

Utilization and Impact of Electronic Information Resources among the Faculty Members of Arts & Science Colleges in Erode District, Tamil Nadu: A Case Study

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(Received 19 December 2018; Revised 18 January 2019; Accepted 2 February 2019; Available online 7 February 2019)

Abstract - The major purpose of this study is to find out the awareness, availability and the usability of electronic information resources by the faculty members of Arts & Science Colleges in Erode District, Tamilnadu under the survey method was used for this study. Questionnaire was used to collect the data. A total number of 780 questionnaires were distributed. Out of that 613 questionnaire were responded. The analysis of data covers the details about usage of electronic resources for developing the knowledge of the faculty members. The study resulted that almost all the users have awareness about the e-resources utility and also regularly accessing all kinds of e-resources.

Keywords: E-Resources, ICT facilities, Information Literacy

I. INTRODUCTION

An electronic information resource is the information source that the library provides to access an electronic format. Computers and related electronic resources have come to play a central role in education. (Pratheepan, T., Jeyaraj, W. J., & Vantharumolai, C. 2012). All the users have experience with the Internet and make the use of it for much of their academic work. Electronic resources are helpful for distant users who have limited time to access the libraries from outside by dial up access commonly available in electronic resources. Electronic resources are now used more often than print resources.

(Jeyaraj W. J. 2017). The application of computers in information processing has brought several products and services to the users and that made libraries more competitive to meet the complex and ever changing needs of user community with most effectively and economically. Manimekalai, A., Balasubramani, R., & Amsaveni, N. (2006). The College libraries are today moving towards having access to more and more e-resources in their collection as they form a major intellectual research output of the world. W. J. Jeyaraj (2012). It is to support teaching, learning and research activities of the academic community of the university. Now a day's increasing the impact of Information and Communication Technology (ICT) on education all those concerned with higher education today are attempting to grasp how ICT could help in digitalizing the process of teaching, learning and doing research. Jeyaraj. W.J (2018)

II. REVIEW OF LITERATURE

The survey regarding the usage of electronic resources has been carried out in many studies.

Thompson *et al.*, (2014) the center s offers a modern economic model different from traditional one in terms of offering an alternative to provide all classrooms with educational technology. They also contribute to organizing and classifying learning resources which facilitate access of staff members to them.

Deng (2010) explored the pattern and trend of accessing and using e-resources in a university library in Australia. He showed that the use of e-resources is very much dependent on the user and the purpose of using e-resources.

Singh (2009) examines the search pattern of online journals among the faculty members, research scholars and post-graduate students to collect the required data. The study reveals that the majority of users are aware about the availability of online Journals. It was found that many users faced problem when using online journals and that they were interested in undergoing training on the use of online Journals.

Lohar and Roopashree (2006) studied the use of electronic resources and how the electronic resources are improving the academic career of the faculty and the problems encountered in the use of the electronic resources. The study was based on faculty members only.

III. OBJECTIVES OF THE STUDY

The objective of the study is to identify the awareness, availability and the usability of electronic resources by the survey of the faculty members of Arts & Science Colleges in Erode District, Tamil Nadu.

1. To identify gender wise distribution of the respondents.
2. To identify the usage of e-resources by the faculty members age group and nativity.
3. To analyze the awareness about electronic information resources by the faculty members.
4. To study the familiarity and frequency in the usage of different kinds of e-resources and library visits.

5. To analyze the respondents extent of access to e-resources.
6. To know the level of satisfaction by the faculty members.

IV. METHODOLOGY

The survey method was used to collect primary data on this research investigation. The data is collected through a structured questionnaire was prepared and keeping in mind for the objective of the study. The questionnaire were distributed among 780 users of arts and science colleges faculty members in erode district. However, 613 of the users are responded and the same were used for this study. The

analysis and interpretation of the data is presented in the subsequent sections.

V. DATA ANALYSIS AND INTERPRETATION

Table I shows that the distribution of questionnaire to the utilization and impact of electronic information resources among the faculty members of Arts and Science Colleges in Erode District. Out of 780 Questionnaires distributed only 613 respondents have responded with the response rate of 238 (30.51%) for male and rest of the 375 (48.05%) are female. It shows that the majority of female faculty members are responded for the utilization of electronic information resources in arts and science colleges, Erode District.

TABLE I STATISTICS FOR THE DISTRIBUTION OF QUESTIONNAIRES TO THE RESPONDENTS

S. No.	Description	No. of Respondents				Total	Percentage
		Male	%	Female	%		
1	No of Questionnaires received	238	30.51	375	48.08	613	78.59
2	No of Questionnaires not replied	71	9.10	96	12.31	167	21.41
	Total Questionnaires Distributed	309	39.61	471	60.39	780	100

TABLE II CATEGORIES AND ANALYSIS OF GENDER WISE RESPONDENTS FROM ARTS AND SCIENCE COLLEGES IN ERODE DISTRICT

Categories	Male	Female	Total
Government Arts & Science Colleges	25 (4.08)	9 (1.47)	34 (5.55)
Aided Colleges	44 (7.18)	55 (8.97)	99 (16.15)
Management Colleges	169 (27.57)	311 (50.73)	480 (78.30)
Total	238 (38.83)	375 (61.17)	613 (100)

Table II shows that the gender wise distribution of respondents among the overall faculty members. 25 (4.08%) male and 9 (1.47%) female respondents from Government Arts and Science Colleges, 44 (7.18%) male and 55 (8.97%) female respondents from Aided Arts and Science Colleges and finally 169 (27.57%) male and 311 (50.73%) female respondents from Management Arts and Science Colleges in Erode District.

It shows that totally 238 (38.83%) male faculty respondents and 375 (61.17%) female faculty respondents from Arts and Science Colleges in Erode District.

Table III shows that the categories and age group wise respondents from Arts and Science Colleges in Erode District. This table shows that the majority of 179 (29.20%) respondents were in the age group of 26-30, and 167 (27.24%) respondents were in the age group of 30-35, and 113 (18.43%) respondents were in the age group of 36-40, and 79 (12.89%) respondents were in the age group of below 25 and only 75 (12.24%) respondents were in the age

group of above 40 years. In this table shows that the maximum of 156 (25.45%) faculties are working in Management Arts and Science Colleges in Erode District with the age of 26-30 years.

TABLE III CATEGORIES OF AGE GROUP WISE RESPONDENTS

Age Group	Categories			
	Government	Aided	Management	Total
<25	2 (0.33)	9 (1.47)	68 (11.09)	79 (12.89)
26-30	2 (0.33)	21 (3.42)	156 (25.45)	179 (29.20)
31-35	15 (2.44)	34 (5.55)	118 (19.25)	167 (27.24)
36-40	8 (1.30)	22 (3.59)	83 (13.54)	113 (18.43)
>40	7 (1.15)	13 (2.12)	55 (8.97)	75 (12.24)
Total	34 (5.55)	99 (16.15)	480 (78.30)	613 (100)

Test the hypothesis that the population are homogenous with respect to the types of colleges they preferred (table value of X^2 at 5% level for 8 degrees of freedom is 15.50). The calculated value of X^2 is higher than the table value and hence the hypothesis does not accepted. Therefore, conclude that the awareness of electronic resources does not appeal equally to all age groups.

TABLE IV HYPOTHESIS 1: CHI-SQUARE TEST WITH AGE GROUP WISE RESPONDENTS FROM SELECTED ARTS AND SCIENCE COLLEGES IN ERODE DISTRICT

O	E	(O-E) ²	(O/E) ^{2/E}
32	28.61	11.492	0.402
28	29.51	2.280	0.077
19	20.88	3.534	0.169
67	64.83	4.708	0.073
79	66.87	147.136	2.200
33	47.30	204.490	4.323
59	60.48	2.190	0.036
68	62.39	31.472	0.504
40	44.13	17.056	0.386
38	40.92	8.526	0.208
43	42.21	0.624	0.015
32	29.87	4.536	0.152
26	27.16	1.345	0.049
11	28.02	289.680	10.338
38	19.82	330.512	16.676
$\Sigma[(O-E)^2/E]=35.608$			

TABLE V DISTRIBUTION OF QUESTIONNAIRES TO THE RESPONDENTS BASED ON THEIR NATIVITY

Nativity	Categories			Total
	Government	Aided	Management	
Rural	18	37	259	314
Urban	16	62	221	299
Total	34	99	480	613

Table V shows that the distribution of questionnaires to the respondents based on their nativity into two categories. One is Rural among overall 314 respondents are classified into 18 respondents in Government Arts and Science Colleges, 37 respondents in Aided Arts and Science Colleges and 259 respondents in Management Arts and Science Colleges. Another one is Urban area among overall 299 respondents are classified into 16 respondents in Government Arts and Science Colleges, 62 respondents in Aided Arts and Science Colleges and 221 respondents in Management Arts and Science Colleges.

TABLE VI DISTRIBUTIONS OF QUESTIONNAIRES TO THE RESPONDENTS FOR ANALYSIS OF AWARENESS ABOUT ELECTRONIC INFORMATION RESOURCES

Level of Satisfaction	Categories			
	Government	Aided	Management	Total
Fully Aware	18 (2.94)	39 (6.36)	165 (26.91)	222 (36.21)
Moderately Aware	9 (1.47)	28 (4.57)	192 (31.32)	229 (37.36)
Somewhat Aware	7 (1.14)	32 (5.22)	123 (20.07)	162 (26.43)
Total	34 (5.55)	99 (16.15)	480 (78.30)	613 (100)

Table VI shows that the distribution of questionnaires to the respondents for the analysis of awareness about electronic information resources is classified into fully aware, moderately aware and somewhat aware respondents. The majority of 37.36% (229) respondents are moderately aware, 36.21% (229) respondents are fully aware and 26.43% (162) respondents are somewhat aware of the electronic information resources. It is included from the above analysis the majority of respondents who are fully aware about electronic information resources are between the aided colleges. Majority of them have mentioned moderately fully aware about the electronic resources facilities.

TABLE VII RANKS OF E-BOOKS UTILIZATION

Rank	Respondents	Percentage	Cumulative percentage
1	135	22.02	22.02
2	286	46.66	68.68
3	108	17.62	86.30
4	84	13.70	100
Total	613	100	

Table VII shows that the rank positions of e-books utilization in that 22.02% of respondents are suggested 1st rank and 46.66% of respondents are suggested 2nd rank and 17.62% of the respondents are suggested 3rd rank and 13.70% of the respondents suggested 4th rank.

TABLE VIII RANKS OF E-JOURNALS & MAGAZINES UTILIZATION

Rank	Respondents	Percentage	Cumulative percentage
1	174	28.38	28.38
2	246	40.13	68.51
3	152	24.80	93.31
4	41	6.69	100
Total	613	100	

Table VIII shows that the rank positions of e-journals & magazines utilization in that 28.38% of respondents are suggested 1st rank and 40.13% of respondents are suggested 2nd rank and 24.80% of the respondents are suggested 3rd rank and 6.69% of respondents suggested 4th rank.

TABLE IX RANKS OF ONLINE DATABASE UTILIZATION

Rank	Respondents	Percentage	Cumulative percentage
1	230	37.52	37.52
2	193	31.48	69.00
3	114	18.60	87.60
4	76	12.40	100
Total	613	100	

Table XI shows that the rank positions of Online Database utilization in that 37.52% of respondents are suggested 1st rank and 31.48% of respondents are suggested 2nd rank and 18.60% of respondents are suggested 3rd rank and 12.40% of respondents are suggested 4th rank.

TABLE X RANKS OF E-NEWSPAPER UTILIZATION

Rank	Respondents	Percentage	Cumulative percentage
1	138	22.51	22.51
2	265	43.23	65.74
3	116	19.09	84.83
4	94	15.17	100
Total	613	100	

Table X shows that the rank positions of E-Newspaper utilization in that 22.51% of respondents are suggested 1st rank and 43.23% of respondents are suggested 2nd rank and 19.09% of respondents are suggested 3rd rank and 15.17% of respondents are suggested 4th rank.

TABLE XI RANKS OF OPEN ACCESS RESOURCES (OAR) UTILIZATION

Rank	Description	Respondents	Percentage	Cumulative percentage
1	DOAJ	161	26.26	26.26
2	NPTEL	95	15.50	41.76
3	NDLTD	106	17.29	59.05
4	Open J-Gate	99	16.15	75.20
5	Shodhganga	152	24.80	100
	Total	613	100	

Table XI shows that the rank positions of Open Access Resources utilization in that 26.26% of respondents are suggested 1st rank for DOAJ (Directory of Open Access Resources) and 24.80% of respondents are suggested 2nd rank for Shodhganga and 17.29% of respondents are suggested 3rd rank for NDLTD and 16.15% of respondents are suggested 4th rank for Open J-Gate and 15.50% of respondents are suggested 5th rank for NPTEL usage.

TABLE XII DISTRIBUTION OF QUESTIONNAIRES TO THE RESPONDENTS BY FREQUENCY OF E-RESOURCES VISIT

Frequency of Library Visit	Categories			Total
	Government	Aided	Management	
Daily	12	28	126	176
Once in two days	10	21	120	151
Twice in a week	06	19	123	148
Once in a week	03	16	43	62
Once in two weeks	03	15	58	76
Total	34	99	480	613

Table XII shows that the user frequency of electronic information resources visits are 176 respondents are visiting the electronic resources daily, 151 respondents are once in two days, 148 respondents are twice in a week, 62 respondents are once in a week and 76 respondents are once in two weeks. Thus, nearly more than one fifth of the respondents are visit and using the electronic resources daily.

TABLE XIII HYPOTHESIS – 2: CHI-SQUARE TEST WITH FREQUENCY OF VISIT BY RESPONDENTS FROM SELECTED ARTS AND SCIENCE COLLEGES IN ERODE DISTRICT

O	E	(O-E) ²	(O/E) ^{2/E}
12	9.76	5.0176	0.514
28	28.43	0.1849	0.006
136	137.81	3.2761	0.023
10	8.38	2.6244	0.313
21	24.38	11.4244	0.468
120	118.24	3.0976	0.026
06	8.21	4.8841	0.594
19	23.90	24.0100	1.004
123	115.89	50.5521	0.436
03	3.44	0.1936	0.056
16	10.01	35.8801	3.584
43	48.55	30.8025	0.634
03	4.21	1.4641	0.347
15	12.28	7.3984	0.602
58	59.51	2.2801	0.038
$\sum[(O-E)^2/E]=8.645$			

Test the hypothesis that the frequency of visit by respondents are with respect to the types of colleges they preferred (table value of X² at 5% level for 8 degrees of freedom is 15.50). The calculated value of X² is lower than this table value and hence the Null hypothesis is accepted and hence alternative hypothesis is rejected. There is no significance different between the observed frequency and expected frequency (there is no relation between the frequency of visit by respondents and the categories of colleges).

TABLE XIV DISTRIBUTION OF QUESTIONNAIRES TO THE RESPONDENTS BY PRINTED JOURNALS IN THE ELECTRONIC JOURNALS

S. No.	Printed Journals	Total No. of Respondents	Percentage
1	Yes	387	63.13%
2	No	226	36.87%
	Total	613	100

The above table shows that the printed journals in addition to the electronic journals are used by the respondents for their references. 387 (63.13%) respondents are used or need the electronic journals where as 226 (36.87%) respondents not require or used in the printed electronic journals.

VI. RESULTS

1. 38.83% of male and 61.17% of female respondents are study participants.
2. The maximum of 179 (29.20%) respondents are in the age group of 26-30 years.
3. 229 (37.36%) respondents are moderately aware about the electronic information resources and 222 (36.21%) respondents are fully aware about the electronic information resources.
4. 22.02% of respondents are suggested 1st rank and 46.66% of respondents are suggested 2nd rank for the utilization of e-books.
5. 28.38% of respondents are suggested 1st rank and 40.13% of respondents are suggested 2nd rank for the utilization of e-journals and e-magazines.
6. 37.52% of respondents are suggested 1st rank and 31.48% of respondents are suggested 2nd rank for the utilization of online database.
7. 22.51% of respondents are suggested 1st rank and 43.23% of respondents are suggested 2nd rank for the utilization of e-newspapers.
8. 26.26% of respondents are suggested 1st rank for DOAJ (Directory of Open Access Journals) and 24.80% of respondents are suggested 2nd rank for Shodhganga.
9. 176 respondents are daily visiting the library for the purpose of using the electronic resources.
10. Educational have significant difference between the listed electronic resources.

VII. SUGGESTION AND CONCLUSION

Based on the study the following suggestions are made to improve the usage of e- resources among the faculty members of arts and science colleges in erode district. The

emergence of electronic sources has provided to the student community particularly for professional students with wide opportunities to satisfy their information needs. The electronic information resources have become an alternative tool to print media. The Educational institutions should be equipped with required electronic resources so as to enable its students to fulfill their academic plans. The Faculty Awareness Program regarding the e-resources shall be conducted by the librarian. So the users can easily to understand the e-resources effectively. E-resources are one of the important learning platforms in the world. Faculty members are easily access and fulfill their needs by the usage of electronic resources.

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