

USE AND IMPACT OF E-RESOURCES AMONG THE FACULTY MEMBERS OF ULTRA COLLEGE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, MADURAI : A CASE STUDY



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ABSTRACT

E-resources are the most sought after form of resources in this IT penetrated academic environment for the faculty members and the students. The use of e-resources can have a strong impact on the academic performance of the users. The present study aims at evaluating the use and impact of e-resources among the faculty members of Ultra College of Engineering and Technology for Women, Madurai. Questionnaire was used to collect data from 70 faculty members. The findings of the study are : 34(49 %) are male and 18 (26%) faculty members belong to 22-26 age group. 28 (40%) respondents are BE graduates and 19 (27%) respondents are ME graduates. 18(26%) respondents are Assistant Professors. A majority of 30 (43 %) faculty members are from the Dept. of CSE/IT and the least number of 5 (7 %) faculties are from the Dept. of Mechanical Engineering. 49 % (34) of the faculty members have optimal awareness about the e-resources. % (14) of the faculties access e-resources in the college library. E-manuscripts is the most used e-resource among the faculty members (16%) followed by E-mail used among 14 % (10) of the faculty members. While CD ROM is used by 67 % (47) respondents daily, 53 % (32) of them use E-mail daily. Online journals are used daily by 56 % (39) of the respondents and search engines are used daily by 51 % (36) of the respondents. 30 % (21) of the faculty members have 6months-1 year experience in using E-resources. 16 % (11) of faculty members each use EBSCO database and Springer Link and 7 % (5) of them each use Science Direct and Nature. 19 % (13) of faculty members come to know about e-resources by browsing Internet. 24 % (17) of faculty members learn about e-resources by self reading technique and 23 % (16) of them use Trial and error method. that 30 % (21) of faculty members use e-resources because their reliability and 26 % (18) of them use them because of authenticity. the impact of e-resources on teaching process is moderate for 46 % (32) of the faculty members. 54 % (38) of the faculty members felt that low internet connectivity is the major problem faced by them in accessing e-resources. 24 % of the faculty members viewed that being less expensive is the best plus point of e-resources. 39 % (27) of faculty members are highly satisfied with the availability and use of e-resources in the college library.

KEYWORDS :E-Resources, awareness, experience, frequency, purposes, e-databases, hindrances, advantages, access points, impact, ultra college of engineering.

1. INTRODUCTION : E-RESOURCES

Electronic resources are those materials available in electronic format. These may be either an electronic version of publication that first appeared in slandered paper format or a document that is wholly composed for, and distributed only with, an electronic environment. These resources may be available in the intranet or internet. Electronic resources consist of materials that are computer-controlled, including materials that require the use of a peripheral attached to a computer; the items many or may not be used in the interactive mode.

- ✦ E-resources can be defined to include resources that are available via Web browsers, FTP, gopher, telnet, mailing list, e-mail or other network tools or protocols (Zhang, 2001).
- ✦ "Material consisting of data and/or computer program(s) encoded for reading and manipulation by a computer, by the use of a peripheral device directly connected to the computer, such as a CD-ROM drive, or remotely via a network, such as the Internet (AACR2). The category includes software applications, electronic texts, bibliographic databases, institutional repositories, Web sites, e-books, collections of e-journals, etc. Electronic resources not publicly available free of charge usually require licensing and authentication" (Reitz, 2005).
- ✦ E-resources also can be defined as those electronic information resources and services that user's access electronically via a computing network from inside the library or remote to the library (Ibrahim, 2004).

2. INSTITUTIONAL PROFILE : ULTRA COLLEGE OF ENGINEERING AND TECHNOLOGY FOR WOMEN, MADURAI

ULTRA Trust, pioneers in education, with an abiding interest in providing professional education to the society was started in the year 1981. In the academic year 2009-10, as another diamond to the crown of the trust, ULTRA college of Engineering and Technology for women, exclusively for women is established at Madurai – Chennai highway, Madurai.

It is founded by Prof. KR. Arumugam, the chairman of ULTRA Trust Madurai. It is the first women's engineering college in the temple city Madurai for empowering the women to contribute the best for the growth of global economy.

It is endowed with State of the Art modern infrastructure facilities coupled with green environment (eco-friendly) high class room environment having the latest technology, laboratory facilities and services, library, model drawing hall, placement and training activities, sports and games facilities, research oriented activities, modern Hostel facilities, modern canteen, and reception hall with Saraswathi statue.

3. REVIEW OF LITERATURE

Thanuskodi (2012) conducted a survey of post graduate students and research scholars of Faculty of Arts in the Annamalai University and found that the majority of users are aware about the availability of e-resources. The result reveals that 47.78% of respondents want to access only electronic version whereas only 32.78% users want to read the printed journals but 19.44% respondents want to use both electronic and printed version. Majority of the respondents (76.66%) use e-resources for writing papers. Nelogal and Bachalapur (2012) conducted a survey through a structured questionnaire

distributed among 256 P.G. students of Science & Technology discipline and found that the information content in e-resources is better than that of print versions; most of the users access e-resources to search bibliographical information. Lack of availability of personal computers and internet bandwidth are the two main problems faced by users.

Dhanavandan, Mohammed Esmail and Nagarajan (2012) conducted a study to find out the utilization of e-resources among the students and faculty members of Krishnasamy College of Engineering and Technology, Cuddalore and found that majority of the users (42%) indicated that they preferred print version of resources for their convenience; 113 users are aware of facilities and services of digital library and make use of it. Only 12% of the respondents use e-resources rarely. Most (45%) of the students use the e-resources for studying and 18.6 % of users for updating the knowledge. Half of the users (55 %) preferred electronic journals and e-books and 28 % of respondents preferred CDs/DVDs. Francis (2012) discussed about the utilization of consortia-based digital information resources by the post graduate and doctoral students of the Kerala Agricultural University, Thrissur. Results show that Library-subscribed online resources were used by 85.71(%) and CD-ROM database resources available in the libraries were used by 65 % students. 36.07(%) of the students accessed and used e- resources many times in a week, 28.68(%) once in a week and 10.66(%) daily.

Navalur, Balasubramani and Kumar (2012) examined the existence of various E-resources, awareness about E-resources, Preference to E-resources, and Assess Points of E-resources problems faced while accessing the E-resources and purpose of E-resources usage in Bharathidhasan University by teachers, students and research scholars. Kandpal, Rawat and Vithal (2013) assessed and evaluated the exposure of ICT and the use of e-resources by the students of NTR College of Veterinary Science, Sri Venkateswara Veterinary University, Gannavaram, Andhra Pradesh with a view to know the exposure of ICT and e-resources to the student at their department or library based on a structured questionnaire. The study confirmed that students of Veterinary Sciences are aware of the e-resources and use various types of e-resources, e-database, and e-journals. The study suggested for the improvement in the access facilities with high internet speed and subscription of more e-resources for the students.

Rawat and Vithal (2013) aimed to assess and evaluate the exposure of ICT and the use of e-resources by the students of NTR College of Veterinary Science, Sri Venkateswara Veterinary University, Gannavaram, Andhra Pradesh and confirmed that students of Veterinary Sciences are aware of the e-resources and use various types of e-resources, e-database, and e-journals. The study suggests for the improvement in the access facilities with high internet speed and subscription of more e-resources for the students. Laxman (2013) studied the usage of e-resources available through UGC-INFONET Digital Library Consortium among the users of the University of Pune. The study reveals that usage of e-resources is increasing. More users are getting awareness of e-resources and using e-databases. Users from Chemistry field are more active in using e-databases. Some databases contain very less titles, but the usage of these databases is very high. Subject specific databases are highly used than multi-subject databases.

Sunil (2013) summarized on consortia system and document delivery services at Banasthali University under JCCC@UGC-INFONET consortia. The findings clearly revealed that more than 60 % of the users were using e-journals weekly for the research purpose. Keyword was the most popular research method for searching e-journals. However, it was found that slow downloading of PDF files was the major problem that would discourage users while using e-journals. Thukaram (2013) undertook a study to find out how the Research Scholars are using the Internet and what kind of difficulties they are facing in the Ramesh Mohan Library, E.F.L. University, Hyderabad. It is revealed that the majority of users are satisfied while using the Internet. Most of the scholars are satisfied by the

service (64.8%) provided by the Library Staff. The Google is the only search engine used by the scholars. Most of the scholars are facing difficulty to get subject related sites. Almost all the respondents have stated that there are limited numbers of computers in the library.

Ganesan and Kaliyaperumal (2013) conducted a study among the dentistry academics of Sri Ramachandra University Library (Medical), Chennai. The results of this study indicate that the awareness programmes of the library are useful to PG students and faculties but not to UG students. Only a minimum number of BDS students are aware of the digital resources related to their academic activities, but as far as access is concerned, more than 50% BDS respondents access using social networking sites (SNSs), blogs, websites/Google scholars, etc. More than 50% of these respondents access using search engines. Jotwani Daulat (2014) studied the marketing efforts being made by IIT libraries to improve the awareness and increase the usage of these resources. The survey revealed that IIT libraries use 27 out of 33 techniques listed in the questionnaire, to promote their e-resources. 85.71 % of the IIT library portals provide links to access e-resources subscribed by them, while 57.14 % provide links to back files of e-journals, 42.86 % provide links to e-books and only one portal (14.28 %) provides access to electronic theses and dissertations.

Elhafiz (2014) described the findings of a survey conducted to measure the use and perception of the United Arab Emirates University (UAEU) faculty members on electronic resources. Analysis confirmed that frequency of use of electronic resources was low. Reasons cited were lack of time because of the time needed to focus on teaching; lack of awareness to electronic resources provided by the library; ineffective communication channels and language barrier. Parthasarathy and Kavitha (2014) carried out a study among the teachers of government colleges in Tiruchirapalli to find out their experience in using e-resources, adequacy of using e-resources, preferred search engine, possible reasons for using e-resources and satisfaction level of using e-resources. They found that about 484(42.20%) male and 207(39.81%) female respondents fulfilled between 51-75 percent of their information needs and 85(7.41% male and 28(5.38%) female respondents fulfilled less than 10.00 percent of their information needs through electronic information resources.

Padma, Ramasamy, Chellappandi and Kathiravan (2014) attempted to trace out the awareness and use of e-resources by the engineering students of two engineering colleges viz. Pannai College of Engineering and Technology and PandianSaraswathiYadav Engineering college located in Sivagangai District. The findings of the study: 86.67% of the respondent are aware the electronic resources. 81.33% of the respondents access the electronic resources. 39.34% of the respondents preferred to use E-journals. 32.79% of the respondents access the electronic resources regularly. 43.33% of the respondents learn through guidance from friends. 35.33% of the respondents use the electronic resources for research/project work. 29.33% of the respondents use the electronic resources for time saving. 34.67% of the respondents report that lack of facilities is the prime problem while using electronic resources. 23.33% of the respondents report that benefits of electronic resources over conventional documents for time saving. 54.67% of the respondents report that access of electronic resources is important. 46.67% of the respondents are satisfied with the use of electronic resources.

4. OBJECTIVES OF THE STUDY

The research has set the following objectives for his study, inter alia.

A. Socio-Demographic Features

- ▲ To provide gender-wise age-wise, and department-wise distribution of the respondents.
- ▲ To get to know the residing sector and academic qualification of the respondents.
- ▲ To identify the marital status of the faculty.

- ✦ To depict the cadre-wise distribution of faculty

B. USE AND IMPACT OF E-RESOURCES

- ✦ To identify the level of awareness of e- resources among the respondents.
- ✦ To infer the e-resource access points used by the respondents
- ✦ To trace out the experience of the respondents in using e-resources.
- ✦ To identify the frequency of e-resources usage by the respondents.
- ✦ To identify the use of various e-resources of the respondents
- ✦ To know the period of e-resources usage of the respondents
- ✦ To enlist the purposes of using the e-resources by the respondents.
- ✦ To study about the e-databases used by the respondents.
- ✦ To know the sources used by the respondents to get acquainted with the e-resources
- ✦ To find out the methods employed by the respondents to learn about the use of e-resources
- ✦ To trace out the reasons why the respondents resort to e-resources
- ✦ To study the helpfulness of e-resources for the research work of the respondents
- ✦ To analyse the impact of e-resources on the teaching / learning process of the respondents
- ✦ To get a glimpse of infrastructural issues in accessing e-resources
- ✦ To enlist the hindrances in accessing e-resources
- ✦ To depict the pros and cons of e-resources as felt by the respondents
- ✦ To study the satisfaction level of the respondents on the availability and use of e-resources and
- ✦ To identify the areas of training needed by the respondents on the use of e-resources

5. SCOPE AND LIMITATIONS

The survey is limited to the teaching faculty only. The area of the study is Ultra College of Engineering and Technology for Women, Madurai. The intention of the study was not to evaluate the quality and usage of any particular type of e-resource/ e-database, but to the general e-resources usage.

6. RESEARCH METHODS

The study undertaken by the researcher belongs to descriptive research study. The researcher has used sampling method in his survey study. The data collected are primary and secondary in nature. 100 faculty members constitute the sampling frame of the study. The sampling techniques adopted are stratified random sampling. Questionnaire is the tool used by the researcher for collecting required data for the investigation. The data was collected from the sample users in the month of April 2015. The questionnaires were distributed to the faculty on their visit to the library. 100 questionnaires were distributed to the faculty members on first come first get basis. The researcher was able to get back only 70 duly filled-in questionnaires. The secondary data required for the study was collected from various sources of information like books, national and international journals, projects, magazines, theses and dissertations etc.

7. DATA ANALYSIS AND INTERPRETATION

7.1. Gender-wise distribution of respondents

Table 7.1: Gender-wise distribution of respondents

S.No.	Gender	Faculty	
		No.	%
01	Male	34	49
02	Female	36	51
Total		70	100

(Source: Primary Data)

Table 7.1 shows the gender-wise distribution of respondents. Out of 70 faculty members, 34(49 %) are male and 36 (51%) are female.

7.2. Age-wise distribution of respondents

Table: 7.2 Age-wise distribution of faculties

S.No.	Age Group	No. of respondents	%
01	22-26	18	26
02	27-31	07	10
03	32-36	17	24
04	37-41	06	09
05	Above 41	22	31
Total		70	100

(Source: Primary Data)

Table 7.2 describes the age-wise distribution of faculty members. While 18 (26%) faculty members belong to 22-26 age group, 22 (31%) respondents belong to 41 and above age category. 17 (24%) faculty members belong to 32-36 age category and just 07(10%) respondents belong to 27-31 age category.

7.3. Qualification-wise distribution of faculties

Table 7.3. : Qualification-wise distribution of faculties

S. No.	Qualification	No. of respondents	%
01	BE	28	40
02	ME	19	27
03	M.Phil	12	17
04	PhD	11	16
Total		70	100

(Source: Primary Data)

Table 7.3 denotes the educational qualification of the faculty members. 28 (40%) respondents are BE graduates and 19 (27%) respondents are ME graduates. While 12 (17 %) respondents are M.Phil scholars, just 11 (16%) respondents are doctorates with Ph.D.

7.4 Cadre-wise distribution of faculties

Table: 7.4 Cadre-wise distributions of faculties

S. No.	Cadre	No. of respondents	%
01	Assistant Professor	18	26
02	Associate Professor	25	36
03	Professor	27	38
Total		70	100

(Source: Primary Data)

It is clear from Table 7.4 that the 18(26%) respondents are Assistant Professors. While 25(36%) respondent are Associate Professors, 27(38%) respondents are Professors.

7.5 Department-wise distribution of respondents

Table 7.5 : Department- wise distribution of respondents

S.No.	Department	Faculty	
		No.	%
01	CSE/IT	30	43
02	ECE	8	11
03	EEE	9	13
04	Mechanical	5	7
05	Civil	9	13
06	Others	9	13
Total		70	100

(Source: Primary Data)

It is inferred from Table 7.5 that a majority of 30 (43 %) faculty members are from the Dept. of CSE/IT and the least number of 5 (7 %) faculties are from the Dept. of Mechanical Engineering.

7.6 Awareness of E-resources

Table 7.6 : Awareness of E-resources

S. No.	Level of E-Resources	Faculty	
		No.	%
01	Optimal Awareness	34	49
02	Moderate Awareness	17	24
03	Least Awareness	19	27
Total		70	100

(Source: Primary Data)

It can be known from Table 7.6 that 49 % (34) of the faculty members have optimal awareness about the e-resources. 24 % (17) of the faculty members have moderate awareness about the e-resources. 27 % (19) of the faculties have least awareness about the e-resources.

7.7 E-resources Access Points

Table: 7.7 : E-resources Access Points

S. No.	E-resources Access Points	Faculty	
		No.	%
01	Home	13	19
02	College Campus	6	9
03	Computer centre	10	14
04	Internet café	11	16
05	Department	7	10
06	Library	14	20
07	Hostel	9	12
Total		70	100

(Source: Primary Data)

It is inferred from Table 7.7 that 20 % (14) of the faculties access e-resources in the college library. While home is the e-resource access point for 19 % (13) of the faculty members , computer center is the place for accessing e-resources for 14 % (10) of the faculties. The least used access point of e-resources is college campus for faculty members (9%).

7.8. E-resources used

Table 7.8 : E-resources used

S. No.	Various of E- resources	Faculty	
		No.	%
01	E-Journals	7	10
02	E-Data archives	6	9
03	E-Manuscripts	11	16
04	E-Maps	8	11
05	E-Books	9	13
06	E-Magazines	7	10
07	E-Thesis	7	10
08	E-Newspaper	3	4
09	E-Mail	10	14
10	E-Research Report	2	3
Total		70	100

(Source : Primary Data)

It is understood from Table 7.8 that E-manuscripts is the most used e-resource among the faculty members (16%) followed by E-mail used among 14 % (10) of the faculty members. Just 2 faculty members use e-research reports and 3 faculties use e-newspapers.

7.9 Types of E-Resources Vs Use Frequency

Table: 7.9 Types of E-Resources Vs Use Frequency

S.No.	E-resource	Daily	2-3 times in a week	Once a week	Once a month	Rarely	Never	Total
01	CD ROM	47(67%)	12(17%)	8(11%)	1(1%)	1(1%)	1(1%)	70 (100)
02	E-MAIL	32(53%)	20(23%)	9(13%)	4(06%)	3(04%)	2(3%)	70 (100)
03	Online databases	39(56%)	21(30%)	5(7%)	2(3%)	2(3%)	1(1%)	70 (100)
04	On line journals	49(70%)	4(06%)	7(10%)	8(11%)	1(1%)	1(1%)	70 (100)
05	Search engine	36(51%)	4(06%)	13(18%)	4(06%)	9(13%)	4(06%)	70 (100)
06	OPAC	58(82%)	2(3%)	1(1%)	1(1%)	7(10%)	1(1%)	70 (100)
07	College website	62(88%)	1(1%)	1(1%)	4(06%)	1(1%)	1(1%)	70 (100)

(Source: Primary Data)

Table 7.9 depicts clearly the type of e-resources and the frequency of their usage by the faculty members. While CD ROM is used by 67 % (47) respondents daily, 53 % (32) of them use E-mail daily. Online journals are used daily by 56 % (39) of the respondents and search engines are used daily by 51 % (36) of the respondents. While 82 % (62) of the respondents use OPAC daily, 88 % (62) of the them use college website daily. It is happy to note that the faculty members use the e-resources frequently. Around 90 % of the respondents are aware of e-resources and use them at least once a month. Only a small margin of 1-10% of the respondents either doesn't use the e-resources or use them scarcely. College website and OPAC are the most used e-resources.

7.10 Experience in using E-Resources

Table 7.10 : Experience in using E-Resources

S. No.	Experience of E-resources	Faculty	
		No.	%
01	6 months	18	26
02	6 Months - 1 year	21	30
03	1 -2 years	19	27
04	> 2 years	12	17
Total		70	100

(Source: Primary Data)

It is decoded from Table 7.10 that 30 % (21) of the faculty members have 6months-1 year experience in using E-resources and 17 % (12) of them use e-resources for more than 2 years. It is a welcoming sign that more than 40 % of the faculty members have more than 1 year experience in using e-resources.

7.11 Use of E-Databases

Table 7.11 : Use of E-Databases

S. No.	Use of different databases	Faculty	
		No.	%
01	CMIE – Prowess	9	13
02	CMIE –India Trades	8	11
03	EBSCO databases	11	16
04	FIIB Virtual Link	4	6
05	DELNET	1	1
06	Nature	5	7
07	Emerald	7	10
08	Web of Science	9	13
09	Science Direct	5	7
10	Springer Link	11	16
Total		70	100

Source(Primary Data)

Table 7.11 illustrates that 16 % (11) of faculty members each use EBSCO database and Springer Link and 7 % (5) of them each use Science Direct and Nature. The least used database among the faculty members is DELNET (1 %).

7.12 Source of information about e-resources

Table 7.12: Source of information about e-resources

S. No.	Source of information about e-resources	Faculty	
		No.	%
01	Library webpage	7	10
02	Library Notice Board	10	14
03	Interaction with peers	9	13
04	Browsing internet	13	19
05	Librarian's guidance	11	16
06	Printed journals	12	17
07	Workshop/Seminars	8	11
	Total	70	100

(Source: Primary Data)

Table 7.12 demonstrates that 19 % (13) of faculty members come to know about e-resources by browsing Internet and 17 % (12) of faculty members use printed journals to get the same information. While 11 % (8) of faculty members learn about e-resources in workshops and conferences, just 10 % (7) of them know it from library webpages. The librarian's guidance deserves applause.

7.13 Methods of learning about e-resources

Table 7.13 : Methods of learning about e-resources

S. No.	Methods of learning about e-resources	Faculty	
		No.	%
01	External Course	5	7
02	Colleagues / Friends	9	13
03	Library staff	13	19
04	Self Reading	17	24
05	Courses from parent organization	10	14
06	Trial and error	16	23
	Total	70	100

(Source: Primary Data)

It is clear from Table 7.13 that 24 % (17) of faculty members learn about e-resources by self

reading technique and 23 % (16) of them use Trial and error method. Just 7 % (5) of them had attended some external course to learn about using various e-resources. Self-reading and Trial and error method is popular among faculties.

7.14 Why do you resort to e-resources?

Table 7.14 : Why do you resort to e-resources?

S. No.	Why do you resort to e-resources?	Faculty	
		No.	%
01	Reliability	21	30
02	Currency	12	17
03	Authenticity	18	26
04	Usability	9	13
05	Objectivity	8	11
06	Others	2	3
Total		70	100

(Source : Primary Data)

It is noticed from table 7.14 that 30 % (21) of faculty members use e-resources because their reliability and 26 % (18) of them use them because of authenticity. Just 11 % (8) of the faculties use e-resources because of their objectivity. Thus, reliability, currency, authenticity and usability are the major features of e-resources that bring the users into their claws.

7.15 Helpfulness of E-resources for Research work

Table 7.15 : Helpfulness of E-resources for Research work

S. No.	Influence of E-journals	Faculty	
		No.	%
01	Up-to-date information	27	39
02	Expedites the research process	5	7
03	Wider range of information	11	16
04	Faster access to information	9	12
05	Easier to access information	7	10
06	Improves research competence	11	16
Total		70	100

(Source : Primary Data)

Table 7.15 portrays that updated information (39 %) and wider range of information (16 %) available in e-resources help the faculty members perform their research work. 16 % (11) of faculty members feel e-resources help to improve their research competence.

7.16 Impact of e-resources on Teaching / Learning

Table 7.16 : Impact of e-resources on Teaching / Learning

S. No.	Impact of e-resources on Teaching / Learning	Faculty	
		No.	%
01	Minimal	9	13
02	Moderate	32	46
03	Extensive	19	27
04	No Impact	10	14
Total		70	100

(Source : Primary Data)

It is clear cut in Table 7.16 that the impact of e-resources on teaching process is moderate for 46 % (32) of the faculty members and extensive for 27 % (19) of the faculty members. Only 14 % (10) of them felt that there is not impact of e-resources on their teaching.

7.17 Infrastructural issues in accessing e-resources

Table 7.17 : Infrastructural issues in accessing e-resources

S. No.	Infrastructural Issues	Faculty	
		No.	%
01	Low internet connectivity	38	54
02	Insufficient work stations	27	39
03	Non-compatibility of systems	5	7
Total		70	100

(Source : Primary Data)

Table 7.17 illuminates that 54 % (38) of the faculty members felt that low internet connectivity is the major problem faced by them in accessing e-resources. For 39 % (27) of the faculty members, insufficient work stations are the problem. Only few faculties opined that non-compatible systems are their problems in accessing e-resources.

7.18 Hindrances in accessing e-resources

Table 7.18 : Hindrances in accessing e-resources

S. No.	Accessing e-resources	Faculty	
		No.	%
01	Need to Search different e- journals	23	33
02	Complicated search instructions	19	27
03	Unable to download articles	11	16
04	Slow host website	17	24
Total		70	100

(Source : Primary Data)

Table 7.18 brings out the fact that 33 % (23) of the faculty members expressed that it is tedious to search for different e-journals to get the required information. While 'complicated search instructions' is the problem for 27 % (19) of faculty members, 'inability to download articles' is the problem for 16 % (11) of faculty members in accessing e-resources.

7.19 Pros and cons of E-resources

Table : 7.19 Pros and cons of E-resources

S. No.	Reasons for E-Resources	Faculty	
		No.	%
	Plus Points		
01	Time Saving	8	11
02	Easy to Use	9	13
03	More Informative	4	6
04	Less Expensive	17	24
05	More Useful	4	6
	Minus Points		
06	Time Consuming	5	7
07	Less Informative	11	16
08	More Expensive	4	6
09	Less Useful	8	11
	Total	70	100

(Source : Primary Data)

It is clear from Table 7.19 that 24 % of the faculty members viewed that being less expensive is the best plus point of e-resources. 13 % (9) of faculty members opined that e-resources are easy to use. It is time saving tool for 11 % (8) of faculty members. When it comes to minus points of e-resources, most of the respondents i.e. 16% (11) of faculty members felt that ' e-resources are less informative'.

7.20 Level of Satisfaction of availability and use of E-Resources

Table 7.20 : Level of Satisfaction of availability and use of E-Resources

S. No.	Satisfaction Level	Faculty	
		No.	%
01	Highly Satisfied	27	39
02	Satisfied	35	50
03	Not Satisfied	8	11
	Total	70	100

(Source: Primary Data)

It is made transparent in Table 7.20 that 39 % (27) of faculty members are highly satisfied with

the availability and use of e-resources in the college library. While 50 % (35) of the faculties are satisfied, 11 % (8) of the faculty members are not satisfied with the availability and use of e-resources in the college library. Thus, majority of the faculty members are happy with the e-resources available in the college library.

7.21 Areas of Training Required

Table 7.21 : Areas of Training Required

S. No.	Areas of Training Required	Faculty	
		No.	%
01	Internet and Search strategies	31	44
02	Use of e-resources	21	30
03	Use of OPAC	18	26
	Total	70	100

(Source : Primary Data)

Table 7.21 depicts that 30 % (21) of the faculties need training on ' Use of E-resources'. 26 % (18) of the faculty members like to attend training programme on ' Use of OPAC'.

SUGGESTIONS

A. FACULTY MEMBERS

- ▲ Enough sources of information and e-resources to facilitate the research work of the faculty members should be made available since there is a prospective scope for many of them to go for their research work. Since the experience of faculty members are in different span, resources at part with their level of expectations need to be made available in the library.
- ▲ Information literacy may be spread among the faculty members by whom they become viable to search, locate, evaluate, download and use correct and authenticated information in right time for right purpose. The faculty members may be sent to some workshops / seminars / locally conducted classes to make them familiar with latest ICT tools and techniques.
- ▲ Sessions on the availability and use of e-resources should be held in the faculty improvement programmes. The faculty members who like to access the e-resources at home may be given a special password protected working atmosphere to enable them work during their free hours at home.
- ▲ The faculty members may be motivated to use e-resources like e-theses, e-books and e-journals which are highly authentic and informative. The faculty members who have rich experience in using e-resources may be requested to share it with their colleagues. (Peer Learning).

B. GENERAL

- ▲ The e-resources available in the college library should be made accessible all through the college campus i.e. department, computer centre, hostel etc through IP authenticated, password protected mode, since most of the respondents access e-resources in the college campus
- ▲ List of e-resources available in the library may be circulated / informed to the users face-to-face / put up in the library notice board / placed in the department notice board / sent o the e-mail id of the users / placed in the library website or blog ; Whenever a new e-resource is added, such new

additions to be given wide publicity among the users with proper marketing and advocacy tools ; Since college website is viewed by more than 60 % of the users daily, enough exposure on available / new e-resources may be properly introduce there ; Links to all the subscribed and free e-resources may be provided in the college / college library website.

- ✦ Users must be encouraged to use e-databases which are available in the college library. The wonders of e-databases like Web of Science, Springer link, Science Direct, Emerald and DELNET should be shared with the users for their better utilization ; An user survey may be conducted to find out the e-databases which are not in good demand. Such databases may be unsubscribed
- ✦ Library notice board should be maintained with all necessary information for the users since users resort to it for getting information about e-resources; Commonly faced accessing problems with regard to the use of e-resources may be displayed along with their practical / possible / step-by-step solutions ; Library may issue special brochures / newsletters / flyers on the availability of e-resources and their use strategies.
- ✦ Federated search engines / library discovery services may be introduced so that the users will be able to search all the available e-resources through a single window system, instead of searching each e-resource separately; The search steps and strategies of using e-resources may be simplified and given in simple language with step by step instructions so that the users will not suffer from the problem of complicated search instructions.
- ✦ An user study (offline or online) may be conducted separately for faculty members to find out the reasons for their dissatisfaction over the availability and use of e-resources to elicit the open views so that enough correction steps may be initiated. The limitations may be limited and problems may be put down, with the suggestions received from the users themselves.

CONCLUSION

The study of use and impact of e-resources among the faculty members of Ultra College of engineering and technology for Women, Madurai has been a fruitful journey for the research as he was able to discover the cycle of research process and cone his research competencies. The research, for sure, will give a definite introspection to the college authorities on the level of use of e-resources and the problems encountered by the users in making use of those e-resources in their teaching and learning arena. This will enable the library staff to be in a better position to understand the user needs so that they will be able to prepare necessary ground works to be prepared to face the information seeking challenges of young engineering graduates and the experienced engineering faculties. This will also help the library professionals to understand the relative importance of e-resources in line with print resources.

REFERENCES

- 1.Bhatt, S. (2013).Consortia System and Document Delivery: E-information Services of Banasthali University. DESIDOC Journal of Library & Information Technology, 33(2), 141-146.
- 2.Dhanavandan, S., Mohammed Esmail, S., & Nagarajan, M. (2012).Use of Electronic Resources at Krishnasamy College of Engineering & Technology Library. Library Philosophy and Practice, 9(3)
- 3.Elhafiz, Ahmed Ibrahim. (2014). Use and User Perception of Electronic Resources in the United Arab Emirates University (UAEU).Academic Journals, 54(11), 18-29.
- 4.Francis, A.T. (2012).Evaluation of Use of Consortium of e-Resources in Agriculture in Context of Kerala Agricultural University. DESIDOC Journal of Library & Information Technology,32(1),38-44.
- 5.Ganesan, S., & Kaliyaperuma, K.(2013). Awareness, Access and Use of Digital Resources among the

Dentistry Academics of Sri Ramachandra University (Medical), Chennai, PEARL - A Journal of Library and Information Science, 7(3), 175-185.

6.Habiba, U., & Chowdhury, S. (2012). Use of Electronic Resources and its Impact: A Study of Dhaka University Library Users. Eastern Librarian, 23(1), 74-90.

7.Jena, P., & Khuntia, D. K. (2012). Usage Patterns of Electronic Resources in Business School Libraries of Orissa: An analysis. Pearl: A Journal of Library and Information Science, 6(1), 30-39.

8.Jotwani, Daulat. (2014). Marketing of Electronic Resources in IIT Libraries. DESIDOC Journal of Library & Information Technology, 34(2), 162-169

9.Londhe, N., L. (2013). Usage Study of UGC-INFONET E-resources at University of Pune. DESIDOC Journal of Library & Information Technology, 34(5), 385-383.

10.Navalur, S. A., Balasubramani, R., & Kumar, P. A. (2012). Usage of E-resources by Faculty, Research Scholars and PG Students of Bharathidasan University: A Study. Journal of Advances in Library and Information Science, 1(4), 165-172.

11.Nelogal, S. B. & Bachalapur, M. M. (2012). Use of electronic resources by post-graduate students in different universities of Karnataka State. International Journal of Information Dissemination and Technology, 2(3), 189-195.

12.Padma, P., Ramasamy, K., Chellappand, P., & Kathirvan, M (2014). Awareness and use of electronic resources by the engineering students: A case study of two engineering colleges in Sivagangai district, Tamilnadu, India. e-Library Science research Journal. 2(10) 1-11.

13.Parthasarathy & Kavitha. (2014). Utilization of e-resources by the users of government colleges in Tiruchirapalli. D-Lib magazine, 3(1), 57-60.

14.Rawat, S. & Vithal, R. (2013). Use of E-resources by Undergraduate Students of NTR College of Veterinary Science, Andhra Pradesh. DESIDOC Journal of Library & Information Technology, 33(5), 394-398.

15.Thanuskodi, S. (2012). Use of E-resources by the Students and Researchers of Faculty of Arts, Annamalai University, International Journal of Library Science, 1(1), 1-7.

16.Thukaram, K. (2013). Use of Internet by the Research Scholars of Ramesh Mohan Library, English and Foreign Languages University, Hyderabad: A Study. PEARL - A Journal of Library and Information Science, 7(4), 229-236.

17.Tyagi, S. (2012). Use of Electronic Information Resources at the Indian Pharmacopoeia Commission. DESIDOC Journal of Library & Information Technology, 32(2), 171-178.