Awareness Electronic Journals and their Usage Among the Users: A Study of Punjab Engineering College , Chandigarh

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Abstract

The present paper focuses on the awareness about electronic journals and their usage among the students and faculty of Punjab Engineering College, Chandigarh. The download usage statistics were used to study the impact of e-journals on use. Also, in order to know the purpose of using these library e-resources are used by them. A survey was conducted in the academic year 2005-06 and data was collected from through a questionnaire method. The finding of the study bring out that despite the fact that most of the users have not heard the name of INDEST consortium and have no knowledge about the library e-resources/ services being provided by the institute, the users are using these e-resources and they are research scholars and faculty. There has been an increase in the usage of e-journals. The users use these e-resources more for seminars and projects as compared to writing papers, and academic and research work.

Key Words

Usage, Awareness, Electronic Journals

Introduction

The application of information technology and internet has resulted in an increase in the collection of electronic journals as compared to print journals. The knowledge delivery under the consortium has shown good impact on the academic community. As the e-journals have opened up many new opportunities for the researchers, the libraries of engineering science and technology institutes have started provide electronic information required by their users through UGC, INFONET and INDEST consortium .The traditional libraries have started giving space to electronic libraries, so as to satisfy the needs of their users. Branin and Case (1998) have compared electronic journals to print journals and concluded that electronic journals have several advantages over print journals. Each volume of the e-journal can be viewed online arid individual articles are available in different formats like PDF, html, etc. They carry the most recent information and can be accessed at the same time as it is generated. They eliminate the printing and mailing processes .and readers can access a particular article or journal within minutes, or even seconds, rather than days or weeks.

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Review of Literature

Electronic information has become an important part of library collection. The user study has progressed from studying use, barriers to conduct study on awareness and acceptance. A large number of journals and back volumes can be searched and retrieved simultaneously and instantly. Besides the traditional plain text, tables, figures, and graphics, multimedia elements can be supported and incorporated in e-journals. Turoff and Heltz (1982) in their study explain that hypertext format enable linking of different sections of an article or different articles in a journal or any other electronic resource outside the journal. Authors of the articles can be contacted easily via e-mail by navigating through links. Electronic journals have become an important source for scientific research and development Eqbal and khan (2007) found that 88.24% faculty of science are more aware about e-journals as compared to faculty of engineering. The majority of research scholars in faculty of science 67.64% and 69.23% faulty of Engineering use e-journals for research work, whereas 35.29% in faculty of science use e-

journals to update their knowledge and 23.70 % in faculty of engineering use them for study. Haneefa and Sreelatha (2006) examined the use of e-journals and INFONET consortium by the doctoral student of Calicut University. They explored the problems faced by the students when using e-journals for their research work. Students had access to e-journals through the INFONET consortium. They were accessing e-journals daily or thrice a week. The features like easy and speedy access to back volumes and hyperlinks attributed the researchers towards accessing e-journals. Mallik et al. (2007) put forward the usage patterns in a case study of CDRL, lucknow that the use groups are differ in their usage methods of access and in their frequency of use of online resources lack of use or awareness of the library home page could have prevented some users from quality accessory available of resources. Liew et al.(2000) found that the patrons' preference for and use of electronic journals for printing articles confines the idea that patrons may limit their research to easily available electronic journals simply because of their convenience and regardless of whether other sources would better suit their information needs. Heavy usage of a handful of the most popular titles and extremely low use of the least popular titles of e-journals suggests that library users are exhibiting the same sort of journal preferences in the electronic domain as they have been in print. This study reinforces the need for more and better usage data for E-journals so that the budget, both for print and electronic resources can be allocated in a manner that will achieve the highest ratio of usage to expenditure.

A Profile of Punjab Engineering College, Chandigarh

The Punjab Engineering College was founded as the Maclagan Engineering College, Lahore way back in the pre-partition days. At the time of partition of the country in 1947, the college was renamed as "East Punjab College" and functioned form the Thomson Engineering College, Roorkee (now known as the University of Roorkee). In the year 1950 the word "EAST" was dropped and the college was renamed as Punjab Engineering College. Towards the end of December 1953 the College was shifted to its present place at Chandigarh and is functioning here since then. The college campus extends over an area of 146 acres. The college is affiliated to Punjab University, Chandigarh and offers a wide rage of academic programmes at the undergraduate, postgraduate and research levels.

Central Library: Its E-resources and services

The central library is housed in an area of about 27,000 sq. feet and organized into various. Sections like Circular, Periodical, Reference, Textbook, Multimedia, Newspaper/Magazine, Technical, Book Bank, and Binding. The library has a good collection of about 1, 06,000 volumes in Science and Technology, to fulfill the needs of 200 members (faculty and students). The library is subscribing to 106 technical Indian and foreign journals in print. The library is member of INDEST consortium. This consortium offers online access to a number of technical journals through portals. The resources are IEL online, ASIE journals, ASME journals, BSU journals in Chemistry, EEVL (Engineering, Mathematics and Computer Science), and online public access catalogue. In addition to these open and free access is provided to journals in Engineering & Technology. The library is also housed with approximately 450 CDs and 50 video cassettes. The library has Engineering Index & Encyclopedia Britannica on CD-ROM. The library is centrally air-conditioned with 250 seats and working hours are from 9:00 am to 11:00 pm. The library is also institutional member of British Library. Online network connection has been provided in the library.

Objectives of the Study

There has been an obvious lack of studies to know the use of electronic information resources by users in technical institutes' libraries. The main objectives of this study are to find out the following:

1. Use and awareness of electronic resources by users;

2. Purposes of using e-resources;

3. Impact of e-resources on usage.

Scope of the Study: As the study covers students, research scholars and faculty of Punjab Engineering College, Chandigarh (A

deemed University),it will be beneficial for other Institutes as well to understand the ensuing electronic resources, and motivate them to implement these resources in their libraries.

Methodology and Collection of Data

Table No.1: Distribution of Questionnaire for Survey

Respondents	Total Strength	Questionnaire Distributed	Response Received
Undergraduates	1630	326	310
Postgraduates	276	55	50
Research Scholars	16	04	04
Faculty	134	28	25
Total	2056	413	389

Table No. 1 exhibits that the total population of the users taken up for the survey was 2056 which included undergraduates, postgraduates, research scholars and faculty. The questionnaires were given to the users personally at the library, department, hostels and computer centre. Twenty per cent of survey population was selected from the total population. 413 questionnaires were distributed and 389 responses were received. The questionnaires distributed to undergraduates were 326 and the response was 310. Similarly, 55 questionnaires were given to postgraduates and the response was received from 50. The response received from the research scholars was 100 per cent, whereas 25 faculty members out of 28 responded to the questionnaires.

Analysis and Interpretation of Data:

The collected data has been analyzed with the help of statistical package for social sciences (SPSS). Statistical methods like percentage and Chi-square Test were used for finding out as to whether the respondents differ in their preference for different factors category-wise.

Table No. 2: Are you aware about your library Electronic resources/services?

Respondents	Response		Total	Chi^2 (df;C)
	Yes N (%)	No N (%)	N (%)	
Undergraduates	76 (24.52)	234 (75.48)	310 (100)	
Postgraduates	19 (38.00)	31 (62.00)	50 (100)	
Research Scholars	4 (100.0)	-	4 (100)	49.101**
Faculty	21 (84.00)	4 (16.00)	25 (100)	(3 ;0.335)
Total	120 (30.85)	269 (69.15)	389 (100)	

**significant at 0.01 level

The data given in table no. 2 shows the response of respondents belonging to different categories with regard to their knowledge about the library's electronic resources. It was found that a maximum proportion of the undergraduate, i.e., 75.48% were not aware about their library e-resources, where as the remaining only 24.52% were aware about such resources. Similarly, among the postgraduates, a high proportion of them, i.e. 62% were not remaining 38% were aware about such resources. On the other hand 100.00% research scholars were aware about the library e-researches. However, a large proportion of

faculty members, i.e., 84.00% were aware about such e-resources, where as the remaining only 16.00% were not aware about them. It is evident that maximum number of research scholars and faculty were aware of library e-resources as compared to undergraduates and postgraduates. From total 389 respondents 30.85 % were aware and 69.15% were unaware of their library e-resources. Thus, maximum number of users did not have the knowledge about their library e-resources / services. The value of ÷^{2} is 49.101 and the degrees of freedom (df) is 3. The value of p is found to be statistically significant (ðd" 0.01). The chi-square test result of significance value at 1 percent level shows there is a significant variation among the users as far as the awareness about e-resources/services provided by their library is concerned.

Table No. 3: Are you aware about the name and working of the INDEST consortium?

Respondents	Response		Total N (%)	Chi^2 (df;C)
	Yes N (%)	No N (%)		
Undergraduates	42 (13.55)	268(86.45)	310 (100)	117.218** (3 ;0.650)
Postgraduates	16 (32.00)	34 (68.00)	50 (100)	
Research Scholars	4 (100.0)	-	4 (100)	
Faculty	25 (100.0)	-	25 (100)	
Total	87 (22.37)	302 (77.63)	389 (100)	

**significant at 0.01 level

The Institutional library under study subscribes to various e-journals/portals for its users under INDEST consortium. Table No. 3 shows that in response to the question whether the respondents have hard the name of INDEST consortium and know about its working, majority of the undergraduate, i.e., 86.45% responded negatively, whereas the remaining only 13.55% of them responded positively. Similarly, a high proportion of postgraduates, i.e., 68.00% responded positively. However, all the research scholars and faculty members responded that they have heard the name of INDEST consortium and know about its working. It has been seen that research scholars and faculty were fully aware about INDEST consortium. From the total 389 users, maximum number of users, i.e., 302 (77.63%) were not aware about INDEST consortium and only 87 (22.37%) were aware about it. The value of ÷^{2} is 117.218 and the degree of freedom (df) is 3. The value of p found to be statistically significant (ðd" 0.01).The chi-square test of independence is significant at 1 percent level of significance. This implies that there is a significant variation among the users as far as the awareness of INDEST consortium is concerned.

Table No. 4: If you are aware about INDEST consortium e-resources, do you use them?

Respondents	Response		Total N (%)	Chi^2 (df;C)
	Yes N (%)	No N (%)		
Undergraduates	-	42 (100.0)	42	53.605** (3;0.617) NR: 302 (77.63%)
Postgraduates	3 (18.75)	13 (81.25)	16	
Research Scholars	4(100.00)	-	04	
Faculty	19 (76.00)	6 (24.00)	25	
Total	26 (29.89)	61 (70.11)	87	

**significant at 0.01 level

Table No. 4 carries the response of users regarding the use of INDEST consortium e-resources. It has been found that none of the respondent used the e-resources. Similarly, a high proportion of postgraduates, i.e., 81.25% did not use such e-resources, whereas the remaining 18.75% only used them. However, 100 per cent of the research scholars were using e-resources from INDEST consortium. Among the faculty members, 76% of them used the e-resources, whereas the remaining 24% did not use such resources. Further, it has been found that research scholars and faculty used these e-resources more as compared to undergraduates and postgraduates. Out of total 389 respondents, 302 (77.63%) users did not respond and 87 responded to this question. From these, only 26 (29.89%) respondents were found to be aware about e-resources provided by their library, white 61 (70.11) were not using them. Thus, majority of the users were not using the e-resources. The chi-square value is significant at 1 per cent level. This implies that there is a significant variation among the users as far as the use of e-resources is concerned.

Table No.5: Know availability of free Electronic journals/Portals on the net?

Respondent	Response		Total N (%)	Chi^2 (df;C)
	Yes N (%)	No N (%)		
Undergraduates	69 (22.26)	241 (77.74)	310(100)	
Postgraduates	21 (42.00)	29 (58.00)	50(100)	11.440**
Research Scholars	2 (50.00)	2 (50.00)	4 (100)	(3;0.169)
Faculty	4 (16.00)	21 (84.00)	25(100)	
Total	96 (24.68)	293 (75.32)	389(100)	

**significant at 0.01 level

In response to the question whether the users have the knowledge about availability of free electronic journals on the not, 69 (22.26%) undergraduates were found to have the awareness in this regard, whereas 241 (77.74%) were lacking this awareness. Similarly, 21 (42%) postgraduates responded yes and 29 (58%) responded no. however, the response of research scholars was 50:50 in this regard, white 4 (16%) faculty members response yes and 21 (84%) responded no. The table clearly shows that maximum numbers of users did not have the knowledge about availability of free e-journals on the not. The awareness about availability of free electronic journals among the research scholars and postgraduates was greater as compared to undergraduate and faculty. The chi-square test for independence is significant at 1 per cent level. It implies that there is a significant variation among the users as the knowledge of availability of free e-journals on the net is concerned. The data provides that of that total 389 respondents 96 (24.68%) responded positively and 293 (75.32%) responded negatively. This shows that maximum of users were not ware about the free e-journals/portals on the net.

The e-resources are used for various purposes. The users were asked for what purpose they use e-journals and bibliographic database. Table no. 6 shows that of the total respondents, maximum number of them, i.e., 339 (87.15%) did not use these e-resources for writing papers, where as the remaining only 50 (12.85%) used for this purpose. As many as 227 (58.35%) used such e-resources for seminars, and the rest 162(41.65%) did not use for this purpose. Similarly, most of the respondents, i.e., 279 (71.72%) did not use e-resources for academic work, whereas the remaining only 110 (28.28%) used for this purpose. It has been found that a greater number of respondents, i.e., 211 (54.24%) used library e-resources for the purpose of writing projects, whereas 178 (45.76%) were not using for this purpose. As many as 336 (86.38%) respondents were not using the library e-resources for the purpose of research work and only 53 (13.62%) of them were using these e-resources for

Table No.6: For what purpose do you use e-resources?

Purpose	Response		Total
	Yes N (%)	No N (%)	N (%)
Writing Paper	50 (12.85)	339(87.15)	389(100)
Seminars	227 (58.35)	162(41.65)	389(100)
Academic work	110 (28.28)	279(71.72)	389(100)
Projects	211 (54.24)	178(45.76)	389(100)
Research work	53 (13.62)	336(13.62)	389(100)

research work.

The library under study subscribes to INDEST consortium for the e-resources. These e-resources can be accessed online and the required documents can be downloaded. The technical e-journals are provided to the uses under the consortium IEL online, ASCE and ASME. Table no. 7 shows the download usage statistics for the years 2004 and 2005. It has been found that there has been an increase in the usage of IEL online and ASME over the previous year whereas the usage of ASCE has decreased for the same period. The total usage shows that download of e-journals has increases in the year 2005 as compared to the previous year. Thus, it indicates that users are suing these e-resources. The increase in usage is encouraging and there is need to provide more such e-resources to the users.

Findings and Recommendation

Table No.7: Down load usage statistics for the two years i.e. 2004 & 2005

S. No	Title	2004	2005	Usage status
1	IEL Online	17457	19579	Increased
2	ASME	299	1416	Increased
3	ASCE	1972	641	Decreased
Total Download Usage		19,728	21,636	Increased

The response of 389 respondents shows that 120 (30.58%) were aware and 269 (69.42%) more not aware about their library e-resources/ services. Research scholars and faculty were more aware about their library e-resources/ services as compared to undergraduates and postgraduates. Similarly, they were also more aware about the name INDEST consortium and the services provided through it. The data indicates that 87 (22.37%) users were aware about the name INDEST consortium and its working, whereas 302 (77.63%) did not know about it. From 87 users who were aware about INDEST consortium 26 (29.89%) used these e-resources and the remaining 61(70.11%) did not use it. 302 (77.63%) users out of surveyed population of 389 did not respond to this question. The users who were aware about free e-journals portals on the net were 96 (42.68%) and 293 (75.32%) of them did not have the awareness about such portals. The e-resources are used more for seminars, i.e., 58.35 percent and 54.24 percent for projects, whereas these

are used less for research and academic work. The download usage shows that users have accepted electronic information and they are using it extensively. It has been observed that there is a constant increase in the number of users downloading information thorough these e-resources. The usage can be further increased by imparting training and through orientation programmes to the users. The findings also indicate that the users who have awareness about these resources are making maximum use of them. The library should increase the number of e-resources so as to fulfill the need of users.

Conclusion

The maximum users still do not have the knowledge about their library e-resources and also have not heard the name of INDEST consortium. However, the users who are aware about these e-resources are making maximum use of them. The research scholars and faculty are the main users who are using e-resources. The download usage statistics indicate that there has been an increase in the number of users over the previous year using such e-resources. There is need to further increase the number of e-resources and to provide support to the users so that they can make maximum use of these resources. The purpose of using these e-resources also needs to be clearly explained to the users.

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