Effects of Students' Demographic and Academic Characteristics on Library Use: A Perspective from Pakistan

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abstract: This study investigated students' use of the central library of the University of the Punjab in Lahore, Pakistan, including the effect of various demographic and academic characteristics on the utilization of library services. The study also examined library users' methods of finding information sources and their perceived importance of the academic library as a place. A validated, self-administered questionnaire was distributed to 400 library users in eight different library locations. Of 400 questionnaires, 317 responses were submitted, for a response rate of 79 percent. The findings indicated that students frequently visit the library for an academic reading environment and a quiet zone for individual study. Overall, many factors influence library use, including both demographic and academic characteristics. Respondents perceive the value of the library as a place for learning, deep thinking, and information-seeking, and they regard the library's collection as important. The university library could apply these insights to strengthen library services and provide more places for learning and study. This article's findings will also prove useful to other Pakistani regional academic libraries considering use patterns and future areas for service development.

Introduction

The country of Pakistan, in South Asia, came into being in 1947 at the time of the partition of British India. The estimated total population as of 2020 was 233.5 million.[1] Two-thirds of the people live in villages where agriculture is the main industry. Pakistan is a multiethnic and multilingual state. Urdu, the national language, is the language of instruction in secondary schools. English is widely used in commerce and business and continues to be an official language of Pakistan. It is also the language of instruction at the higher levels of education, particularly for science and technology courses. Pakistan's literacy rate is 49 percent.[2] There are 226 public and private universities in Pakistan. They are fully equipped with modern books, journals, periodicals,

manuscripts, compact discs, movies, maps, audiovisual materials, and the like.[3] The funding situation for university libraries is much stronger than that for school, college, national, and public libraries, providing them with more resources, services, personnel, and organization.[4]

Pakistani university libraries are among the most advanced in the country. The 10 universities existing in 1981 grew to 23 by 1989; their more than 140 libraries hold almost 2,900,000 volumes, accounting for over a fifth of all books in Pakistani librar-ies.[5] University libraries grew at more than 60,000 volumes a year in the 1980s, keeping pace with the growth of the student population.[6] The government's University Grants Commission funds the libraries of all public universities. Notable collections are at the University of the Punjab Library (opened in 1906; 769,000 volumes); the Mahmud Hus-sain Library at Karachi University (founded in 1952; 255,000 volumes); the University of Peshawar (opened in 1951; 200,000 volumes); Quaid-i-Azam University, Islamabad (established in 1965; 150,000 volumes); and the University of Sindh, Jamshoro (opened in 1949; 137,800 volumes). The Lahore University of Management Sciences (8,000 volumes) and Shah Abdul Latif University in Khairpur (19,200 volumes) began in 1985; and Ham-dard University (80,000 volumes) opened at Madinat al-Hikmah near Karachi in 1989.[7]

Pakistani LIS researchers have mostly surveyed academic libraries with a focus on university libraries. They have explored users' perceived satisfaction with library resources and services, the quality of service, collection development and management, and digitization practices. Researchers have also examined innovations in university libraries and the role of Pakistani university libraries in the reading habits of students.[8]

This study investigates the use of academic library services and facilities and the influence of demographic and academic characteristics on library utilization from a developing country's perspective. The study also examines library users' methods of finding sources and what they perceive as the importance of the library as place within Pakistan. This study is unique in that it covers the range of services and facilities that a university library offers its patrons and examines the influence of demographic and academic characteristics on library use.

Literature Review

A review of related literature shows that researchers have investigated the university libraries of Pakistan to determine users' perceived service quality, collection management practices, satisfaction with library resources and services, and research support services. Muhammad Sajid Mirza and Khalid Mahmood studied university libraries' electronic resources and services and concluded that the libraries provide effective resources and services to their users. The library patrons in the study were very satisfied with the online public access catalog, Internet, e-mail services, databases, CD-ROM databases, virtual or electronic reference service, and printing facilities.[9] Shafiq Ur Rehman determined the service quality of Pakistani university libraries from the users' perspective. He collected data from undergraduate and graduate students and faculty members of 22 Pakistani universities through a locally modified LibQUAL+ survey in Urdu. Rehman's findings indicated that libraries overall failed to meet users' minimum acceptable and desired levels of service quality.[10] The different findings of the two studies might result from

the researchers measuring different aspects of library resources and services. Mirza and Mahmood investigated the effectiveness of the electronic resources and services and found users satisfied with them. The LibQUAL+ survey instrument employed by Rehman measured library users' minimum, perceived, and desired levels of service quality across three dimensions: affect of service, information control, and library as place.

Most academic libraries in Pakistan focus on increasing the size of their collections, which means that an attitude of "the bigger the better" prevails. Higher authorities seldom hold libraries accountable for the utility or effectiveness of their collections.[11] Ghalib Khan and Rubina Bhatti evaluated the collection development and management policies and procedures in the university libraries of the North West Frontier Province of Pakistan (currently Khyber Pakhtunkhwa or KPK) based on users' satisfaction. The study concluded that collection development and management in the libraries were ineffective in fulfilling users' information needs.[12]

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Researchers in Pakistan also examined the role of university libraries and the reading habits of user populations. Saira Soroya and Kanwal Ameen studied the future role of university libraries as perceived by millennials, people born in the 1980s or 1990s, in the context of the current digital environment. The results revealed that Pakistani millennials want easy access to a wide range of reading material in both print and digital form, and they desire continued access to electronic and print resources. Findings confirmed that, overall, Pakistani students prefer access to a hybrid library (both print and electronic).[13] Saadia Mushtaq, Saira Soroya, and Khalid Mahmood explored the reading habits of Generation Z Pakistani students—that is, those born in the late 1990s and early 2000s—in two Lahore district schools. Their findings revealed that Generation Z students prefer to read on paper and in English. On average, they read for up to four hours daily, preferably at home and mostly for academic purposes. The students indicated that libraries, either academic or public, were their least preferred place for reading and obtaining reading material.[14]

Research support services in university libraries of Punjab in Pakistan were examined by Nusrat Ali, Muhammad Shoaib, and Iqbal Hussain Asad. They reported that the libraries provided traditional services as well as modern facilities to scholars, students, and teachers for both face-to-face and online learning. The study concluded that Pakistani university libraries play a pivotal role in supporting research and academic activities. Librar-

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ies provide specialized research training to scholars, including strategies for conducting literature reviews, searching techniques, data analysis tools, and reference management.[15]

Muhammad Shoaib, Farooq Abdullah, and Nusrat Ali also examined library resources and the research environment in higher education institutions in terms of students' satisfaction. A total of 1,358 students participated from both public and private universities. Findings showed that the students were provided with resources to meet their research needs. The study also revealed that more research-focused students were satisfied with the available library resources.[16]

Few or no studies, however, have examined the frequency of various activities and use of university library services and facilities. There also is a need to explore the influence of demographic and academic characteristics on the use of university library services and facilities within developing countries, including Pakistan. This study aims to fill those gaps.

Objectives of the Study

The objectives of this study are as follows:

1. Investigate academic library users' most frequent and least frequent activities in the Punjab University Library.
2. Measure the influence of users' demographic and academic characteristics (gender, education, year of study, semester of study, discipline, cumulative grade point average, library instruction, and frequency of library visit) on their activities in the library.
3. Investigate users' specific strategies for finding information within the library.
4. Assess users' perceived significance of the university library as a place.

Methodology

The design of the present study was a quantitative survey. The Punjab University Library, the central library of University of the Punjab, was chosen as the setting. The university also has 56 additional independent libraries attached to university departments, colleges, and institutes. Punjab University Library has a print book collection of more than 500,000 volumes in European languages and in Urdu, Arabic, Persian, and Sanskrit. In addition to the general collection, it has special collections, manuscripts, personal collections, serials, and digital materials. The library is scanning its manuscripts and rare collections to digitize them for preservation and distribution on request to researchers from all over the world.

An average of 1,200 users visit Punjab University Library daily, including students, researchers, and faculty of the university along with foreign scholars and visitors. The targeted population of the present study was students visiting the library in January 2020. A questionnaire was developed in consultation with relevant published research and the researchers' personal observations. It covered demographic and academic characteristics, frequency of activities in the library (use of services and facilities), methods of finding library information sources, utilization of the library's collections, and users' perceived importance of the library as a place. The survey instrument is provided in the Appendix.

The survey instrument was assessed for content validity by two professionals and two faculty members from the Department of Information Management at the Univer-

sity of the Punjab. A pilot study was conducted in the second week of December 2019. About 50 students in the library's reference section and discussion hall filled out the questionnaire. Respondents in the pilot study were also asked to mention any difficulty or ambiguity regarding the questions. They declared themselves satisfied with the content of the questionnaire.

After minor phrasing alterations, 400 copies of the pretested questionnaire were distributed at eight different locations in the library: the registration desk, reference section, Oriental (Asian) section, serials section, Internet lab, United Nations Organization section, and the study halls of the ground and second floors. Of 400 questionnaires, 317 responses were returned, for a response rate of 79 percent. The response data were entered into SPSS, and descriptive statistics and ordinal regression analysis were used to analyze the data.

Demographic Characteristics

Data analysis showed that a majority of the respondents were male (56 percent) as compared to female (44 percent). A majority (60 percent) were aged 21 to 24, and 22 percent were between 17 and 20. Most of the library users (43 percent) were graduates with BS, MA, or MSc degrees; 23 percent were postgraduates with MPhil or PhD qualifications. A majority of the respondents (53 percent) had a cumulative grade point average (CGPA) in the range of 3.1 to 3.5, and some (32 percent) had a CGPA above 3.5.

Faculties of University of the Punjab

The University of the Punjab has 13 divisions or faculties, but the faculty of medicine had no on-campus students at the time of data collection. The highest number of respondents (16 percent) were from the Faculty of Behavioral and Social Sciences, nearly equaled by those (16 percent) from the Faculty of Commerce. The lowest number of responses came from the Faculty of Pharmacy (0.3 percent) and that of Oriental Learning (3 percent). There were more respondents from the faculties of Social and Behavioral Science, Commerce, and Economics and Management Sciences than from those of Science, Life Sciences, and Arts and Humanities. Of 317 respondents, 8 did not mention their discipline.

Library Visits

Data analysis shows that of 312 respondents, the highest number (37 percent) reported daily visits to the university library. Fourteen percent of respondents went to the library about four to five times per week, and 26 percent visited the library about two to three times weekly.

Respondents were asked about the average amount of time they spent during a visit to the library. One-third (33 percent) spent an average of two to four hours during a visit. Some (22 percent) stayed one to two hours, and 21 percent of respondents remained more than six hours. Only 5 percent of respondents spent less than one hour in a visit.

Respondents were asked about attending library instruction or orientation programs. The results show that a majority of the respondents (54 percent) had received a library instruction program.

Activities in the University Library

Respondents were asked to indicate their frequency of participating in activities in the library on a five-point Likert-type scale, where 1 equaled "never" and 5 meant "very frequently." Table 1 reveals the respondents' frequency of various activities. An overwhelming majority of the respondents (77 percent) visited the library for an optimal reading environment (including air conditioning, seating capacity, and study carrels or cabins)

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either frequently or very frequently. A majority of the respondents (67 percent) also came to the library to take advantage of the quiet atmosphere for individual study. Only 13 percent of respondents visited the library to use audiovisual materials either frequently or very frequently, and 14 percent went to the library to attend workshops and seminars.

Table 1 also presents the median values of the respondents' frequency of doing various activities in the library. The most frequent activities were to utilize the optimal reading environment and quiet study zone for individual work (median = 4). Respondents less often went to the library to find information sources, access library e-resources (e-journals and databases), consult reference services, utilize group study rooms, borrow or return materials, or use the computer lab. Respondents' least frequent activities in the library were attending workshops and seminars, socializing with friends, and checking for plagiarism or receiving guidance on avoiding plagiarism. Findings showed that respondents regarded the university library more as a place to study than as a collection of information.

Influence of Demographic and Academic Characteristics

A factor analysis of academic library users' various activities in the university library was performed using principal component analysis. The purpose of such analysis is to reduce the original set of data to a smaller number of variables that still contain most of the information in the large set. The factors with high loading values—that is, values above 0.5, indicating a strong impact on the variables—were further chosen for ordinal regression, a technique that examines the nature and strength of relationships between variables. Table 2 presents the regression analysis of academic library users' activities. The respondents' demographics, academic characteristics, frequency of library visits, and other characteristics were entered into the regression equation to predict the influence of these factors on their activities in the library. Table 2 shows that gender impacted negatively on socialization (meeting friends) and using the reading environment in the library. This means that men socialized less and used the optimal reading environment in the library less often than women did.

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Table 1.
Frequency of respondents' activities in the library

Library activities	Never	Rarely	Seldom	Frequent	Very frequent	Median
Finding library information sources (books, journals, newspapers, etc.)	31 (10%)	63 (20%)	68 (22%)	92 (29%)	58 (19%)	3
Accessing library electronic resources (e-journals, e-books, databases)	60 (19%)	64 (21%)	78 (26%)	65 (21%)	41 (13%)	3
Reference services	60 (20%)	62 (21%)	68 (23%)	78 (26%)	30 (10%)	3
Plagiarism checking and anti-plagiarism guidance	131 (44%)	65 (22%)	58 (19%)	36 (12%)	10 (3%)	2
To avail themselves of the quiet zone (individual study)	22 (7%)	24 (8%)	56 (18%)	95 (31%)	112 (36%)	4
To avail themselves of the discussion room (group study)	59 (19%)	54 (18%)	67 (22%)	78 (25%)	49 (16%)	3
Use of computer lab	89 (29%)	63 (21%)	66 (22%)	56 (18%)	31 (10%)	3
Circulation (book issue/return)	68 (22%)	60 (20%)	79 (26%)	60 (19%)	39 (13%)	3
Use of audiovisual materials	153 (50%)	59 (19%)	53 (18%)	27 (9%)	12 (4%)	1
To attend workshops and seminars	137 (45%)	70 (23%)	56 (18%)	38 (12%)	5 (2%)	2
Socialization (to meet friends/to accompany a friend)	99 (32%)	65 (21%)	61 (20%)	64 (21%)	19 (6%)	2
To avail themselves of a better reading environment (air conditioning, seating capacity, study carrels and cabins)	13 (4%)	26 (8%)	35 (11%)	116 (38%)	119 (39%)	4

Table 2.
Ordered logit regression of academic library user activities

Variables*	Socialization estimates	Reading environment estimates	Discussion room estimates	Plagiarism estimates	Computer lab estimates	Finding library print sources estimates	Accessing e-sources estimates	Quiet zone (individual study) estimates	Use of audiovisual materials estimates	Use of reference services estimates
Gender										
Male = 1										
Female = 0	-.760§	-.840§	-.242	-.138	-.369	-.760§	-.404	-.567†	-.018	.241
Education										
BS	1.441†	-.463	.873	1.154	-.055	-.242	.507	.110	.244	.239
MA/MSc.	1.688§	-.450	.538	.990	-.138	-.212	.271	-.110	.266	-.194
MPhil/MS	.997	-.047	.692	.921	-.407	-.592	-.187	-.120	.208	-.092
PhD	3.091§	-1.609	1.422	.626	-.248	-.730	-2.909§	-1.780†	.223	-1.112
Year of study										
1st year	2.171†	-.169	-.203	2.244†	.422	-1.186	.199	.089	.881	1.006
2nd year	.351	.450	-.102	1.306†	.927	-.282	1.579§	.161	.840	1.488§
Semester										
1st	-.660	.228	.535	1.315†	.354	-.120	.743	.713	1.278†	1.025†
2nd	-.666	.331	.388	-.448	-.286	-.103	-.050	.100	-.586	-.003
3rd	.603	.305	.354	.193	.402	-.139	.406	.314	.891	.503
4th	.013	.006	.456	-1.013	.177	-.532	-.876	-.221	.005	.116
5th	-.059	.273	.017	.447	-.444	-.237	.606	.720	.162	.912
6th	.089	-.363	-1.293	-.001	-.182	1.926§	.023	.433	-1.333	.566
7th	-.563	.502	-.060	-.861	-.045	-.602	.179	1.128	-.259	.647
8th	-.722	1.310	-.278	-1.608†	.061	-.288	-1.250	1.619†	.208	-.779

CGPA

1.5–2.1	-2.100	1.041	2.287	-1.035	.011	.982	1.451	-1.524	.350	-.573
2.1–2.5	-1.122	-1.287	-1.387	-.693	-.898	2.250†	-.327	-.801	-.873	-1.136
2.6–3.0	-.668†	-.776	.004	.539	-.477	-.239	-.316	-.430	-.727	-.115
3.0–3.5	-.774§	-.457	-.454	.518	-.140	-.870†	-.181	-.708	-.137	.079
Above 3.5	-1.347§	-.574	-.791†	.465	-.272	-.631	-.253	-.589	-.280	.098

Frequency of library visits

Four to five times in a week	-.084	-.542	-.224†	1.102§	-.485	.484	.209	-.431	.944†	.735†
Two to three times in a week	-.220	.098	-.130	.014	-.010	.869§	.484	.107	.759†	.626†
Once a week	.834	-.609	.087	.174	1.244†	1.284†	1.272†	.215	1.701§	1.385§
Few times a month	.142	.466	.044	-.348	.121	.604	-.015	.172	-.055	1.330§
Once in a month	.447	-.598	.158	.012	1.021	1.158†	-.071	.266	1.313†	.751
Few times a year	.331	1.186	.223	-.016	1.034	.339	.338	.779	1.653	1.091
About once a year	-.675	1.109	.654	-1.372	-.740	1.971	.469	.638	-3.030§	1.441
Seldom	.199	.452	.015	-.501	.398	1.328†	.314	.302	.887	.434

Library instruction

Received = 1										
Not received = 0	-.201	-.243	-.416	-.552†	-.696§	-.382	-.582†	-.400	-.403	-.363

Table 2, continued.

Variables*	Socialization estimates	Reading environment estimates	Discussion room estimates	Plagiarism estimates	Computer lab estimates	Finding library print sources estimates	Accessing e-sources estimates	Quiet zone (individual study) estimates	Use of audiovisual materials estimates	Use of reference services estimates
Discipline										
Science	.129	–.688	.008	.795	1.168§	.495	.762	–1.055†	1.638§	.991†
Arts and Humanities	–.164	–.793	–.329	–.173	.809	.357	.202	–.548	.519	.473
Law	.261	–.590	–.358	.263	.682	.017	.226	–1.461†	.834	.432
Commerce	.374	–.791	–.538	1.228†	1.292§	.692	1.052†	–.966†	1.452§	.957†
Social and Management Science	–.083	–.948	.285	.769	.254	.517	–.544	.733	.778†	

*Dependent variables are the frequency of doing the library activities described in the column headings on a five–point scale, from "never" to "very frequently."

†Significant at 0.05.

§Significant at 0.01

Gender had no impact on the use of group study facilities, plagiarism checking, or utilization of computer labs in the library. Level of academic education positively impacted socialization in the library. Library users with a BS, MA, or PhD degree socialized more than those with a MPhil degree. However, education did not influence the use of the library's reading environment, group study rooms, plagiarism services, and computer labs.

Students' academic year also positively affected socializing and use of plagiarism services. Users enrolled in the first year of their academic program socialized more often and visited the library for plagiarism checking more often than second-year students did. Students' semester also impacted use of plagiarism services. Users in the first semester of their program of study more frequently consulted plagiarism checking services than did users in other semesters. Reaching the last semester, the eighth, had a negative influence on use of plagiarism checking. Cumulative grade point average (CGPA) impacted negatively on socializing and group study activities. Students with a CGPA of 2.6 to 3.0 or 3.0 and above socialized less in the library and made less use of group study areas. Frequency of library visits impacted positively on use of plagiarism checking services and utilization of computer labs. Students visiting the library four to five days a week more often used plagiarism checking than did those who came less often. Those entering the library once a week utilized computer labs more frequently than others did.

Library instruction participation impacted negatively on use of plagiarism checking and computer labs. Respondents who received library instruction also used computer labs less than those who did not receive such instruction. The discipline of users impacted positively on plagiarism checking and computer lab use. Students from science and commerce fields used computer labs more than those in arts and humanities, law, and social and management sciences disciplines. Respondents from the commerce discipline employed plagiarism checking services more than did those from other disciplines.

> **Students from science and commerce fields used computer labs more than those in arts and humanities, law, and social and management sciences disciplines.**

Survey results show that gender impacted negatively on individual study. Male students less likely used the quiet zone for individual study than did female students. Gender did not, however, affect use of library print information sources, accessing library electronic sources, or use of audiovisual and reference sources. Level of education negatively impacted use of electronic information sources and individual study areas. Scholars with a PhD would less likely access electronic sources and use individual study areas than users with a BS, MA or MSc, or MPhil degree.

Year of study also positively impacted use of electronic information sources and of reference sources. Students enrolled in the second year of their academic program more frequently accessed electronic information sources and used reference services more often than did students in their first year of study. Respondents' semester also impacted positively on use of library print information sources, of audiovisual materials, and of reference services, and on individual study practices. Students in the first semester of their program of study more frequently used audiovisual materials and

reference services than did those in later semesters. Respondents in their sixth semester more frequently consulted print information sources than did those in other semesters. Students in their eighth semester engaged in more individual study than did students in all other semesters.

Respondents' CGPA impacted negatively on the use of print information sources. Those with a CGPA of 3.0 to 3.5 would more likely consult print information sources. Frequency of library visits had a positive influence on use of print information sources, accessing electronic sources, use of audiovisual materials, and utilization of reference services. Receiving library instruction impacted negatively on use of electronic sources. Academic discipline positively affected utilization of electronic sources, audiovisual materials, and reference services. Field of study impacted negatively on use of individual study areas.

Finding Information Sources by Browsing versus Searching

Respondents were asked how often they used various methods for finding and locating information sources on a five-point Likert-type scale (with 1 indicating "never" and 5 "very frequently"). Table 3 shows that most of the respondents (46 percent) browsed library shelves to locate their needed library materials either frequently or very frequently. Following browsing library shelves, respondents equally searched the online public access catalog (OPAC) and asked library staff for help (41 percent) either frequently or very frequently to find library materials. Table 3 also presents median scores for methods of finding and locating library materials and shows that respondents seldom employed all methods of finding information, such as open shelf browsing, the online public access catalog, the library website, and asking for library staff help (median = 3).

Importance of the Library as a Place

Table 4 shows that an overwhelming majority of the respondents (90 percent) saw the library as either important or very important as a place for information-seeking. A large majority of respondents (89 percent) also considered the library either important or very important as a place for learning. A majority (83 percent) perceived the library as important or very important as a place for contemplation.

Median values from Table 4 also show that respondents had high regard for the library as a collection. They rated the library as only moderately important as a place for meeting and socializing and for recreation.

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Discussion and Conclusion

The study aimed to investigate Punjab University Library users' most frequent and least frequent activities in the library and the influence of their demographic and aca-

Table 3.
Frequency of respondents' methods of finding information sources

Method	Never	Rarely	Seldom	Frequently	Very frequently	Median
Search library catalog (OPAC)	58 (20%)	55 (19%)	59 (20%)	71 (24%)	52 (17%)	3
Browse library shelves	47 (16%)	40 (14%)	72 (24%)	98 (33%)	38 (13%)	3
Ask library staff	34 (12%)	57 (19%)	85 (28%)	85 (28%)	38 (13%)	3
Use library website	74 (26%)	59 (20%)	64 (22%)	52 (18%)	42 (14%)	3
Any other source (please specify)						4

Table 4.
Respondents' perceived importance of library as a place

Value of library	Not at all important	Slightly important	Neutral	Important	Very important	Median
Library as a physical place	34 (12%)	24 (8%)	84 (29%)	77 (26%)	72 (25%)	4
Library as a collection	4 (1%)	22 (7%)	33 (11%)	82 (27%)	161 (54%)	5
Place for learning	3 (1%)	13 (4%)	18 (6)	66 (22%)	204 (67%)	5
Place for information-seeking	4 (1%)	11 (4%)	14 (5%)	62 (21%)	206 (69%)	5
Place for contemplation (deep thinking)	5 (2%)	12 (4%)	34 (11%)	94 (32%)	151 (51%)	5
Place for meeting and socializing	60 (20%)	50 (17%)	77 (26%)	65 (22%)	47 (15%)	3
Place for recreation	57 (19%)	49 (16%)	55 (18%)	76 (26%)	61 (21%)	3
Any other						4

demic characteristics on their library activities. The study also explored respondents' perceptions of the importance of the library as a place. The key findings exhibited that users frequently visited the library to find a better reading environment and to study by themselves in the quiet zone. This finding is similar to that of Vera Lux, Robert Snyder, and Colleen Boff, who also determined that a majority of users came to the library for one primary reason, to study.[17] Jong-Ae Kim confirmed that the most frequent activities in libraries were individual study, reading, computer use, finding information, group study, consulting reference and information services, and meeting and socializing.[18]

The present study shows that respondents rarely visit the library to get audiovisual materials or to attend workshops and seminars. Lower use of audiovisual materials such as CDs, DVDs, microfilms, and microfiche, might result from users' dependence on electronic information sources and the Internet. The role of the university library is important in developing reading habits among its academic community. Strong relationships need to be established between the university library and academic departments to arrange workshops and seminars relevant to academic community interests. Respondents perceive the library as very important as a place for learning, for deep thinking, and for information-seeking, and they rate it highly as a collection. This finding corresponds to Kim's findings that users view the academic library primarily as a place for learning and information-seeking.[19]

The results of regression analysis identify that both demographic and academic characteristics—gender, education, year of study, discipline, CGPA, and frequency of library visits—significantly explain users' activities in the library. This finding corresponds to a study by Magdalena Jara and her colleagues that explored the patterns of utilization of print materials and digital resources in an undergraduate library of a Chilean university by students' discipline and year of study. Jara's team found that use of the library by undergraduates varied across discipline.[20] The present study also showed that use of the library varied across disciplines. Students from the commerce and science fields used the library more than did those from the arts and humanities, law, and social and management sciences. These findings resemble those shared by Graham Stone and Ellen Collins, who explored the effect of demographic differences such as age, gender, ethnicity, and country of origin upon undergraduate library usage. Their study found a statistically significant relationship between demographic characteristics and library usage on some, though not all, dimensions.[21]

> **Students from the commerce and science fields used the library more than did those from the arts and humanities, law, and social and management sciences.**

The present study's findings suggest insights that the Punjab University Library might use to strengthen its services and maximize library usage. These results offer university library managers a better understanding of students' behavior across disciplines, academic programs, and year of the study in relation to library services and facilities. The findings showed that PhD students will less likely access electronic information resources and utilize quiet study room facilities compared to undergraduates and less advanced graduate students. The library could arrange awareness programs for PhD

scholars about e-journals and e-books databases. Awareness programs could also be offered to students of the arts and humanities, law, and social and management sciences in relation to library sources and services.

This study determined library visitors' use of services and facilities only inside the building. Additional research is needed to explore off-campus use of library services and facilities and the perceptions and expectations of off-campus students regarding the library as a place and a collection.

University libraries in other developing countries may also conduct studies to understand users' behavior. The present study shows the use of library more as a place for academic work than as a place of information-seeking. Therefore, university libraries should allocate more funding to improve their physical infrastructure by providing more space for study areas. Library managers should focus on improving the physical facilities of libraries, such as lighting, furniture, and air conditioning, for users' comfort.

University libraries in Pakistan play an important role in supporting the research and academic activities of both students and academics.[22] University libraries in other countries may also support scholars by providing training programs, including strategies for conducting a literature review, searching techniques, data analysis tools, and reference management, to meet their users' research-related needs.

University library users want a wide range of print and electronic information sources and easy access to both formats.[23] University libraries in other developing countries could offer information sources both in print and online.

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Appendix

Library Survey Questionnaire

Demographic Information
Please check (✓) one response for each demographic attribute (questions).

1. Gender: a. □ Male   b. □ Female

2. Age: a. □ 17–20 years   b. □ 21–24 years   c. □ 25–28 years   d. □ Above 28 years

3. Education: a. □ BS   b. □ MA □ MPhil/□ MS   c. □ PhD   d. □ Others
   (Please specify)

4. Department:

5. Semester:

6. Year of study: □ 1st year   □ 2nd year

7. Cumulative grade point average (CGPA):   □ 1.5–2.00   □ 2.1–2.5   □ 2.6–3.00
   □ 3.0–3.5   □ Above 3.5

Q 2. How often do you visit the library? Check only one response category.
   □ Daily   □ 4–5 times a week   □ 2–3 times a week   □ Once a week
   □ A few times a month   □ About once a month   □ A few times a year
   □ About once a year   □ Seldom

Q 3. How much time do you spend on average during a single library visit? Check only
   one response category.
   □ Less than an hour   □ One to two hours   □ Two to four hours
   □ Four to six hours   □ More than six hours

Q 4. Have you attended any library instruction program about use of library materials?
   □ Yes   □ No

Q 5. How often do you visit the library for the following activities?

Library activities	Never	Rarely	Seldom	Frequently	Very frequently
Finding library information sources (books, journals, newspapers, etc.)					
Accessing library electronic resources (e-journals, e-books, databases)					
Reference services					
Plagiarism checking and anti-plagiarism guidance					
To avail [yourself of] the facility of the quiet zone (individual study)					
To avail [yourself of] the facility of discussion room (group study)					
Use of computer lab					
Circulation (book issue/ return)					
Use of audiovisual materials					
Purposes of library visit	**Never**	**Rarely**	**Seldom**	**Frequently**	**Very frequently**
To attend workshops and seminars					
Socialization (To meet friends/to accompany a friend)					
To avail [yourself of] better reading environment (air conditioning, seating capacity, study carrels and cabins)					
Any other purpose (Please specify)					

Q 6. If your purpose of visiting the library is to find library information sources as mentioned in Question 5, then how often do you use the following methods to find library information sources?

Sources	Never	Rarely	Seldom	Frequently	Very frequently
Search library catalog (OPAC)					
Browsing library shelves					
Ask library staff					
Use library website					
Any other source (please specify)					

Q 6. How frequently do you use the library collection in the following languages?

Language	Never	Rarely	Seldom	Frequently	Very frequently
English					
Urdu					
French					
Sindhi					
Punjabi					
Arabic					
Any other language, (please specify)					

Q 7. What importance do you give to the library in the following aspects?

Value of library	Not at all important	Slightly important	Neutral	Important	Very important
Library as a physical place					
Library as a collection					
Place for learning					
Place for information-seeking					
Place for contemplation (deep thinking)					
Place for meeting and socializing					
Place for recreation					
Any other					

Thanks for your participation.

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