



USE OF ELECTRONIC RESOURCES IN RURAL ENGINEERING COLLEGES: A SURVEY IN BELGAUM DISTRICT

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ABSTRACT

Due to the developments in Information and Communication Technology (ICT) the formats of information sources have developed and the libraries are transformed with electronic resources and internet. As such, at present the engineering colleges are imparting education in technology in different parts of Karnataka. The libraries are well equipped with the ICT technology applications to store and disseminate the electronic resources to their users. To assess the usefulness of the electronic resources in rural engineering college libraries, the present study was made. Total 300 students studying in engineering and 150 faculty members working in 5 engineering colleges located in Belgaum district were surveyed with questionnaire to collect primary data on use of e-resources. It was found that almost users are using the e-resources in the libraries. As suggested from the study, there is need to increase the number of e-resources to the INDEST consortium. Further, there is also need to provide more awareness about the use of e-resources by the library professionals by organizing information literacy programmes to the users.

KEYWORDS: Information and

Communication Technology (ICT) , electronic resources and internet.

INTRODUCTION:

The major contribution of the Information and Communication Technology (ICT) is the evolution of Electronic Resources. E-resources have changed the entire scenario of the education system, especially higher education system. The dependency on print resources have completely switching over to electronic media. This is a good sign of educational development. Now all most all the institutions are concentrating more on electronic resources rather than traditional print media. This has exerted the

pressure upon the traditional role of librarians.

The rapid growth and development of Information and Communication Technology has changed our society. To meet the tremendous information explosion and high demand of information, libraries are now taking the advantage of the digital technology. The digital technology helped to develop the electronic resources such as CD databases, e-books, e-journals, ETDs (Electronic Theses and Dissertations) etc. Hence the presently the library transformed and there are four kinds of libraries. They are Conventional Libraries, Digital Libraries, Hybrid Libraries and Virtual Libraries.

Electronic library is a library that has wide spread use of



computers and such other activities as online databases and automated record keeping and computer based decision making. Digital libraries are libraries in which all information exists in digital format. The information itself may however reside on different storage media such as electronic memory magnetic or optical disks, but user will not necessarily perceive any difference between them. Virtual libraries use the technology of Virtual Reality (VR). This is known as tele-presence in its simplest form. In a virtual environment, one would be able to browse without having to physically go to it. Using Virtual Reality equipment and facilities one would be able to enter virtual library, browse around its rooms and shelves, use index or catalogue, and select a book by pointing to it and touching it. The term Virtual Reality refers to an environment or object simulated by computer hardware and software in such a way that the viewer experiences the environment or objects as though it were real (Sangam and Kulkarni, 2001).

The major Information and Communication Technologies (ICT) transformed and developed the library and information services as under (Mestri and Kumbargoudar, 2006):

- ❖ Automation and Mechanization of every function of the libraries;
- ❖ Compact Storage of Information, easy accessibility and faster communication;
- ❖ Subject databases particularly from academic institutions: Increasing number of institutions, especially academic and research institutes are making databases in their specialized subject made available;
- ❖ Automated Library Catalogue: Increasing numbers of libraries are making their Catalogue electronically available over the Internet which may extend the use of library resources.
- ❖ List Serves and discussion groups on a wide variety of topics. Participants have the opportunity to exchange and share current information;
- ❖ Document Delivery Services may be provided electronically using Internet Technology;
- ❖ Electronic Mails allow users to send messages or files to each other;
- ❖ Commercial Information databases are available on the internet include, DIALOG, Lexis-Nexis, Dow Jones News/Retrieval and many others;
- ❖ Telnet or remote login-allowing users to log into remote sites;
- ❖ File Transfer Protocol (FTP) and Hyper Text Transfer Protocol (HTTP) allowing users to access and retrieve files at remote sites;
- ❖ Gopher- a text only, non-graphic method to receive internet documents, which have largely been intergenerated into the World Wide Web;
- ❖ The World Wide Web allows users to jump from one resource to another in easier way, without going through gopher style menus;
- ❖ Video-conferencing and Teleconferencing involves linking more than two users, so that participants from different places over the world can see each other and view presentations;
- ❖ The Consortia like UGC-Infonet , INDEST AICTE , provides the information through access to a large number of journals to academic libraries all over the India. Such services are enabled to economize the services from single platform, to avoid duplication of subscription, to strengthen the services of networking and encouraging research and development by providing information in easy accessible way.
- ❖ Open Source Initiatives and Institutional Repositories.

Digital or electronic information is becoming increasingly prevalent now in libraries. Print materials are being digitized to make electronic copies of documents available to the public as well as to protect delicate original documents from excessive handling. Documents stored in thousands of different file formats have created complicated processes necessary for their future preservation. There is also a proliferation of "born-digital" materials that have never existed in print form but still must be effectively managed to ensure their preservation. These born-digital materials are of particular concern to librarians involved in managing digital information because of their recent abundance. As digital documents are produced at increasing rates, there is need to know, collect, retrieve, disseminate and enhance their use in the library.

Any invention in terms of storage and dissemination of information, the technological institutes and engineering colleges should adopt the same. As such, now the engineering colleges in Karnataka have well equipped with modern Information and Communication Technology (ICT) to disseminate the information to the faculty and students. Of course, there are subject databases, e-learning materials, consortia like INDEST, which are providing relevant information to the users in engineering colleges, but there is need to explore the extent of usage of electronic resources compared to the print materials in the engineering college libraries. Hence, the present study is made to know about the use of e-resources in rural engineering colleges located in Belgaum division.

OBJECTIVES OF THE STUDY:

The following are the objectives of the present study:

- 1.To assess the frequency of visit of students and faculty members to the engineering college libraries for access and use the electronic resources;
- 2.To study the significance of use of electronic resources as expressed by the users;
- 3.To know about knowledge and expertise of users in use of general internet based electronic resources and consortium.

METHODOLOGY:

The present study is made to assess the use of electronic resources in rural engineering colleges in Belgaum district. There are total five engineering colleges in Belgaum district, namely, (1) SJPN Trust's Hira Sugar Institute of Technology, Nidasoshi, Taluka: Hukkeri (2) Angadi Institute of Technology and Management, Savagaon, Belgaum (3) Shaikh College of Engineering and Technology, Bhootaramanahatti, Belgaum (4) Jain College of Engineering, Machhe, Belgaum and (5) V.S.M's Institute of Technology, Nippani. There are more than 4500 students studying and 400 faculty members are working in these engineering colleges. Each of these engineering colleges have well equipped library with access to electronic resources. As it is not possible to survey all the faculty members and students to assess the use of e-resources, a sample survey was made covering total 300 students and 150 faculty members from these colleges through questionnaire. The collected primary data through questionnaires is analyzed and discussed as under.

ANALYSIS AND DISCUSSION:

1. Frequency of Visit to the Library:

Visit to the library is essential to know about the different electronic resources that are accessible online. Hence, it was asked to the respondents about frequency of visit to the library of their engineering colleges. The following table disclosed the information as under.

Table No. 1. Frequency of Visit to the Library

Particulars	Students		Faculty Members	
	Frequency	Percentage	Frequency	Percentage
Daily	104	34.67	12	8.00
Twice in Weekly	71	23.67	08	5.33
Fortnightly	44	14.66	47	31.33
Monthly	36	12.00	43	28.67
Occasionally	45	15.00	40	26.67
Twice in a Year	--	--	--	--
Never	--	--	--	--
Total	300	100	150	100

It is clear from the above table that of the students covered under the study, 104 (34.67%) are visiting library daily, followed by 71 (23.67%) are visiting the library weekly twice, about 45 (15.00%) are visiting the

library occasionally, about 44 (14.66%) are visiting library fortnightly and the remaining 36 (12.00%) are visiting the library monthly.

Of the faculty members covered under the present study, 47 (31.33%) are visiting fortnightly followed by, 43 (28.67%) are visiting monthly, about 40 (26.67%) are visiting occasionally, about 12 (8.00%) are visiting daily and the remaining 08 (5.33%) are visiting the library weekly twice.

2. USE OF DOCUMENTS IN THE LIBRARY:

The Library consists of different kinds of documents such as printed books, printed journals, reference works, newspapers, other printed documents, CD databases, web based information sources such as OPAC, e-books, e-journals, Electronic Theses and Dissertations, INDEST Consortium, etc. The following table presented the use of different kinds of documents that are used by the faculty members and students covered under the present study.

Table No. 2. Use of documents in the Library

Particulars	Students		Faculty Members	
	Frequency	Percentage	Frequency	Percentage
Printed Books	300	100	45	30.00
Printed Journals	300	100	116	77.33
Other Printed documents	54	18.00	22	14.67
Offline digital documents (CD)	77	25.67	62	41.33
Web based information sources	234	78.00	93	62.00
All of the Above	84	28.00	93	62.00
None of the Above	--	--	--	--
Total	300	100	150	100

It is observed from the above table that all the students are using printed books and printed journals. It is noted that of the total 300 students, only 234 (78.00%) are using web based information sources, followed by 84 (28.00%) are using all the kinds of resources, about 77 (25.67%) are using offline digital documents such as CD databases and about 54 (18.00%) are using other kinds of documents.

Of the total 150 faculty members it is noted that about 116 (77.33%) are using printed journals, followed by 93 (62.00%) are using all the kinds of documents, 93 (62.00%) are using web based information sources, about 45 (30.00%) are using printed books and 22 (14.67%) are using other kinds of printed documents.

3. KNOWLEDGE ABOUT USE OF COMPUTER AND INTERNET BASED INFORMATION SOURCES:

To access the offline and web based e-resources, there is need for adequate skills on computer applications and internet techniques. Hence, it was asked to the respondents that whether they have adequate knowledge about the use of computer and internet based information sources. The collected information is presented in the following table.

Table No. 3. Knowledge about Use of Computer and Internet based Information Sources

Particulars	Students		Faculty Members	
	Frequency	Percentage	Frequency	Percentage
Yes	267	89.00	150	100
No	33	11.00	--	--
Total	300	100	150	100

It is revealed from the above table that of the total students 267 (89.00%) have adequate knowledge

about use of computers and internet, whereas remaining 33 (11.00%) have no adequate knowledge on the same. Further, it is noted that all the faculty members are fully aware about the use of computer and internet.

4. Adequate Knowledge on use of Internet and Web based e-resources:

To use and access the electronic resources, there is need for adequate knowledge about internet, web, different software programmes, etc. Hence, the following table shows that whether the students and faculty members have adequate knowledge on the use of web based e-resources.

Table No. 4. Adequate Knowledge on Use of Internet and Web based e-resources

Particulars	Students		Faculty Members	
	Frequency	Percentage	Frequency	Percentage
Yes	231	77.00	122	81.33
No	69	23.0	28	18.66
Total	300	100	150	100

Among the students covered under the study, only 231 (77.00%) have knowledge on the use of internet and access web based electronic resources, whereas the remaining 69 (23.00%) of the students do not have such skills. As expressed by faculty members, only 122 (81.33%) are expressed that they have adequate knowledge on the use of internet and web based e-resources, whereas the remaining 28 (18.66%) have expressed that they do not have adequate knowledge on these skills.

5. USE OF TECHNIQUES OF INTERNET AND WEB:

The internet has various kinds of techniques and applications, such as electronic mail, search engines, web logs, OPAC, e-books, online journals, etc. Further, above stated table depicted that only 231 students and 122 faculty members have adequate knowledge on the use of web based resources. The following table shows the use of different internet and web techniques and applications that are used by the students and faculty members covered under the present study.

Table No. 5. Use of Techniques of Internet and Web

Particulars	Students		Faculty Members	
	Frequency	Percentage	Frequency	Percentage
Search Engines	231	100	122	100
Electronic Mail	231	100	122	100
Subject databases	93	40.26	87	71.31
Institutional/ Departmental Portals	146	63.20	98	80.32
Web logs	81	35.06	37	30.32
e-books/ e-journals	231	100	122	100
OPAC	231	100	122	100
Open Sources, e- prints, Archives, Institutional Repositories	182	78.78	103	84.42
INDEST Consortium	231	100	122	100
Total	231	100	122	100

It is noted from the above table that of the 231 (100%) of the students scholars, all are using search

engines, electronic mail, electronic books, electronic journals, OPAC and INDEST consortium, followed by 93 (40.26%) are accessing subject databases 146 (63.20%) are using institutional and departmental portals, 81 (35.06%) are using web logs and 182 (78.78%) are using the open sources such as e-prints, archives and institutional repositories.

Among the faculty members covered under the study, all are using search engines, electronic mail, electronic books, electronic journals, OPAC and INDEST Consortium, only 87 (71.31%) are using subject databases, 98 (80.32%) are using institutional and departmental portals, 37 (30.32%) are using web logs and 103 (84.42%) are using open sources, e-prints, archives and institutional repositories.

6. SOURCE THROUGH WHICH CONSORTIUM IS KNOWN:

It is noted that there are different sources such as guidance of the library professionals and teachers, advertisements or through web searching, the consortium is known to respondents. The following table stated the responses of the respondents regarding source through which INDEST Consortium is known.

Table No. 6. Source through which Electronic Resources and Consortium is known

Particulars	Students		Faculty Members	
	Frequency	Percentage	Frequency	Percentage
Faculty Members/ Heads	21	14.48	05	4.10
Library Professionals	150	64.93	98	80.33
Advertisements	31	13.41	06	4.92
Colleagues/ Friends/ Co-workers	29	12.55	13	10.65
Web Sources	--	--	--	--
Any Other	--	--	--	--
Total	231	100	122	100

It is observed from the above table that of all the students, 21 (14.48%) have stated that they got awareness about e-resources and consortium through faculty members and heads, major portion, that is 150 (64.93%) students got the awareness by library professionals, 31 (13.41%) have got the awareness through advertisements and 29 (12.55%) have got the awareness by colleagues, friends and co-workers. On the source through which electronic resources and consortium is known to faculty members, 98 (80.33%) have got such awareness by library professionals followed by, 13 (10.65%) have got the awareness by their colleagues, friends and co-workers, 06 (4.92%) have got the awareness by advertisements and 05 (4.10%) have got awareness by other faculty members and heads of their departments and institutions respectively.

7. ELECTRONIC RESOURCES ARE EASY TO ACCESS, SEARCH AND GET RELEVANT INFORMATION AT LESSER TIME:

As discussed already, access to electronic resources is easy, searching is also easy and also within no time relevant information may be accessed from the electronic resources. Hence, it was asked to the respondents that whether they agree that electronic resources are easy to access, search and get relevant information at lesser time. The collected data is presented in the following table.

Table No. 7. Electronic Resources are Easy to Access, Search and Get relevant Information at Lesser time

Sl No.	Particulars	Students		Faculty Members	
		Frequency	Percentage	Frequency	Percentage
1	Yes	171	74.02	97	79.51
2	No	60	25.97	25	20.49
	Total	231	100	122	100

As revealed from the above table that 171 (74.02%) of the students expressed that the accessing, searching and getting relevant information from the electronic resources in lesser time, whereas the remaining 60 (25.97%) have stated that it is not easy to access, search and get relevant information at lesser time. Of all the faculty members, 97 (79.51%) have expressed that it is easy to access, search and get relevant information from electronic resources at lesser time, whereas 25 (20.49%) have not agreed to the same.

8. Sufficient Number of Journals in the Consortium to fulfill Information Needs:

It was asked to the respondents, that whether the INDEST Consortium has sufficient number of full text journals accessible to meet the needs of faculty members and students of the different departments. The collected responses are presented in the following table.

Table No. 8. Sufficient Number of Journals in the Consortium to fulfill Information Needs

Particulars	Students		Faculty Members	
	Frequency	Percentage	Frequency	Percentage
Yes	158	68.39	78	63.93
No	73	31.60	44	36.06
Total	231	100	122	100

It is already noted that all the students and faculty members are using the INDEST consortium in their libraries. As such, 158 (68.39%) of the students felt that there are sufficient number of journals in the consortium, whereas the remaining 73 (31.60%) have not agreed to the same. Among the faculty members, 78 (63.93%) are satisfied and agreed that sufficient number of journals in the consortium, whereas the remaining 44 (36.06%) have not agreed to the same.

SUGGESTIONS FROM THE STUDY:

1. It is suggested to the library professionals to increase the usage of e-resources in the libraries by organizing information literacy training programmes.
2. There is need to increase the number of e-resources in INDEST consortium.
3. It is suggested to the engineering colleges in rural areas to upgrade the internet speed, so that electronic resources should be accessed and used in lesser time.

CONCLUSION:

It is concluded that the rural areas are neglected in terms of essential infrastructure such as power supply, internet connectivity, etc. Further, many of the engineering colleges are imparting technical education in rural areas. Technical infrastructure is essential for learning technical courses. For this purpose, the engineering colleges should facilitate good infrastructure to the libraries, so that the electronic resources should be accessed and used by all the users. Further, it is essentially needed to educate and give awareness about the significance of electronic resources among all the users of the engineering college libraries. Hence, it is essential that the library professionals must organize information literacy programmes frequently to the faculty members and students in the engineering colleges.

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