

# Use of ICT based Resource by Faculty Members of Engineering Colleges in Ariyalur & Perambalur Districts of Tamilnadu- A study

<sup>1</sup>T.Elakkiya, <sup>2</sup>Dr.R.Jayapriya

<sup>1</sup>Research Scholar, <sup>2</sup>Librarian

<sup>1</sup>Dept. of Library & Information Science, Annamalai University, India.

<sup>2</sup>University College of Engineering Panruti Campus, Tamilnadu, India.

**Abstract :** This paper aims at analyzing use of ICT based resources and services by the faculty members of Engineering Colleges in Ariyalur and Perambalur District of Tamilnadu, India. The researcher selected 212 samples in various Private Engineering colleges. Standard questionnaires are used to collect the primary data. The main objectives of this study is to know their attitude about ICT, the type of search engines used, the motivating factors to use ICT resources and services and frequency usage of internet. Result found that most of the respondent have highly use the ICT resources and services. From the study the investigator is able to find out that most of the faculty members prepare E-Journals as the first source of information for keeping up to date information and study purpose.

**IndexTerms - ICT based resources and services, Faculty Members, Engineering College, Ariyalur, Perambalur.**

## I. INTRODUCTION

Academic libraries from its inception have played an important role in providing study and research materials to their users. But the last few decades have witnessed sea changes in the collection, organization and services of academic libraries. This is only because of the impact of Information & Telecommunication Technology (ICT). The term ICT includes any communication device or application, computer and network hardware and software, satellite systems and so on. The rapid development of ICT, along with the tremendous growth of literatures in all field of knowledge, changing users inclination/demand for online resources, shrinking library budget, development of various library networks and consortia etc have compelled almost all libraries to develop various ICT tools and services to cater their users properly. Dilevko and Harris (1997) have opined that the traditional library is undergoing significant changes due to the electronic revolution, which in its various manifestations has affected nearly every aspects of information provision. The ICT has now-a-days become an important technology in academic institutions as it plays a very important role in meeting information needs of the researchers and institution as a whole.

ICT has affected the system and services of engineering college libraries to a great extend. Availability and access of e-resources (both online and offline) is one of the major impact of ICT and these resources have become an integral part of any modern library collection. Accordingly the users' skills and trends towards the use of ICT based library services need to be examined by libraries regularly to update and provide better library services to users. The present study is an attempt to find out the use of various ICT based library services by the faculty members of Engineering College, Ariyalur and Perambalur Districts of Tamilnadu, India.

## II. REVIEW OF LITERATURE

**Dhanavandan (2011)** found that the role of engineering colleges in the technical manpower development is quite significant. They need rapid Information Communication Technology infrastructure and in this context, there is a need for adequate development of electronic resources. The lack of adequate finance is the main reason for not developing information communication technology infrastructure especially in the case of libraries, those that do not receive financial aid from UGC of India or others like AICTE. The problem can be solved only through the aid from the state government or AICTE. The establishment of information communication technology infrastructure facilities in the self financing college libraries in Tamil Nadu can improve the efficiency of information support, the information retrieval and quality of education as a whole.

**Seena and Sudhier (2014)** investigated the awareness, skill and attitude towards Information and Communication Technologies (ICT) among library professionals in Kerala University Library, Thiruvananthapuram.

**Puttaswamy and Krishnamurthy (2014)** analyzed the advancement of Information and Communication Technology (ICT) in recent era that has made the information services available to the users on their desktop as well as on their laptop and hand held e-book reader. expressed that all the nations of the world are embracing technological innovations and integrating them into their educational systems for advancement and development.

**Shivaputrappa, and Ramesh, (2013)** observed a significant difference between different designations towards competence on operation of computers, creation of files and folders, library automation software modules, various operating systems, internet-related skills, web design/web editors, search engines and digitization of IR.

### III. BACKGROUND INFORMATION

**Ariyalur Engineering College** was established in 2013, located in Tamil Nadu which is affiliated to Anna University, Chennai and approved by AICTE, New Delhi with an aim to provide quality education and training to the students of Melakaruppur and transforming their lives, shaping them into working professionals.

**Nelliandavar Institute of Technology** (NIT) located at Nerunjikorai Village, Pudhupalayam, Ariyalur Tk & Dt Pudhupalayam Ariyalur Tamil Nadu is one of the popular colleges in India.

**Dhanalakshmi Srinivasan Engineering College** established in the year 2001, the college strives to impart quality education in the field of engineering and technology through a stimulating and innovative environment. The college is recognized by AICTE, New Delhi and affiliated to Anna University, Chennai. Since inception, the college strives to establish itself as a world class nodal center of learning, research and training.

**Elizabeth College of Engineering and Technology** is situated in Perambalur in Tamil Nadu state of India. Established in 2013.

**Holy Angels School of Business** is situated in Perambalur in Tamil Nadu state of India. it is accredited from AICTE and it is affiliated to Anna University. HASB, Perambalur offers 4 courses.

**Roever Engineering College**, Established in 2001, Roever Engineering College run by St.John Sangam Trust is a quality technical education institution offering research oriented education at affordable costs. Roever Institutions do have a great track record on social development. REC is part of the larger Roever educational family with a specific focus on research-oriented education. It even provides guides to undertake PhD program under Anna University Trichirapalli.

**Sri Ramakrishna College of Engineering** -Sri Ramakrishna Educational Institutions is one of the educational group in Perambalur, Tamilnadu. Which runs several educational institutions under Sri Swamy Vivekananda Educational Trust. Dr.M.Sivasubramaniam, is the founder chairman of the trust. First a Nursery and Primary School was started on 6<sup>th</sup> June 1984 with 30 students in the name of Sri Ramakrishna who was the Guru of the great religious leader Sri Swamy Vivekananda. Late Sri Thirumuruga Kirubananda Variar Swamigal opened the building in the year 1990.

### IV. OBJECTIVES

The following objectives are formulated to identify the problems.

1. To identify the frequency of the use of e-resources and services available in the library covered under the survey.
2. To study the reason for using the e-resources use of the faculty members.
3. To identify the preference of search engines to gathering information.
4. To examine the motivating factors to use ICT.
5. To find out the frequency of usage of internet.
6. To identify the problems faced by library personnel in the utilization of ICT.
7. To know the ICT awareness among librarians of Engineering College of Haryana.
8. To know satisfaction amongst users regarding ICT services and facilities.

### V. LIMITATIONS OF THE STUDY

The present study was limited to the faculty members of Self –Financing Engineering Colleges in Ariyalur and Perambalur Districts during 2019.

### VI. SIZE OF SAMPLE

The target population of the present study consists of the faculty members of Engineering Colleges in Ariyalur & Perambalur Districts during 2019. The total faculty members of different departments are more than 500 in numbers, which includes faculty members of different categories such as Professor, Associate Professor and Assistant Professor.

### VII. METHODOLOGY

The researcher has employed a well structured questionnaire for collecting the data from the faculty members of self financing engineering colleges in Ariyalur and Perambalur District affiliated to Anna University, Chennai, Tamilnadu. The questionnaire has been prepared in such a way that the respondents could easily understand the question items. A total number of 230 questionnaires were distributed among the faculty members. The investigator could collect questionnaires from only 212 out of 13 engineering faculty members among whom the questionnaires were distributed. This constitutes 83% of the total respondents.

Table-1 Engineering Colleges included in the Study

S. No.	Name of Institutes/ Colleges	Abbreviated As
<b>Ariyalur District</b>		
1.	Ariyalur Engineering College, Melakaruppur	AEC
2.	Meenakshi Ramaswamy Engineering College, Thathanur	MRC
3.	Nelliandavar Institute of Technology, Pudhupalayam	NIT
<b>Perambalur District</b>		
4.	Dhanalakshmi Srinivasan Engineering College	DSEC
5.	Dhanalakshmi Srinivasan College of Engineering	DSCE
6.	Dhanalakshmi Srinivasan Institute of Research and Technology	DSIRT
7.	Elizabeth College of Engineering Technology	ECET
8.	Holy Angels School of Business	HASB
9.	Roever College of Engineering and Technology	RCET
10.	Roever Engineering College	REC
11.	Roever Institute of Management	RIM
12.	Srinivasan Engineering College	SEC
13.	Sri Ramakrishna College of Engineering	SRCE

The analysis of data of Table-2 revealed that out of total 230 respondents selected for the present study, 212 responded with the filled in questionnaire with a response rate of 81.57%. Similarly among 212 responded faculty members, 26 were Professors (12.26%), 64 were Associate Professors (30.19%) and 122 were Assistant professors (57.55%).

Table-1: Category of Respondents

S.No	Colleges	Total no. of respondents			No. of respondents responded			Percentage (%)
		Professor	Assoc. Professor	Asst. Professor	Professor	Assoc. Professor	Asst. Professor	
1.	AEC	1	4	6	1	3	5	4.25
2.	MRC	5	8	14	5	8	10	10.85
3.	NIT	0	1	4	0	1	4	2.36
4.	DSEC	6	15	24	6	14	21	19.34
5.	DSCE	6	12	22	6	12	22	18.87
6.	DSIRT	2	8	10	2	7	10	8.96
7.	ECET	1	0	2	1	0	2	1.42
8.	HASB	0	2	3	0	2	3	2.36
9.	RCET	2	6	17	2	6	17	11.79
10.	REC	2	11	16	2	7	13	10.38
11.	RIM	1	2	6	1	2	6	4.25
12.	SEC	0	2	4	0	2	4	2.83
13.	SRCE	0	0	5	0	0	5	2.36
Total		26	71	133	26	64	122	100

## VIII. ANALYSIS AND INTERPRETATION

The collected data is analyzed and interpreted under various headings.

Table-2 Distribution of respondents on the basis of Gender

S.No	Gender wise	Respondents	Percentage
1.	Male	131	61.79
2.	Female	81	30.21
	Total	212	100

Analysis of respondents shows that (61.29%) of them are male students and (30.21%) of them are female students out of 212 respondents.

Table :3 Respondents Awareness of ICT Based Resources and Services

S.No.	Place	Respondents	Percentage
1.	E-journals	190	89.62
2.	E-books	168	79.25
3.	CD-ROM Databases	151	71.23
4.	E-reference sources	181	85.38
5.	Online databases	160	75.47
6.	OPAC	142	66.98
Multiple response			

Table 3 reveals the awareness of ICT based resources and services among the users of faculty. There were nine kinds of ICT based resources were specified in the questionnaire. The analysis shows that the majority of ICT based resources, of which faculty members were aware, were e-journals 190(89.62%), e-reference sources 181(85.38%), e-books 168(79.25%), online databases 160(75.47%) and OPAC 142(66.98%).

Table-4 Frequency of using ICT based resources and services.

S.No.	Frequency	Respondents	Percentage
1.	Daily	48	22.64
2.	Once in a week	83	39.15
3.	Twice in a week	39	18.40
4.	Once in a fortnight	42	19.81
Total		212	100

It is evident from the table-4 that a high percentage of faculty 83(39.15%) using e-resources once in week. followed by daily 48(22.64%), once in a fortnight 42(19.81%) and the remaining twice in a week 39(18.40%). Hence it can be conclude that a high percentage of the respondents using e-resources once in a week.

Table-5 Time spent in accessing ICTbased resources and services.

S.No.	Time spend	Respondents	Percentage
1.	Less than one hour	41	19.34
2.	One hour	81	38.21
3.	More than one hour	59	27.83
4.	More than Two hours	31	14.62
Total		212	100

A study in Table 5 indicates distribution of respondents time spend in accessing ICT based resources and services. It could be noted that out of 212 respondents, 41(19.34%) of them spend less than one hour per day, 81(38.21%) of them spend one hour per day, 59(27.83%) of them spend more than one hour per day, and 31(14.62%) of them spend more than two hours per day.

Table-6 Purpose of using ICT based resources and services

S. No.	Purpose	Respondents	Percentage
1.	Study	52	24.53
2.	Research	29	13.68
3.	Publishing Articles and books	26	12.26
4.	Update information	41	19.34
5.	Professional development	42	19.81
6.	Entertainment	12	5.66
7.	Chatting	10	4.72
Total		212	100

Table 6 depicts respondents purpose of using ICT based resources and services. Out of the total number of 212 respondents, 52(24.53%) respondents are using ICT based resources for their study purpose, 29(13.68%) respondents are using ICT based resources for their research work,26(12.26%) respondents are using ICT based resources for writing articles and books, 41(19.81%) respondents are using ICT based resources for keeping up-to-date information, 42(19.81%) respondents are using ICT based resources for finding relevant information and professional development, 12(5.66%) respondents are using ICT based resources for their entertainment, 10(4.72%) respondents are using ICT based resources for chatting.

Table-7 Frequently used ICT based resources and services

S. No.	ICT Resources	Respondents	Percentage
1.	E-Books	20	9.43
2.	E-journals	34	16.04

3.	E-Reference Sources	42	19.81
4.	Online Databases	43	20.28
5.	CD-ROM databases	22	10.38
6.	E-mail	31	14.62
7.	Any others	20	9.43
	Total	212	100

Table 7 shows the category wise distribution of respondents frequently used ICT based sources and services. Out of 212 respondents from, 20(9.43%) respondents use e-book, 34(16.04%) respondents use e-journals, 42(19.81%) respondents use e-reference sources, 43(20.28%) respondents use online databases, 22 (10.38%) respondents use CD-ROM databases, 31(14.62%) respondents use-mail, and 20 (9.43%) use any other sources.

Figure-1 Level of Satisfaction ICT based resources and services

Figure- shows a high percentage of the respondents (42.38%) are satisfied with e-resources. It is evident from the figure that (40.77%) of them are partially satisfied with e-resources and (16.85%) of them are dissatisfied.

Table-8 problems faced using ICT based resources and services

S. No.	Problems	Respondents	Percentage
1.	Speed of internet	71	33.49
2.	Download/saving	43	20.28
3.	Network problem	49	23.11
4.	uncomfortable furniture	18	8.49
5.	Limited access permissions	31	14.62
	Total	212	100

Table-8 shows that a high percentage of respondents 71(33.49%) are facing problem of speed of internet, 49(23.11%)of them network problems, 43(20.28%) download/saving, 31(14.62%) limited access permissions and the remaining 18(8.49%) uncomfortable furniture.

Table 9: Purpose of visit the College Library

Purpose of Visit	Respondents	Percentage
To study	41	19.34
To use library equipment	58	27.36
To borrow and return books	24	11.32
To access E-resources	39	18.40
Reading news paper	18	8.49
To use internet	27	12.74
Any others	5	2.36
Chisquare=24.485 df6. P=0.0000 Yates chisquare-square= 23.278 Yates P=0.0007		Significant

Table-9 also indicates that 41(19.34%) respondents visit the study purpose of use of to use library equipment followed by 39(18.40%) respondents visit the purpose of use to access E-resources, about 41(19.34%)respondents from purpose of visit the library to study and 5(2.36%)respondents visit to the library for any other purposes.

The chi-square test was conducted 24.485 df6. P=0.0000 less than 0.05 are accepted. The significant relationship between purpose of visit and parameters. And Yates chi-square= 23.278 Yates P=0.0007 are significant

Table 10: Purpose of use of Internet

Purpose of use of Internet	Excellent	Very Good	Good	Average	Poor	Mean	SD
Online news	75(35.38)	58(27.36)	36(16.98)	33(15.57)	10(4.72)	2.45	1.24
Online Magazines	63(29.72)	71(33.49)	34(16.04)	29(13.68)	15(7.08)	2.93	1.3
e-Books	71(33.49)	65(30.66)	38(17.92)	24(11.32)	14(6.60)	3.28	1.66

e-journals	85(40.09)	58(27.36)	40(18.87)	21(9.91)	8(3.77)	2.54	1.58
e-mail	101(47.64)	77(36.32)	21(9.91)	8(3.77)	5(2.36)	2.42	0.9
Job Information	54(25.47)	78(36.79)	46(21.70)	19(8.96)	15(7.08)	2.46	1.25
Movie Review	36(16.98)	58(27.36)	71(33.49)	29(13.68)	18(8.49)	3.14	1.1

The Table-10. Depicts that in case of Purpose of use of Internet 'online news' about 75 (35.38%) of Faculty opine as 'Excellent', followed by Online Magazines 63(29.72%) opine as 'Good', of Faculty opine as 'e-Books' 14(6.60%) opine as 'Poor', with a mean value of 3.28 and SD being 1.66 followed by 'e-journals' 85(40.09%) opine as 'Excellent', of faculties opine as 'e-mail' 77(36.32%) opine as 'Very Good', of Faculty opine 'job information' 78(3679%) opine as 'Very Good', of Faculty opine 'movie review' 71 (33.49%) opine as 'Good', mean value of 3.14 and SD being 1.1.

**Table 11:** Preferred search engine

Search Engine	Excellent	Ver Good	Good	Average	Poor	Mean	SD
Google	73(34.43)	58(27.36)	38(17.92)	35(16.51)	8(3.77)	1.59	1
Yahoo	64(30.19)	70(33.02)	35(16.51)	30(14.15)	13(6.13)	1.72	1.08
MSN	69(32.55)	58(27.36)	44(20.75)	26(12.26)	15(7.08)	2.45	1.31
Alta	85(40.09)	58(27.36)	40(18.87)	21(9.91)	8(3.77)	2.4	1.29
Hot Bot	102(48.11)	76(35.85)	21(9.91)	9(4.25)	4(1.89)	3.28	1.34
InfoSeek	51(24.06)	71(33.49)	51(24.06)	24(11.32)	15(7.08)	3.2	1.07
Inktomi	34(16.04)	59(27.83)	68(32.08)	31(14.62)	20(9.43)	2.71	1.15

The Table-11 Depicts that in case of Preferred search engine 'Google' about 73(34.43%) of Faculty opine as 'Excellent', with a mean value of 1.59 and SD being 1.00. followed by Yahoo '64(30.19%) of Faculty opine as MSN 69(32.55%) opine as 'Excellent', of Faculty opine as Alta Vista 85(40.09%) opine as 'Excellent', of Faculty opine as Hot Bot 102(48.11%) opine as 'Excellent', mean value of 3.28 and SD being 1.34. of Faculty opine as InfoSeek 51(24.06%) opine as 'Good', mean value of 3.20 and SD being 1.07. of Faculty opine as Inktomi 34(16.04%) opine as Very Good.

**Table 12:** Extent of Dependency on College Library to Fulfill Information Requirement respondents.

Extent of Dependency	Respondents	Percentage
To great extent	89	41.98
To moderate extent	61	28.77
To a little extent	44	20.75
Not at all	18	8.49
Total	212	100

The Table-12 Depicts that out of 212 respondents 89(41.98%) of respondents related to Extent of Dependency on College Library to fulfill Information Requirement opine as To great extent followed by 44(20.75%) 'To a little extent' and 61(28.77%) To moderate extent dependency on Engineering College Library.

## IX.FINDINGS

Findings are arrived based on the above analysis. They are:

1. Majority of the respondents of their frequency of use of ICT resources and services are Daily.
2. Result shows that the most of the respondents are use of ICT resources and services for research and teaching purpose.
3. Analysis proves that respondents differ in using search engine. Rediff, Yahoo and google are the preference of the respondent.
4. Analysis shows that there is a significant difference in motivating factors to use ICT.
5. The study exhibits that most of the respondents use internet either daily or weekly for their information, which means that Internet has a predominant role in academic activity.
6. Users demanded more ICT based services.

## X.CONCLUSION

The present study made an attempt to know the use of ICT resources and services by the faculty members of engineering colleges in Ariyalur District. Questionnaires are used to collect the primary data. Result shows that the most of them respondents are use of ICT resources and services for research and teaching purpose. Mostly all the respondent are using the e-resources and services either daily or weekly basis. Result found that the respondent have high level of attitude towards the use of ICT and its e-resources and services.

**XI. REFERENCE**

1. Dhanavanda, S, Esmail, S. Mohammed & Nagarajan, M. (2011). Information communication technology (ICT) infrastructure facilities in self financing engineering college libraries in Tamilnadu. *Library Philosophy and Practice* ISSN 1522-0222, 1-10.
2. Helaluddin. (2010). Application of information and communication technologies in engineering college libraries. a study of engineering college libraries in Faridabad district, Haryana, India. *Fifty Fifth ILA National conference on Library and Information Science in the Digital Era*, 542-556.
3. Maheswaran. R. (2016). Design and Development of Library Gateway : Special Reference to University of Peradeniya, Sri Lanka. *Indian Journal of Information Sources and Services*. 6(2). 41–45.
4. Maheswaran R. (2016). Status of Institutional repositories in SAARC countries: An Analytical Study in Information for sustainable development: Challenged and opportunities. *First International conference on Library and Information Management*. 64.
5. Maheswaran R. (2016). Status of Institutional repository in Sri Lanka: An Analytical Study. *Multidisciplinary Research for sustainable development in the information era: 6th International symposium*. 35.
6. Jeyaraj. W. J. (2012). Designing Libraries based on Factors that Determine the Existence of Libraries. *Indian Journal of Information Sources and Services*. 2(1). 71–74.
7. Jeyaraj W. J. (2017). Job Satisfaction Level of Teacher Librarians of National Schools in the Batticaloa District of Sri Lanka. *Journal of Research in Humanities and Social Science*. 5(6). 34–41.
8. Pratheepan T. & Jeyaraj W. J. (2012). Applications and impacts of emerging technologies in academic libraries; a perspective approach. *NILIS Symposium*. 210.
9. Seena & Sudhier. (2014). A Study on Skills among Library Professionals in the Kerala University System. *Annals of Library and Information Studies*. 61. 132-141.
10. Puttaswamy & Krishnamurthy. Internet Usage Pattern of Engineering Students: A Study of two Engineering Colleges in Sivagangai District, Tamilnadu State, India. *International Journal of Library and Information Studies*. 4(1).104-114.
11. Olagunju, Adenegan & Lawal. (2015). Application of Information and Communication Technology to the teaching and learning of mathematics towards millennium development goals realization in Nigeria. *African Educational Research Journal*. 3(1). 33-38.
12. Swain, Dillip K. & Panda, K.C. Use of e-services by faculty members of business schools in a state of India: a study. *Collection Building*. 28(3). 108-116,

