

Use of Information and Communication Technology by the Faculty Members of Engineering Colleges in Salem and Namakkal Districts: A Study

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Abstract - This study deals with frequency of access, time spent for using ICT, places of highly accessing, search engines used, satisfaction level, hindrances faced while accessing ICT based resources, and benefit of ICT based resources by the faculty members of engineering colleges in Salem and Namakkal districts.

Keywords: E-mail, Faculty members, ICT, Internet, Search engines

1. INTRODUCTION

In recent years, Information and Communication Technology (ICT) has been regarded to have a pervasive influence on the economy as well as other parts of society. The ICT is widely considered as the most important revolution humankind has experienced since the industrial revolution and the development of movable type printing techniques. A country's development depends on the extent of use, speed of access, and skill application of ICT systems. The utilization of ICT has become an indicator of the level of the nation's wealth. Countries, which are not using the ICT, are likely to lose their global competitiveness.

Research on ICT based resources in library users has attracted the attention of various scholars and researches (Chifwepa, 2003 [1] ; Rahman *et al.* 2004 [2]; Obioha, 2005 [3]; Igben *et al.*, 2007 [4], Abdullah Almobarraz 2009 [5], S. Dhanavandan [6], C.S Chandra Mohan Kumar and J.Dominic [7].

They have contributed to various research outputs and on analysis of these research findings. It enables the researchers to concentrate on a new area of research.

II. OBJECTIVES OF THE STUDY

In order to pursue this study, the following objectives have been framed, in according with the scope of this investigation:

1. To analyse the utility of ICT in terms of respondents duration and quantum of time utilization with respect to information needs and requirements of the faculty members of engineering colleges;

2. To identify the respondent's highly accessed places for ICT based resources in the collection of information for their academic and research purposes;
3. To analyses the extent of use of ICT facilities and advantages of services made by libraries of their own institutions;
4. To know the extent of respondent's satisfaction with ICT available in their own institutional libraries for the academic and research purposes;
5. To find out the impact of ICT for teaching and research among the faculty members of engineering colleges;
6. To assess the extent of benefit of ICT with respect to information sharing behavior among the faculty members of engineering colleges;
7. To identify the problem faced while accessing ICT based resources by the faculty members of engineering colleges in Salem and Namakkal Districts;

III. METHODOLOGY

This study attempts to examine the use of Information and Communication Technology towards the acquisition of knowledge among the faculty member with reference to engineering colleges in Salem and Namakkal Districts.

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 collected data from the faculty members of engineering colleges in Salem and Namakkal Districts. The data were collected from the faculty members of the concerned colleges by employing mailed questionnaire method.

IV. RESULTS AND DISCUSSION

The questionnaire was issued to the staff members of various departments of the colleges and the collected data's were statistically analyzed. Table I describes the details of questionnaire distributed and actual responses received.

Tables II indicates that the designation-wise response rate of the faculty members towards the distribution of questionnaires. The result reveals that out of a total of 1948 responses, the Professors population is 120 and comes to 6.16% whereas the populations of Associate Professors and Assistant Professors are 220 and 450 and the percentages share are 11.29% and 23.10 %, respectively. The population of Lecturer is 1158 (59.45 %).

The distribution of faculty members according to their frequency of using the ICT based resources shown in Table III. It is evident from the table that 56.98 %of the faculty members are using the ICT based resources every day; 20.59 % use once in a week; 12.32 % use once in a month; 6.37 % use ICT less than once in a month and the remaining 3.75 %of respondents use ICT once in a fortnight. Hence it can be concluded that most of faculty members are using the ICT based resources every day.

With regard to 120 Professors, a maximum of 67.50 % of them using every day and 2.50 % of them using ICT based resources once in fortnight. Among 220 Associate professors, a maximum of 55.45 % of them using daily and a minimum of

TABLE I DETAILS OF QUESTIONNAIRE DISTRIBUTED AND ACTUAL RESPONSES RECEIVED

S. No.	Name of the Colleges	District	Year of Establishment	No. of Faculty Members	Questionnaire Distributed	Total Respondents	%
1	Government College of Engineering, Salem	Salem	1966	76	76	61	2.34
2	Vinayaka Missions Kirupanandha Variyar Engineering College, Salem	Salem	1987	251	251	202	7.76
3	KS Rangasamy College of Technology, Tiruchengode,	Namakkal	1994	302	302	208	7.99
4	Mahendra Engineering College, Kalipatty.	Namakkal	1995	190	190	128	4.92
5	Annai Mathammal Sheela Engineering College, Erumapatty.	Namakkal	1996	120	120	85	3.27
6	Sona College of Technology, Salem.	Salem	1997	271	271	210	8.07
7	SSM College of Engineering, Komarapalayam,	Namakkal	1998	118	118	79	3.03
8	PGP College of Engineering And Technology, Namakkal.	Namakkal	1999	110	110	82	3.15
9	Muthayammal Engineering College, Rasipuram	Namakkal	2000	170	170	110	4.23
10	KSR College of Engineering, Tiruchengode,	Namakkal	2001	205	205	172	6.61
11	Pavai Engineering College, Pachal,	Namakkal	2001	167	167	141	5.42
12	Sengunthar Engineering College, Tiruchengode.	Namakkal	2001	94	94	68	2.61
13	Vivekanandha College of Engineering For Women, Tiruchengode.	Namakkal	2001	154	154	125	4.80
14	Maha Collge of Engineering, Salem	Salem	2005	87	87	64	2.46
15	The Kaveri Engineering College, Mechery,	Salem	2006	90	90	66	2.54
16	Gnanamani College of Technology, Pachal	Namakkal	2006	103	103	78	3.00
17	Vivekananda Institute of Engineering & Technology For Women, Tiruchengode	Namakkal	2006	95	95	69	2.65
Total				2603	2603	1948	74.85

TABLE II DESIGNATION-WISE DISTRIBUTION OF RESPONDENTS

S. No	User Category	No. of Respondents	%
1	Professor	120	6.16
2	Associate professor	220	11.29
3	Assistant professor	450	23.10
4	Lecturer	1158	59.45
Total		1948	100

4.09 % of them using ICT based resources once in a fortnight. From the total of 450 Assistant professors, 50.67 % of them using daily and 4.44 % of them using ICT based resources once in a fortnight. Out of 1158 Lecturers, 58.63 % of them using ICT based resources every day and 3.54 % of them using ICT based resources once in a fortnight.

Distribution of the respondent's time spends for accessing ICT based resources and services are shown in Table IV. It could be noted that out of the total 1948 respondents 13.66 %

TABLE III DISTRIBUTION OF RESPONDENT'S FREQUENCY OF ACCESSING ICT BASED RESOURCES

User Category	No. of Respondents and their Percentage					Total
	Every Day	Once in a Week	Once in a Fortnight	Once in A Month	Less than Once in a Month	
Professor	81 (67.50)	24 (20.00)	3 (2.50)	8 (6.67)	4 (3.33)	120
Associate Professor	122 (55.45)	47 (21.36)	9 (4.09)	26 (11.82)	16 (7.27)	220
Assistant Professor	228 (50.67)	94 (20.89)	20 (4.44)	73 (16.22)	35 (7.78)	450
Lecturers	679 (58.63)	236 (20.38)	41 (3.54)	133 (11.49)	69 (5.96)	1158
Total	1110 (56.98)	401 (20.59)	73 (3.75)	240 (12.32)	124 (6.37)	1948

them spend less than one hour per day; 37.83 % of them spend one hour per day, 21.36 % of them spend one and half an hours per day; 14.99 % of them spent two hours per day and 12.17 % of respondents spend more than two hours per day. From the above study it can be concluded that most of faculty members are spending a minimum of one hour for using ICT based resources.

Table V shows the result of place from where the faculty member of engineering colleges had access to ICT based resources. There were five options viz. in the library, department, browsing centre's, at home and other places. The result reveals that 666 (34.19%) faculty members highly accessed ICT based resources available at the department; 498 (25.56%) faculty members highly accessed at the library; 488 (25.05%) faculty members accessed at home; 172 (8.83%) faculty members highly accessed at browsing centres and 124 (6.37%) faculty members highly accessed ICT based resources at other places.

Thus the data shows that most of the faculty members of all the 17 colleges highly accessing the ICT based resources at their department. According to the user category 42.50 % of the Professors, 31.36 % of Associate professors, 36.89 % of Assistant professors and 32.82 % of Lecturers are accessing the ICT based resources at their department.

The data on the search engines used of the respondents are presented in the Table VI. The data indicates that out of 1948 respondents, 802 (41.17%) respondents have used Google; 288 (14.78%) respondents have used AltaVista; 628 (32.24) respondents have used Yahoo; 173 (8.88%) respondents have used MSN and 57 (2.93 %) respondents have used other search engines. It is clearly observed from the above discussion that majority of the respondents have used Google.

Table VII shows the designation wise distributions of respondents satisfaction level of ICT based resources. It could be noted that out of 1948 respondents, 356 (18.28%) respondents are highly satisfied; 678 (34.80%) respondents are satisfied, 507 (26.03%) respondents are somewhat satisfied; 263 (13.50%) respondents are dissatisfied and 144 (7.39%) respondents are highly dissatisfied.

Among the total number of 120 Professors, 43.33 % of them are satisfied and 4.17 % of them are highly dissatisfied. Out of 220 Associate professors, 35.45 % of them satisfied and 6.82 % of them are highly dissatisfied. With regard to 450 Assistant professors, 29.11 % of them satisfied and 10.00 % of them are highly dissatisfied. Out of 1158 Lecturers, 36.01 % of them are satisfied and 6.82 % of them are highly dissatisfied. Hence it can be concluded that most of the faculty members are satisfied.

TABLE IV DISTRIBUTION OF RESPONDENT'S TIME SPENT FOR USING ICT BASED RESOURCES

User Category	No. of Respondents and their Percentage					Total
	Less than one Hour	One Hour	One and Half an Hour	Two Hours	More than Two Hours	
Professor	14 (11.67)	42 (35.00)	27 (22.50)	23 (19.17)	14 (11.67)	120
Associate Professor	33 (15.00)	68 (30.91)	43 (19.55)	39 (17.73)	37 (16.82)	220
Assistant Professor	65 (14.44)	194 (43.11)	99 (22.00)	48 (10.67)	44 (9.78)	450
Lecturers	154 (13.30)	433 (37.39)	247 (21.33)	182 (15.72)	142 (12.26)	1158
Total	266 (13.66)	737 (37.83)	416 (21.36)	292 (14.99)	237 (12.17)	1948

TABLE V DISTRIBUTION OF RESPONDENT'S PLACES OF HIGHLY ACCESSING ICT BASED RESOURCES

User category	No. of Respondents and their Percentage					Total
	In the Library	Department	Browsing	At Home	Other Places	
Professor	24 (20.00)	51 (42.50)	5 (4.17)	36 (30.00)	4 (3.33)	120
Associate Professor	51 (23.18)	69 (31.36)	22 (10.00)	66 (30.00)	12 (5.45)	220
Assistant Professor	107 (23.78)	166 (36.89)	51 (11.33)	86 (19.11)	40 (8.89)	450
Lecturers	316 (27.29)	380 (32.82)	94 (8.12)	300 (25.91)	68 (5.87)	1158
Total	498 (25.56)	666 (34.19)	172 (8.83)	488 (25.05)	124 (6.37)	1948

TABLE VI DISTRIBUTION OF RESPONDENT'S SEARCH ENGINES USED

User Category	No. of Respondents and their Percentage					Total
	Google	AltaVista	Yahoo	MSN	Any other	
Professor	60 (50.00)	15 (12.50)	35 (29.17)	9 (7.50)	1 (0.83)	120
Associate Professor	103 (46.82)	41 (18.64)	51 (23.18)	15 (6.82)	10 (4.55)	220
Assistant Professor	147 (32.67)	64 (14.22)	176 (39.11)	49 (10.89)	14 (3.11)	450
Lecturers	492 (42.49)	168 (14.51)	366 (31.61)	100 (8.64)	32 (2.76)	1158
Total	802 (41.17)	288 (14.78)	628 (32.24)	173 (8.88)	57 (2.93)	1948

Table VIII shows the distribution of respondent's hindrances faced while accessing ICT based resources. It shows that, 28.33 % of the Professor respondents faced slow access speed; 38.18 % of the Associate professor respondents also faced slow access speed; 19.78 % of the Assistant professor respondents found relevant information and 26.69 % of the Lecturer respondent's faced slow access speed.

Table IX shows an interesting result about the benefit of using ICT based resources. The result reveals that 507 (26.03%) respondents were of the opinion that it is time saving; 611 (31.37%) respondents were of the opinion that it is easy to use, 291 (14.93%) respondents were of the opinion that it is more informative; 173 (8.89%) respondents were of the opinion that it is more preferred and 366 (18.79%) respondents were of the opinion that it is easy to locate.

V. CONCLUSION

From this study it is found that majority of the respondent in the engineering colleges have used ICT based resources every day (56.98%). Among the search engine, Google is the popular and frequently used search engine (41.17%) for fulfilling their information needs. It is also determined that most of the faculty members faced problem of slow access speed (26.69%). At the same time the level of satisfaction of the faculty members with the ICT based resources available in the college library shows a positive result (34.80%). So it is proved that the engineering college libraries providing maximum level of services to its user.

TABLE VII DISTRIBUTION OF RESPONDENT'S SATISFACTION LEVEL OF ICT BASED RESOURCE

User Category	No. of Respondents and their Percentage					Total
	Highly Satisfied	Satisfied	Some What Satisfied	Dissatisfied	Highly Dissatisfied	
Professor	23 (19.17)	52 (43.33)	25 (20.83)	15 (12.50)	5 (4.17)	120
Associate Professor	41 (18.64)	78 (35.45)	60 (27.27)	26 (11.82)	15 (6.82)	220
Assistant Professor	78 (17.33)	131 (29.11)	129 (28.67)	67 (14.89)	45 (10.00)	450
Lecturers	214 (18.48)	417 (36.01)	293 (25.30)	155 (13.39)	79 (6.82)	1158
Total	356 (18.28)	678 (34.80)	507 (26.03)	263 (13.50)	144 (7.39)	1948

TABLE VIII DISTRIBUTION OF RESPONDENT'S HINDRANCES FACED WHILE ACCESSING ICT BASED RESOURCES

User Category	No. of Respondents and their Percentage							Total
	Slow Access Speed	Finding Relevant Information	Accessing Full Text	Read From Computer	Excess Retrieved Information	Limited Access Terminal	Others	
Professor	34 (28.33)	22 (18.33)	20 (16.67)	18 (15.00)	15 (12.50)	6 (5.00)	5 (4.17)	120
Associate professor	84 (38.18)	40 (18.18)	32 (14.55)	28 (12.73)	18 (8.18)	6 (2.73)	12 (5.45)	220
Assistant professor	86 (19.11)	89 (19.78)	83 (18.44)	63 (14.00)	75 (16.67)	25 (5.56)	29 (6.44)	450
Lecturers	316 (27.29)	213 (18.39)	194 (16.75)	162 (13.99)	154 (13.30)	54 (4.67)	65 (5.61)	1158
Total	520 (26.69)	364 (18.69)	329 (16.89)	271 (13.91)	262 (13.45)	91 (4.67)	111 (5.70)	1948

TABLE IX DISTRIBUTION OF RESPONDENT'S BENEFIT OF USING ICT BASED RESOURCES

User Category	No. of Respondents and their Percentage					Total
	Time Saving	Easy To Use	Easy To Locate	More Information	More Preferred	
Professor	36 (30.00)	34 (28.33)	25 (20.83)	13 (10.83)	12 (10.00)	120
Associate professor	69 (31.36)	56 (25.46)	42 (19.09)	35 (15.91)	18 (8.18)	220
Assistant professor	94 (20.89)	162 (36.00)	79 (17.56)	77 (17.11)	38 (8.44)	450
Lecturers	308 (26.60)	359 (31.00)	220 (19.00)	166 (14.34)	105 (9.07)	1158
Total	507 (26.03)	611 (31.37)	366 (18.79)	291 (14.93)	173 (8.89)	1948

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