

IMPACT AND PURPOSE OF ACCESSING ELECTRONIC JOURNALS IN ENGINEERING COLLEGE STUDENTS AT CHENNAI – A STUDY

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Abstract: The study focused on the extent of access and use of electronic journals by the students of engineering college in Chennai from the different E-journal sources available. The study adopted the quantitative research and used cross sectional survey research design. Findings from the study revealed that personal access through open source was the most used source of e-journals for their academic activities. E-journals were also most frequently used in academic activities. Students should attend more trainings and workshops on E-resources search and retrieval skills; modules should include effective search strategies, designing appropriate metadata and subject headings to enable easy retrieval.

Key Words: e-Journals, Access e-Journals, purpose of Access, respondent.

INTRODUCTION OF E-JOURNALS:

The World Wide Web has provided e-resources accessible to anyone, anywhere at any time, not only e-journals, e-books but also conference papers, theses or research reports, technical reports and working papers. E-journals are useful to the college, university, arts, science and medical student's community and research people. Researchers are frustrated by a lack of access to research, since no library can afford to subscribe to all relevant journals. Hence librarians to subscribe e-journals, back-dated issues, It will be more helpful for the research community and students.

Types or Variant of e-journals:

1. Classic electronic journals
2. Parallel electronic journals or Electronic version of print
3. Database model and software model
4. CD-ROM journals
5. Full text
6. Electronic only journals

E-journals may be classified in to Toll Access Journals:

For which we pay annual subscription and have a limited access database. Recently managing toll access journals through consortium or directly through publishers or other agencies. Eg: IEL online. ASCE, ASME and Science Direct etc.

Open Access Journals:

Journals that are available in the internet freely and can be used by multiple users in a campus or worldwide. Eg: www.doaj.org, www.medknow.com. Open access includes off variety of items available in internet that includes open access books, Journals, self archiving, institutional repositories and open source software etc.

Access E-Journals Advantages:

- Electronic journals (e-journals) are valuable resources
- They are largest and fastest growing segment of the digital collections
- By simple definition, they are any journal or serial publication available in electronic format
- It enables immediate access to articles
- Articles can be searched by a phrase or keyword
- In addition, it also saves shelf space

- In retrospective search multiple files can be accessed simultaneously
- his publication may or may not have a print counterpart

OBJECTIVES OF THE STUDY:

The following are the important objectives of the study:

1. To find out the frequency of accessing e-journal among the engineering students.
2. To study the purpose of accessing e- journals for the engineering students.

DATA COLLECTION:

Primary data were collected through a structured questionnaire, which was distributed among the library user (respondent) in Private Engineering Colleges in Chennai, Tamilnadu, India. The questionnaire contained open-ended questions and it also incorporated various parameters that were identified for analysing those parameters.

SAMPLE SIZE:

The sample size consists of 291 respondents who had used E resources. Convenience sampling technique was used for a period of 10 days (February 2016).

RESEARCH DESIGN:

Question-wise analysis was carried out with the help of Microsoft Excel Workbook and SPSS version 20.0. The questionnaire was based on difference variables, which were considered to be significant while accessing e-journal. Some analytical techniques like tables, percentage and Chi-square Test were used to analyse the collected data

ANALYSIS AND INTERPRETATION:

Out of 291 respondents, among the gender-wise users in the sample area, a total of 184 (63.23%) respondents belong to the male respondents and the remaining 107 (36.77%) respondents belong to the female respondents. Age-wise respondents in the sample area, a total of 186 (63.92%) respondents belong to the age group of below 20 years and the remaining 105 (36.08%) belong to the age group of more than 20 years.

The table 1 states that frequency of browsing, of 291 respondents, most of them 34.02% are browsing once in a week, and they are followed by other respondents 29.90% who are browsing once a day, some of them 18.56% are browsing once in a month, some of them 11.00% are browsing twice in a month, and very few of them 6.53% are browsing occasionally. According to the time spent for browsing, among the total respondents, majority of them 32.65% are spending two hours and they are followed by 26.80% are spending an hour browsing, some of them 25.09% who are spending less than an hour for browsing and few of them 15.46% are spending more than two hours for browsing.

Table no. 1- Frequency and Spending Time for Browsing

Frequency	No. of Respondents	Percentage of Total
Frequency of Browsing		
Once in a Day	87	29.90%
Once in a Week	99	34.02%
Once in a Month	54	18.56%
Twice in a Month	32	11.00%
Occasionally	19	6.53%
Spending Time for Browsing		
Less than an Hour	73	25.09%
One Hour	78	26.80%
Two Hours	95	32.65%
More than Two hours	45	15.46%

Source: Primary Data

Table No. 2 - Propose of Accessing in E-Journals

Propose	No. of Respondents	Percentage of Total
For Education	98	33.68%
For General Knowledge	69	23.71%
For Research / Project Work	104	35.74%
For Business	14	4.81%
Recreation	6	2.06%
Total	291	100.00%

Source: Primary Data

The table 2 pointed out purpose of accessing in e-journal. Out of the total respondents, some of them 35.74% are browsing for Research / Project work. Some of them 33% are browsing for education purpose. Some students from the total respondents 23.71% are browsing to gain general knowledge. Some of them 04.81% are browsing for business purpose. Very few of them 2.06% are browsing for recreation purpose.

Table no. 3- Distribution of Engineering Students According To Gender

Respondents	Gender		Total
	Male	Female	
CSE & IT Students	48 (16.49%)	40 (13.74%)	88 (30.23%)
ECE & EEE Students	31 (10.65%)	32 (10.99%)	63 (21.64%)
Civil Engineering Students	39 (13.40%)	07 (2.40%)	46 (15.80%)
Mechanical Engineering Students	50 (17.18%)	20 (6.87%)	70 (24.05%)
Other Students	16 (5.50%)	08 (2.75%)	24 (8.25%)
Total	184 (63.22%)	107 (36.75%)	291 (100%)

Source: Primary Data

It is also clear from the above table that majority of the respondents are in the category of CSE/IT students and their percentage is 30.23% and they are followed by 24.05% of them who are in the category of Mechanical Engineering Students, 21.64% of them are in the category of ECE/EEE students, 15.80% of them are in the category of Civil Engineering students and the remaining 8.25% of them are from the category of Other Engineering students. It is clearly seen from the above discussion that, male students are more and female students are less.

Table No. 4 – Impact of Using E-Journals

Respondents	Level of Impact			Total
	Very Less	Affordable	Non affordable	
CSE & IT Students	12 (4.12%)	58 (19.93%)	18 (6.19%)	88 (30.24%)
ECE & EEE Students	25 (8.59%)	31 (10.65%)	07 (2.41%)	63 (21.65%)
Civil Engineering Students	13 (13.40%)	24 (13.40%)	09 (2.40%)	46 (15.80%)
Mechanical Engineering Students	14 (4.12%)	48 (16.49%)	08 (2.75%)	70 (24.05%)
Other Students	06 (2.06%)	16 (5.50%)	02 (0.69%)	24 (8.25%)
Total	70 (24.05%)	177 (60.82%)	44 (15.12%)	291 (100.00%)

Source: Primary Data

Data in table 4 demonstrates that impact of using e-journals. Out of the total respondents most of them (60.82%) say that is affordable, Some of them (24.05%) say that is very less, and few of them (15.12%) say that is non affordable. It is clearly seen from the above discussion that most of the student's opinion is affordable using e-journals.

PURPOSE OF ACCESSING E-JOURNALS:**Table.5**

General Awareness						
Designation	Purpose of Access					
	Always	When Needed	Some Time	Occasionally	Not Accessing	Total
Under Graduate Students	54	88	24	38	10	214
	18.56%	30.24%	8.25%	13.06%	3.44%	73.54%
Post Graduate Students	25	24	11	17	0	77
	8.59%	8.25%	3.78%	5.84%	0.00%	26.46%
Total	79	112	35	55	10	291
	27.15%	38.49%	12.03%	18.90%	3.44%	100.00%
Research work						
Designation	Purpose of Access					
	Always	When Needed	Some Time	Occasionally	Not Accessing	Total
Under Graduate Students	17	59	104	34	0	214
	5.84%	20.27%	35.74%	11.68%	0.00%	73.54%
Post Graduate Students	7	14	37	14	5	77
	2.41%	4.81%	12.71%	4.81%	1.72%	26.46%
Total	24	73	141	48	5	291
	8.25%	25.09%	48.45%	16.49%	1.72%	100.00%

Preparing Seminar / Conference Notes						
Designation	Purpose of Access					
	Always	When Needed	Some Time	Occasionally	Not Accessing	Total
Under Graduate Students	131	54	24	4	1	214
	45.02%	18.56%	8.25%	1.37%	0.34%	73.54%
Post Graduate Students	51	15	5	1	5	77
	17.53%	5.15%	1.72%	0.34%	1.72%	26.46%
Total	182	69	29	5	6	291
	62.54%	23.71%	9.97%	1.72%	2.06%	100.00%
Preparing Articles						
Designation	Purpose of Access					
	Always	When Needed	Some Time	Occasionally	Not Accessing	Total
Under Graduate Students	107	23	71	4	9	214
	36.77%	7.90%	24.40%	1.37%	3.09%	73.54%
Post Graduate Students	27	14	24	5	7	77
	9.28%	4.81%	8.25%	1.72%	2.41%	26.46%
Total	134	37	95	9	16	291
	46.05%	12.71%	32.65%	3.09%	5.50%	100.00%
Enhancing Knowledge						
Designation	Purpose of Access					
	Always	When Needed	Some Time	Occasionally	Not Accessing	Total
Under Graduate Students	47	89	14	28	36	214
	16.15%	30.58%	4.81%	9.62%	12.37%	73.54%
Post Graduate Students	28	17	8	11	13	77
	9.62%	5.84%	2.75%	3.78%	4.47%	26.46%
Total	75	106	22	39	49	291
	25.77%	36.43%	7.56%	13.40%	16.84%	100.00%

Referred their Related Subjects						
Designation	Purpose of Access					
	Always	When Needed	Some Time	Occasionally	Not Accessing	Total
Under Graduate Students	89	102	1	8	14	214
	30.58%	35.05%	0.34%	2.75%	4.81%	73.54%
Post Graduate Students	35	31	4	0	7	77
	12.03%	10.65%	1.37%	0.00%	2.41%	26.46%
Total	124	133	5	8	21	291
	42.61%	45.70%	1.72%	2.75%	7.22%	100.00%

Source: Primary Data

From Table 5 that designation wise to study the purpose of accessing E Journals for *general awareness*. Out of 291 (100%) respondents, 79 (27.15%) respondents are accessing E Journals always, 112 (38.49%) respondents are accessing E Journals when needed, 35 (12.03%) respondents are accessing E Journals some time, 55 (18.90%) respondents are accessing occasionally and the remaining 10 (3.44%) respondents are not accessing.

H₀: There is no significant difference between designation and the accessing E Journals for general awareness

Chi-square	Value p0.05	DF	Calculative Value	Results
Pearson	9.49	4	7.15	significant

The above table describes that calculated value 9.49 is less than Table value 7.15 at degrees of freedom 4. Hence the hypothesis is accepted. So there is no significant difference between designation and the accessing E Journals for general awareness.

The purpose of accessing E Journals for *research work*, Out of 291 (100%) respondents, 59 (20.27%) respondents are accessing E Journals always, 105 (36.08%) respondents are accessing E Journals when needed, 47 (16.15%) respondents are accessing E Journals some time, 33 (11.34%) respondents are accessing occasionally and the remaining 47 (16.15%) respondents are not accessing.

H₀: There is no significant difference between designation and the accessing E Journals for research work.

Chi-square	Value p0.05	DF	Calculative Value	Results
Pearson	9.49	4	16.16	Insignificant

The above table describes that calculated value 16.16 is greater than Table value 9.49 at degrees of freedom 4. Hence the hypothesis is rejected. So there is significant difference between designation and the accessing E Journals for research work.

The purpose of accessing E Journals for *Preparing Seminar and Conference Notes*, Out of 291 (100%) respondents, 88 (30.24%) respondents are accessing E Journals always, 65 (22.34%) respondents are accessing E Journals when needed, 41 (14.09%) respondents are accessing E Journals some time, 52 (17.87%) respondents are accessing occasionally and the remaining 45 (15.46%) respondents are not accessing.

H₀: There is no significant difference between designation and the accessing E Journals for preparing seminar or conference notes.

Chi-square	Value p0.05	DF	Calculative Value	Results
Pearson	9.49	4	12.37	Insignificant

The above table describes that calculated value 12.37 is greater than Table value 9.49 at degrees of freedom 4. Hence the hypothesis is rejected. So there is significant difference between designation and the accessing E Journals for preparing seminar or conference work.

The purpose of accessing E Journals for *Preparing Articles*, Out of 291 (100%) respondents, 110 (37.80%) respondents are accessing E Journals always, 79 (27.15%) respondents are accessing E Journals when needed, 75 (25.77%) respondents are accessing E Journals some time, 8 (2.75%) respondents are accessing occasionally and the remaining 19 (6.53%) respondents are not accessing.

H_0 : There is no significant difference between designation and the accessing E Journals for preparing articles.

<i>Chi-square</i>	<i>Value p0.05</i>	<i>DF</i>	<i>Calculative Value</i>	<i>Results</i>
Pearson	9.49	4	11.65	Insignificant

The above table describes that calculated value 11.65 is greater than Table value 9.49 at degrees of freedom 4. Hence the hypothesis is rejected. So there is significant difference between designation and the accessing E Journals for preparing articles.

The purpose of accessing E Journals for enhancing knowledge, Out of 291 (100%) respondents, 75 (25.77%) respondents are accessing E Journals always, 106 (36.43%) respondents are accessing E Journals when needed, 22 (7.56%) respondents are accessing E Journals some time, 39 (13.40%) respondents are accessing occasionally and the remaining 49 (16.84%) respondents are not accessing.

H_0 : There is no significant difference between designation and the accessing E Journals for enhancing knowledge.

<i>Chi-square</i>	<i>Value p0.05</i>	<i>DF</i>	<i>Calculative Value</i>	<i>Results</i>
Pearson	9.49	4	11.64	Insignificant

The above table describes that calculated value 11.64 is greater than Table value 9.49 at degrees of freedom 4. Hence the hypothesis is rejected. So there is significant difference between designation and the accessing E Journals for enhancing knowledge.

The purpose of accessing E Journals for **Referred Related Subjects**, Out of 291 (100%) respondents, 124 (42.61%) respondents are accessing E Journals always, 133 (45.70%) respondents are accessing E Journals when needed, 05(1.72%) respondents are accessing E Journals some time, 08 (2.75%) respondents are accessing occasionally and the remaining 21 (7.22%) respondents are not accessing.

H_0 : There is no significant difference between designation and the accessing E Journals for referred related subjects.

<i>Chi-square</i>	<i>Value p0.05</i>	<i>DF</i>	<i>Calculative Value</i>	<i>Results</i>
Pearson	9.49	4	11.63	Insignificant

The above table describes that calculated value 11.63 is is greater than Table value 9.49 at degrees of freedom 4. Hence the hypothesis is rejected. So there is significant difference between designation and the accessing E Journals for referred related subjects.

FINDINGS

1. Majority of the respondents are browsing once in a week.
2. Majority of the respondents are spending two hours in browsing.
3. Most of the respondents are browsing for Research / Project work.
4. Most of the student's opinion is affordable using e-journal.

5. There is some relationship between designation and research work, seminar articles and reference to access e-journals.

CONCLUSION AND RECOMMENDATIONS:

Engineering College Libraries to provide more flexible platforms of access e-journals. E-Journals are main sources of research students. To organize workshops and seminar to all the users and create awareness of using e-journals regularly. In Chennai, limited engineering colleges to encourage e-resources and many things related library. So, government should take steps promote e-Journals access facilities in all government and Private engineering Colleges. All the engineering college must conduct free training to utilize e-journals all the users. Students should attend more training and workshops for on E-resources search and retrieval skills.

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