Information Behavior and Accessibility: Examining How Differently-Abled Students Use Academic Library Services in India

Suman Pandey[1]*

[1]Library and Information Science, Desh Bhagat University, Mandi Gobindgarh, Punjab, India

***Corresponding Author E-mail: gurinderkaursandhu007@gmail.com**

Abstract

Supporting the academic success of students with disabilities in higher education requires access to inclusive information environments. The information behavior and accessibility experiences of students with disabilities utilizing academic library services in a few Indian universities were investigated in this study. 120 students' survey responses were combined with qualitative information from semi-structured interviews using a mixed-methods approach. The findings demonstrated that even while a large number of students frequently accessed library resources, their perception of accessibility remained poor, and that systemic obstacles including insufficient assistive technology, restricted physical infrastructure, and unprepared staff members had an impact on their involvement. According to statistical analysis, there were no appreciable variations in accessibility perceptions among the various types of disabilities, suggesting that difficulties were shared by all. These results emphasize the necessity of extensive institutional changes to establish academic library environments that are more welcoming and easily accessible.

Keywords: Accessibility, Differently-abled students, Academic libraries, Information behavior, Higher education, India

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1. INTRODUCTION

Academic performance, intellectual development, and social participation in higher education are all significantly influenced by information access[1]. For students with disabilities, academic libraries are vital sources of information, digital resources, and academic support services. But even though inclusive education is becoming more widely recognized in India, many university libraries still struggle to accommodate the wide range of accessibility requirements of this student body[2]. The capacity of learners with disabilities to fully utilize the resources that are

provided is frequently limited by a lack of assistive technologies, physical infrastructure obstacles, and inadequate staff training[3]. Developing inclusive and equitable academic ecosystems in this context requires an understanding of how these students use information services and navigate library environments[4]. The purpose of this study is to identify current gaps and provide ideas for significant improvement by investigating the information behavior and accessibility experiences of students with disabilities in Indian university libraries.

1.1. Statement of the problem

Academic libraries at many institutions still struggle to provide fair and easily accessible information services for students with disabilities, even in spite of notable progress in inclusive education legislation in India[5]. These students frequently face several obstacles that make it difficult for them to use library services efficiently, such as insufficient assistive technology, physically inaccessible locations, a lack of alternative formats, and undertrained library employees. Their information-seeking activity is thus often limited, which may have an impact on their academic achievement and overall educational experience[6]. However, there is still a dearth of empirical knowledge regarding the real ways in which students with disabilities use library services, the particular difficulties they encounter, and the degree to which the facilities now in place satisfy their needs. To promote true inclusion, it is imperative that libraries carefully examine their experiences and pinpoint areas for improvement.

1.2. Background of the study

India has made significant strides in the direction of inclusive education, especially in the wake of governmental programs that prioritize equal access to educational opportunities for all students, including those with disabilities[7]. The intellectual growth and academic achievement of students with disabilities are greatly aided by academic libraries, which serve as important repositories of information. However, a number of studies and institutional reports show that many university libraries still have difficulty creating fully accessible spaces[8]. These libraries frequently lack necessary assistive technology, physical accommodations, or staff members who are trained to meet the various needs of users with disabilities. These restrictions may limit students' autonomy in finding, using, and accessing academic materials, which may have an impact on their information behavior and overall educational experience[9]. In order to build inclusive information systems and promote equitable academic participation, it is crucial to comprehend how differently-abled students use library services and the elements that either facilitate or block their access[10]. This study places itself in this larger framework with the goal of providing empirical knowledge that can guide practice, policy, and upcoming advancements in academic library accessibility in India.

1.3. Objectives of the Study

- To investigate how students with disabilities use specific academic libraries in India to find information.

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- To evaluate how accessible and usable library materials, services, and infrastructure are for students with disabilities.
- To determine the difficulties and impediments that students with disabilities have when attempting to utilize academic library services.
- To make suggestions based on the study's findings for enhancing the inclusion and accessibility of academic library services.

2. METHODOLOGY

This study looked into how students with disabilities used and accessed academic library services at a few Indian universities. In order to comprehend both the information activity patterns and the accessibility hurdles, a mixed-methods methodology was used. The research design, sample, tools, processes, and analytical techniques employed are described in the methodology section below.

2.1. Description of Research Design

A descriptive mixed-methods study design was employed. Semi-structured interviews were used to provide qualitative insights to thoroughly examine individual experiences, while standardized questionnaires were used to collect quantitative data to detect usage trends and accessibility issues. Triangulation and improved validity were made possible by the combination of these techniques.

2.2. Sample Details

The study comprised 120 students with disabilities who were enrolled in five Indian public universities. To guarantee representation of students with learning, hearing, locomotor, and visual impairments, a purposeful sampling technique was employed. Additionally, (n=10) library employees were included for other viewpoints.

2.3. Instruments and Materials Used

Data were collected using:

- A structured questionnaire with multiple-choice and Likert-scale questions about accessibility, library usage frequency, information-seeking behavior, and service satisfaction.

- A semi-structured interview guide that emphasizes difficulties, networks of support, and suggestions for enhancement

- To support findings, institutional documentation including service manuals and library accessibility policies was examined.

2.4. Procedure and Data Collection Methods

The surveys were disseminated electronically and in easily readable formats, including large-print and screen-reader-friendly PDFs. The survey was filled out whenever it was convenient for the participants.

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Depending on the accessibility requirements of the participant's, semi-structured interviews were either performed in person or over video call. With consent, each interview was audio recorded and lasted roughly 20 to 30 minutes.

In order to comprehend the difficulties in providing services, library employees were also interviewed. Every piece of information was gathered over a six-week period.

2.5. Data Analysis Techniques

SPSS, quantitative data were coded and subjected to descriptive statistics (mean scores, frequency, and percentage). Chi-square tests were used to analyze disability category differences.

Thematic analysis was used to examine qualitative interview transcripts, utilizing open coding and categorizing recurrent themes pertaining to service gaps, user preferences, and accessibility issues. The dependability of the results was enhanced by the triangulation of quantitative and qualitative data.

3. RESULTS

The results of the quantitative and qualitative data gathered from students with disabilities at five Indian universities are presented in this section. Understanding their information-seeking habits, library usage patterns, and perceptions of the accessibility of academic library services were the objectives of the analysis. Descriptive statistics and chi-square tests were used to assess quantitative data, while theme analysis of qualitative responses was used to understand accessibility issues.

To determine the level of engagement with accessible resources, the frequency of access to academic library facilities by differently-abled students was evaluated. During a normal academic week, participants were asked how frequently they visited the library. Table 1 displays the replies' distribution.

Table 1: Frequency of Library Use by Participants

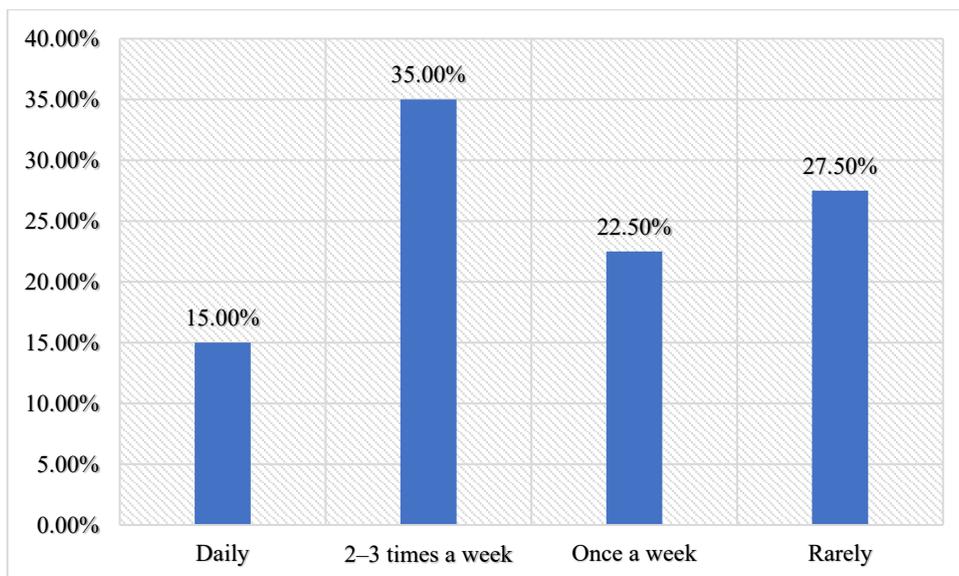| Library Use Frequency	N	Percent (%)
Daily	18	15.0%
2–3 times a week	42	35.0%
Once a week	27	22.5%
Rarely	33	27.5%
Total	120	100.0%

Figure 1: Visual representation of Library Use by Participants

According to Table 1, most students said they used the library at least once a week, with 35% saying they used it two or three times. However, a significant percentage (27.5%) only seldom accessed the library, suggesting that some groups may face obstacles or find the services offered to be of limited benefit.

Students were asked to rank their experiences on a five-point scale from "Very Accessible" to "Not Accessible" in order to assess the accessibility of library services. Their answers revealed information about how inclusive and user-friendly they thought library spaces were. These findings are summarized in Table 2.

Table 2: Perceived Accessibility of Library Services

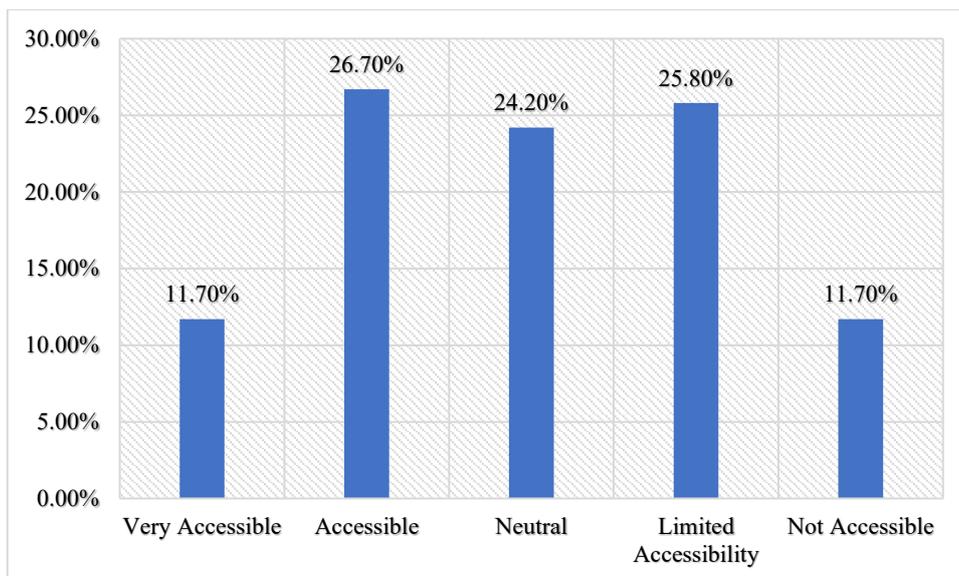| Accessibility Rating	N	Percent (%)
Very Accessible	14	11.7%
Accessible	32	26.7%
Neutral	29	24.2%
Limited Accessibility	31	25.8%
Not Accessible	14	11.7%
Total	**120**	**100%**

Figure 2: Visual Representation of Perceived Accessibility of Library Services

Table 2 reveals that 37.5% of respondents thought accessibility was limited or bad, while just 38.4% said the library was accessible or very accessible. These findings suggested that accessibility was still a major issue for a large number of students with disabilities, which calls for more research.

3.1. Statistical Analysis

The study employed a chi-square test to investigate if there were significant differences in accessibility perceptions amongst the several handicap categories (visual, hearing, locomotor, and learning disorders).

A crosstabulation of disability type and accessibility ratings was done to see if each disability category had a different opinion about how accessible libraries were. Table 3 displays the replies' distribution among the categories.

Table 3: Crosstabulation of Disability Type × Accessibility Rating

Disability Type	Very Accessible	Accessible	Neutral	Limited	Not Accessible	Total
Visual	2	6	7	12	5	32
Hearing	4	10	8	6	2	30
Locomotor	5	9	6	7	3	30
Learning	3	7	8	6	4	28
Total	14	32	29	31	14	120

Table 3 shows that students with disabilities had varied feelings about the library's accessibility. It appears that accessibility was a problem for all types of disabilities, as no one disability type consistently indicated better or lower satisfaction.

To find out if there were any significant differences in accessibility ratings between impairment groups, we ran a chi-square test of independence. The results of the SPSS-style chi-square test are shown in Table 4.

Table 4. Chi-Square Tests

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.782	12	.252
Likelihood Ratio	15.021	12	.240
Linear-by-Linear Assoc.	1.125	1	.289
N of Valid Cases	120	—	—

Perceived accessibility was not significantly related to disability type, according to the chi-square results ($p > .05$). This further demonstrated the necessity for all-encompassing, accessibility-focused enhancements to library services and provided evidence that accessibility problems were systemic rather than disability-specific.

In order to round out the quantitative results, the qualitative data was evaluated thematically using semi-structured interviews. When looking at the difficulties encountered by students with disabilities when utilizing university libraries, a number of trends became apparent. In Table 5, we can see a summary of the main points.

Table 5. Summary of Major Themes Identified

Theme	Description
Lack of Assistive Technologies	Students reported insufficient screen-reader software and limited Braille materials.
Physical Accessibility Barriers	Issues included inaccessible entryways, heavy doors, and inconvenient seating arrangements.
Limited Staff Awareness	Students felt staff were not adequately trained to support differently-abled users.
Need for Personalized Support Services	Requests for disability-specific orientation sessions and support desks were common.

Table 5's themes show that users continue to encounter technological, structural, and service-related obstacles. These details backed up the numbers and highlighted how important it is for academic libraries to have more accessible physical design, better staff training, and better assistive technology.

4. DISCUSSION

This study set out to investigate the information-seeking behaviors of academic library users with disabilities in Indian institutions, specifically looking at how they used these services and what obstacles they encountered. The results showed a complicated pattern wherein students

frequently made use of library resources while yet facing substantial accessibility issues. Results from both qualitative and quantitative analyses showed that accessibility was a problem for all types of disabilities, revealing systemic inadequacies that need fixing at the institutional level.

4.1. Interpretation of Results

Despite frequent library use, many students reported difficulty gaining access to the resources they needed. Further confirmation from the chi-square test showed that accessibility issues persisted across different kinds of disabilities, indicating that the problems did not stem from user traits but rather from library architecture, design, and service offerings. Thematic analysis corroborated this view by highlighting recurrent problems including inadequate assistive technology, unprepared library workers, and physical barriers. Taken as a whole, the results suggested that current services were not designed with users with disabilities in mind, which limited their access to academic resources.

4.2. Comparison with Existing Studies

This study's results are in line with previous research that has shown that students with disabilities continue to encounter barriers to access in academic libraries. Consistent with the current study's finding of systemic accessibility gaps, Vs and Sudhier (2022)[11] also noted that insufficient assistive technology and low staff understanding continued to be significant obstacles for students with disabilities. We discovered low accessibility ratings, which are consistent with the findings of Chandrakanth and Reddy (2019)[12] that physical infrastructure restrictions and inadequate service customization harmed user happiness. The fact that students with disabilities in India still have uneven access to information services, even after legislative instructions, is highlighted by Yadav and Singh (2022)[13], lending credence to our claim that these problems affect all disability categories. The present study's conclusions that institutional frameworks, not user-specific characteristics, impede access are in line with those of Jha (2022)[14], who stated that libraries frequently fail to assure fair access owing to antiquated service models. The study's qualitative themes, which emphasized the necessity of better assistive technology, staff training, and inclusive service designs, were further supported by Salauddin's (2022)[15] emphasis on the need for systemic improvements in accessible formats and user assistance. These results support the current research and show that university libraries in India still have a long way to go before they fix their accessibility problems.

4.3. Implications for Existing Studies

This study's findings aligned with and extended insights from previous research:

- Inadequate assistive technology is a significant obstacle for visually impaired and other differently-abled learners, according to existing literature.

- This study was consistent with previous research on library accessibility in Indian higher education, which has focused on physical infrastructure issues.

- The investigation's conclusion that staff readiness has a major impact on user experience is supported by research that emphasizes the significance of staff training and disability awareness.

- Previous research has suggested redesigning services with the user in mind, and the current results support the necessity of inclusive service models in academic libraries.

- The prevalence of barriers across disability groups is consistent with past research that suggests institutional gaps, not individual disabilities, are the root cause of accessibility concerns.

4.4. Limitations of the Study

The study had several limitations that should be considered when interpreting the results:

- Only five universities were included in the sample, which could not be representative of all Indian higher education establishments.

- Self-reported data might have contained errors in recollection or personal bias.

- Only four major disability categories were included in the study, which may have excluded the experiences of other disability groups.

- The length of the interviews may have limited the depth of qualitative insights.

- A single scale was used to assess accessibility perceptions; more observational data might have given a more complete picture.

4.5. Suggestions for Future Work

Future research may build upon the current study by considering the following directions:

- Adding more universities from various parts of India to the sample.

- Using accessibility audits or observational techniques to supplement self-reported data.

- Analyzing how new technologies, such assistive systems powered by artificial intelligence, can improve library accessibility.

- To gain a deeper understanding of the distinct requirements of individual user groups, case studies tailored to disabilities are being conducted.

- Assessing how staff training initiatives and legislative changes affect the long-term improvement of library accessibility.

5. CONCLUSION

This study looked at how differently-abled students used academic library services in a few Indian universities and their accessibility experiences. The results showed that even while a large number of students actively used the library's services, there were still major accessibility issues for all handicap categories. The obstacles were systemic, ranging from physical infrastructure restrictions to inadequate assistive technologies and inadequate staff preparation,

as shown by both numeric data and thematic insights. Overall, the study showed that in order to guarantee fair access to information for all students, inclusive, student-centered changes in academic library services are required.

5.1. Summary of Key Findings

The major findings of the study can be summarized as follows:

- The majority of students with disabilities visited the library at least once a week, demonstrating a proactive approach to information searching.

- Less than 40% of respondents rated library environments as accessible, indicating typically poor perceived accessibility levels.

- The chi-square test revealed no significant correlation between disability type and accessibility perceptions, confirming that accessibility issues were comparable across disability groups.

- Lack of accessible technology, physical hurdles, and inadequate staff training were among the major concerns identified by qualitative data;

- Overall, the findings showed that institutional structures, not user-specific variables, were the main cause of accessibility constraints.

5.2. Significance of the Study

The study provided empirical insights into the lived experiences of students with disabilities in academic libraries, adding to the expanding body of scholarship on inclusive higher education in India. It emphasized systemic gaps that still limit equitable access and emphasized the value of accessible information environments in promoting academic performance. The study highlighted the need for comprehensive institutional improvements rather than discrete treatments by showing that accessibility concerns were common across disability kinds. For legislators, librarians, and university administrators striving for inclusive and disability-friendly library ecosystems, these findings offer significant guidance.

5.3. Recommendations

Based on the results, the following recommendations were proposed:

- Universities ought to spend money on cutting-edge assistive technology like ergonomic equipment, Braille displays, screen readers, and captioning tools.

- To provide barrier-free access, library infrastructure should be updated with ramps, larger aisles, tactile signage, and movable seats.

- All library employees should be required to complete accessibility and disability awareness training.

- Libraries ought to set up help centers or support desks especially for patrons with disabilities.

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- Regular accessibility audits and student input channels ought to be incorporated into policy frameworks.

- To establish more accessible library environments, cooperative efforts between universities, disability support units, and accessibility specialists should be reinforced.

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