

Impact and Purpose of Accessing Electronic Journals in Engineering College Students at Dindigul District – A Study

Dr. S.Aravind

Librarian and Head

Department of Library and Information Science

G.T.N. Arts College Dindigul

Tamilnadu, India

aragtn2601@yahoo.com

Abstract

The study focused on the extent of access and use of electronic journals by the students of an engineering college in Dindigul District 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 training 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.

Keywords: e-Journals, Access e-Journals, purpose of Access, findings, and Conclusion

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

Open Access Journals

Journals that are available on 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 a variety of items available on the 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
- This 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 in Dindigul District.
2. To study the purpose of accessing e-journals for the engineering students in Dindigul District.

DATA COLLECTION

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

SAMPLE SIZE

The sample size consists of 281 respondents who had used E-resources. Convenience sampling technique was used for a period of 10 days (December 2018).

RESEARCH DESIGN

The 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 analyze the collected data

ANALYSIS AND INTERPRETATION

Out of 281 respondents, among the gender-wise users in the sample area, a total of 174 (61.92%) respondents belong to the male respondents and the remaining 107 (38.07%) respondents belong to the female respondents. Age-wise respondents in the sample area, a total of 181 (64.41%) respondents belong to the age group of below 20 years and the remaining 100 (35.58%) belong to the age group of more than 20 years.

The table 1 states that frequency of browsing, of 291 respondents, most of them 35.23% are browsing once in a week, and they are followed by other respondents 30.96% who are browsing once a day, some of them 19.22% are browsing once in a month, some of them 09.61% are browsing twice in a month, and very few of them 4.98% are browsing occasionally. According to the time spent for browsing, among the total respondents, majority of them 32.03% are spending two hours and they are followed by 27.76% are spending an hour browsing, some of them 25.98% who are spending less than an hour for browsing and few of them 14.23% 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	30.96%
Once in a Week	99	35.23%
Once in a Month	54	19.22%
Twice in a Month	27	9.61%
Occasionally	14	4.98%
Spending Time for Browsing		
Less than an Hour	73	25.98%
One Hour	78	27.76%
Two Hours	90	32.03%
More than Two hours	40	14.23%

Source: Primary Data

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

Propose	No. of Respondents	Percentage of Total
For Education	98	34.88%
For General Knowledge	63	22.42%
For Research / Project Work	104	37.01%
For Business	10	3.56%
Recreation	6	2.14%
Total	281	100.00%

Source: Primary Data

The table 2 pointed out the purpose of accessing in e-journal. Out of the total respondents, some of them 37.01% are browsing for Research / Project work. Some of them 34.88% are browsing for education purpose. Some students from the total respondents

22.42% are browsing to gain general knowledge. Some of them 03.56% are browsing for business purpose. Very few of them 2.14% are browsing for recreation purpose.

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

Respondents	Gender		Total
	Male	Female	
CSE and IT Students	48 (17.08%)	40 (14.23%)	88 (31.32%)
ECE and EEE Students	31 (11.03%)	32 (11.39%)	63 (22.42%)
Civil Engineering Students	34 (12.10%)	07 (02.49%)	41 (15.59%)
Mechanical Engineering Students	50 (17.79%)	20 (07.12%)	70 (24.91%)
Other Students	11 (03.91%)	08 (02.85%)	19 (6.76%)
Total	174 (61.92%)	107 (38.08%)	281 (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 31.32% and they are followed by 24.91% of them who are in the category of Mechanical Engineering Students, 22.42% of them are in the category of ECE/EEE students, 15.59% of them are in the category of Civil Engineering students and the remaining 6.76% 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	Nonaffordable	
CSE and IT Students	12 (4.27%)	58 (20.64%)	18 (6.41%)	88 (31.32%)
ECE and EEE Students	25 (8.90%)	31 (11.03%)	07 (2.49%)	63 (22.42%)
Civil Engineering Students	10 (03.56%)	22 (07.83%)	09 (3.20%)	41 (14.59%)
Mechanical Engineering Students	14 (4.98%)	48 (17.08%)	08 (2.84%)	70 (24.91%)
Other Students	06 (2.13%)	11 (3.91%)	02 (0.71%)	19 (06.76%)
Total	67 (23.84%)	170 (60.50%)	44 (15.66%)	291 (100.00%)

Source: Primary Data

Data in table 4 demonstrate that impact of using e-journals. Out of the total respondents most of them (60.50%) say that is affordable, Some of them (23.84%) say that is very less, and few of them (15.66%) say that is unaffordable. 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	14	38	10	204
	19.22%	31.32%	4.98%	13.52%	3.56%	72.60%
Post Graduate Students	25	24	11	17	0	77
	8.90%	8.54%	3.91%	6.05%	0.00%	27.40%
Total	79	112	25	55	10	281
	28.11%	39.86%	8.90%	19.57%	3.56%	100.00%
Research work						
Designation	Purpose of Access					
	Always	When Needed	Some Time	Occasionally	Not Accessing	Total
Under Graduate Students	17	59	104	24	0	204
	6.05%	21.00%	37.01%	8.54%	0.00%	72.60%
Post Graduate Students	7	14	37	14	5	77
	2.49%	4.98%	13.17%	4.98%	1.78%	27.40%
Total	24	73	141	38	5	281
	8.54%	25.98%	50.18%	13.52%	1.78%	100.00%
Preparing Seminar / Conference Notes						
Designation	Purpose of Access					
	Always	When Needed	Some Time	Occasionally	Not Accessing	Total
Under Graduate Students	131	54	14	4	1	204
	46.62%	19.22%	4.98%	1.42%	0.36%	72.60%
Post Graduate Students	51	15	5	1	5	77
	18.15%	5.34%	1.78%	0.36%	1.78%	27.40%
Total	182	69	19	5	6	281
	64.77%	24.56%	6.76%	1.78%	2.14%	100.00%
Preparing Articles						
Designation	Purpose of Access					
	Always	When Needed	Some Time	Occasionally	Not Accessing	Total
Under Graduate Students	107	13	71	4	9	204
	38.08%	4.63%	25.27%	1.42%	3.20%	72.60%
Post Graduate Students	27	14	24	5	7	77
	9.61%	4.98%	8.54%	1.78%	2.49%	27.40%
Total	134	27	95	9	16	281
	47.69%	9.61%	33.81%	3.20%	5.69%	100.00%
Enhancing Knowledge						
Designation	Purpose of Access					
	Always	When Needed	Some Time	Occasionally	Not Accessing	Total
Under Graduate Students	47	89	4	28	36	204
	16.73%	31.67%	1.42%	9.96%	12.81%	72.60%
Post Graduate Students	28	17	8	11	13	77

	9.96%	6.05%	2.85%	3.91%	4.63%	27.40%
Total	75	106	12	39	49	281
	26.69%	37.72%	4.27%	13.88%	17.44%	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	4	204
	31.67%	36.30%	0.36%	2.85%	1.42%	72.60%
Post Graduate Students	35	31	4	0	7	77
	12.46%	11.03%	1.42%	0.00%	2.49%	27.40%
Total	124	133	5	8	11	281
	44.13%	47.33%	1.78%	2.85%	3.91%	100.00%

Source: Primary Data

From Table 5 that designation wise to study the purpose of accessing E-Journals for *general awareness*. Out of 281 (100%) respondents, 79 (28.11%) respondents are accessing E-Journals always, 112 (39.86%) respondents are accessing E-Journals when needed, 25 (08.90%) respondents are accessing E-Journals some time, 55 (19.57%) respondents are accessing occasionally and the remaining 10 (3.56%) respondents are not accessing.

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

<i>Chi-square</i>	<i>Value p0.05</i>	<i>DF</i>	<i>Calculative Value</i>	<i>Results</i>
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 281 (100%) respondents, 24 (8.54%) respondents are accessing E-Journals always, 73 (25.98%) respondents are accessing E-Journals when needed, 141 (50.18%) respondents are accessing E-Journals some time, 38 (13.52%) respondents are accessing occasionally and the remaining 05 (1.78%) respondents are not accessing.

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

<i>Chi-square</i>	<i>Value p0.05</i>	<i>DF</i>	<i>Calculative Value</i>	<i>Results</i>
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 a 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 281 (100%) respondents, 182 (64.77%) respondents are accessing E-Journals always, 69 (24.56%) respondents are accessing E-Journals when needed, 19 (6.76%) respondents are accessing E-Journals some time, 05 (1.78%) respondents are accessing occasionally and the remaining 06 (2.14%) respondents are not accessing.

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

<i>Chi-square</i>	<i>Value p0.05</i>	<i>DF</i>	<i>Calculative Value</i>	<i>Results</i>
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 a 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 281 (100%) respondents, 134 (47.69%) respondents are accessing E-Journals always, 27 (9.61%) respondents are accessing E-Journals when needed, 95 (33.81%) respondents are accessing E-Journals some time, 9 (3.20%) respondents are accessing occasionally and the remaining 16 (5.69%) respondents are not accessing.

H₀: 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 a significant difference between designation and the accessing E-Journals for preparing articles.

The purpose of accessing E-Journals for *enhancing knowledge*, Out of 281 (100%) respondents, 75 (26.69%) respondents are accessing E-Journals always, 106 (37.72%) respondents are accessing E-Journals when needed, 12 (4.27%) respondents are accessing E-Journals some time, 39 (13.88%) respondents are accessing occasionally and the remaining 49 (17.44%) respondents are not accessing.

H₀: 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 a significant difference between designation and the accessing E-Journals for enhancing knowledge.

The purpose of accessing E-Journals for **Referred Related Subjects**, Out of 281 (100%) respondents, 124 (44.13%) respondents are accessing E-Journals always, 133 (47.33%) respondents are accessing E-Journals when needed, 05(1.78%) respondents are accessing E-Journals some time, 08 (2.85%) respondents are accessing occasionally and the remaining 11 (3.91%) respondents are not accessing.

H₀: 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 greater than Table value 9.49 at degrees of freedom 4. Hence the hypothesis is rejected. So there is a significant difference between designation and the accessing E-Journals for referred related subjects.

FINDINGS

- 1.Majority of the engineering college students are browsing once in a week.
- 2.Majority of the engineering college students are spending two hours in browsing.
- 3.Most of the engineering college students are browsing for Research / Project work.
- 4.Most of the engineering college students 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

In view of the above, it is concluded that engineering college libraries need to increase accessibility of e-resources since these play a significant role in satisfying the research and academic needs of information efficiently Engineering College Libraries to provide more flexible platforms of access e-journals. E-Journals are main sources of engineering students. To organize workshops and seminar to all the users and create awareness of using e-journals regularly to engineering college students. In Dindigul District, limited engineering colleges to encourage e-resources and many things related library. So, the government should take steps promote e-Journals access facilities in all government and Private engineering Colleges to benefit for students. All the engineering college must conduct free training to utilize e-journals all the users. Engineering students should attend more training and workshops for on E-resources search and retrieval skills.

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