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## AWARENESS AND USE OF ELECTRONIC RESOURCES BY THE ENGINEERING STUDENTS: A CASE STUDY OF TWO ENGINEERING COLLEGES IN SIVAGANGAI DISTRICT, TAMILNADU INDIA

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### Abstract :

*The electronic resources have grown in to an all-subject, perennial reservoir. The e-resources, available in different file formats and in multi-variety forms, have captured the attention of the research scholars in the recent years, thanks to the vast digital resources made available in engineering colleges. This study attempts 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 Pandian Saraswathi Yadav Engineering college located in Sivagangai District. A sample size of 150 engineering students was selected by random sampling method. The data required for the study was collected through a questionnaire. 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.*

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### KEYWORDS :

E-resources, Search engines, search strategy, awareness of e-resources, advantages, limitations, learning modes.

### INTRODUCTION:

E-resources have become a bubbling boon for the library professionals as well as library users in this Google era. The variety of e-resources available, the number of tools available to access these e-resources, the availability of so-called premium databases at lesser rates via consortia arrangements, establishment of IT hubs in various colleges, the ease of use, the nature of interactivity of e-resources and all such factors have made the library users to be at their ease in getting required information for pursuing their studies and research.

### E-RESOURCES

An electronic resource is defined as a resource which requires computer access or any electronic product that delivers a collection of data, be it text referring to full text bases, electronic journals, image collections, other multimedia products and numerical, graphical or time based, as a commercially available title that has been published with an aim to being marketed. These may be delivered on CD ROM, on tape, via internet and so on.

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**TYPES OF E-RESOURCES**

There are many approaches of categorization of e-resources such as by distribution medium (online, CD ROM, Web) or by content (bibliographic, full text) or by type of format (e-book, e-journal, database). For this study the approach of categorization of e-resources is based on type of classification used for print media which is most established and popular method of categorization, i.e. primary and secondary sources.

Primary sources: E-books, E-journals, Electronic Thesis and Dissertations (ETD).

Secondary sources: E-Course material, Indexing and abstracting databases, E-Reference databases.

**REVIEW OF LITERATURE**

Habiba & Chowdhury (2012) presented an analytic study of the status of electronic resources, facilities and services provided by the Dhaka University Library (DUL). They discussed the purpose of using e-resources, benefits, subject coverage status, overall user satisfactions, problems that are faced by DUL users while accessing e-resources and perceived impact of e-resources on users. Finally, the paper reported the results from questionnaire-based survey of e-resources use and its impact on DUL users. Navalur, Balasubramani & 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 & 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. Bhat & Mudhol (2014) presented the findings of a survey about the awareness and use of electronic resources by medical students available in the medical institute libraries. The subjects chosen for this study were 300 faculty members and medical students of Sher-E-Kashmir Institute of Medical Science (SKIMS), Jammu and Kashmir, India.

Chandra, Sankaranarayanan & Nagarajan (2014) attempted to investigate the awareness of e-resources, experience level in using e-resources, time spent on using e-resources, purpose of using e-resources, use of various online sources and the most preferred place for accessing e-resources by the Associate Professors and Assistant Professors of Arts and Science Colleges in Chennai. Parthasarathy & Kavitha (2014) explained the 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 by the teachers of Government Colleges in Tiruchirapalli. 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.

**OBJECTIVES OF THE STUDY**

**The researcher has the following objectives for her study, inter alia :**

- To provide gender-wise and Course-wise distribution of the respondents.
- To trace out the kinds of e-resources the respondents are aware of.
- To find out the awareness and access options of e-resources by the respondents.
- To find the frequency of accessing e-resources by the respondents.
- To find out the purposes of using e-resources by the respondents.
- To identify the reasons for using e-resources by the respondents.
- To elicit the problems faced in accessing e-resources.
- To trace out the benefits of e-resources over conventional documents
- To rate the access of e-resources and
- To identify the level of satisfaction of the respondents with e-resources.

**METHODOLOGY**

**a) Research Type :** The study undertaken by the researcher belongs to descriptive research study. The researcher has used survey method in his study.

**b) Sample Size :** The researcher collected data from two engineering colleges in Sivagangai District by name Pannai College of Engineering and Technology and Pandian Saraswathi Yadav Engineering College .120 B.E students and 30 M.E students were randomly selected as the sample for the study.

**c) Tool for Data Collection:** Questionnaire is the tool selected by the research for collecting data from the chosen sample. A simple but a clearly presented questionnaire with 15 questions was used as a tool. No open ended question was included.

**e) Method of data collection:** The data was collected from the sample users in the month of April 2014. The questionnaires

were distributed to the B.E and M.E students by the researcher personally.. The duly filled-in questionnaires were collected back from them immediately after they were filled. Out of 170 questionnaires distributed to the respondents, the research was able to get back only 150 duly filled-in questionnaires.

**f) Data Analysis and Interpretation:** The data collected was simplified by means by tables – single column and double column or triple column tables – prepared with the help of coding with tally marks. The tabulated data was analysed with simple percentage method in MS Excel to draw necessary inferences.

**ANALYSIS AND INTERPRETATION**

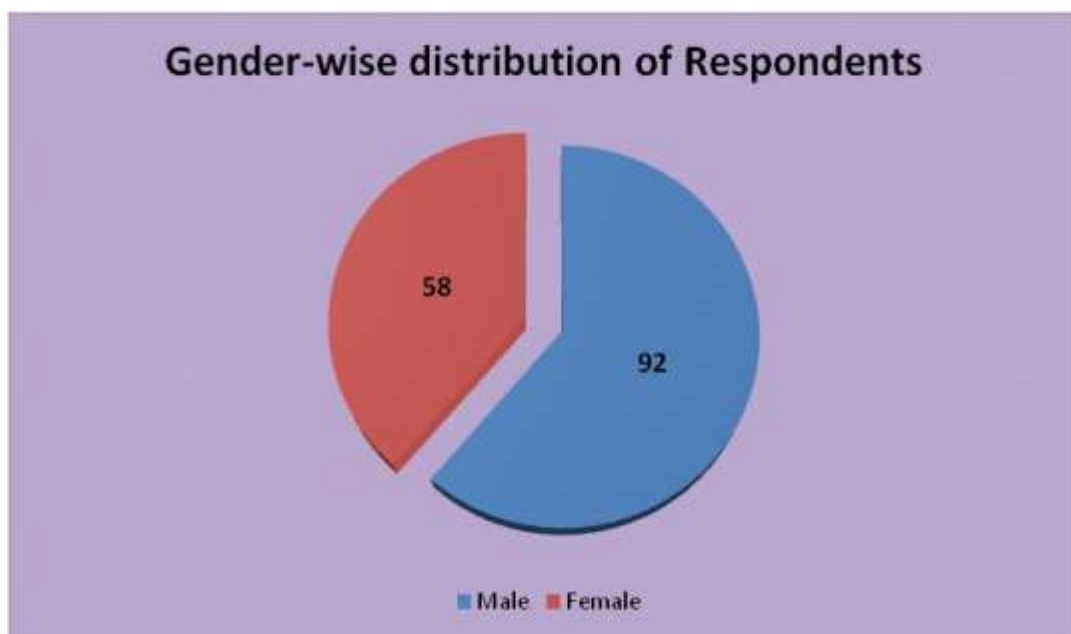
1. Gender-wise distribution of Respondents

**Table 1 : Gender-wise Distribution of Respondents**

S.No.	Gender	No. of Respondents	Percentage
1.	Male	92	61.33
2.	Female	58	38.67
Total		150	100

Table displays the Gender-wise Distribution of Respondents. 92 respondents (61.33%) are male whereas 58 respondents (38.67%) are female. Therefore the number of male respondents is more than the number of female respondents in Sivagangai District Engineering colleges who use electronic resources.

**Chart 1: Gender-wise distribution of Respondents**



2. Study Year-Wise distribution of Respondents

**Table 2 : Study Year-Wise distribution of Respondents**

S.No.	Status	No. of Respondents	Percentage
1	<b>B.E Students</b>		
	First year	44	29.33
	Second year	28	18.67
	Third year	23	15.33
	Final year	26	17.33
2	<b>M.E Students</b>		
	First year	18	12
	Second year	11	7.33
Total		150	100

Table 2 shows the Study Year-wise distribution of respondents. Forty four respondents (29.33%) belong to First year B.E. Twenty eight respondents (18.67%) belong to Second year B.E. Twenty three respondents (15.33%) belong to Third year B.E and twenty six respondents (17.33%) belong to Final year B.E. While eighteen respondents (12%) belong to first year M.E, eleven respondents (7.33%) belong to second year M.E. Hence most of the respondents are first year B.E students.

**3. Awareness of Electronic Resources**

**Table 3 : Awareness of Electronic Resources**

S. No	Option	No. of Respondents	Percentage
1	Yes	130	86.67
2	No	20	13.33
Total		150	100

Table 3 shows that 130 respondents (86.67%) are aware of electronic resources and remaining 20 respondents (13.33%) are not aware of electronic resources. Thus, most of the respondents are aware of the electronic resources.

**4. Access of Electronic Resources**

**Table 4: Access of Electronic Resources**

S.No.	Option	No. of Respondents	Percentage
1	Yes	122	81.33
2	No	28	18.67
Total		150	100

Table 4 shows that 122 respondents (81.33%) access Electronic Resources and 28 respondents (18.67%) do not access the Electronic Resources. Thus, most of the respondents access the Electronic Resources.

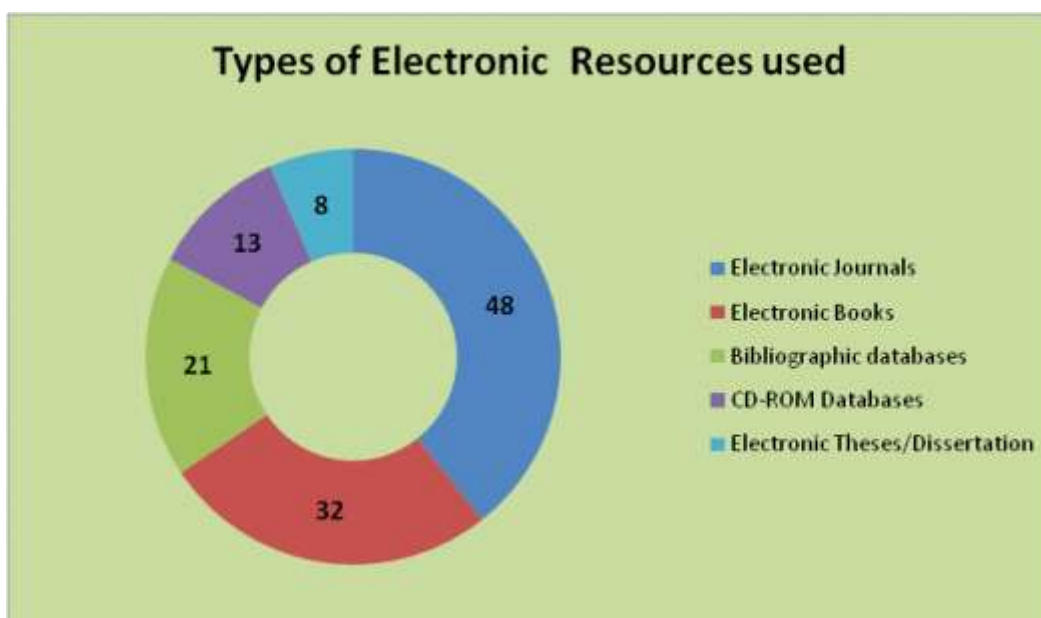
**5. Types of Electronic Resources**

**Table 5: Types of Electronic Resources**

S.No.	Types	No. of Respondents	Percentage
1	Electronic Journals	48	39.34
2	Electronic Books	32	26.23
3	Bibliographic databases	21	17.21
4	CD-ROM Databases	13	10.65
5	Electronic Theses/Dissertation	8	6.56
Total		122	100

Table 5 shows that 48 respondents (39.34%) prefer to use E-journals whereas 26.23% use E-Books and 17.21% use Bibliographic databases. 10.65% prefer to use CD-ROM databases and 6.56% use Electronic Theses/Dissertation. Hence majority of the respondents prefer to use E-journals. Remaining 28 respondents do not access Electronic Resources.

**Chart 2: Types of Electronic resources used**



**6. Frequency of accessing Electronic Resources**

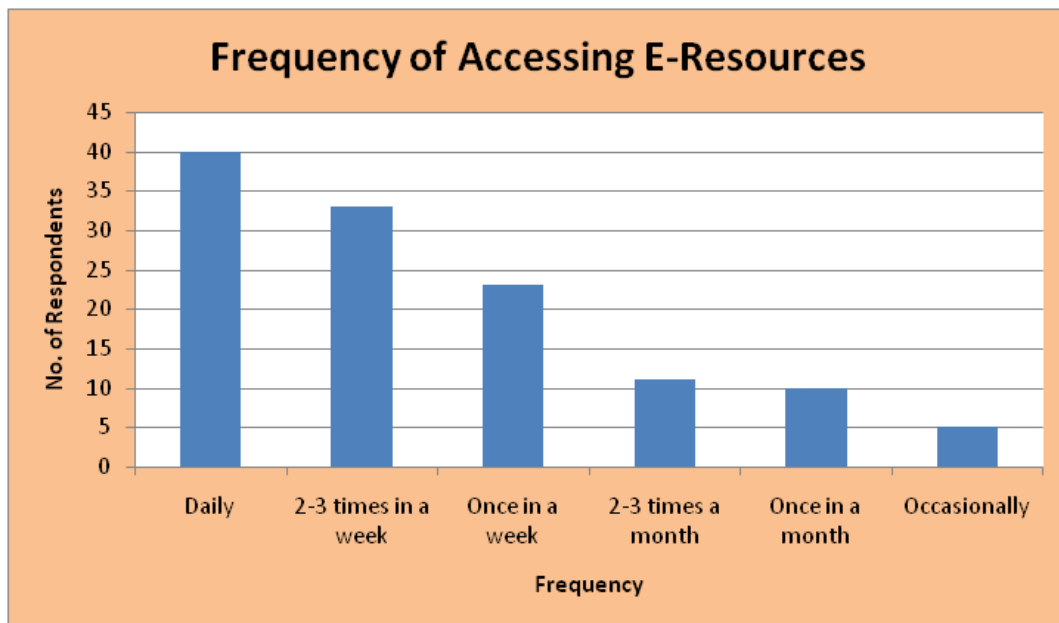
**Table 6: Frequency of accessing Electronic Resources**

S. No	Frequency	No. of Respondents	Percentage
1	Daily	40	32.79
2	2-3 times in a week	33	27.05
3	Once in a week	23	18.85
4	2-3 times a month	11	9.02
5	Once in a month	10	8.20
6	Occasionally	5	4.10
Total		122	100

Table 6 discusses the frequency of accessing electronic resources. 40 respondents (32.79%) access the electronic

resources daily and 33 respondents (27.05%) access e-resources 2-3 times in a week. While 23 respondents access (18.85%) e-resources once a week, 11 respondents (9.02%) access them 2-3 times a month and 10 respondents (8.20%) access them once in a month. Hence most of the respondents access the electronic resources regularly. Remaining 28 respondents do not access Electronic Resources.

**Chart 3: Frequency of Accessing E-Resources**



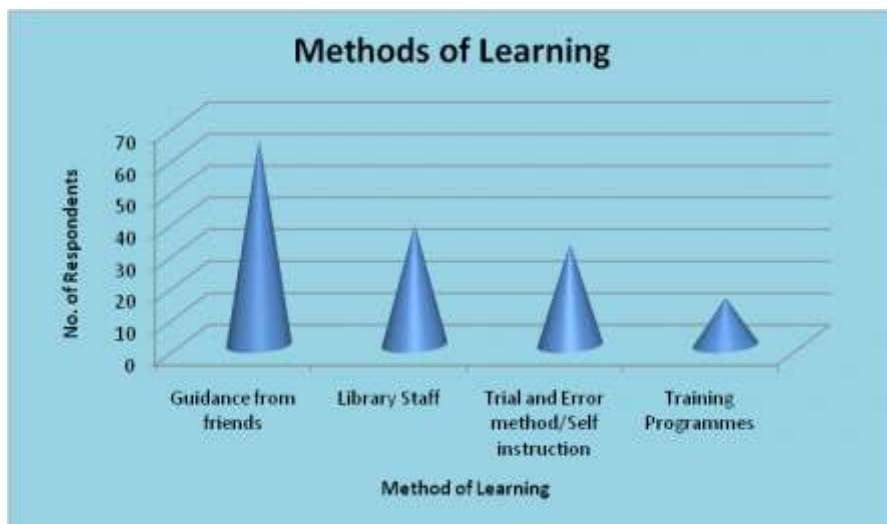
**7. Methods of Learning about the use of Electronic Resources**

**Table 7 : Methods of Learning about the use of Electronic Resources**

S. No	Methods	No. of Respondents	Percentage
1	Guidance from friends	65	43.33
2	Library Staff	38	25.33
3	Trial and Error method/Self instruction	32	21.33
4	Training Programmes	15	10
Total		150	100

Table 7 shows the methods of learning e-resources usage skills. In this study, 43.33% of the respondents learn through guidance from friends, 25.33% of the respondents learn e-resource usage skills from library staff, 21.33% of the respondents learn from trial and error method and 10% of the respondents learn through training programmes. Hence most of the respondents learn through guidance from friends.

Chart 4: Methods of learning about e-resources



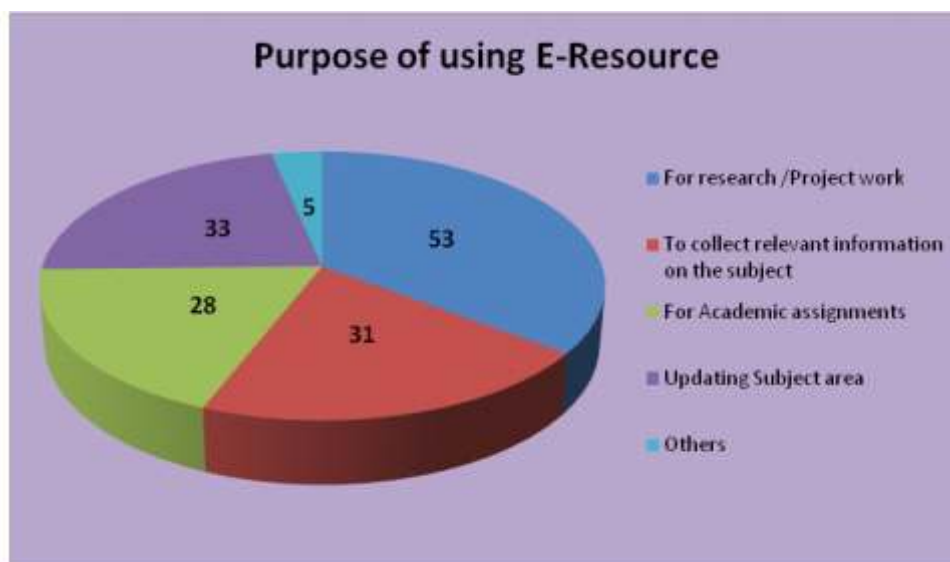
8. Purpose of using Electronic Resources

Purpose of using Electronic Resources

S.No.	Purpose	No. of Respondents	Percentage
1	For research /Project work	53	35.33
2	To collect relevant information on the subject	31	20.67
3	For Academic assignments	28	18.67
4	Updating Subject area	33	22
5	Others	5	3.33
Total		150	100

Table 8 describes the purpose of using electronic resources. In this study, 53 respondents (35.33%) use the electronic resources for research/project work and 31 respondents (20.67%) use e-resources to collect relevant information on their subjects. While 28 respondents (18.67%) use e-resources for completing their academic assignments, 33 respondents (22%) use e-resources for getting updated information on their subject areas. Thus, majority of the respondents use the electronic resources for research/project work.

Chart 5: Purpose of using E-Resources



**9. Reasons for using Electronic Resources**

**Table 9 : Reasons for using Electronic Resources**

S.No.	Option	No. of Respondents	Percentage
1	Time saving	44	29.33
2	Easier access to information	35	23.33
3	Faster access to information	32	21.33
4	Access to wider range of sources of information	14	9.33
5	Access to current information	25	16.67
Total		150	100

Table 9 reveals the reasons for using electronic resources. In this study, 44 respondents (29.33%) use the electronic resources because of their time saving caliber. This is followed by 35 respondents (23.33%) who use the electronic resources for easier access to Information. 32 respondents (21.33%) use the electronic resources for faster access to information and 14 respondents (9.33%) use the electronic resources for access to wider range of sources of information. 25 respondents (16.67%) use the electronic resources for getting access to current information. Therefore, majority of the respondents (29.33%) use the electronic resources for their time saving ability.

**10. Problems in accessing Electronic Resources**

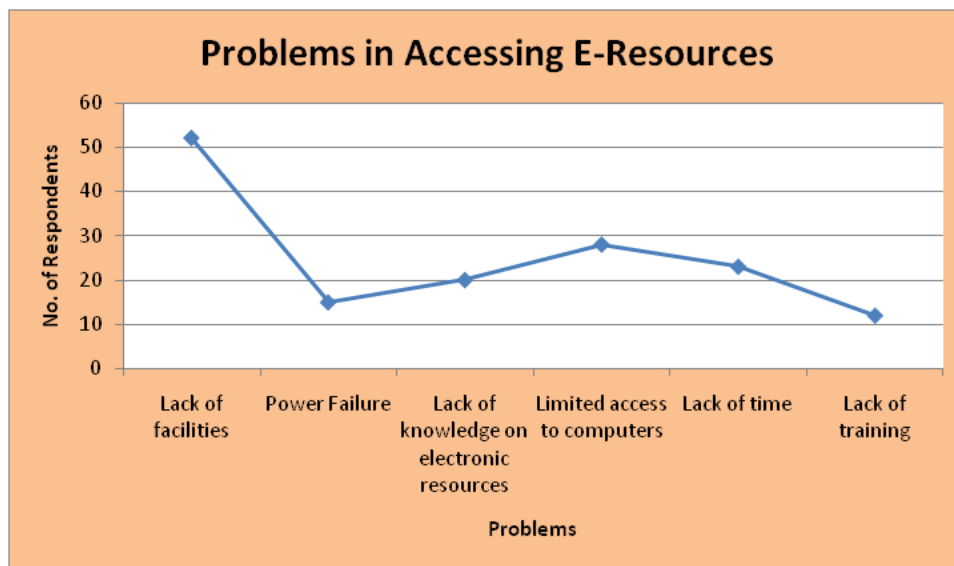
**Table 10: Problems in accessing Electronic Resources**

S.No.	Problems	No. of Respondents	Percentage
1	Lack of facilities	52	34.67
2	Power Failure	15	10
3	Lack of knowledge on electronic resources	20	13.33
4	Limited access to computers	28	18.67
5	Lack of time	23	15.33
6	Lack of training	12	8
Total		150	100

Table 10 shows the Problems faced while using electronic resources. In this study, 52 respondents (34.67%) report that lack of facilities is the prime problem while using electronic resources. While 15 respondents (10%) report that power failure is their problem, 20 respondents (13.33%) report that lack of knowledge on electronic resources is their major problem. 28 respondents (18.67%) report that 'limited access to computers' as their problem, 23 respondents (15.33%) report that 'lack of time' is their problem in accessing e-resources. Lack of training is the problem for 12 respondents (8%). Thus, majority of the respondents report that lack of facilities is the prime problem while using electronic resources.



Chart 6: Problems in Accessing E-Resources



11. Benefits of e-resources over conventional documents

Table 11 : Benefits of e-resources over conventional documents

S. No	Option	No. of Respondents	Percentage
1	Easy to use	33	22
2	More informative	20	13.33
3	Time saving	35	23.33
4	More useful	13	8.67
5	Less expensive	21	14
6	More preferred	18	12
7	Multi User	10	6.67
Total		150	100

Table 11 reveals the benefits of electronic resources over conventional documents. 33 respondents (22%) report that 'easy to use electronic resources' is the major advantage of e-resources. This is followed by 20 respondents (13.33%) who report that e-resources are 'more informative'. While 35 respondents (23.33%) report that e-resources are time saving, 13 respondents (8.67%) report that e-resources are more useful than conventional sources. While 21 respondents (14%) report that e-resources are less expensive, 10 respondents (6.67%) report that e-resources only offer 'multi user option'. Thus, majority of the respondents (23.33%) opined that the major advantage of e-resources over the conventional document is their time saving caliber.

12. Rating of 'Electronic Resources Access'

Table 12 : Rating of 'Electronic Resources Access'

S.No.	Rating	No. of	Percentage
1	Highly important	46	30.67
2	Important	82	54.67
3	No importance	8	5.33
4	No comments	14	9.33
Total		150	100

Table 12 shows that 46 six respondents (30.67%) report that access of electronic resources is highly important and 82 respondents (54.67%) report that it is important. While 8 respondents (5.33%) comment that access of electronic resources is of no importance, 14 respondents (9.33%) have no comments. Thus, most of the respondents report that access of electronic resources is important.

**13. Level of satisfaction with use of Electronic Resources**

**Table 13: Level of satisfaction with use of Electronic Resources**

S.No.	Opinion	No.of Respondents	Percentage
1	Very Good	43	28.67
2	Good	70	46.67
3	Satisfactory	26	17.33
4	Not Satisfactory	11	7.33
Total		150	100

Table 13 shows the level of satisfaction with use of electronic resources. 28.67% of the respondents gave 'Very Good' as their level of satisfaction of library e-resources and 46.67% of the respondents report that their satisfaction level is 'Good'. While 17.33% of the respondents report that they are just satisfactory with the available e-resources, 7.33% of the respondents report that they are not satisfactory. Thus, 46.67% of the respondents are satisfied with the electronic resources made available in the library.

**SUGGESTIONS**

- Library should subscribe to e-resources keeping in mind the priorities and preferences of users.
- Announcements should be done by the library about the availability of new e-resources or additions of new databases for users of the library.
- Library should provide the facilities for the user to get familiar with e-resources subscribed by the library; this can be done by the presentations organized by the concerned publishers or vendors.
- Special training programs should be organized for students to maximize the use of e-resources
- The library should also organize orientation programs for the new students every year.
- More computers with the latest specifications and multimedia kit should be installed, so that the users can use internet telephony, video conferencing, chatting and other useful services of the internet.
- Problems related to slow connectivity should be overcome by upgrading the band width.
- The important role of library is to promote and provide instructions in the use of electronic resources, as numerous blogs and RSS feeds are available from a variety of scientific databases, electronic journals and electronic books, which there are still not well exploited by many libraries.

**CONCLUSION**

The dependency on internet based services is increasing everyday and users of engineering colleges too are depending much more on information resources available through internet for various educational purposes. It is clear from the study that all the engineering students' access electronic information resources. The use of e-resources benefits the students to access up to date information.

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