

## **Usage Pattern of Electronic Resources among the Research Scholars in Anna University of Technology, Coimbatore and Its Affiliated Colleges**

Dr.L.Santhi<sup>1</sup>, Dr.N.Radhakrishnan<sup>2</sup>

<sup>1</sup>Librarian, PSGR Krishnammal College for Women, Coimbatore.

<sup>2</sup>Associate Professor, Dept. of Library and Information Science, Periyar University, Salem.

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**Abstract:** *The main focus of the research was to examine the Usage pattern of electronic resources by the research scholars from Engineering Institutions affiliated to Anna University of Technology, Coimbatore. The study was carried out for researchers who are doing Ph.D in Anna University, Coimbatore and its affiliated institutions to explore their usage pattern of electronic resources. Questionnaire method was used to examine and collect data from the research scholars. The collected data has been analyzed with the help of Statistical Package for Social Science (SPSS). Statistical methods like percentage, Chi-Square and ANOVA were used. The Hypotheses framed were proved by this study. The results revealed that there is a significant difference among researchers in different age groups who are familiar with utilization of electronic resources. Course oriented web pages should be linked with library websites which in turn help the research scholars to use these resources easily and effectively.*

**Keywords:** *Electronic resources, Engineering College Libraries, Research Scholars, Print resources*

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### **I. Introduction**

With the growing popularity of e-resources, the traditional libraries are gradually migrating from print documents to e-resources and providing access to information which is considered to be more important than the print medium. This has led academic environment to relook into their collection development and functioning. Application of Information Communication Technology (ICT) in libraries has provided enough opportunities for building e-resources and disseminated them in the manner which suits the needs of academics. To maximize the e-resources' use in these libraries, the attitudes of the users are to be measured to maximize the usage. Spending large amount on e-resources may not create an impact on the services until proper human resource is deployed to serve the end users. The assumption and facts are to be analyzed to study and find out the need of the users so as to support and provide an effective access to e-resources.

### **II. Review of Literature**

Studies related to various electronic resources usage pattern of faculties and research scholars of various colleges and universities were undertaken by different authors. The studies by Ansari, Rekha Chirra, Madhusudhan and Amritpal Kaur revealed that electronic resources are the best means of getting current and up-to-date information. E-journals have become a vital part of information for research work. 100% of the respondents admit that e-resources can be good substitute for conventional resources if the access speed is fast. The information available in e-resources has been a great asset for the respondents. They have been able to keep themselves abreast of the latest information and improve their academic and professional competency.

Masoom Raza and Ashok Kumar Upadhyay revealed that the most common problem faced by the respondents is that there is difficulty in accessing full text and many of the respondents are not satisfied with the Internet facilities available. Some problems like lack of training and slow downloading have been found and the researchers felt the difference about the need for print journals as well as electronic journals.

It is clear from the above reviews that usage of electronic resources requires User education should be conducted for a small group of faculty members belonging to a single discipline such as mathematics, physics, chemistry, English at a time so that the resources accessible under the consortium in a particular subject can be made known to the faculty members concerned and is highly focused.

### **III. Objectives**

The main objective of the study is to gain a clear insight into the impact of e-resources usage pattern among research scholars and to critically assess its implementation, and to assess the contemporary use of electronic information resources by the research scholars.

#### IV. Hypothesis

The following Hypothesis was framed in this connection. (1) There is a significant difference on the usage pattern of print and e-resources among research scholars. (2) Age of the research scholars is the influencing factor in terms of e-resource usage pattern among the respondents.

#### V. Methodology

The researcher used a design of empirical survey. This study involves both primary, secondary data and wide interaction with a sample group. Simple random sampling method is chosen as far as primary data is concerned.

The population size of the present study includes 160 colleges. There were 781 research scholars who had registered for doing Ph.D in different disciplines in the year 2007-08. Out of a total population (781), 610 respondents were randomly served the questionnaire for the present study. 499 respondents had given their feed back at the response rate of 81.80%.

#### VI. Analysis

Utilization of e-resources is analyzed in terms of the location to access, format preferences, sources for locating the e-information, are presented in the following Tables.

**Table.1 Classification by utilization of e-resources with location and preferred format**

S.No	Variable	Response		
		Frequency	Percentage	Total
1	<b>Location to access E- Resources</b>			
1.1	On campus	104	20.84	499 (100)
1.2	Off campus	26	5.21	
1.3	Both	369	73.95	
2	<b>Preferred format</b>			
2.1	Print	131	26.25	499 (100)
2.2	Electronic	45	9.02	
2.3	Both	323	64.73	

104 (20.84%) respondents are using the e-resources at their campus, and 26 (5.21%) research scholars replied that they are using e-resources outside campus like computer centers, and home. Majority of the respondents 369 (73.95%) access e-resources both on campus and off campus location.

131 (26.25%) respondents prefer to use print formats when they access the e-resources, 45 (9.02%) of them prefer to use electronic formats and 323 (64.73%) respondents browse both print as well as electronic formats.

**Table.2 Classification by utilization of e-resources with types of e-resources, method of access, purpose and locating the information**

S.No	Variable	No. of Respondents		
		Yes (%)	No (%)	Total (%)
1	<b>Types of e-resources</b>			
1.1	E-Books	432 (86.6)	67 (13.4)	499 (100)
1.2	E-Journals	488 (97.8)	11 (2.2)	
1.3	E-Dictionaries	162 (32.5)	337 (67.5)	
1.4	E-Theses	228 (45.7)	271 (54.3)	
1.5	E-Magazines	278 (55.7)	221 (44.3)	
1.6	E-Catalogs	78 (15.6)	421 (84.4)	
1.7	E-Databases	261 (52.3)	238 (47.7)	
2	<b>Method of information access</b>			
2.1	Download and copy on CD / pendrive	335 (67.1)	164 (32.9)	499 (100)
2.2	Take print out	397 (79.6)	102 (20.4)	
2.3	Only reading	86 (17.2)	413 (82.8)	
3	<b>Purpose of using e- resources</b>			
3.1	To update for research work	489 (98)	10 (2)	499 (100)
3.2	For preparing academic course work	323 (64.7)	176 (35.3)	
3.3	To publish articles / Papers	322 (64.5)	177 (35.5)	
4	<b>Types of Sources used for locating information</b>			

4.1	Databases	353 (70.7)	146 (29.3)	499 (100)
4.2	Directories	126 (25.3)	373 (74.7)	
4.3	Indexes / Abstracts	175 (35.1)	324 (64.9)	
4.4	Bibliographies	124 (24.8)	375 (75.2)	
4.5	Union Catalogue	44 (8.8)	455 (91.2)	
4.6	Web online public access catalogue	98 (19.6)	401 (80.4)	
4.7	Search engines / Meta search engines	421 (84.4)	78 (15.6)	

It is observed that 432 (86.6%) research scholars are using e-books for their research. Majority (98%) of the respondents use e-journals for their research, 162 (32.5%) browse e-dictionaries for their research, 228 (45.7%) research scholars are using e-theses for their research, 278 (55.7%) research scholars are using e-magazines for their research, 78 (15.6%) browse e-catalogs for their research, 261 (52.3%) research scholars are using e-databases for their research.

### VII. Hypothesis testing

#### Gender and Usage Pattern of E-Resources

The e-resources are used by the researchers for a number of days or only for instant access. Because of this usage pattern, the output of e-materials used by them are sometimes hard copy or soft copy. Hence the researcher is interested in knowing the classification of e-resources that are used in printout form and soft form.

The analysis of association between gender and usage pattern tested with print, electronic and both format has been made using chi-square test and the results are summarized in the following tables.

**Table.3 Association between gender and usage pattern of print and e-resources**

S.No	Gender	Usage pattern			$\chi^2$ (df;p(s))
		Print	E-resource	Both	
1	Male	83	34	212	2.254 (2;0.324)
2	Female	48	11	111	

The analysis pertained to access the e-resources among the respondents showed that the chi square test results i.e.  $\chi^2 = 2.254$  at 2 degrees of freedom with the probability value of 0.324 which is greater than 5% level and hence it is inferred that there is no significant difference among research scholars for accessing e-resources.

**Table.4 Association between research scholars pertinent to usage pattern of print and e-resources**

S. No	E-resources	Print		Electronics		Both		$\chi^2$ (df;p(s))
		Yes	No	Yes	No	Yes	No	
1	E – Books	21.2	5.0	7.0	2.0	58.5	6.2	11.261(4;0.024)
2	E – Journals	25.7	0.6	8.6	0.4	63.7	1.0	1.761(2;0.415)
3	E – Dictionaries	4.0	22.2	3.4	5.6	25.1	39.7	23.977(2;0.000)
4	E – Theses	7.2	19	5.2	3.8	33.3	31.5	25.187(4;0.000)
5	E – Magazines	9.4	16.8	5.6	3.4	40.7	24	28.326(2;0.000)
6	E – Catalogs	1.4	24.8	1.2	7.8	13	51.7	15.637(2;0.000)
7	E – Databases	9.0	17.2	3.4	5.6	39.9	24.8	31.944(2;0.000)

The probability values are significant at 5% level of significance, it is concluded that there is a significant difference among research scholars related to usage pattern for other e-resources such as e-book, e-dictionaries, e-theses, e- magazines, e-catalogs and e-databases.

**Table.5 Association between age groups and utilization of e- resources**

E-resources	Age group 23 – 27		Age group 28 – 32		Age group 33 – 37		Age group 38 – 42		Age group 43 – 47		48 and above		$\chi^2$ (df;p(s))
	Opinion		opinion		opinion		opinion		opinion				
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
E – Book	16.2	3	41.5	5.6	23.2	3.8	4.4	1.0	1.0	-	0.2	-	2.443(5;0.785)
E – Journals	19.2	-	45.5	1.6	27.1	-	5.0	0.4	1.0	-	0.2	-	11.207(5;0.047)
E – Dictionaries	6.2	13	13.8	33.3	9.6	17.4	1.8	3.6	0.8	0.2	0.2	-	8.864(5;0.115)
E – Theses	5.6	13.6	23.8	23.2	12.4	14.6	3.2	2.2	0.6	0.4	0.2	-	16.470(5;0.006)
E – Magazines	9.6	9.6	24.2	22.8	17.2	9.8	3.8	1.6	0.6	0.4	0.2	-	9.646(5;0.086)
E – Catalogs	2.6	16.6	6.2	40.9	5.0	22	1.4	4.0	0.2	0.8	0.2	-	9.871(5;0.079)
E – Databases	10.4	8.8	23.8	23.2	14.6	12.4	2.8	2.6	0.4	0.6	0.2	-	1.782(5;0.878)

The analysis of use behavior of electronic resources towards the different age groups among the respondents showed that the probability value are 0.785, 0.115, 0.086, 0.079 and 0.878 which are greater than the level of significance at 5% level. Hence e-books, e-dictionaries, e-magazines, e-catalogs and e-databases show that there is no significant difference among the different age group of research scholars.

### **VIII. Conclusion**

It is clear from the study shows that research scholars prefer electronic resources as a greater part for their research. So it is essential to develop specific web pages, blogs and wikis accommodating the topic in conjunction with navigation facilities to all subscribed online databases, e-journals, and open access e-information resources. These course oriented should be linked with library websites which in turn help the research scholars to use these resources easily and effectively. Libraries should take active participation in various e-journal consortiums for maximizing procurement of e-journals at minimal cost on sharing basis by which institutes can afford to balance e-subscriptions.

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