Utilization of E-Resources among the Faculty Members of Engineering Colleges in Salem and Namakkal Districts, Tamil Nadu

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Abstract – **This paper discusses the experiences in using electronic resources, time spent for using ICT based resources, places of highly accessing electronic resources, search engines used, satisfaction level of electronic resources, hindrances faced while accessing electronic resources and benefit of electronic resources by the faculty members of engineering colleges in Salem and Namakkal districts. The researcher has chosen 17 engineering colleges from the available 40 colleges, which are established during the years between 1966 and 2006. The majority of the respondent in the engineering colleges have used electronic resources daily.**

I. INTRODUCTION

Libraries which are considered only as the storehouses of knowledge have got a new outlook in the modern Information and Communication Technology (ICT) era. The activities which have been carried out manually in libraries with so much of pain and strain are being carried out smoothly with the help of e-resources with greater effectiveness. Library organization, administration and other technical processing have become easier and more quantum of work could be done in a relaxed mood. ICT generates more results at a given time.

Wagner Ben [1] provided an overview of the development of electronic resources over the past three decades, discussing key features, disadvantages, and benefits of traditional online databases and CD-ROM and web-based resources. Ying Zhang [2] studied the impact of Internet - based electronic resources on formal scholarly communication in the area of library and information science: A citation analysis. The Internet based electronic resources (e- resources) are growing dramatically: however, there have not been empirical studies evaluating the impact of e-resources, as a whole, on formal scholarly communication.

A study on e-resources were conducted at various universities and countries like Gulbarga university, Gulbarga [3], NASSDOC Library [4], Madras university library [5], Research scholars in Central Food and Technology Research Institute, Mysore [6], Ashesi University college [7], the engineering research community in Karnataka [8], medical science faculty at the universities of West Indies [9], health sciences center of Kuwait University [10] andTanzania [11]. Esakkimuthu [12] conducted a survey on the effective use of the library resources, internet and electronic resources by the users of selected special libraries in Tamil Nadu.

II. OBJECTIVES OF THE STUDY

The followings are the important objectives of the study.

1. To study the experience of e-resources among the Faculty Members of Engineering Colleges in Salem and Namakkal Districts;

2. To determine the frequently used e-resources among the Faculty Members of Engineering Colleges in Salem and Namakkal Districts;

3. To find out the method used for reading full text e-resources among the Faculty Members of Engineering Colleges in Salem and Namakkal Districts;

4. To find out the most preferred format for downloading articles among the Faculty Members of Engineering Colleges in Salem and Namakkal Districts;

5. To find out how the library helps the users to access e-resources among the faculty Members of Engineering Colleges in Salem and Namakkal Districts;

6. To study the usefulness of e-resources among the Faculty Members of Engineering Colleges in Salem and Namakkal Districts.

III. Methodology

In order to study the use of Information and Communication Technology by the Faculty members of Engineering Colleges in Salem and Namakkal Districts, the researcher has chosen 17 Engineering colleges from the available 40 colleges, which are established during the years between 1966 and 2006. The Researcher has adopted stratified random sampling method. Only 74.85% of the faculty members are included in the study, owing to lack of responses from the other 25.15% of the faculty members.

IV. Data Analysis

The collected data were classified and tabulated according to the objectives and hypothesis stated. For proper arrangement of the data a master table was prepared by the researcher and was subjected to the statistical treatments. The general interpretation of data was made with the help of percentages. On the basis of obtained score, gender-wise, college-wise and designation-wise interpretations were made.

V. Results and Discussion

An analysis of the nature and type of information required by the faculty members is an important aspect. It explores e-resources and their utility to the faculty of engineering colleges. This study also attempts to assess the faculty member's level of motivation in respect of seeking and collecting various sources of library information with the help of e-resources; The analysis has been made for 1948 respondents, which included 1250 male and 698 female respondents with regard to gender and 120 professors, 220 Associate Professors and 450 Assistant Professors and 1158 Lecturers with regard to designation from the 17 engineering colleges. The findings of the present study lead to the following observations.

The details of the various types of e-resources used are presented in table I. It is observed from the table that 480(24.64%) faculty members used E-journals, 170(8.73%) faculty members used E-books, 388(17.35%) faculty members used online database, 146(7.49%) faculty members are used on line thesis, 201(10.32%) faculty members used online newspapers, 176(9.03%) faculty members used online magazines, and website information, 144(7.39%) faculty members are used CD, 47(2.41%) faculty members are used library catalogue and the remaining 70(3.59%) faculty members used others. Hence it can be concluded that 480(24.64%) faculty members are used e-journals.

From the total 120 Professors, 25.00% of them used e-journals and 4.17 % of them used library catalogue. Among 220 Associate Professors, 19.09% of them used e-journals and 4.55% of them used library catalogue. Out of 450 Assistant Professors, 20.44% of them used e-journal and 1.55% of them used library catalogue. Among the total number of 1158 Lecturers, 27.29% of them used e-journal and 2.16% of them used library catalogue. Hence it can be concluded that 25.00% of the professors and 27.29% of the Lecturers have used e-journals.

TABLE I STATUS WISE DISTRIBUTION OF RESPONDENT'S VIEWS ON FREQUENTLY USED E-RESOURCES

Status	E-journals	E-books	Online Database	Online Thesis	Online News Papers	Online Magazine	Website Information	CD	Library Catalogue	Others	Total
Professor	30 (25.00)	17 (14.17)	13 (10.83)	5 (4.17)	11 (9.17)	8 (6.67)	18 (15.00)	10 (8.33)	5 (4.17)	3 (2.50)	120
Associate Professor	42 (19.09)	24 (10.91)	28 (12.73)	12 (5.45)	15 (6.82)	11 (5.00)	34 (15.45)	32 (14.55)	10 (4.55)	12 (5.46)	220
Assistant Professor	92 (20.44)	33 (7.33)	71 (15.78)	27 (6.00)	58 (12.89)	27 (6.00)	68 (15.11)	49 (10.89)	7 (1.55)	18 (4.00)	450
Lecturer	316 (27.29)	96 (8.29)	226 (19.52)	102 (8.81)	117 (10.10)	130 (11.22)	56 (4.84)	53 (4.58)	25 (2.16)	37 (3.20)	1158
Total	480 (24.64)	170 (8.73)	338 (17.35)	146 (7.49)	201 (10.32)	176 (9.03)	176 (9.03)	144 (7.39)	47 (2.41)	70 (3.59)	1948

Table II reveals how the library helps to use e-resources among the faculty members of 17 engineering colleges in Salem and Namakkal Districts. The analysis shows that out of 1948 total respondents, 453(23.25%) respondents opinion on instruction in use e-resources; 1046(53.70%) respondents opinion on notification of new resources; 347 (17.81%) respondents opinion are easier access and 102(5.24%) respondent selected other factor.

As a result, it was observed that 53.70% of the faculty member's opinion are how the library help to use e-resource. With regard to 120 Professors, 45.00% of them need notification of new resources and 9.17% of them need other help from the library. Out of the 220 Associate professors, 57.63% of them need notification of new resources and 10.91% of them need other help from the library. With respect

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TABLE II STATUS-WISE DISTRIBUTION OF RESPONDENTS HOW THE LIBRARY HELPS TO USE THE E-RESOURCES

Status	Instruction in use	Notification of new resources	Easier Access	Others	Total
Professor	21 (17.50)	54 (45.00)	34 (28.33)	11 (9.17)	120
Associate professor	38 (17.27)	127 (57.63)	31 (14.09)	24 (10.91)	220
Assistant professor	97 (21.56)	263 (58.44)	59 (13.11)	31 (6.89)	450
Lecturer	297 (25.65)	602 (51.99)	223 (19.26)	36 (3.11)	1158
Total	453 (23.25)	1046 (53.70)	347 (17.81)	102 (5.24)	1948

to 450 Assistant Professors, 58.44% of them need notification of new resources and 6.89% of them need other help from the library to use of e-resources. Among 1158 Lecturers, 51.99% of them need notification of new resources and 3.11% of them need other help from the library to use of e-resources.

Table III shows the Status wise distribution of respondent's years of experience in using e-resources. Out of 120 Professor respondents, 111(92.50%) respondents have been accessing e-resources for more than 2 years, 9(7.50) respondents have been accessing e-resources for a period of 2 years. From the 220 Associate Professor respondents, 208(94.55%) respondents have been accessing e-resources

for more than 2 years, 12(5.45%) respondents have been accessing e-resources for a period of 2years.

With regard to 450 Assistant Professor Respondents, 428 (95.11%) respondents have been accessing e-resources for more than 2 years, 20(4.44%) respondents have been accessing e-resources for a period of 2 years, and 2 (0.44%) respondents have been accessing e-resources for a year. From the total number of 1158 Lecturers, 97.41% of them have been accessing e-resources for more than 2 years, 1.81% of them have been accessing e-resources for 2 years, 0.60% of them have been accessing e-resources for a year and 0.17% of them have been accessing e-resources less than a year. It states that, most of the faculty members (96.25%) have been accessing e-resources for more than 2 years.

TABLE III STATUS-WISE DISTRIBUTION OF RESPONDENT'S EXPERIENCE IN ACCESSING E-RESOURCES

Status	Less Than a Year	One Year	Two years	More than Two years	Total
Professor	0 (0.00)	0 (0.00)	9 (7.50)	111 (92.50)	120
Associate Professor	0 (0.00)	0 (0.00)	12 (5.45)	208 (94.55)	220
Assistant Professor	0 (0.00)	2 (0.44)	20 (4.44)	428 (95.11)	450
Lecturer	2 (0.17)	7 (0.60)	21 (1.81)	1128 (97.41)	1158
Total	2 (0.10)	9 (0.46)	62 (3.18)	1875 (96.25)	1948

(Figures in Parentheses denote Percentage)

In table IV the result of methods used for reading full text e-resources by the faculty members of engineering colleges .As the table shows that out of 1948 faculty members, 913(46.87%) respondents have used computer screen for reading full text, 623(31.98%) respondents have used printout, 353(18.12%) respondents have used downloading and 59(3.03%) respondents have used any other method for reading full text.

Thus, the overall result shows that a considerable number of respondents were used (46.87%) computer screen for reading full text. With regard to 120 Professors, 61.66% of them used computer screen and 5.83% of them used other methods for reading full text e-resources. Out of 220 Associate Professors, 56.82% of them used computer screen and 3.18 % of them used other methods. In case of 450 Assistant Professors, 42.22% of them used print out

TABLE IV STATUS-WISE DISTRIBUTION OF RESPONDENT'S METHODS USED FOR READING FULL TEXT E-RESOURCES

Status	Computer Screen	Print out	Down Loading	Any Other	Total
Professor	74 (61.66)	27 (22.50)	12 (10.00)	7 (5.83)	120
Associate Professor	125 (56.82)	51 (23.18)	37 (16.82)	7 (3.18)	220
Assistant Professor	143 (31.77)	190 (42.22)	104 (23.11)	13 (2.89)	450
Lecturer	571 (49.31)	355 (30.66)	200 (17.27)	32 (2.76)	1158
Total	913 (46.87)	623 (31.98)	353 (18.12)	59 (03.03)	1948

(Figures in Parentheses denote Percentage)

and 2.89% of them used other methods for reading full text e-resources. Among the total number of 1158 Lecturers, 49.31% of them used computer screen and 2.76% of them used other method for reading full text e-resources.

It states that 61.66 % of the Professors have used computer screen and 42.22 % of the Assistant Professors have used print out methods for reading full text e-resources.

Data presented in table V shows the status wise distribution of respondent's format preferred to download articles. Out of 120 Professor Respondents, 61(50.83%) respondents preferred PDF format for downloading articles, 15(12.50%) respondents preferred HTML format, 38(31.67%) respondents preferred word format and 6(5.00%) respondents preferred other format for downloading articles. Among 150 Associate professor Respondents, 115(52.27%) respondents preferred PDF format, 30(13.64%) respondents preferred HTML format, 67(30.45%) respondents preferred word format and 8(3.64%) respondents preferred other format for downloading articles. Out of 450 Assistant professor Respondents, 240(53.33%) respondents preferred PDF format, 59(13.11%) respondents preferred HTML format, 140(31.11%) respondents preferred word format and 11(2.44%) respondents preferred other format for downloading

articles. With regard to 1158 Lecturers, 710(61.31%) respondents preferred PDF format, 120(10.36%) respondents preferred HTML format, 311(26.86%) respondents preferred word format and 17(1.47%) respondents preferred other format for downloading articles. It states that most of the respondents from all the four categories preferred PDF format for downloading articles.

Table VI shows the Status-wise distribution of respondents usefulness of ICT based resources and it is clear that out of 1948 respondents,732(37.58%) respondents felt that it is very useful, 1177(60.42%) respondents felt that it is useful, 32(1.64%) respondents felt that it s average and only 7(0.36%) respondents were feels that not useful. With regard to 120 Professors, 59.17% of them felt that it is useful and only 0.83% of them felt that it is not useful. Out of 220 Associate Professors, 62.73% of them felt that it is useful and 0.45% of them felt that it is not useful. With respect to 450 Assistant Professors, 64.89% of them felt that it is useful and 0.44% of them felt that it is not useful. Out of 1158 Lecturers, 58.38% of them felt that it is useful and 0.26% of them felt that it is not useful. Hence it can be concluded that most of the faculty members felt that ICT based resources are useful for their teaching and research work.

TABLE V STATUS-WISE DISTRIBUTION OF RESPONDENT'S FORMAT PREFERRED TO DOWNLOAD ARTICLES

Status	PDF	HTML	Word Format	Others	Total
Professor	61 (50.83)	15 (12.50)	38 (31.67)	6 (5.00)	120
Associate Professor	115 (52.27)	30 (13.64)	67 (30.45)	8 (3.64)	220
Assistant Professor	240 (53.33)	59 (13.11)	140 (31.11)	11 (2.44)	450
Lecturer	710 (61.31)	120 (10.36)	311 (26.86)	17 (1.47)	1158
Total	1126 (57.80)	224 (11.50)	556 (28.54)	42 (2.16)	1948

(Figures in Parentheses denote Percentage)

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TABLE VI STATUS WISE DISTRIBUTION OF RESPONDENTS REGARDING THE USEFULNESS OF E-RESOURCES

Status	Very Useful	Useful	Average	Not Useful	Total
Professor	44 (36.67)	71 (59.17)	4 (3.33)	1 (0.83)	120
Associate Professor	72 (32.73)	138 (62.73)	9 (4.09)	1 (0.45)	220
Assistant Professor	149 (33.11)	292 (64.89)	7 (1.56)	2 (0.44)	450
Lecturer	467 (40.33)	676 (58.38)	12 (1.04)	3 (0.26)	1158
Total	732 (37.58)	1177 (60.42)	32 (1.64)	7 (0.36)	1948

(Figures in Parentheses denote Percentage)

VI. CONCLUSION

From this study it is found that majority of the respondent in the engineering colleges have been accessing e-resources for more than two years (98.25%) E-journals are used for fulfilling their information needs. It is found that 46.87% of the respondents preferred PDF format to download the articles. It is also found that 23.25% of the respondents received instruction from the library to use e-resources. The majority of the respondent's opined that e-resources are useful for their teaching and research purpose.

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