



USE OF INTERNET BASED E-RESOURCES BY ENGINEERING STUDENTS OF NATIONAL INSTITUTE OF TECHNOLOGY (NIT) SRINAGAR, KASHMIR

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ABSTRACT

In NIT libraries across India, the latest information communication technologies are increasingly used to collect, store, retrieve and disseminate a great amount of information to help engineering professionals in their contemporary education, research and engineering practices. The engineering e-resources and databases developed by engineering institutions, associations, agencies and publishers provide the latest technological information. In a developing country like India, engineering professionals are quite aware of the new technologies used by their counterparts in the developed nations. In Jammu and Kashmir State, there is one National Institute of Technology institution and majority of the students are well aware of electronic resources.

KEYWORDS: E-resources, Internet, Engineering college library, B-tech M-tech students.



1. INTRODUCTION :

Today, India's decision-makers at both the central and state levels have chosen to explore the use of newer computer and Internet based electronic education, and are been promoting the use of open and distance learning for both the formal and non-formal education areas. The Internet facility in India has grown tremendously over the last several years. The use of e-resources is rapidly increasing owing to its efficiency and capability in providing right information to the right person at the right time pertaining to user's specific subject. Internet works around the clock and connects user with every corner of the world. Internet has become an unavoidable need for every institution of higher learning. The engineering

and technical education is mandatory for the development of any nation. The engineering institutions are very much needed for the scientific advancement of the nation. For making engineering students more accomplish and innovative in the work force, information plays vital role. For accessing information and keeping abreast with the new technologies, access to electronic resources has become an essential human need with all its facets.

With the advent of information communication technology the size of libraries have reduced. In fact, these smaller modern electronic libraries have rich potential of information. The digital and electronic information is based on digitized data,

which has gradually replaced paper-based media. As the electronic information system in comparison to print based information system is getting more and more popular these days, the traditional libraries are becoming digital libraries as they are in the process of doing digitization of their documents and moving towards to become virtual libraries.

2. BACKGROUND

The Central Library NIT, Srinagar has switched over to an open-source Integrated Library System (ILS), thus heading towards the growing community of libraries collaborating to achieve technology goals in engineering field. The impressive feature set of OPAC is up to the mark of meeting the needs of its reader base. New OPAC is a true enterprise-class ILS with comprehensive functionality including basic and advanced options. This OPAC includes modules for circulation, cataloging, acquisitions, serials, reserves, patron management, branch relationships, and much more. OPAC uses a dual

database design that uses the strengths of the two major industry-standard database types i.e text-based and RDBMS. This design character ensures that OPAC is scalable enough to meet the transaction work of library.

3. REVIEW OF LITERATURE

There are numbers of studies on use of e-resources by students. Achonna¹ in his research found, use of e-journal resources were low. Lack of skills, inadequate provision of computers and power outage etc. were the problems faced in use of e-resources. Study concluded the need for the training skills, provision of adequate computers; need to popularize the information technology and its usage and to motivate the students to use e-journal resources. Joteen Singh² et al. executed a study on "Use of Internet Based E-Resources at Manipur University: A Survey" to examine the use of electronic information focusing on the Internet services by post graduate students, research scholars, teachers and non-teaching staff members. Users were using the Internet mainly to download the information from web based resources and web sites. Lack of power supply and the low speed Internet access were general problems faced by users in accessing information from web based resources. Baikady and Mudhol³ explored use of web resources in learning, teaching, clinical practice, and patient care and found that users prefer web-based resources over traditional library and users perceive that web contains exhaustive information and is easy to use. Baskaran⁴ revealed that maximum use of library is by faculty of science particularly scientific e-journals for preparing seminars, conferences and other assignments. Bashorun⁵, et al. found that the frequency of use of electronic resources by teaching staff was low, as most of the faculty time is spent on teaching. The study also pointed out some of the problems like lack of awareness to users about electronic resources provided by the library, lack of electricity supply to use computer, slow speed of network, and inadequate searching skills. Kumar & Kumar⁶ found, in his study of medical and management colleges in Bangalore city that the users are well aware of e-resources and prefer to use internet. Bhat and mudhol⁷ Medical Faculty members and students' attitudes seem to be very positive towards e-resources for their study and research and the role of libraries as gateway to provide assistance in accessing these resources.

4. OBJECTIVES OF THE STUDY

- To assess the frequency of use of different electronic information sources by the engineering students.
- To know the respondents' extent of access to electronic information sources.
- To examine the attitude of the students towards use of electronic resources.

5. METHODOLOGY

The researcher employed a well structured questionnaire for collecting the data from the students of National Institute of technology, Srinagar. The questionnaire was prepared in such a way that the respondents could easily understand the items. A total number of 626 e-questionnaires were mailed to students, the email ids of students were collected after personal visit to central library NIT, Srinagar. The investigator received back questionnaires from only 448 respondents out of 626 engineering students among whom the questionnaires were distributed digitally. This comprises 71.56% (448/626) of the total response rate.

6. DATA ANALYSIS

Table 6.1 reveals that the highest response to the survey was from B-Tech final year students (81.68%), followed by the B-Tech 3rd & 4th year students (77.29%) and M-Tech students (54.35%).

Table-6.1
Sample and response rate by professional status

Sl. No	Professional status	Questionnaires distributed	Questionnaires received	Percentage of Responses
1	M-Tech students	195	106	54.35
2	B-Tech final year students	202	165	81.68
3	B-Tech 3rd & 4th year students	229	177	77.29
	Total	626	448	71.56

Frequency of use of different Electronic Information Sources

In the survey the respondents were also queried about the electronic information sources they frequently use. Table 6.2 lists the use of seven specific electronic sources i.e E-mail, Web resources, Mailing lists/Professional groups, Internet Relay Chat, File Transfer Protocol, TELNET and CD-ROMs by respondents.

Table -6.2
Frequency of use of electronic information sources

Frequency	Electronic Information Sources						
	E-mail	Web Resources	CD-ROM	FTP	TELNET	Professional Group/ Mailing List	Internet Relay Chat
Everyday	257 (57.36)	168 (37.5)	68 (15.17)	11 (2.45)	3 (0.66)	37 (8.25)	19 (4.24)
2-3 days/week	64 (14.28)	144 (32.14)	66 (14.73)	16 (3.57)	1 (0.22)	49 (10.93)	29 (6.47)
Once in a week	61 (13.61)	87 (19.41)	47 (10.49)	9 (2.00)	2 (0.44)	49 (10.93)	29 (6.47)
2-3 times a month	31 (6.91)	22 (4.91)	45 (10.04)	5 (1.11)	1 (0.22)	35 (7.81)	29 (6.47)
Once in a month	24 (5.35)	18 (4.01)	31 (6.91)	12 (2.67)	0 (0)	38 (8.48)	27 (6.02)
Occasionally	11 (2.45)	9 (2.00)	99 (22.09)	8 (1.78)	1 (0.22)	66 (14.73)	89 (19.86)
Never use	0	0	92 (20.53)	387 (86.38)	440 (98.21)	174 (38.83)	226 (50.44)
Total	448 (100)	448 (100)	448 (100)	448 (100)	448 (100)	448 (100)	448 (100)

Note: Figures in the brackets represent percentage

E-mail is the most widely used tool, which is utilized by all the respondents, 57.36% respondents use E-mail on daily basis. 14.28% use it 2-3 days/week, 13.61% use it once in a week, and 6.91% utilize it 2-3 times a month. 5.35% and 2.41% of the respondents use it once in a month and occasionally. E-mail is attractive resource for all the respondents. Other similar studies have also shown that E-mail has been the most intensively used Internet facility.

Next to E-mail is Web resource the most frequently used tool. 37.5% and 32.14% of the respondents use it every day and 2-3 days/week respectively. 19.41% use web resources once in a week, 4.91% use it 2-3 times a month and 4.01% use it once in a month. Also 2.0% of the respondents use it occasionally.

A majority 22.9% of the respondents use CD-ROMs occasionally. 15.17% use CD-ROMs every day, 14.73% 2-3 days/week and 10.49% once in a week. About 10.4% use them 2-3 times a month and 6.91% once in a month. 20.53% never used CD-ROMs for needed information.

The use of TELNET and FTP are negligible since 98.21%, 86.38% respondents, respectively did not use them. 8.25% used Professional Group/ Mailing List every day, 10.93% use it 2-3 days/week and same percentage 10.93% use it once in a week. About 7.81% use it 2-3 times a month, 8.48% once in a month and 14.73% use it occasionally. A majority 38.83% never used Professional Group/ Mailing List. Internet Relay Chat (IRC) is used by 19.86% of respondents occasionally and 6.2% use IRC once in a month. 6.47% use IRC 2-3 days/week, Also 6.47% once in a week and 6.47% use IRC 2-3 times a month. A majority about 50.44% never uses IRC at all.

6.1 Classification of respondents by position-wise status

Respondent’s position-wise frequency of EIS use is given in Table 6.3 and 6.3A. The frequency of use of two electronic information sources namely ‘TELNET’ and ‘FTP’ are not analyzed according to the position-wise status of the respondents, because very less number of respondents use these electronic resources.

Table- 6.3
Use of different EIS by position-wise status

Frequency of Use	Electronic Information Sources								
	Email			Web Resources			CD-ROM		
	M-Tech	B-Tech final yr	B-Tech 3 & 4 th yr	M-Tech	B-Tech final yr	B-Tech 3 & 4 yr	M-Tech	B-Tech final yr	B-Tech 3 & 4 yr
Everyday	67 (63.20)	108 (65.45)	82 (46.32)	40 (37.73)	77 (46.66)	51 (28.81)	22 (20.75)	28 (16.96)	18 (01.16)
2-3 days/week	8 (7.54)	19 (11.51)	37 (2.90)	25 (23.58)	53 (32.12)	66 (37.28)	9 (8.49)	35 (21.21)	22 (12.42)
Once in a week	16 (15.09)	14 (8.48)	31 (17.51)	26 (24.52)	20 (12.12)	41 (23.16)	6 (5.66)	16 (9.69)	25 (14.12)
2-3 times a month	6 (5.66)	12 (7.27)	13 (7.34)	6 (5.66)	7 (4.24)	9 (5.08)	8 (7.54)	14 (8.48)	23 (12.99)
Once in a month	5 (4.71)	9 (5.45)	10 (5.64)	6 (5.66)	5 (3.03)	7 (3.95)	5 (4.71)	12 (7.27)	14 (7.90)
Occasionally	4 (3.77)	3 (1.81)	4 (2.25)	3 (2.83)	3 (1.81)	3 (1.69)	27 (25.47)	37 (22.42)	35 (19.77)
Never use	0	0	0	0	0	0	29 (27.35)	23 (13.93)	40 (22.59)
Chi-Square value	Chi-square value = 22.11* df = 10 *p-value = 0.012			Chi-square value = 20.23* df = 10 *p-value = 0.027			Chi-square value = 29.14* df = 12 *p-value = 0.004		

Note: Figures in the brackets represent percentage to total in each group of respondents

Table- 6.3A
Use of different EIS by position-wise status

Frequency of Use	Electronic Information Sources					
	Mailing Lists/Professional group			IRC		
	M-Tech	B-Tech final	B-Tech 3 rd & 4 th	M-Tech	B-Tech final	B-Tech 3 rd & 4 th
Everyday	9 (8.49)	17 (10.30)	11 (6.21)	4 (3.77)	11 (6.66)	4 (2.25)
2-3 days/week	13 (12.26)	15 (9.09)	21 (11.86)	9 (8.49)	14 (8.48)	6 (3.38)
Once in a week	11 (10.37)	10 (6.06)	28 (15.81)	7 (6.60)	10 (6.06)	12 (6.77)
2-3 times a month	8 (7.54)	8 (4.84)	19 (10.73)	5 (4.71)	7 (4.24)	17 (9.60)
Once in a month	7 (6.60)	14 (8.48)	17 (9.60)	3 (2.83)	9 (5.45)	15 (8.47)
Occasionally	21 (19.81)	36 (21.8)	9 (5.08)	19 (17.92)	39 (23.63)	31 (17.51)
Never use	37 (34.90)	65 (39.39)	72 (42.37)	59 (55.66)	75 (45.45)	92 (51.97)
Chi-Square value	Chi-square value = 33.79* df = 12 *p-value = 0.007			Chi-square value = 19.80* df = 12 *p-value = 0.071		

Note: Figures in the brackets represent percentage

A very large majority of respondents are making use of E-mail. It is seen from the table 6.3 that 63.20% M-Tech students, 65.45% B-Tech final year students and only 46.32% B-Tech 3rd & 4th year students use E-mail every day. About 7.54% M-Tech students, 11.51% B-Tech final year students and 2.90% B-Tech 3rd and 4th year students make use of E-mail 2-3 days/week. 15.9% M-Tech students, 8.48% B-Tech final year students and 17.51% B-Tech 3rd and 4th year students utilize E-mail once in a week. The M-Tech students comprising of 5.66%, B-Tech final year students 7.27% and 7.34% of B-Tech 3rd and 4th year students use E-mail 2-3 times a month. 4.71% M-Tech students, 5.45% B-Tech final year students and 5.64% B-Tech 3rd and 4th year students use E-mail once in a month. Very less no of M-Tech students 3.77%, B-Tech final year students 1.81% and B-Tech 3rd and 4th year students 2.25% use E-mail occasionally.

The findings of use of web resources indicate that there exist some variations among the respondents. About 37.73% of M-Tech students, 46.66% B-Tech final year students and 28.81% B-Tech 3rd & 4th year students use web resources daily. Whereas 23.58% M-Tech students, 32.12% B-Tech final year students and 37.28% B-Tech 3rd & 4th year students use it 2-3 days/week. 24.52% M-Tech students, 12.12% B-Tech final year students and 23.16% of B-Tech 3rd and 4th

year students use web resources once in a week. 5.66% M-Tech students use web resources 2-3 times a month and once in a month. 4.24% B-Tech final year students and 5.8% B-Tech 3rd and 4th year students use it 2-3 times a month. About 3.3% B-Tech final year students and 3.95% of B-Tech 3rd and 4th year students use web resources once in a month. Very negligible 2.83% M-Tech students, 1.81% B-Tech final year students and 1.69% B-Tech 3rd and 4th year students use it occasionally.

The frequency of use of CD-ROMs indicates that there exists variation in the use according to position wise status of the respondents. It can be seen from the table 6.3 that 20.75% M-Tech students, 16.96% B-Tech final year students and very less 1.16% B-Tech 3rd and 4th year students use CD-ROMs daily. Good number of 21.21% B-Tech final year students uses these 2-3 days/week. While only 12.42% B-Tech 3rd and 4th year students and very less 8.49% of M-Tech students use CD-ROMs 2-3 days /week. About 6.60% M-Tech students, 6.6% B-Tech final year students and 6.77 B-Tech 3rd & 4th year students use CD-ROMs once in a week. 12.99% B-Tech 3rd and 4th year students use CD-ROMs 2-3 days/week in comparison to 8.48% of B-Tech final year students. While only 8.49% M-Tech students use them 2-3 days per week. About 7.90% B-Tech 3rd and 4th year students, 7.27% B-Tech final year students and very less 4.71% M-Tech students use CD-ROMs once in a month. Majority of 25.47% M-Tech students, 22.42% B-Tech final year students and 19.77% of B-Tech 3rd & 4th year students use CD-ROMs occasionally. Also 27.35% M-Tech students, 13.93% B-Tech final year students and 22.59% B-Tech 3rd and 4th year students never use CD-ROMs.

CONCLUSION

The library atmosphere has currently undergone through a drastic change in terms of collections and information services. The proliferation of e-resources has a significant impact on the way the engineering community uses, stores, and preserves technological information. The merits of electronic resources have drawn attention of the library users to a great extent. Accordingly, these e-resources have occupied a significant place in the collection and budget of almost all libraries. Student's attitudes seem to be very positive towards e-resources for their study and research and the role of engineering libraries as gateway to provide assistance in accessing these internet based resources. Students are heavily dependent on Internet for their required information and to keep themselves up-to-date in their technological area. Higher speeds with Wi-Fi campus needs to be developed by National Institute of Technology, so that students can use online e-resources and other databases within the campus according to their suitability. The Central Library needs to arrange various orientation and training programmes for students to get optimum use of available electronic resources. In this regard, the Central Library NIT may arrange orientation programmes, subscribe database and product trials of various e-resources to generate more and more awareness among engineering students.

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