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Information-Seeking Behavior of Engineering Students and Their Adaptation To Electronic Resources

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ABSTRACT

The study is an analysis of the need of the electronic resources which affect information seeking behavior of engineering students of different streams in different engineering colleges of Kota region of Rajasthan. It focuses on the information need and searching behavior of the target group. The findings of the study indicate that the guidance on authenticity, use of the resources available free on internet and the use of library resources/services is necessary to help students to meet their information requirements. The study finds the present status of information need, problems affecting the information seeking behavior and future requirements of the engineering students for exploring the e-resources.

Introduction

In the present "INFORMATION ERA" the information becomes the most important elements for progress in society. To flourish in this modern era, one needs a variety of information. Many electronics resources are available on the web has affected information seeking behavior. Innumerable types of information in a large variety of containers and in many different locations are all available at one place. Information seeking behavior is expressed in various forms reading printed materials to research and experimentation, faculty and students actively seeking current information from the various media available in libraries. Progress in information technology has offered today's information seekers different opportunities to access the information resources in variety of formats, including commonly-available electronic information sources, such as CD ROMs, databases, Web-OPACs, and the Internet. In some instances these are replacing the print-based information sources as the primary media for the storage and communication of recorded information.

Information Seeking Behavior is mainly concerned with who needs what kind of information and for what reason; how information is found, evaluated and used, and how their needs can be identified and satisfied. The information seeking behavior essentially refers to the strategies and actions undertaken to locate discrete knowledge elements.

During last decade, in Kota region that is popularly known as the Coaching City of India, there has been a mushrooming growth of engineering institutions imparting education and training in different disciplines. As the orientation of students have changed from traditional system to the automated system of library, so the study is an effort to identify and analyze the trends in the information seeking behavior of engineering students of Kota region of Rajasthan. In the study summary data on the information seeking behavior of target group is presented and the practical significance of the data is analyzed.

Review of Literature

Information is an important resource for individual growth and survival. The progress of modern societies as well as individuals depends on right kind of information, in the right form and at the right time. Information is needed to take a right decision and also to reduce uncertainty. *Wilson (2000)and Igwe, K.N. (2012),* define the information seeking behaviour as that which involves personal reasons for seeking information, the kinds of information which are being sought and the ways and sources with which needed information is being sought. *Leckie, Pettigrew and Sylvian (1996),* defines infor-

mation seeking behavior as expressed in various forms, from reading printed materials to research, an experimentation scholars, students and faculties actively, seeking current information from the various media available in libraries, e.g. encyclopedia, journals and more currently, electronic media. *Aina (2004) and Krikelas, J. (1983),* opined that "the information seeking behaviour of a user depends on education, access to library and the length of a time user wishes to devote to information seeking". No matter how comprehensive the resources and services of a library are. *Green (2000)* and Osorio (2001) explored the interrelation between Web publishing and information retrieval technologies. Most of the libraries have their sites to explain about library resources, products and services. The level of end user satisfaction with information technology (IT) has widely been accepted as an indicator of IT success. *Natarajan (2012) and Sridhar (1989)* concluded that e-resources help for anytime availability and easy to access, which helps for the researchers to carry out the research on time. The study by *Tanveer Haider Naqvi (2014)* observed that CD-ROM Database, e-journals and online database were most commonly used e-resources among students. It is suggested in the study that library should have better networking and subscribe more number of e-resources and should acquire more number of network computer on which the searching and browsing for needed information could be done effectively.

Methodology

Experimental Design: This study was designed as an exploratory study of engineering students of various institutions of Kota region for the information seeking behavior and their adaptation of electronic resources. To serve the dual purpose, questionnaire and personal interview method was adopted. The survey has yielded quantitave data on each question to convey a real picture regarding the factor triggering the information need, individual concept, seeking behavior and adaptation of electronic resources.

Data Analysis: :
Total 609 questionnaires were distributed 482 (79.14) were received from 6 engineering colleges in Kota region. the data collected from the Under Graduate (B.Tech.), Post Graduate (M.Tech.), Ph.D. students and faculty members of Engineering College in Kota region is presented and analyzed by using appropriate statistical tools and techniques.

Familiarity with the uses of ICT Resources and Services

A question regarding the familiarity with the uses of electronic resources and services in the library was included in the questionnaire and it is observed from the data that majority (62.8%) of the respondents are familiar with the ICT uses.

Visit the library for various purposes

The various purposes and periodicity of visit to library is analyzed based on the opinion of respondents. Most of the respondents visit the library weekly. But the trend is different in accessing the reference resource.

Table 1: Visit the library for various purposes

	Depend-ency	Daily	Weekly	Fort-nightly	Month-ly	quar-terly	Not at all
2	Access Periodi-cals	65 (13.4)	199 (41.23)	104 (21.67)	57 (11.9)	18 (3.7)	39 (8.1)
3	Access Refer-ence resource	237 (49.23)	123 (25.61)	71 (14.6)	38 (7.97)	13 (2.59)	0 (0)
6	Access other online resource	54 (11.2)	43 (8.92)	94 (19.5)	38 (7.88)	192 (39.8)	61 (13)
7	Access CDs / VCDs / DVDs	47 (9.75)	36 (7.47)	57 (11.83)	102 (21.16)	125 (25.9)	115 (24)

No preferred pattern of visit in the library is seen in terms of access online resources. This may be due to the fact that in most of the college the Post Graduate / Research Scholars/ faculty members are provided the individual user id and passwords to access the online resources like N-List/ DELNET. CD/DVD/VCD and these are also accessed regularly wherever available. These are used on need based.

3. Level of Convenience in using Information and Communication Technology (ICT) Facilities

To judge the convenience in handling the ICT facilities a question is incorporated in the questionnaire and results are cited in Table 2. The responses were asked in 4 categories with 6 fields/attributes. In Engineering colleges it is observed from the responses that majority of the population (63.2%) feels very comfortable in dealing with internet facility followed by the handling of e-journals (55.1%). This is because of the fact that now a day's internet becomes part of the day to day life and its use is being taught since school level.

Table 2: Level of Convenience in using ICT Facilities in your library

S.No.	Facilities	Highly Conven-ient	Conven-ient	Fairly Con-venient	In Conven-ient
1	Comput-ers	55 (11.5)	96 (19.87)	138 (28.7)	192 (39.93)
2	e- journals	266 (55.1)	150 (31.2)	48 (10)	18 (3.7)
3	Internet	305 (63.2)	93 (19.3)	84 (17.5)	0 (0)
4	e- library	46 (9.5)	133 (27.67)	201 (41.7)	102 (21.13)
5	E-Thesis	27 (5.7)	32 (6.6)	43 (8.87)	380 (78.83)
6	DELNET	104 (21.5)	184 (38.14)	105 (21.7)	90 (18.66)
	Sum	803	688	619	782

Almost a quarter of the population (21.5%) in this region feels highly convenient in dealing with the DELNET facilities available in almost all institutions. But very few (11.5%) respondents feel convenience in experimenting with computers. It is also clearly seen from the data that students feel difficul-

ties in dealing with the E-thesis. A majority of the population (78.83%) have inconvenience for this field.

4. Help by library staff while searching information on the Internet/computer

A question regarding the ICT help in library is asked to the stakeholders. Only 41.87% respondents in engineering colleges are in view that library staff helps any individual when help is required in terms of ICT but the majority is disappointed by the responses of library staff.

Some of the identified reasons are as follows:

Libraries in most of the institutions are lacking in library staff.

Library staff is not properly trained in terms of Information and Communication Technology.

The available ICT equipments are installed with the old version of software. These are not being updated properly.

Internet /Net connectivity is not working with required / expected speed.

Most of colleges has a big computer lab so student access the e-resources in computer lab. So library staff could not help the student.

5. Need of Training to use the digital resources available in the library

Now a day's it is made mandatory to have digital resources in the institution specially in library. The digital resources are very comfortable in use. The reference or the contents can directly be taken in the thesis report. So it is very much essential that every user must know the handling of the available digital resources. For this purpose a proper training is very much necessary. A question, regarding this aspect, was placed in the questionnare and response was as expected. Majority of the respondents (87.19%) are of the openion that a proper training is very essential

Affect of electronic / modern facilities on information seeking behavior

The opinions of respondents in using the information technology, such as their interest in using the technology, need for training, difficulties in retrieving the *e-sources* and their comfort level in getting the required information within right time are analyzed. Table 3 indicates that 36.95 percent of respondents feel that they are comfortable in getting their information within right time using the electronic facilities.

Table 3: Electronic / modern facilities affect information seeking behavior

S.No.	Statement	Response (%)
1	I am not interested in using the technology rather than going straightaway to the resource by institution	39 (8)
2	I am not given proper training / information in making use of them	151 (31.4)
3	The retrieval of e – sources consumes much time in getting right information I need, since the search lists large number of relevant and irrelevant information	114 (23.6)
4	I feel comfortable in getting my information within right time using the e – facilities.	178 (36.95)

31.4 percent of students specify that they are not given proper training / information in making use of the technology. 23.6 percent of students point out that the retrieval of *e – sources* consumes much time in getting right information that they need, since the search lists large number of relevant and irrelevant information. Only 8 percent of the respondents indicate that they are not interested in using the technology rather than going straightaway to the resource by intuition.

Commonly used Internet services

The usage of internet services is analyzed and the results are mentioned in Table 4.

Table 4: Commonly used internet services

S.No.	Services	Continu-ously	Fre-quently	Occasion-ally	Rarely
1	e-mail	104 (21.6)	239 (49.65)	87 (18)	52 (10.75)
2	Search engine	299 (61.94)	102 (21.17)	59 (12.3)	22 (4.59)
3	Blog	35 (7.21)	91 (18.98)	69 (14.22)	287 (59.59)
4	List- Serve	35 (7.26)	86 (17.87)	119 (24.64)	242 (50.23)
5	Messen-ger	47 (9.78)	102 (21.21)	246 (51)	87 (18.01)
	Sum	520	620	580	690

It is evident from the table that most of the respondents from Engineering colleges use the popular search engines to get the information. The search engines are being used by 61.94 % of the population either continuously. Second most used internet service is the emails to receive the information. 49.65% of the respondents are frequently using the email facility to get the information. It is also reflected from the table that Blogs and List Serve are rarely used by most of the populations.

Favourite Journals / Magazines for Academic and General Purpose and frequency of referring

The frequency of access of scholarly journals is analyzed based on the opinion of respondents of engineering colleges. It is evident from the table that research is not prevailed in Engineering colleges. Majority of the stakeholders does not refer any journal. The intensive survey indicates that some journals are subscribed in the institutions either in electronic form or in hard copy and some of them are journals from the consortium of IEEE, ASME, ACM, SAE and ASCE. In engineering colleges most of the journals are subscribed in electronic form.

Table 5: Favourite Journals / Magazines read for Academic and General Purpose

Journals		Kota Region			
		Continu-ously	Frequent-ly	Occasion-ally	Not at all Referring
1	IEEE	124 (25.80)	101 (21)	125 (26.00)	132 (27.40)
2	ASME	33 (6.80)	96 (19.90)	135 (28.00)	218 (45.50)
3	ACM	45 (9.30)	64 (13.20)	143 (30.00)	230 (47.80)
4	SAE	46 (9.60)	54 (11.20)	154 (32.00)	228 (47.40)
5	ASCE	44 (9.10)	54 (11.20)	135 (28)	249 (51.70)

It is also reflected from the Table 5 that the journals of Institute of Electrical and Electronics Engineers (IEEE) is the most popular and common in Engineering colleges and 25.80% of the population is accessing this consortium continuously and 21% accessing it frequently for their research and project/thesis purpose. Next popular journal in this region are from the consortium of American Society of Mechanical Engineers (ASME) which are frequently used by Mechanical / Instrumentation and Civil engineering students and faculty. The use other journals of different groups are distributed evenly and all are occasionally searched by the population.26% to 30% respondents use all the journals occasionally. But majority of the population (ranging from 27% to 52%) are not referring any type of journal.

Conclusion:

In the present changing learning environment, majority of students are well versed in using computers. They are interested to access resources through digital mode, spend much time on online resources and depend on internet for getting information.
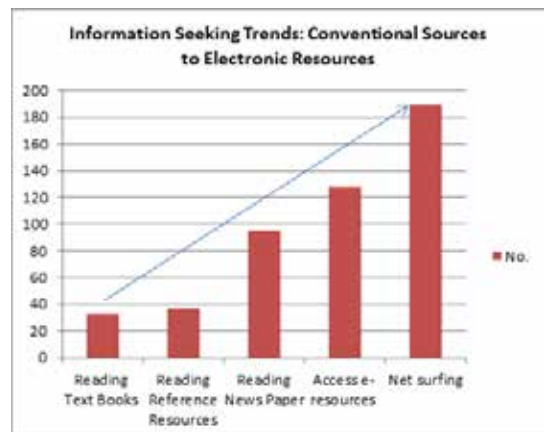

Fig1. Information Seeking Trends: Conventional Sources to Electronic Resources

However, on the other hand, with respect to accessing scholarly resources such as e-journals and digital library, their interest is minimal. This trend necessitates educating them in using scholarly resources for their academic benefits and teaching them smart search strategies for getting right information in short span of time by using internet.

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