Information Access Pattern of Target Users in the Engineering Management Institutions

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ABSTRACT: Purpose: *For two decades, the library has been switched over to printed format into the electronic mode with the application of information technology in the libraries immensely in India, specifically in engineering and management institutions. Presently, e-resources and e-service have played a significant role in the libraries. The current research study evaluates the information-seeking behavior of faculty members and the students towards provided library information resources and services in Haryana's selected management and engineering institutions. The study is a prerequisite for improving information resources and services used for optimum level and plans as per prospects.*

Methodology: *The researcher has distributed 660 questionnaires among faculty members, PG and UG students of NIT, Kurukshetra and GJU, Hisar engineering and management institute libraries.*

Findings: *It was found that the majority of users were overall satisfied with available printed and ICT-based library information sources and services. The study also found that some of the library information sources and services were not fully utilized by the faculty members and the students. Furthermore, it is also suggested that the library needs to focus on optimum utilization of the available ICT based resources and services.*
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1. Introduction

Information needs and information-seeking behavior are important aspects of library and information science research. In the changing ICT environment, every library has different users' information needs, and the uses of information also differ according to the changing requirements. An Evaluation is one of the practical tools to judge library performance to encourage the utilization of various library resources and services, understand the current information needs of users, and reshape users-oriented library collection and services. The theory of information-seeking behavior has been emerging basically from the concept of user studies. It helps libraries in many ways, such as planning, future decision making, implementing, and assessing the current status

of library resources and services Natarajan (2012). The main motive of the academic library is to provide the required information sources and services within the time frame for their users. Grover (1993) has defined very simply information needs "information is that diagnosing needs, prescribing a service that meets those needs, implementing that service and evaluating the outcome of these interactions."

2. Need for Study

Libraries are an integral part of any educational institutes to support academic excellence. The libraries must make available ICT-based facilities to the users as per their requirements. Understanding of information needs and information-seeking behavior of users are vital aspects of developing the various approaches that are appropriate to acquire better results.

The current study is undertaken to determine the information-seeking behavior of faculty members and the students towards information sources and services in the NIT, Kurukshetra, and GJU, Hisar engineering and management institute of Haryana. To understand how faculty members and the students are

A designed questionnaire was prepared to know the reactions of faculty members and the students towards existing information sources and services and help make a plan to fulfill users' requirements.

3. Review of Related Studies

Advancement of information technology and the enormous growth of e-resources has revolutionized the knowledge management and access of information worldwide in libraries. In the era of Information Society, numerous articles have been published in this particular area of information need and information-seeking behaviors, specifically towards library information resources and services in India and worldwide.

The study by C Hirani Gamage (2006) looks at the significant issues and concerns of information needs and information-seeking behavior in the University of Sri Lanka. He found that the library collection of environmental sciences was not stored correctly, available sources were not up-to-date. Natrajan (2012) researched the information-seeking behavior of students in management institutions at Delhi NCR among 250 students. The study found that most students are using the library daily, resources are utilized effectively, and the Internet is used as the primary source of information. The result also indicates that most users are satisfied with the library resources and services.

Abrham, Tamizhehelvan, and Sornam(2015) attempted a study on information needs and searching behavior of engineering college 150 faculty of Tiruchirapalli District in Tamil Nadu. The study found that books, journals, and the Internet are the most used resources; it also found that the primary purposes for accessing and referring information resources are preparation of lectures and publication of articles.

Shaha and Waghchoure(2017) studied the information-seeking behavior among 500 students at the Theme College of Engineering Boisar. They found that 26.41% visited the library for academic purposes and also found that users point out that they do not see the latest editions of books.

Nwone and Mutula (2018) surveyed information-seeking behavior from 246 professors in a selected federal university in Southwest Nigeria. This study found that professors need information for developing content used for teaching and conducting research. Chinnaswamy (2016) attempted a case study on 300 users' information needs and information-seeking behavior of engineering college students in Madurai. This study found that 55.33% of users were using the library for examination preparation and 38% of users were using the print copy, and 81.33% of users were using the pen drive. Saravanan and Mohammad(2015) examine the impact of the electronic information-seeking behavior of users of selected engineering colleges in Thiruvallur; the study found that 98.55% of users are excising E-resources and 99% of users are satisfied with e-resources service, the result also found that 97.17% of users are aware of e-resources.

Tucci (2011) attempted a study on evaluating the information-seeking behavior of Computer science and engineering faculty members at the College of New Jersey.

Ramaiah and Shimray (2018) carried out a study on students' information-seeking behavior in Muffakham Jah College of engineer

ing and technology at Hyderabad. The study was focused on 47% faculty of computer science and engineering of that college. He found that the faculty believed that the collection development and service policies did not fulfill their information needs. Their research found that 78% of respondents were chosen the print form of textbooks, and 78.67% of students were satisfied with the existing library facilities. Oluwakemi (2019) assessed information-seeking behavior and information need in his case study among UG students of the College of Management sciences at Bells(Nigeria). The case study was based on 420 UG students. This study explained that 92.4% of respondents used internet resources, and 82.4% used lecture notes and reading lists. At the same time, 32.4% of respondents were seeking assistants from library staff.

4. Purpose

We have created a set of primary objectives, both broad and specific ones.

1. Broadly, we intend to analyze the mode and nature of information access patterns in this work.

2. We like in much another research plan to tap and record the most kind of preferred sources and tiles as it has an impact on the future information acquisition.

3. In the work, we have addressed the issues while accessing and searching for required information in the corporate information houses.

4. We have also planned to study the impact of ICT in the information corpus

5. The users have various options while accessing information sources such as external and internal formats. Identifying such a format will enable to plan of future digital libraries.

6. We intend to measure overall user satisfaction towards existing Library information sources and services.

5. Research Methods

The current study has been based on the descriptive method of Survey and using a designed questionnaire among faculty members and the students (Including UG and PG students) at Haryana of NIT, GJU engineering, and management institute libraries, which was pre-tested on users.

A total sample number of 660 questionnaires (including Faculty members and UG and PG Students) were personally circulated to the Faculty members and the students, out of which 510 questionnaires were received back and found suitable for analysis. The data analyses have been mainly using statistical techniques of percentage and tabulated.

6. Analysis and Interpretation of Data

The researcher personally distributed 660 structured questionnaires among faculty members and the students, and a total number of 510 (77.27%) responses were received back (including 75(68.18%) of faculty members and 435(79.09%) of students.

To know, the respondents were asked to mention the purpose of visiting the library. Table 1 depicts that a higher majority, 84.12% of total users, visited the library for circulation of books, followed by 60.98% for preparing notes/assignments, 48.04% of users visited the library for reading, and 29.61% users visited for reference. In comparison, 26.86% of users visited the library to update themselves, 25.10% visited for research work, and 18.04% visited for browsing; besides, only 11.57% of users saw the library for other purposes.

The responses show that most users seek information from the library to prepare their notes and assignments.

To know, respondents were asked to mention the most used types of library information sources. Table 3 exhibits that 78.63% of total users were the most used textbooks, followed by 62,16% used e-books, 60.39% used reference books, 50.78% of users used Dissertation/Project Reports, and 48.24% of users used e-Journals. The results also observed that less than 50% of total users were used other information sources, like an absolute majority 42.35% of users were using printed journals, followed by 43.14%

No	Preferences	Total (N=510)	
		No	Percentage
1	To prepare Notes/ Assignments	311	60.98%
2	For circulation of Books	429	84.12%
3	For reading	245	48.04%
4	For Updating yourself	137	26.86%
5	For Reference	151	29.61%
6	For Browsing	92	18.04%
7	For Research	128	25.10%
8	Other Purpose	59	11.57%

Table 1. Purpose of Visiting Library
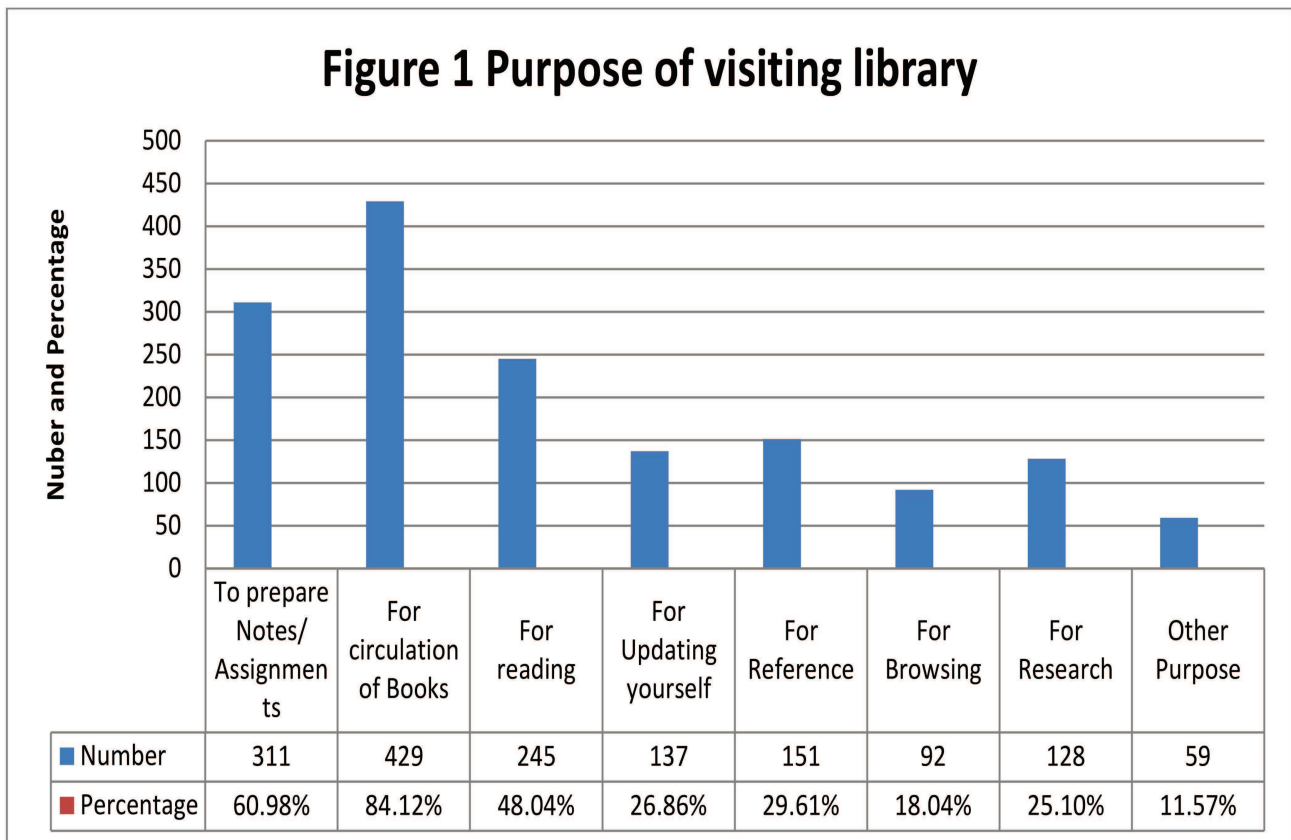
Figure 1. Projected by the Author

No	Preferences	Total (N=510)	
		No	Percentage
1	Daily	203	39.80%
2	2-3 times in a week	162	31.80%
3	Once in a week	79	15.50%
4	1-2times in a month	41	8.00%
5	Rarely	25	4.75%
	Total	510	100.00%

Source: Calculated by author

Table.2. Frequency of Visiting Library

Figure 2 Frequency of Visiting Library

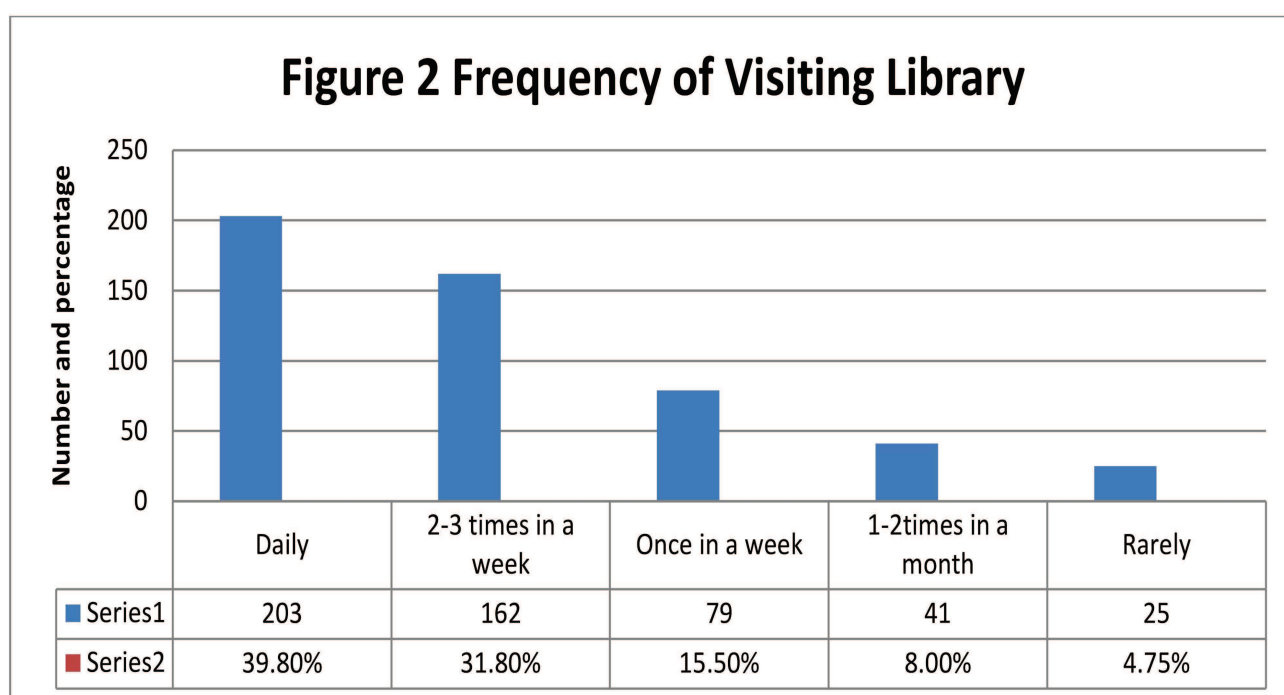|	Daily	2-3 times in a week	Once in a week	1-2times in a month	Rarely
Series1	203	162	79	41	25
Series2	39.80%	31.80%	15.50%	8.00%	4.75%

Figure 2. Projected by the Author

used newspaper/magazines sources and only 36.67% using audio-visual materials.

The responses exhibit that users rated top priority to textbooks and used extensively, e-books and reference books were also used chiefly as popular information sources.

No	Preferences	Total (N=510)	
		No	Percentage
1	Text books	401	78.63%
2	Reference books	308	60.39%
3	Journals	216	42.35%
4	Magazines/Newspapers	220	43.14%
5	e-journals	246	48.24%
6	e-books	317	62.16%
7	dissertation /Project reports	259	50.78%
8	Audio-Visual Materials (CD/DVDs)	187	36.67%
	Total	**510**	

Source: Calculated by author based on the responses in questionnaire
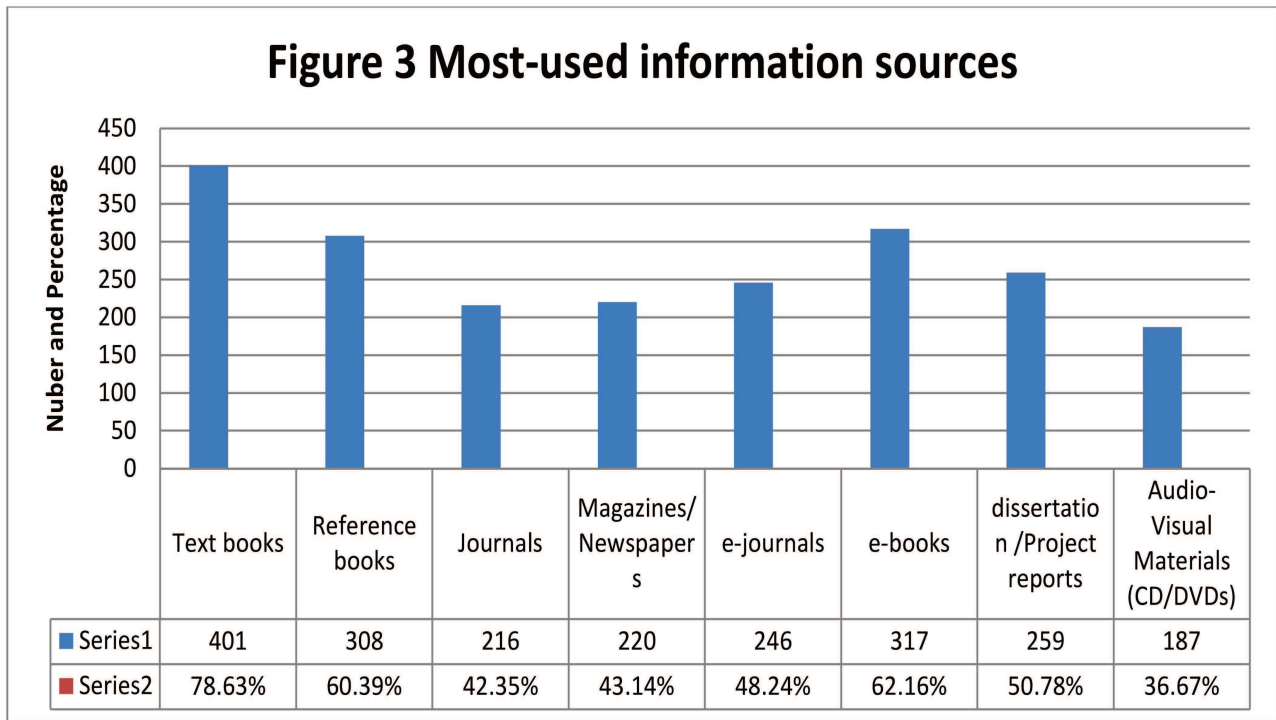
Table 3. Preferred information platform of sources

Figure 3. Projected by the Author

No	Preferences	Total (N=510)	
		No	Percentage
1	Circulation	409	80.20%
2	Reference service	311	60.98%
3	CAS/SDI	176	34.51%
4	Newspapers Clipping	149	29.21%
5	Book Bank Service	175	34.31%
6	E-resources service	263	51.57%
7	Interlibrary Loan	137	26.86%
8	Photocopy service	210	41.18%
9	OPAC	362	70.98%
10	Internet Service	390	76.47%

Source: Calculated by author

Table 4. Preferred Library services (multiple responses)
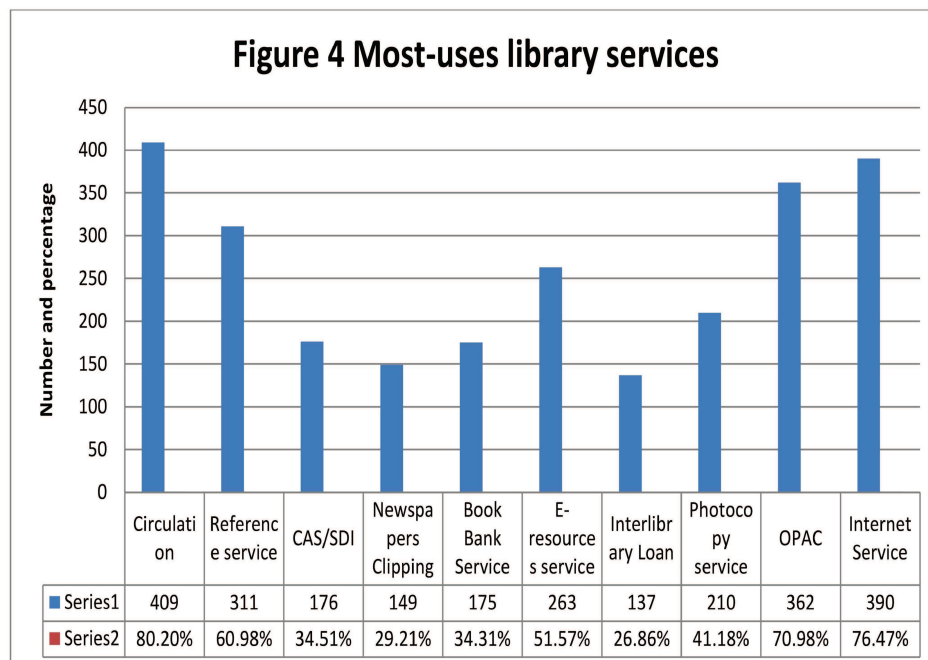

Figure 4. Projected by the Author

To know, the respondents were asked to mention about most used types of library services to fulfill their information needs. Table 4 shows that 80.20% of users used the most used circulation service, followed by 76.47% of users used Internet service, 70.98% of users used OPAC service, 60.98% used reference, 51.57% of users used e-resources service. Whereas, an absolute majority of less than 50% were using other services like 41.18% of users were using photocopying service, followed by 34.51% used CAS/ SDI, 29.21% used newspaper clipping service, 34.31% used the book bank service, and only 26.86 % of total users were used interlibrary loan service.

The responses exhibit that users rated top priority to the circulation of books and mainly use Internet service, OPAC service, reference service, and e-resources services.

No	Preferences	Total=(N=510)	
		No	Percentage
1	Time saving	162	31.76%
2	Easier access to information	91	17.84%
3	Faster access to information	142	27.84%
4	Wider range to access information	56	10.98%
5	Storage and retrieval of information	59	11.57%

Source: Calculated by author based on the responses in questionnaire

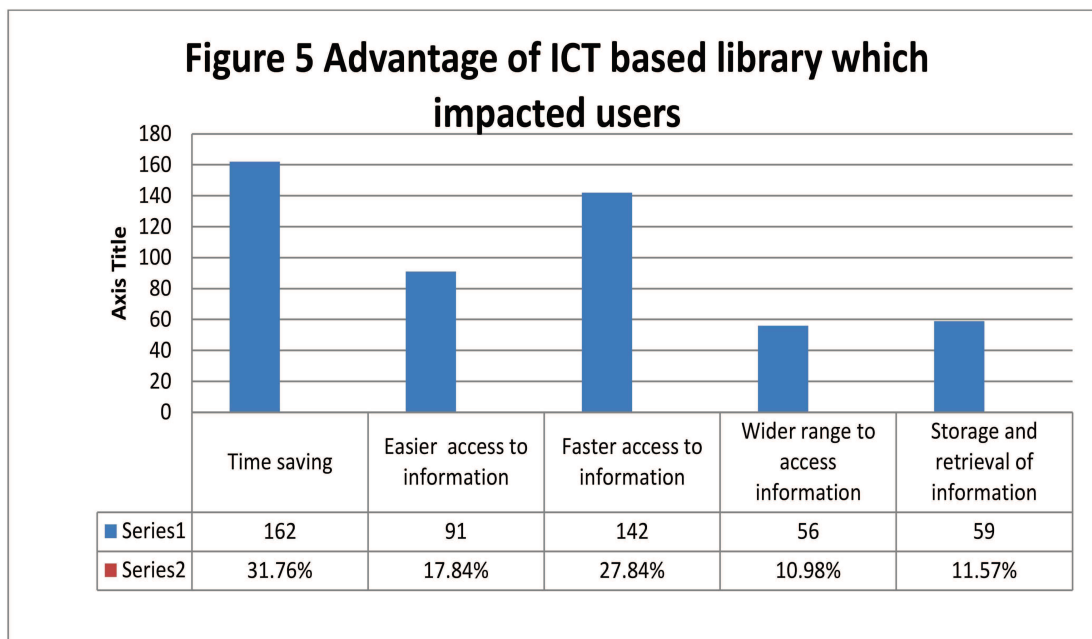Table 5. Advantage of ICT based Library which impacted users

Figure 5. Projected by the Author

To know respondents were asked about the advantage of ICT-based library, which has impacted their habits of seeking information in the library. Table 5 highlighted that a majority of 31.76% users impacted with Time-saving advantage followed by 27.84 % of users affected with faster access to information,17.84% of users affected to Easier access to information,11.57% of users impacted to storage and retrieval of data, and only10.98% affected with a broader range to access information.

The responses exhibit that Time-saving and easier access to the Information advantage of ICT impacts the user habits to seek information.

No	Preferences	Total = (N = 510)	
		No	Percentage
1	Print Sources of Information	164	32.16%
2	Electronic Sources of Information	213	41.76%
3	Both Sources(Print & Electronic)	133	26.08%

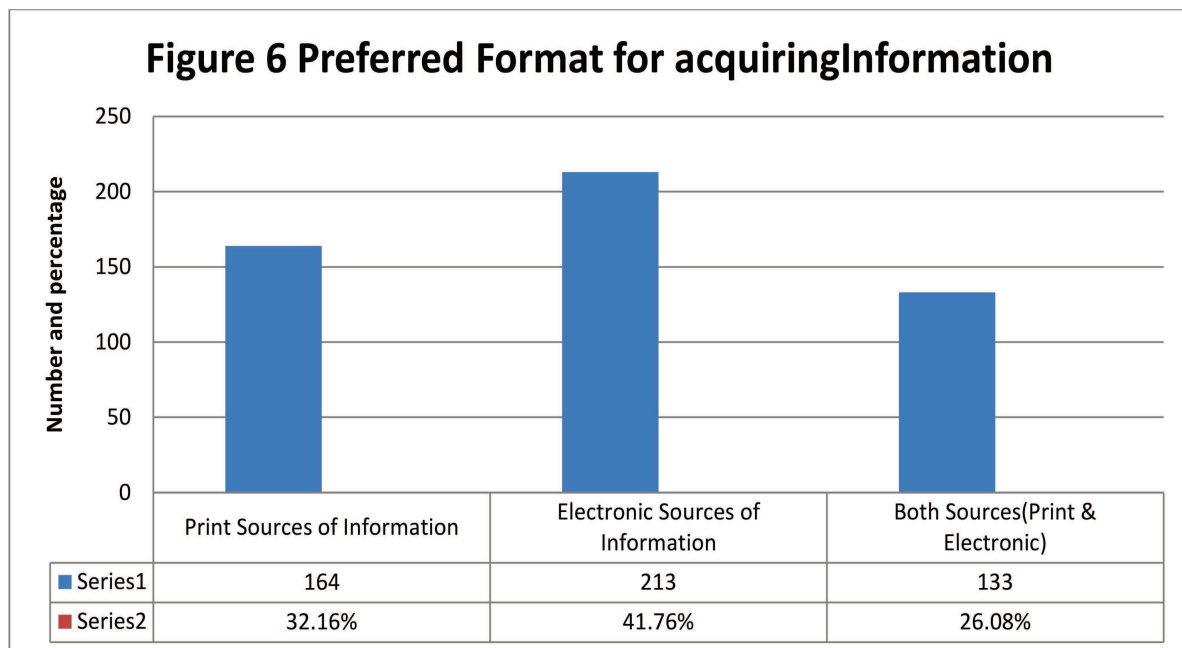Table 6. Preferred Format for acquiring Information

Figure 6. Projected by the Author

The respondent was asked about the preferred format for acquiring Information in the library to know. Table 6 highlights the opinion of users about the preferred form for obtaining Information in the library. The results showed that the highest major-ity, 41.76%, of users selected electronic sources of Information for acquiring, 32.16% of users preferred Print sources of Informa-tion, and only 26.08% of users preferred Both sources (including Print and electronic sources of Information.

The responses exhibit that users preferred to electronic format for acquiring Information in the library, which indicates the shifting mindset of library users from printed form to electronic format.

No	Preferences	Total =(N=510)	
		No	Percentage
1	Books are not properly arranged	171	33.53%
2	Required latest books are not available	123	24.12%
3	Lack of support Library staff	127	24.90%
4	Lack of awareness about ICT based sources and services	174	34.12%
5	Lack of time and availability Computer system	187	36.67%

Figure 7. Projected by the Author

To know, the respondents were asked about their problems faced while seeking information in the library. The above table 7 highlighted that the highest majority 36.67%of users faced that " Lack of time and availability computer system" was the major problem, 34.12% of users faced the "problem Lack of awareness about ICT based sources and services," 33.53% of users faced the "problem books are not properly arranged", 24.90% of users met lack of support library staff and 24.12% of users faced " required latest books are not available in the library."

The responses exhibit that users were faced mainly the problem of less Timing and less number of computer systems available in the library, and lack of awareness about ICT-based library resources and services.
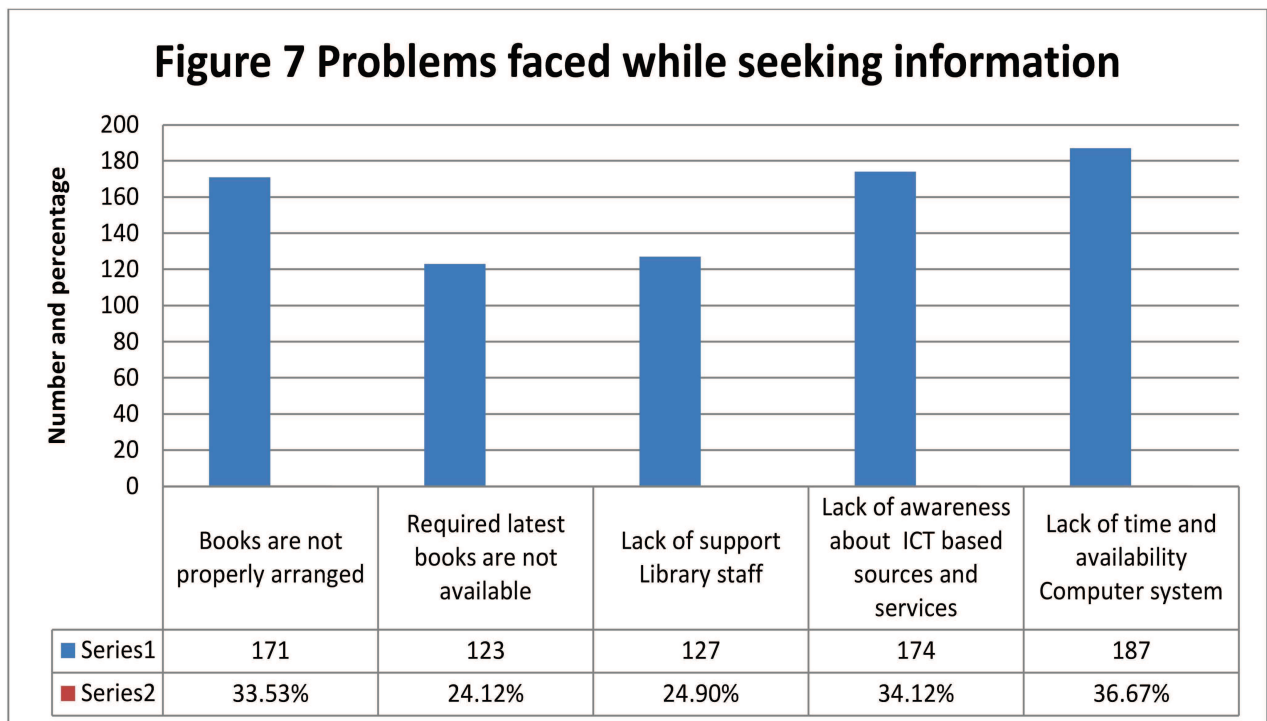
Figure 7 Problems faced while seeking information

	Books are not properly arranged	Required latest books are not available	Lack of support Library staff	Lack of awareness about ICT based sources and services	Lack of time and availability Computer system
Series1	171	123	127	174	187
Series2	33.53%	24.12%	24.90%	34.12%	36.67%

Figure 7. Projected by the Author

No	Sources	Total Users Including Faculty and Students (N=510)			
		Satisfied	**Partially Satisfied**	**Not Satisfied**	**Total**
1	Library Resources	228(44.71%)	120(23.53%)	162(31.76%)	100.00%
2	Library Services	262(51.37%)	174(34.12%)	74(14.51%)	100.00%

Source: Calculated by author based on the responses in questionnaire

Table 8. Overall User satisfaction of users about Library resources and Services

Figure 8 Overall User satisfaction of users about Library resources and Services

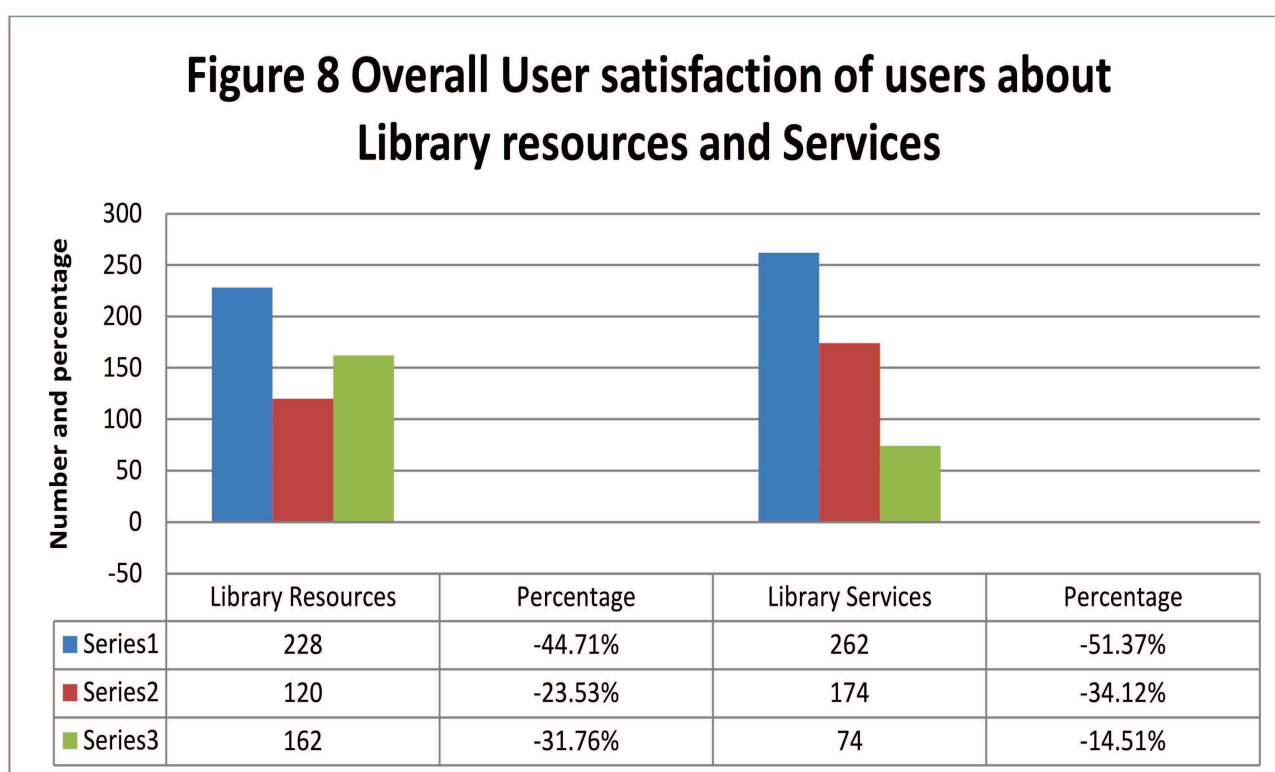|	Library Resources	Percentage	Library Services	Percentage
■ Series1	228	-44.71%	262	-51.37%
■ Series2	120	-23.53%	174	-34.12%
■ Series3	162	-31.76%	74	-14.51%

Figure 8. Projected by the Author

To know, respondents were asked about overall satisfaction with available library resources and services. The above table 8 exhibits that a majority, 44.71%, are satisfied with available library resources, followed by 31.76% not happy and 23.53% partially happy. About the library service, a higher majority, 51.37% of users, we're satisfied with the available library services, followed by 34.12% somewhat happy and 14.51% not delighted.

Key Findings: The Key findings of the study can be summarized as follows:

It was revealed that the majority of users come mainly in the library for consulting circulation of books and preparing notes/assignments

It was observed that most users visited the library daily.

It was observed that most users mostly used textbooks, e-books, and reference books respectively as library information sources, and user-marked CDs/DVDs as at least used information sources.

It was observed that most of the users frequently used circulation service, Internet service, and OPAC service, respectively, and users marked interlibrary loan and newspaper clipping service as the most minor used library services.

It was observed that most users were most affected by the advantage of Time-saving and faster access to information of ICT-based library resources and services.

It was observed that most users preferred the option for acquiring electronic sources of information.

It was observed that most of the users indicated the problem of lack of time and availability computer system and lack of awareness about ICT based resources and services while seeking information in the library.

It was observed that most users were satisfied with the available library resources and services.

Some suggestions were also received from users that need awareness and training programs about IT-based library resources and services, need to increase the timing and speed of Internet access, Increase No of the Computer system in the library, and need the proper arrangement of books

7. Conclusion

The advancement of ICT-based Library information sources and services has played a vital role and changed the whole working culture of modern academic libraries. The result of the study also describes that ICT-based resources and services have profoundly impacted the users' opinions and their experience in the Library. The easy and free flow availability to access information changed the information-seeking behavior method of users. Now a day's, library users are shifting prints resources to e-resources. It can be summarized that most users are attracting and using IT-based electronic resources and services. The Library must take new initiatives for filling users' information needs as per their multidimensional demands in this challenging ICT environment.

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