Use Pattern of E-Resources and E-Services among the Faculty Members in Select Engineering College Libraries in Kanchipuram Dt.

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Abstract

This paper studied about the use pattern e-resources and e-services knowledge and awareness among the Faculty Members in Select Engineering College Libraries in Kanchipuram Dt. The collection consists of open–access journals, electronic theses and dissertations, audio files and transcripts, maps, newspapers, photographs, manuscripts and rare books, and historical materials.. In this study, totally 600 questionnaires were distributed to the respondents among the respondents in Select Engineering College Libraries in Kanchipuram Dt. Out of 600, 560 questionnaires were returned by the respondents. It found that the faculty members have given first priority to the purpose of 'Project Report Soft Copy / e-Thesis'. 'E-Article/Publication' and 'Online Databases' are the purposes to visit the library and the second and third preference respectively
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Keywords
Awareness; Public libraries; Open E-Resources; Tirunelveli

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1. Introduction

E-Resources plays a vital role in the development of higher education. Which include e-journals, e-books, online database, CD-ROM database and Internet that delivers a collection of data, be it text referring to full text basis, e-journal, image collection, other multimedia products and numerical, graphical or time based. Electronic publishing has lead to new era of communications and information sharing. It creates opportunities for the users as well as authors and publishers. Many of the electronic books or electronic publisher's web site freely permit and encourage the readers to provide feedback on works, often directly to the author rather than to the publisher. Nevertheless the users may establish their own accounts, charge services to credit cards or to pay by prearranged method, and have requested material delivered directly to them by fax, e-mail, etc. today, libraries of all kinds have been spending larger and larger shares of their budgets to adopt or gain access to electronic resources from the publishers and the vendors. This is due to the fact that e-resources have enabled libraries to improve services in a variety of ways. First, most e-resources are equipped with powerful search and retrieval tools that allow users to perform literature searches more effectively and efficiently. Moreover, since most relevant e-resources are now available through the web, the users can have desktop access to them 24 hours a day.

2. Review of literature

Mostofa (2013)[1] conducted a study and results show that half of the faculty members are consulted with expert as communication channel when they have a question asked. More than 50 % of faculty members depend on the library resources for teaching purpose.Fasola and Olabode (2014)[2] surveyed among the students of ajayi crowther university, oyo, Nigeria, how they seek information and this is what has prompted this study. It was discovered that majority of the students (66%) sought information for academic purposes and the library (62.8%) was their preferred place of searching and using information resources. Ngozi, Uche and Ejiro (2015)[3] investigated, information seeking behavior of faculty members of the Federal University of Petroleum Resources (FUPRE). The research finding show that the respondents use books, as their preferred source of information. They suggested improving the internet facilities to assist faculties in their research. Mahapatra (2017)[4] has attempted to collect information related to the preferences on electronic

information resources, types of e-resources used, the use of statistical information in e-format, online databases in social science and satisfaction on the use of e-resources. The information has been analyzed in the light of data collected from 90 social scientists from research institutes and universities in the city of Bhubaneswar. Gopinath (2017)[5] assessed the perception and use of electronic information resources on the quality of education and research among the academic community in the Mahatma Gandhi University. The study has applied a standard survey. On the basis of the results, a few suggestions have been put forward for improving the use of electronic information resources among the academic community in the Mahatma Gandhi University. Nkem Emilia Orsu (2019)[6] Recommended based on the study's findings such as more awareness creation on importance of open access repositories; re-training of lecturers and provision of adequate ICT infrastructures that will improve the utilization of open access repositories by lecturers which could enhance the global visibility of academic publications from the Nigerian Universities. Dauda Joshua., and Lizette King (2020)[7] studied and found that the lack of sufficient Internet access for academics and students and lack of training and awareness campaigns. Conclusion has shown that e-resources did not impact research and teaching of academics in MAUTech, Yola.

3. Methodology

The present study intends to analyze the use of E-Resources and E-Services among the Faculty Members in Select Engineering College Libraries in Kanchipuram Dt. In this study, totally 600 questionnaires were distributed to the respondents among the respondents in Select Engineering College Libraries in Kanchipuram Dt. Out of 600, 560 questionnaires were returned by the respondents. The response rate was 93.33%.

4. Objectives of the Study

The following objectives are framed for the purpose of the present study.

1. To identify the frequency of visit the library
2. To know the purpose of using the library resources
3. To identify the responses of searching e-resources among faculty members
4. To assess the usefulness of e-resources among faculty members.

5. Analysis and Interpretation

5.1 Distribution of Questionnaires

The assess the awareness and use pattern of the electronic resources of the present study among the Faculty Members in select engineering colleges in Kanchipuram District and shown in table 1.

Table 1: Distribution of Questionnaires

S. No	Name of the Colleges	Questionnaire Distributed	%	Questionnaire Received	%
1	Rajalakshmi Engg. College	100	16.67	94	15.67
2	Dhanalakshmi College of Engg.	100	16.67	95	15.83
3	Sakthi Maariamman Engg. College	100	16.67	90	15.00
4	Thirumalai Engg. College	100	16.67	92	15.33
5	Sri Sairm Engg. College	100	16.67	93	15.50
6	Sri Muthukumaran Inst. of Tech.	100	16.67	96	16.00
	Total	600	100.00	560	93.33

The table 1 shows the college wise distribution of the questionnaire among the faculty members in the select engineering colleges in Kanchipuram District. Among the 600, a total of 100(16.67%) of the questionnaires were distributed to Faculty Members in each Six engineering Colleges in Kanchipuram District and stratified random sampling were used. It is studied from the table the highest numbers of respondents were received from 'Sri Muthukumaran Inst. of Tech' and the response rate is 93.33%.

5.2. Frequency of visit to the Library

The frequency of visit to the Library among the respondents has been analyses based on the opinion which is shown in the table 2.

Table 2: Frequency of visit to the Library

S. No	Frequency	Gender		Total
		Male	Female	
1	Daily	49(8.75)	33(5.89)	82(14.64)
2	2-3 times in a week	73(13.04)	46(8.21)	119(21.25)
3	Once in a week	138(24.64)	108(19.29)	246(43.93)
4	Once in a month	57(10.18)	34(6.07)	91(16.25)
5	Occasionally	15(2.68)	7(1.25)	22(3.93)
	Total	332(59.29)	228(40.71)	560(100)
		Chi.V: 2.397 df: 4; Sig. 0.663		

(Figures in the parentheses denote percentage)

The frequency of visit to the library analyzed with their gender of the respondents in table 2. Totally 332(59.29%) of the 'Male' were visiting the library which includes 138(26.64%) as visiting 'once in a week', 73(13.04%) of them as visiting '2-3 times in a week, 57(10.18%) as visiting 'once in a Month, 49(8.75%) as visiting 'Daily' and only 15(2.68%) as visiting 'occasionally'. Followed by 228(40.71%) of the 'Female' visited the library, 33(5.89%) as using 'Daily', 46(8.21%) were visiting '2-3 times in a week', 108(19.29%) were visiting 'once in a week', 34(6.07%) were visiting 'once in a month' and 7(1.25%) were visiting 'occasionally'. It is identified from the table the highest number of respondents belongs to the category of 'Male' Faculty members' 138(24.64%) were visiting library 'once in a week'.

5.3 Purpose of visit to the Library

To know the purpose of visit to the Library among the Faculty members in select engineering clogeges in Kanchipuram District has been analysed based opinion and responses. The five-point scales of Strongly Disagree, Disagree, No Opinion, Agree, and Strongly Agree were used for the study. The Mean, Standard Deviation and their Rank for the purpose of visit to the Library have been calculated and the same are shown in table 3.

Table 3: Purpose of visit to the Library

S. No	Purpose	SDA	DA	NO	A	SA	M	Std. Dev.	R
1	To Borrow and return Books	32(5.71)	9(1.61)	18(3.21)	259(46.25)	242(43.21)	4.20	1.003	1
2	To read news Paper & Journals	36(6.43)	53(9.46)	9(1.61)	248(44.29)	214(38.21)	3.98	1.165	3
3	To Know New arrival	68(12.14)	36(6.43)	5(0.89)	277(49.46)	174(31.07)	3.81	1.279	6
4	To access e-resources	33(5.89)	38(6.79)	58(10.36)	197(35.18)	234(41.79)	4.00	1.151	2
5	To enhance my knowledge	74(13.21)	35(6.25)	26(4.64)	190(33.93)	235(41.96)	3.85	1.374	5
6	To refer Dissertation/Projects	81(14.46)	6(1.07)	57(10.18)	171(30.54)	245(43.75)	3.88	1.369	4

(Figures in the parentheses denote percentage)

(SDA- Strongly Disagree, A-Disagree, NO- No Opinion, A-Agree, SA- Strongly Agree Std. Dev. – Standard Deviation, R-Rank)

Table 3 shows the purpose of visit to the Library among the faculty members in select engineering colleges in Kanchipuram District and the faculty members have given first priority to the purpose of 'To Borrow and return Books'. 'To access e-resources' and 'To read news Paper' and are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'To know the new arrival'. The mean value of all the variables ranges between 3.81 and 4.20. It can be inferred that all the six variables lie between 'Strongly Agree' and 'Agree'. The deviation of opinion ranges between 1.003 and 1.369.

5.4. Purpose of visit to the library Vs Gender

The study has been further extended to category of the respondents for the purpose of visit to the library by respondents in select engineering colleges in Kanchipuram District. The Mean, Standard Deviation and their Rank for the purpose have been calculated and shown in table 4.

Table 4: Purpose of visit to the library Vs Gender

S.No	E-Resource	Male			Female			Chi-Square
		M	SD	R	M	SD	R	
1	To Borrow and return Books	4.23	.973	1	4.14	1.044	1	9.004
2	To read news Paper & Journals	3.99	1.133	2	3.97	1.213	3	7.025
3	To Know New arrival	3.81	1.291	6	3.81	1.264	5	7.766
4	To access e-resources	3.94	1.160	3	4.10	1.134	2	5.447
5	To enhance my knowledge	3.82	1.440	5	3.89	1.272	4	8.141
6	To refer Dissertation/Projects	3.93	1.297	4	3.80	1.466	6	10.053

(M-Mean, SD-Standard Deviation, R-Rank, Degrees of freedom = 4, Table Value = 9.488)

Table 4 depicts the respondents in the category of 'Male' Faculty Members have given first priority to the purpose of 'To Borrow and return Books'. 'To read news papers & Journals' and 'To access e-resources' and are the purposes to visit the library and the second and third preference respectively given for them. The least preference was given for 'To know the new Arrivals'. In the case of 'Female' faculty members has given first priority to the purpose of 'To Borrow and return Books'. 'To access the e-resources' and 'To read newspaper' are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given for the 'To refer Dissertation and Projects'..

Further, the 'Chi square' has been administered to identify the significance. The table value is 9.488 at 5% level of significance, the calculated value for all the variables were less than the table value which indicated the variables as insignificant in their difference of opinion between Gender towards the purpose of visit to the library.

5.5. Responses to searching the E-Resources

To know Responses to searching the E-resources among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses. The five-point scales of Strongly Disagree, Disagree, No Opinion, Agree, and Strongly Agree were used for the study. The Mean, Standard Deviation and their Rank for the searching of e-resources in the Library have been calculated and the same are shown in table 5.

Table5: Responses to searching the E-Resources

S/N	Parameters	SDA	DA	NO	A	SA	M	Std. Dev.	R
1	Always Relevant	0	50(8.93)	72(12.86)	196(35)	242(43.21)	4.1250	.95071	1
2	Sometimes Relevant	85(15.18)	29(5.18)	14(2.5)	166(29.64)	266(47.5)	3.8911	1.43702	5
3	Rarely relevant	58(10.36)	19(3.39)	21(3.75)	235(41.96)	227(40.54)	3.9893	1.23016	2
4	Always irrelevant	37(6.61)	44(7.86)	41(7.32)	222(39.64)	216(38.57)	3.9571	1.16981	4
5	No Comments	53(9.46)	81(14.46)	249(44.46)	177(31.61)	53(9.46)	3.9821	.91677	3

(M-Mean, SD-Standard Deviation, R-Rank, Degrees of freedom = 4, Table Value = 9.488)

Table 5 shows the purpose of searching the e-resources among the faculty members in select engineering colleges in Kanchipuram District and the faculty members have given first priority to the purpose of 'Always Relevant'. 'Rarely Relevant' and 'No Comments' and are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'Sometimes Relevant'. The mean value of all the variables ranges between 3.8911 and 4.1250. It can be inferred that all the six variables lie between 'Strongly Agree' and 'Agree'. The deviation of opinion ranges between 0.95071 and 1.43702.

5.6. Responses to searching the E-resources Vs Gender

The study has been further extended to category of the respondents for the Responses to searching the E-resources by respondents in select engineering colleges in Kanchipuram District. The Mean, Standard Deviation and their Rank for the purpose have been calculated and shown in table 6.

Table 6: Responses to searching the E-resources Vs Gender

S. No	E-Resource	Male			Female			Chi-Square
		M	SD	R	M	SD	R	
1	Always Relevant	4.1265	.96257	1	4.1228	.93526	1	1.283
2	Sometimes Relevant	3.8855	1.42872	5	3.8991	1.45214	5	2.158
3	Rarely	4.0361	1.21864	2	3.9211	1.24628	4	2.319
4	Always irrelevant	3.9639	1.11508	4	3.9474	1.24767	3	8.991
5	No Comments	3.9699	.92253	3	4.0000	.91005	2	1.637

Table 6 depicts the respondents in the category of 'Male' Faculty Members have given first priority to the purpose of 'Always Relevant' towards Responses to searching the E-resources. 'Rarely Relevant' and 'No Comment' are the purposes to visit the library and the second and third preference respectively given for them. The least preference was given for 'Sometimes Relevant'. In the case of 'Female' faculty members has given first priority to the purpose of 'Always Relevant'. 'No Comments' and 'Always Irrelevant' are the Responses to searching the E-resources and the second and third preference respectively given for them by the respondents. The least preference was given for the 'Sometimes Relevant'.

Further, the 'Chi square' has been administered to identify the significance. The table value is 9.488 at 5% level of significance, the calculated value for all the variables were less than the table value which indicated the variables as insignificant in their difference of opinion Gender towards the Responses to searching the E-resources.

5.7. Usefulness of E-Resources

To know Usefulness of E-Resources among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses. The five-point scales of Strongly Disagree, Disagree, No Opinion, Agree, and Strongly Agree were used for the study. The Mean, Standard Deviation and their Rank for the Usefulness of E-Resources to the Library have been calculated and the same are shown in table 7.

Table 7: Usefulness of E-Resources

S/N	E-Resources	SDA	DA	NO	A	SA	M	Std. Dev.	R
1	NPTEL Lecture notes	33(5.89)	38(6.79)	58(10.36)	197(35.18)	234(41.79)	4.00	1.151	3
2	IETE	74(13.21)	35(6.25)	26(4.64)	190(33.93)	235(41.96)	3.85	1.374	8

	EDUSAT								
3	Virtual Lab	81(14.46)	6(1.07)	57(10.18)	171(30.54)	245(43.75)	3.88	1.369	7
4	MIT Open Courseware	4(0.71)	54(9.64)	62(11.07)	255(45.54)	185(33.04)	4.01	.945	2
5	Epathshala		46(8.21)	72(12.86)	199(35.54)	243(43.39)	4.14	.934	1
6	SWayam Prabha	85(15.18)	31(5.54)	13(2.32)	166(29.64)	265(47.32)	3.88	1.440	6
7	Ekalavya	58(10.36)	18(3.21)	21(3.75)	238(42.5)	225(40.18)	3.99	1.226	4
8	E-Learning Center Resources	36(6.43)	44(7.86)	43(7.68)	220(39.29)	217(38.75)	3.96	1.165	5

(M-Mean, SD-Standard Deviation, R-Rank, Degrees of freedom = 4, Table Value = 9.488)

Table 7 shows the To know Usefulness of E-Resources among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses and the faculty members have given first priority to the purpose of 'Epathashala'. 'MIT Open Courseware' and 'NPTEL Lecture notes' are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'IETE EDUSAT'. The mean value of all the variables ranges between 3.85 and 4.14. It can be inferred that all the six variables lie between 'Strongly Agree' and 'Agree'. The deviation of opinion ranges between 0.934 and 1.374.

5.8. Usefulness of E-Resources Vs Gender

The study has been further extended to category of the respondents for the Usefulness of E-Resources by respondents in select engineering colleges in Kanchipuram District. The Mean, Standard Deviation and their Rank for the purpose have been calculated and shown in table 8.

Table 8: Usefulness of E-Resources Vs Gender

S.No	E-Resource	Male			Female			Chi-Square
		M	SD	R	M	SD	R	
1	NPTEL Lecture notes	3.94	1.160	6	4.10	1.134	2	5.447
2	IETE EDUSAT	3.82	1.440	8	3.89	1.272	6	8.141
3	Virtual Lab	3.93	1.297	7	3.80	1.466	7	10.053
4	MIT Open Courseware	3.99	.980	2	4.03	.892	3	4.182
5	Epathshala	4.11	.952	1	4.19	.907	1	1.052
	SWayam Prabha	3.95	1.416	5	3.79	1.472	8	5.155
	Ekalavya	3.96	1.238	3	4.03	1.209	4	4.843
	E-Learning Center Resources	3.95	1.161	4	3.98	1.174	5	1.211

Table 8 depicts the respondents in the category of 'Male' Faculty Members have given first priority to the purpose of 'Epathashala' towards the Usefulness of E-Resources. 'MIT Open Courseware' and 'Ekalavya' are the second and third preference respectively given for them. The least preference was given for 'IETE EDUSAT'. In the case of 'Female' faculty members has given first priority to the purpose of 'Epathashala'. 'NPTEL Lecture notes' and 'MIT Open Courseware' are the Responses to searching the E-resources and the second and third preference respectively given for them by the respondents. The least preference was given for the 'Swayam Prabha'.

Further, the 'Chi square' has been administered to identify the significance. The table value is 9.488 at 5% level of significance, the calculated value for all the variables were less than the table value which indicated the variables as insignificant except the variable 'Virtual Lab' in their difference of opinion between the gender towards the Usefulness of E-Resources.

5.9. User Satisfaction

To know user satisfaction of E-Resources among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses. The five-point scales of Never, Rerely, Sometimes, Often and Always were used for the study. The Mean, Standard Deviation and their Rank for the purpose of visit to the Library have been calculated and the same are shown in table 9.

Table 9: User Satisfaction

S/N	Descriptions	Never	Rarely	Sometimes	Often	Always	M	Std. Dev.	R
1	Question Bank Soft Copy	68(12.14)	36(6.43)	5(0.89)	277(49.46)	174(31.07)	3.81	1.279	9
2	Online Databases	33(5.89)	38(6.79)	58(10.36)	197(35.18)	234(41.79)	4.00	1.151	3
3	EBooks/Journals/ Magazines	74(13.21)	35(6.25)	26(4.64)	190(33.93)	235(41.96)	3.85	1.374	8
4	Lecturer Notes Soft Copy	81(14.46)	6(1.07)	57(10.18)	171(30.54)	245(43.75)	3.88	1.369	7
5	E-Article/Publication	4(0.71)	54(9.64)	62(11.07)	255(45.54)	185(33.04)	4.01	.945	2
6	Project Report Soft Copy / e-Thesis	0	46(8.21)	72(12.86)	199(35.54)	243(43.39)	4.14	.934	1
7	Link to Useful Sites	85(15.18)	31(5.54)	13(2.32)	166(29.64)	265(47.32)	3.88	1.440	6
8	Reports/Newsletter Soft Copy	58(10.36)	18(3.21)	21(3.75)	238(42.5)	225(40.18)	3.99	1.226	4
9	Photocopying service	36(6.43)	44(7.86)	43(7.68)	220(39.29)	217(38.75)	3.96	1.165	5

(M-Mean, SD-Standard Deviation, R-Rank, Degrees of freedom = 4, Table Value = 9.488)

Table 9 shows the user satisfaction of E-Resources among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses and the faculty members have given first priority to the purpose of 'Project Report Soft Copy / e-Thesis'. 'E-Article/Publication' and 'Online Databases' are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'Question Bank Soft Copy'. The mean value of all the variables ranges between 3.81 and 4.14. It can be inferred that all the six variables lie between 'Often' and 'Always'. The deviation of opinion ranges between 0.934 and 1.440.

5.10. User Satisfaction Vs Gender

The study has been further extended to category of the respondents for the User Satisfaction of E-Resources by respondents in select engineering colleges in Kanchipuram District. The Mean, Standard Deviation and their Rank for the purpose have been calculated and shown in table 8.

Table 10: User Satisfaction Vs Gender

S. No	E-Resource	Male			Female			Chi-Square
		M	SD	R	M	SD	R	
1	Question Bank Soft Copy	3.81	1.291	9	3.81	1.264	7	7.766
2	Online Databases	3.94	1.160	6	4.10	1.134	2	5.447
3	EBooks/Journals/Magaz ines	3.82	1.440	8	3.89	1.272	6	8.141
4	Lecturer Notes Soft Copy	3.93	1.297	7	3.80	1.466	8	10.053
5	E-Article/Publication	3.99	.980	2	4.03	.892	3	4.182
6	Project Report Soft Copy / e-	4.11	.952	1	4.19	.907	1	1.052

	Thesis							
7	Link to Useful Sites	3.95	1.416	5	3.79	1.472	9	5.155
8	Reports/Newsletter Soft Copy	3.96	1.238	3	4.03	1.209	4	4.843
9	Photocopying service	3.95	1.161	4	3.98	1.174	5	1.211

Table 10 shows Gender wise analysis of the user satisfaction of E-Resources among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses and the 'Male' faculty members have given first priority to the purpose of 'Project Report Soft Copy / e-Thesis'. 'E-Article/Publication' and 'Reports/Newsletter Soft Copy' are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'Question Bank Soft Copy'. The mean value of all the variables ranges between 3.81 and 4.11. It can be inferred that all the six variables lie between 'Often' and 'Always'. The deviation of opinion ranges between 0.952 and 1.440.
Similarly the 'Feale' faculty members have given first priority to the purpose of 'Project Report Soft Copy / e-Thesis'. 'Online Databases' and 'E-Article/Publication' are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'Link to Useful Sites'. The mean value of all the variables ranges between 3.79 and 4.19. It can be inferred that all the six variables lie between 'Often' and 'Always'. The deviation of opinion ranges between 0.892 and 1.466.Further, the 'Chi square' has been administered to identify the significance. The table value is 9.488 at 5% level of significance, the calculated value for all the variables were less than the table value which indicated the variables as insignificant except the variable 'Lecturer Notes Soft Copy' in their difference of opinion between the gender towards the users satisfaction of E-Resources.

5.11. Quality of E- Resources and E-Services

To assess the Quality of E- Resources and E-Services among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses. The five-point scales of Never, Rarely, Sometimes, Often and Always were used for the study. The Mean, Standard Deviation and their Rank for the purpose of visit to the Library have been calculated and the same are shown in table 11.

Table 11: Quality of E- Resources and E-Services

S/N	Parameters	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**	M	Std. Dev.	R
1	Information Search Service	0	46(8.21)	72(12.86)	199(35.54)	243(43.39)	4.14	.934	1
2	Email Alert Service	85(15.18)	31(5.54)	13(2.32)	166(29.64)	265(47.32)	3.88	1.440	6
3	Digital Reference Service	58(10.36)	18(3.21)	21(3.75)	238(42.5)	225(40.18)	3.99	1.226	4
4	Subject Gate/Web Portal	36(6.43)	44(7.86)	43(7.68)	220(39.29)	217(38.75)	3.96	1.165	5
5	Instant Messaging Service	68(12.14)	36(6.43)	5(0.89)	277(49.46)	174(31.07)	3.81	1.279	9
6	Online Chat Service	33(5.89)	38(6.79)	58(10.36)	197(35.18)	234(41.79)	4.00	1.151	3
7	CAS (Current Awareness Service)	74(13.21)	35(6.25)	26(4.64)	190(33.93)	235(41.96)	3.85	1.374	8
8	SDI Using Digital Resources	81(14.46)	6(1.07)	57(10.18)	171(30.54)	245(43.75)	3.88	1.369	7
9	FAQ (Frequently Asked Questions)	4(0.71)	54(9.64)	62(11.07)	255(45.54)	185(33.04)	4.01	.945	2

(M-Mean, SD-Standard Deviation, R-Rank, Degrees of freedom = 4, Table Value = 9.488)

Table 11 shows the Quality of E- Resources and E-Services among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses and the faculty members have given first priority to the purpose of 'Information Search'. 'FAQ (Frequently Asked Questions)' and 'Online Chat Service' are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'Instant Messaging Service'. The mean value of all the variables ranges between 3.81 and 4.14. It can be inferred that all the six variables lie between 'Often' and 'Always'. The deviation of opinion ranges between 0.934 and 1.440.

5.12. Quality of E- Resources and E-Services Vs Gender

The study has been further extended to category of the respondents for the Quality of E-Resources and e-services by respondents in select engineering colleges in Kanchipuram District. The Mean, Standard Deviation and their Rank for the purpose have been calculated and shown in table 12.

Table 12: Quality of E- Resources and E-Services Vs Gender

S.No	E-Resource	Male			Female			Chi-Square
		M	SD	R	M	SD	R	
1	Information Search Service	4.11	.952	1	4.19	.907	1	1.052
2	Email Alert Service	3.95	1.416	5	3.79	1.472	9	5.155
3	Digital Reference Service	3.96	1.238	3	4.03	1.209	4	4.843
4	Subject Gate/Web Portal	3.95	1.161	4	3.98	1.174	5	1.211
5	Instant Messaging Service	3.81	1.291	9	3.81	1.264	7	7.766
6	Online Chat Service	3.94	1.160	6	4.10	1.134	2	5.447
7	CAS (Current Awareness Service)	3.82	1.440	8	3.89	1.272	6	8.141
8	SDI Using Digital Resources	3.93	1.297	7	3.80	1.466	8	10.053
9	FAQ (Frequently Asked Questions)	3.99	.980	2	4.03	.892	3	4.182

Table 12 shows Gender wise analysis of the Quality of E- Resources and e-services among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses and the 'Male' faculty members have given first priority to the purpose of 'Information Search Service'. 'FAQ (Frequently Asked Questions)' and 'Digital Reference Service' are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'Instant Messaging Service'. The mean value of all the variables ranges between 3.81 and 4.11. It can be inferred that all the six variables lie between 'Often' and 'Always'. The deviation of opinion ranges between 0.952 and 1.440. Similarly the 'Female' faculty members have given first priority to the purpose of 'Project Information Search Service'. 'Online Chat Service and 'FAQ (Frequently Asked Questions)' are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'Email Alert Service'. The mean value of all the variables ranges between 3.79 and 4.19. It can be inferred that all the six variables lie between 'Often' and 'Always'. The deviation of opinion ranges between 0.892 and 1.472.

Further, the 'Chi square' has been administered to identify the significance. The table value is 9.488 at 5% level of significance, the calculated value for all the variables were less than the table value which indicated the variables as insignificant except the variable 'SDI Using Digital Resources' in their difference of opinion between the gender towards the users satisfaction of E-Resources.

5.13. Problem faced while Accessing e-Resources

To assess the Problem faced while accessing e-Resources among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses. The five-point scales of Strongly Disagree, Disagree, No Opinion, Agree, and Strongly Agree were used for the study. The Mean, Standard Deviation and their Rank for the p Quality of E- Resources and E-Services have been calculated and the same are shown in table 13.

Table 13: Problem faced while Accessing e-Resources

S/N	Parameters	SDA	DA	NO	A	SA	M	Std. Dev.	R
1	Unfamiliarity	85(15.18)	31(5.54)	13(2.32)	166(29.64)	265(47.32)	3.88	1.440	6
2	Getting Unwanted Information	58(10.36)	18(3.21)	21(3.75)	238(42.5)	225(40.18)	3.99	1.226	2
3	It is Difficult to Read	36(6.43)	44(7.86)	43(7.68)	220(39.29)	217(38.75)	3.96	1.165	4
4	Lack of Handling technique	0	53(9.46)	80(14.29)	251(44.82)	176(31.43)	3.98	.915	3

5	Connectivity Problem	0	55(9.82)	64(11.43)	183(32.68)	258(46.07)	3.94	1.342	5
6	Infrastructure is not Good	40(7.14)	17(3.04)	12(2.14)	248(44.29)	243(43.39)	4.14	1.097	1
7	Library Staffs are not Co-Operative	51(9.11)	64(11.43)	10(1.79)	245(43.75)	190(33.93)	3.82	1.267	7

(M-Mean, SD-Standard Deviation, R-Rank, Degrees of freedom = 4, Table Value = 9.488)

Table 13 shows the Problem faced while accessing e-Resources among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses and the faculty members have given first priority to the purpose of 'Infrastructure is not Good'. 'Getting Unwanted Information' and 'Lack of Handling technique' are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'Library Staffs are not Co-Operative'. The mean value of all the variables ranges between 3.82 and 4.14. It can be inferred that all the six variables lie between 'Agree and 'Strongly Agree. The deviation of opinion ranges between 0.915 and 1.440.

5.14. Problem faced while Accessing e-Resources Vs Gender

The study has been further extended to category of the respondents for the Problem faced while accessing e-Resources by respondents in select engineering colleges in Kanchipuram District. The Mean, Standard Deviation and their Rank for the purpose have been calculated and shown in table 14.

Table 14: Problem faced while Accessing e-Resources Vs Gender

S.No	E-Resource	Male			Female			Chi-Square
		M	SD	R	M	SD	R	
1	Unfamiliarity	3.95	1.416	5	3.79	1.472	7	5.155
2	Getting Unwanted Information	3.96	1.238	3	4.03	1.209	2	4.843
3	It is Difficult to Read	3.95	1.161	4	3.98	1.174	4	1.211
4	Lack of Handling technique	3.97	.913	2	4.00	.920	3	1.881
5	Connectivity Problem	3.93	1.371	6	3.95	1.301	5	4.500
6	Infrastructure is not Good	4.12	1.132	1	4.17	1.045	1	9.846
7	Library Staffs are not Co-Operative	3.81	1.240	7	3.83	1.307	6	8.206

Table 14 shows Gender wise analysis of the Problem faced while accessing e-Resources among the Faculty members in select engineering colleges in Kanchipuram District has been analyzed based opinion and responses and the 'Male' faculty members have given first priority to the purpose of 'Infrastructure is not Good'. 'Lack of Handling technique' and 'Getting Unwanted Information' are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'Library Staffs are not Co-Operative'. The mean value of all the variables ranges between 3.81 and 4.12. The deviation of opinion ranges between 0.913 and 1.416.Similarly the 'Female' faculty members have given first priority to the purpose of 'Infrastructure is not Good'. 'Getting Unwanted Information' and 'Lack of Handling technique' are the purposes to visit the library and the second and third preference respectively given for them by the respondents. The least preference was given 'Unfamiliarity. The mean value of all the variables ranges between 3.79 and 4.17. The deviation of opinion ranges between 0.920 and 1.472.

Further, the 'Chi square' has been administered to identify the significance. The table value is 9.488 at 5% level of significance, the calculated value for all the variables were less than the table value which indicated the variables as insignificant except the variable 'Infrastructure is not

Good' in their difference of opinion between the gender towards the Problem faced while accessing e-Resources.

Conclusion

Almost all the engineering college libraries have good collection of e-resources and facilitating e-services to the users. It provides the various services to the user with their satisfaction and fulfilments of requirements. . The library professionals are to create the good platform to attract the user's community with bundle of resources and e-services. They will be arrange and organise various programmes to offers e-resources facilities with more satisfactory. But they will maintain and update regularly based on the need of user community.

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