The major goal is to provide essential resources for learning, teaching, and research. As Dr.S.R.Ranganathan, a pioneering librarian famously stated, "The library is a growing organism," highlighting the importance of continuously adapting collections to meet the evolving needs of the academic community.

1.2 Statement of Problem

The problem being addressed in this study is the lack of comprehensive understanding regarding the perceptions of faculty members and research scholars about the library collections in Arts and Science colleges in Coimbatore, Tamil Nadu. In spite of the growing importance of library resources for academic and research activities, there is limited within reach into how well these resources meet the needs of students and faculty, particularly in terms of availability, significance, usage, and accessibility of both physical and digital materials. This study aims to identify gaps and provide recommendations for improving library services and collections to better support academic goals.

1.3 Objectives

1. To assess the availability and variety of library collections in Arts and Science colleges in Coimbatore, including books, journals, e-books, and multimedia resources.
2. To evaluate how well library resources meet the academic and research needs of students and faculty in different departments.
3. To examine how students and faculty use library resources, focusing on their preferences for physical against digital materials.
4. To explore the role of digital resources and online databases in improving access to and effectiveness of library collections.
5. To gather opinions from students, faculty, and library staff about the strengths, challenges, and areas for improvement in library services and resources.

1.4 Methodology

The study "A Study on the Perceptions of Library Collections in Arts and Science Colleges in Coimbatore, Tamil Nadu" will survey 500 respondents (250 faculty members and 250 research scholars) across 28 colleges, using stratified random sampling to ensure different representation. Data will be collected through structured questionnaires with both quantitative and qualitative questions on the availability, relevance, usage, and challenges of library resources, including books, journals, e-books, and multimedia. The effectiveness of digital resources and online databases will also be evaluated. Collected data will be observed using descriptive statistics and investigation, with ethical standards such as informed consent and confidentiality maintained.

2. Review of Literature

The following few review of literature on library collections in Arts and Science colleges highlight developing perceptions regarding the availability Library Collections and accessibility of resources.

Kumar and Reddy (2023) in their article in the International Journal of Library and Information Science revealed that 60% of library staff felt that the existing digital infrastructure in smaller Arts and Science colleges was insufficient, calling for greater investment in e-resources and e-books to improve access to academic publications. These studies underline the growing demand for digital materials while highlighting the continued significance of physical resources in specific academic disciplines.

Sharma and Mena (2022) found that 68% of students in Arts colleges favoured digital resources for research because of their convenience. However, 45% of students still preferred print materials for in-depth study, particularly in subjects such as literature and history, as published in the Journal of Academic Library Management.

Patel et al. (2021) in the Journal of Educational Resource Development found that 70% of faculty members in Science colleges expressed satisfaction with e journals but noted that many faculty members, particularly in fields like chemistry and physics, required more updated journals to stay in progress with ongoing research.

Singh and Gupta (2020) examined libraries in smaller universities and recognized significant gaps in resources, especially digital access. Their findings indicated that 72% of smaller universities lacked sufficient digital infrastructure, with many institutions struggling to meet the demands of up to date academic world, published in the Journal of Library and Information Science. They recommended increased funding and improvements in library infrastructure to address these challenges.

Rajesh and Sarcoma (2019) in their study in the Journal of Academic Libraries emphasised that various library resource, such as books, journals, and e-resources, have a direct impact on academic performance, highlighting the essential role libraries play in enhancing learning and research.

Mishap and Joshi (2019) in the International Journal of Library and Information Studies, the very important role of libraries in supporting research activities, noting that access to engaged databases is essential for producing high-quality academic work. Their study found that 85% of researchers stated that access to databases like Scopus and IEEE Explore significantly improved the quality and depth of their research.

Patel and Joshi (2019) reported that the challenges faced by librarians in maintaining and updating collections, particularly with budget constraints and technological advancements. They found that 78% of librarians struggled to balance the need for digital resources and the maintenance of traditional print collections.

Reddy (2018) in the Journal of Science and Technology Libraries, highlighted the need for modernised academic materials, particularly journals and research publications, in fields like science and technology. His study found that 62% of faculty members in these fields reported challenges in obtaining current journals, especially in smaller institutions with limited funding for subscription based resources.

Vera and Jain (2018) in their article published in the Journal of Library Resource Planning stressed the importance of regular assessments and user feedback in effective library resource planning. They found that 75% of librarians believed that systematic assessments were essential for ensure that libraries stay relevant to the developing needs of users.

Mena (2017) studied usage patterns and concluded that while students favoured digital resources for convenience, investigated in the Journal of Educational Research, particularly for quick referencing and research, print materials still played an important role in traditional learning. Her study revealed that 52% of students still trusted physical textbooks, especially for subjects requiring extensive reading, such as literature and history.

Sharma and Rae (2017) in the Journal of Research Libraries, found a direct correlation between the availability of high-quality library resources and the quality of research output. They suggested that libraries should increase investment in digital resources and user training to enhance research quality. Their findings indicated that 80% of researchers agreed that training on using digital resources improved their research output.

Aryan and Vera (2017) in the Journal of Educational Technology noted that while students preferred digital resources for ease of access, 40% of students still valued physical textbooks, particularly for courses involving intensive reading.

Kumar and Sharma (2016) in their research in the Journal of Higher Education and Research found that while faculty members were generally satisfied with the availability of books and journals, there were concerns regarding the accessibility of digital resources, which are crucial for contemporary research. They found that 60% of faculty members expressed dissatisfaction with access to e-journals and databases, mainly due to limited institutional subscriptions and slow internet connectivity.

Taker and Mena (2016) explored user satisfaction with library services and found that while libraries were measured as essential, many users felt that aspects such as working hours, access to digital platforms, and resource sufficiency needed improvement. Their study revealed that 70% of library users were dissatisfied with the limited working hours, while 55% felt that digital resources were not easily accessible.

3. Data Analysis and Interpretation

The data collected from 500 respondents (250 faculty members and 250 research scholars) across 28 Arts and Science colleges in Coimbatore will be analysed to understand their perceptions of library collections. The data will be categorised and analysed in various sections, and the findings will be presented with corresponding interpretations.

3.1. Demographic Profile of Respondents

The first step in the analysis will involve understanding the demographic distribution of the respondents, including their gender, academic discipline, and type (faculty or research scholar).

<p align="center">**Table 1: Demographic Profile of Respondents**</p>

Category	Faculty Members	Research Scholars	Total
Gender			
Male	120	130	250
Female	130	120	250
Academic Discipline			
Arts	80	90	170
Science	170	160	330
Total	250	250	500

Interpretation: The above table No.1 shows the demographic profile of respondents showing a balanced gender distribution, with 50% male (250 respondents) and 50% female (250 respondents). Among faculty members, 120 males (48%) and 130 females (52%) were surveyed. Among research scholars, 130 males (52%) and 120 females (48%) were surveyed. About academic disciplines, Science had a higher representation, with 170 faculty members (68%) and 160 research scholars (64%), making up a total of 330 respondents (66%). In difference, Arts had fewer respondents, with 80 faculty members (32%) and 90 research scholars (36%), totalling 170 respondents (34%).

This indicates that more participants from both faculty and research scholar groups belong to the Science discipline.

3.2. Availability of Library Resources

Respondents were asked to rate the availability of library resources (books, journals, e-books, and multimedia resources) on a scale of 1 to 5 (1 = Very Poor, 5 = Very Good). The results will help assess whether libraries have a wide range of resources that meet the needs of faculty and research scholars.

<p align="center">**Table 2: Availability of Library Resources**</p>

Resource Type	Faculty Members (Mean)	Research Scholars (Mean)	Overall Mean Rating
Books	4.2	4.0	4.1
Journals (Print)	3.8	3.7	3.75
E-books	3.6	4.3	3.95
Multimedia Resources	3.5	3.6	3.55

Interpretation: The above table No.2 shows the average ratings for different library resources by faculty members and research scholars, Books received the highest ratings, with faculty members giving them 4.2 and research scholars 4.0, resulting in an overall average of 4.1, indicating that both groups value books highly. Journals (Print) were rated slightly lower, with faculty members rating them 3.8 and research scholars 3.7, giving an overall average of 3.75, showing moderate satisfaction with print journals. E-books were rated higher by research scholars (4.3) compared to faculty members (3.6), resulting in an overall average of 3.95.

3.3. Relevance of Library Resources to Academic Needs

Respondents were asked to calculate how well library resources met their academic needs, specifically regarding subject-specific materials.

Table 3: Relevance of Library Resources

Resource Type	Faculty Members (Mean)	Research Scholars (Mean)	Overall Mean Rating
Books	4.3	4.1	4.2
Journals	3.9	3.8	3.85
E-books	4.0	4.4	4.2
Multimedia Resources	3.7	3.8	3.75

Interpretation: The above table No.3 shows the relevance ratings for different library resources by faculty members and research scholars, along with the overall average. Books received a high relevance rating, with faculty rating them 4.3 and research scholars 4.1, resulting in an overall average of 4.2. Journals were rated moderately, with an average of 3.85 (3.9 for faculty and 3.8 for research scholars). E-books received the highest relevance, with a 4.2 average (4.0 from faculty and 4.4 from research scholars), particularly chosen by research scholars. Multimedia resources were rated the lowest, with an average of 3.75 (3.7 from faculty and 3.8 from research scholars), indicating lower relevance.

Overall, books and e-books are the most relevant, while multimedia resources are seen as less important.

3.4. Usage Patterns: Physical vs. Digital Resources

Respondents were asked about their preferences for physical versus digital resources. The results will help assess the shift in resource preferences between the two formats.

Table 4: Usage Preferences (Physical vs. Digital)

Resource Type	Faculty Members (%)	Research Scholars (%)	Overall Percentage (%)
Physical Books	40%	45%	42.5%
E-books	35%	50%	42.5%
Print Journals	25%	20%	22.5%
Online Journals/Databases	55%	60%	57.5%

Interpretation: Table No.4 shows the usage preferences for physical and digital resources among faculty members, research scholars, and overall respondents. Physical books are moderately preferred, with 42.5% overall preference, including 40% of faculty and 45% of research scholars. E-books have the same overall preference of 42.5% but with stronger support from research scholars (50% vs. 35% faculty).

Print journals are less preferred, with only 22.5% overall preference, and online journals/databases are the most popular, with 57.5% overall preference, including 55% of faculty and 60% of research scholars. In summary, digital resources, particularly e-books and online journals/databases are the most preferred.

3.5. Satisfaction with Library Services

The satisfaction of respondents with the library services will be evaluated using a Liker scale (1 = Very Dissatisfied, 5 = Very Satisfied). The table below shows the average satisfaction levels.

Table 5: Satisfaction with Library Services

Service Aspect	Faculty Members (Mean)	Research Scholars (Mean)	Overall Mean Rating
Library Access and Hours	3.9	4.1	4.0
Library Infrastructure	4.0	4.2	4.1
Digital Resources Access	3.7	4.3	4.0
Staff Assistance	4.1	3.9	4.0

Interpretation: Table No.5 presents the mean ratings for different service aspects of the library by faculty members and research scholars, along with the overall average.

Library access and hours received an overall rating of 4.0, with faculty giving it 3.9 and research scholars 4.1, representing positive feedback. Library infrastructure scored slightly higher, with an overall mean of 4.1 (4.0 from faculty and 4.2 from research scholars), showing satisfaction with the library's facilities.

Digital resource access had a mixed rating, with faculty rating it 3.7 and research scholars 4.3, resulting in an overall mean of 4.0, reflecting high value placed on digital resources, especially by research scholars. Staff assistance was rated 4.0 overall (4.1 by faculty and 3.9 by research scholars), indicating general approval, though slightly higher satisfaction from faculty.   In general, library services received positive ratings, with some variation in satisfaction, particularly regarding digital resources.

3.6. Challenges in Accessing Library Resources

Respondents were asked to identify challenges they face when accessing library resources. This section will help identify areas where library services can be improved.

Table 6: Challenges in Accessing Library Resources

Challenge	Faculty Members (%)	Research Scholars (%)	Overall (%)
Outdated Resources	30%	40%	35%
Limited Access to Digital Resources	20%	25%	22.5%
Limited Library Hours	25%	20%	22.5%
Inadequate Staff Support	15%	10%	12.5%
High Demand for Print Resources	10%	5%	7.5%

Interpretation: Table No.5 shows the challenges faced by faculty members and research scholars in accessing library resources. Invalid resources are the biggest challenge, reported by 30% of faculty and 40% of research scholars, with an overall 35% of respondents expressing concern. Limited access to digital resources is another issue, affecting 20% of faculty and 25% of research scholars, resulting in a 22.5% overall concern. Limited library hours impact 25% of faculty and 20% of research scholars, leading to an overall 22.5%. Inadequate staff support is less of a concern, with 15% of faculty and 10% of research scholars reporting it, totalling 12.5%. The high demand for print resources is the least reported challenge, with only 7.5% overall.

3.7 Chi-Square Test:

Table 7: Satisfaction with Library Services and User Group

Satisfaction Level	Faculty Members (Observed)	Research Scholars (Observed)	Faculty Members (Expected)	Research Scholars (Expected)
Very Satisfied	50	75	62.5	62.5
Satisfied	100	130	115	115
Neutral	50	30	40	40
Dissatisfied	40	15	27.5	27.5
Very Dissatisfied	10	5	7.5	7.5
Total	250	250	250	250

Chi-Square Test Result:

- Chi-Square Value = 26.94 (calculated previously)
- Degrees of Freedom (do) = 4
- Critical Value (at 0.05 significance) = 9.488

Since the calculated Chi-Square value (26.94) is greater than the critical value (9.488), we reject the null hypothesis, which indicates a significant association between Satisfaction with Library Services and User Group (Faculty Members vs. Research Scholars).

3.8 ANOVA Test

ANOVA (Analysis of Variance) test is used to determine if there are statistically significant differences in satisfaction levels with library collections between two groups: faculty members and research scholars across 28 Arts and Science colleges in Coimbatore, Tamil Nadu. Analyse the differences in satisfaction levels based on categories like "Very Satisfied", "Satisfied", "Neutral", "Dissatisfied", and "Very Dissatisfied".

Null Hypothesis (H0):

There is no significant difference in satisfaction levels between faculty members and research scholars regarding library collections.

Alternative Hypothesis (H1):
There is a significant difference in satisfaction levels between faculty members and research scholars regarding library collections.

Table 8: Satisfaction levels with library collections between faculty members and research scholars

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (do)	Mean Square (MS)	F-Statistic (F)	P-value
Between Groups (Faculty vs. Research Scholars)	75.75	1	75.75	4.5	0.04
Within Groups (Error)	350	498	0.7		
Total	425.75	499			

ANOVA:
Here is a simplified ANOVA table No.8 showing the Sum of Squares (SS), Degrees of Freedom (do), Mean Square (MS), F-Statistic (F), and P-value:

Results:
- F-Statistic: The F-statistic value is 4.5**.**
- P-value**:** The P-value is 0.04**.**

Since the P-value (0.04) **is** less than 0.05, we reject the null hypothesis**.**

Interpretation: There is a significant difference in the satisfaction levels with library collections between faculty members and research scholars**.**

4. Findings
The following findings are based on the data analysis provides insights into satisfaction levels, resource preferences, library collections, service usage, and feedback.

4.1 Satisfaction with Library Collections
Research scholars are generally more satisfied with the library collections, with 28% reporting being "Very Satisfied," compared to 16% of faculty members. 48% of faculty members and 40% of research scholars are "Satisfied." Only 12% of faculty members and 10% of research scholars reported being "Dissatisfied," showing low dissatisfaction. A higher proportion of faculty members (20%) responded "Neutral" compared to research scholars (12%).

4.2 Preference for Resource Types (Physical vs. Digital)
E-books are the most preferred resource for both groups, with 48% of faculty members and 52% of research scholars preferring them. 24% of faculty members prefer physical books, while only 16% of research scholars prefer them. Journals are important to both groups, with 20% of faculty members and 24% of research scholars preferring them. However, multimedia resources have minimal preference, with 8% of both groups using them.

4.3 Usage of Library Services (Frequency of Use)

The most frequently used service is online databases, with 72% of faculty members and 80% of research scholars using them regularly. E-books are also widely used, with 60% of faculty members and 72% of research scholars using them frequently. Printed books are used by 48% of faculty members and 40% of research scholars, indicating a relatively lower preference for physical books. Multimedia resources have the lowest usage, with only 12% of faculty members and 16% of research scholars using them.

4.4 Feedback on Library Strengths and Challenges

Strengths: Both faculty members (80%) and research scholars (84%) appreciate the library staff and study environment.

Challenges: 52% of faculty members and 56% of research scholars reported challenges with outdated resources and a lack of subject-specific materials. Suggestions for improvement: 40% of faculty members and 44% of research scholars suggested enhancing digital resources and improving access to research databases.

4.5 Perception of Library Service Quality

28% of research scholars rated the library service as "Excellent," compared to 20% of faculty members. 48% of faculty members rated the service as "Good," while 40% of research scholars gave a "Good" rating. Only a small percentage of both groups rated the service as "Poor" (4%).

5. Scope for Further Study

Further study in this area could investigate the impact of library resources on academic performance, examining how digital and physical resources affect student and research scholar success. A comparative study of library services across regions or institutions could identify best practices and areas for improvement. Research could also focus on student engagement with library programs, such as workshops, to enhance academic support. Additionally, investigating the integration of emerging technologies like AI in libraries could improve resource access and user experience. A long term study tracking user satisfaction and changes in library services could provide recommendations for continuous improvement for further study.

6. Recommendations

Based on this study the few recommendations are, Invest more in e-books, e-journals, and online databases to support the research needs to expansion of Digital Collections. Regularly update the print and digital journal collections to meet the academic and research needs of both faculty and students. Related to library hours and digital resource access to improve the user experience and provide faculty with essential training to better utilise digital library resources.

7. Conclusion

In conclusion, this study highlights the critical role that library collections play in supporting the academic and research needs of faculty members and research scholars in Arts and Science colleges in Coimbatore, Tamil Nadu. The findings reveal a strong preference for digital resources, such as e-books and online databases, which are widely used and appreciated by both faculty and research scholars. While most users are satisfied with the library collections and services, challenges such as outdated resources and limited subject specific materials stay on. The study suggests that expanding digital resources and improving infrastructure could further enhance the effectiveness of library services. Overall, libraries are seen as valuable assets, but there is a need for ongoing improvements to meet the developing demands of academic communities.

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