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Information Seeking Behavior and User Pattern in Library by Faculties of Engineering Colleges in South Tamil Nadu- A Study

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Abstract

Engineers who are faculty members in engineering colleges now-a-days require not only adequate technological ability and problem solving skills, but also the necessary skills live active co-operation, effective communication and presentation, along with business ethics and inter-personal relationship. At present, engineering colleges have in common an additional responsibility properly provide excellent opportunities to every engineering student to properly utilize the technological knowledge.

The study was conducted with the help of a well structured, close-ended questionnaire. The respondents were selected on the basis of stratified random sampling method form the four southern districts of Tamil Nadu at the rate of 140 per district totaling 560 sampling respondents. All the respondents are faculty members from selected engineering colleges in these four districts.

The study concluded that university libraries have adopted all the new information and communication technologies (ICT) and electronic resources and they are efficiently used by the academic faculties. Most of the engineering colleges are provided with the advanced technologies in the departments so as to make effective teaching and research usage. The government has now, taken initiative to undergo several steps to improve the digital library infrastructure.

Keywords:

Faculty, Pattern, OPAC, CD-ROMS/DVDs, Internet, E- Resources

Introduction:

The 'Concept' of library has changed dramatically due to the impact of Information Communication Technologies (ICT). Libraries have moved from print-based environment to electronic environment. Electronic publication is replacing print-on-paper publications. Combine access to data bases enables users to retrieve relevant and latest information in a minimum time. Fundamental aim of engineering college libraries is based on the philosophy of intellectual freedom and providing access to infinite amount of information. Engineers require not only adequate technological ability and problem solving skills, but also the skills like co-operation, communication and presentation skills, along with business ethics and inter-personal relationship.

Engineering college Libraries

Engineering college libraries can be treated as academic libraries since them later to the information needs of specific professional and academic user community. In the case of the Engineering college libraries, the main focus of the collection will be engineering and the allied subjects. The primary object of these libraries is to support the teaching-learning process of their parent institutions. The quality of engineering education is supervised by the board of the All India Council for Technical Education (AICTE) which was set-up in November 1945 as a National Level Apex Advisory Body (AAB) to conduct survey on and to promote the development in the country in a coordinated and integrated manner by government of India. It prescribes standards to be maintained, act as an authority for planning, formulation and maintenance of norms and standards quality assurance through accreditation funding in priority areas, monitoring and evaluation. It has the responsibility for the approval of courses and takes appropriate steps to promote engineering and management education.

ANNA UNIVERSITY

Anna University is an esteemed university of Technical Education in TamilNadu. The main university campus is located in Guindy, Chennai. It was started on the 4th September 1978. It included the four institutes namely college of Engineering Guinty, Alagappa college of Technology, Madras institute of technology and school of Architecture and planning. In 1982 the name "Anna University" was adopted. It affiliated university in 2001. In the year 2007 engineering colleges in Tamilnadu were divided into six constituent parts namely Chennai (campus) Chennai, Coimbatore, Madurai, Tiruchirapalli and Tirunelveli. However the constituent colleges were merged on 14th September, 2011 under one roof as Anna University.

SCOPE OF THE STUDY

The scope of the present study is "Information Seeking Pattern in Library by Faculty Members of Engineering Colleges in South TamilNadu - A study. The present study concentrates on the Information Seeking pattern of faculties southern TamilNadu. Now-a-days, technology plays a significant role and one can achieve more e-resources to improve the standard of learning and to educate the faculty members to handle the technology for various purposes.

OBJECTIVES OF THE STUDY

The following are the main objectives of the present study

1. To find out information seeking pattern of faculty members in the study area.
2. To identity the purpose of use of information resources among faculty members of engineering colleges in the four southern districts of TamilNadu. I.e. Madurai, Tirunelveli, Tuticorin and kanyakumari districts.
3. To investigate the level of use of library services of faculty members of engineering colleges in the selected districts.
4. To study the purpose of use of the library for relevant references
5. To study the information seeking pattern on library level
6. To study the problems facing in information seeking pattern
7. To know the satisfaction level of faculty members in using
8. To give appropriate suggestions and recommendations

HYPOTHESES SET AND TESTED

Based on the objectives of the study the following hypothesis have been framed and tested
1. There is no significant difference among gender and information seeking pattern of faculty members of engineering colleges in the selected districts.
2. There is no significant difference between the respondent categories towards the value and importance of the electronic reference services by the users of libraries
3. There is no significant difference between the respondent categories of professors, Associate Professors and Assistant professors towards the problems for in information seeking pattern.

REVIEW OF LITERATURE

Review of literature study conducted in order to understand what research has already been made in the given field to identify the various aspects of study neither to not touched by other researcher and to find a suitable method of literature not only provides glimpse into the earlier studies carried out in this particular area, but also reflects the directions in which it is moving. This background the researcher has attempted to review the following few past studies
1. Arshad et al, (2018) wrote on "Scholarly Information seeking of Academic Engineers and Technologists". The study was on selected engineers from the University of Punjab and

61% have responded the survey. The library was used by academic engineers and Technologists for their scholarly tasks and their usage pattern of electronic journals, e-books, discussion with colleagues and electronic research reports are studied. They have used the general search engines, Google Scholar and open access e-journal website for their academic purposes using the up-to-date and supervising researchers

2. Jeyapal et al, (2015) explained the "Information seeking pattern of corporate library user's challenges and changes". The study revealed that the working environment of software industry using the knowledge management among the corporate staff. It concluded that the majority of the software professionals feel in reducing the stress by using information seeking behaviour which was common among IT professionals

3. Lewis et al, (2014) carried out a study on "Use of information resources in engineering college libraries of Dakshina kannada and udipi Districts. A comparative study". Mostly on using information for all use of study, teaching and research activity. The study focused on experience, inadequacy of information resources in their college libraries and using the various categories of facilities and services regularly to meet the changing needs of the users.

4. Pareek et. al., (2013) "A study information seeking behavior and library use pattern of researchers in the Banasthah University". The study deal with information requirements and also determines their awareness of library services and guidance of the researchers.

5. Arokiya mary et. al., (2009) presented a paper on "Information needs and information seeking patterns: perceptions of foreign students in the university of Mysore". The study revealed that the usefulness of the library resources and the web information services. This focuses the result of efficiency and skills in tracking academic information. It suggested that in recent years organizing training and orientation programmes should be organized for users.

6. Hertzum et al, (2000) stated that the "Information-seeking practices of engineers: Searching for Documents as people". The result showed in at the information on from the colleagues and internal report and 40 to 66% are time communication in order.

SOURCES OF INFORMATION

The present study is based on both primary and secondary sources. Primary data has been collected from the selected 560 respondents and secondary data has been collected from the libraries, librarians and the records of the libraries of engineering colleges for the four districts of south Tamilnadu.

SAMPLING DESIGN

A Sample of 560 respondents has been selected at the rate of 140 respondents per district based on the stratified random sampling method. All the staff of the engineering colleges who are users of libraries has formed the population of the study

TOOLS USED FOR COLLECTION OF DATA

For the collection of primary data from the selected respondents, a structured, close-ended questionnaire was used. In addition secondary data was also collected through interview with the librarians of the libraries of the engineering colleges.

LIMITATIONS OF THE STUDY

Since the study in confined only to four districts and only a limited number of 140 respondents from each district were requested to fill the questionnaire, the findings are applicable only to the sampling districts and cannot be generalized.

SCHEME OF REPORTING

The outcome of the study has been reported through five chapters such as, Introduction, Review of literature, Methodology of study, Data Analysis and interpretation and summary of findings and suggestions.

DATA ANALYSIS AND INTERPRETATION

The various data collected with reference to the objectives of the study have been tabulated, analyzed and inferences.

Table 1
Respondents- Gender wise

Designation	No of Respondents		Total
	Male	Female	
Professor	43	14	57
	(75.44)	(24.56)	(100)
Associate Professor	62	37	99
	(62.63)	(37.37)	(100)
Assistant Professor	278	126	404
	(68.82)	(31.18)	(100)

Total	383 (68.40)	177 31.60)	560 (100)

Source: Primary date (Figures in the parentheses indicate percentages to total

Table 1 show that out of 560 respondents 383 (68.40%) were males and 177 (31.60%) were females.

Respondent's Qualification-wise

Table 2 given below show the details of the educational qualification of the respondents.

Table 2

Educational Qualification of the Faculties

Designation	No of Respondents					Total
	ME	**Ph.D**	**M.Sc**	**M.Phil**	**Others**	
Professor	23 (40.35)	19 (33.33)	7 (12.28)	7 (12.28)	1 (1.75)	57 (100)
Associate Professor	32 (32.32)	47 (47.47)	10 (10.10)	9 (9.09)	1 (1.01)	99 (100)
Assistant Professor	187 (46.28)	142 (35.14)	26 (6.43)	37 (9.15)	12 (2.97)	404 (100)
Total	242 (43.21)	208 (37.14)	43 (767)	53 (9.46)	14 (2.50)	560 (100)

Source: Computed from primary data percentages within in brackets.

Table 2 shows the details of the faculty members qualifications out of 560 respondents, 43.21 percent of the faculty members are M.E, followed by 208 (37.14%) are Ph.D, 53(9.46%) are M.Phil, 43(7.67) hold M.Sc degree (7.67%) and others 14 (2.50%)

Frequency of library visit by Faculty members

Table 3 reveals that out of 560 respondents, 23.21 percent of the faculty members visited the library thrice a day, followed by 22.85 percent visited daily, 16.60

percent visited twice a day and 13.1 percent of the faculty members visited the library weekly once and 10.53 percent of the respondents visited rarely.

Table 3
Frequency of Visit to Library

Designation	No of Respondents						Total
	Daily	**Twice a Day**	**Thrice a Day**	**Weekly**	**Monthly**	**Rarely**	
Professor	9 (15.78)	12 (21.05)	15 (26.31)	4 (7.01)	9 (15.78)	8 (14.03)	57 (100)
Associate Professor	23 (23.23)	19 (19.19)	16 (16.16)	10 (10.10)	25 (25.25)	6 (6.05)	99 (100)
Assistant Professor	96 (23.76)	62 (15.34)	99 (24.50)	60 (14.85)	42 (10.39)	45 (11.13)	404 (100)
Total	128 (22.85)	93 (16.60)	130 (23.21)	74 (13.21)	76 (13.57)	59 (10.53)	560 (100)

Source: Computed from Primary data percentages are given with in Brackets

The table reveals that in the category of professors 26.31 percent visited library thrice a day, 7.01 percent visited once in a week. In the case of Associate professor Category, 25.25 percent visited monthly once and 6.06 percent visited rarely. In the case of Assistant Professor's category, 23.76 percent visited library daily. Hence, it is inferred that the Assistant Professors visit the library more times than others.

Information Seeking Pattern of Faculty members:

The information seeking pattern of the faculty members has been displayed in Table 4. The process of information acquiring, using and implementing information are known as Information Seeking pattern. The following table gives the details of the Faculty Members Information Seeking Pattern in the use of library in online public Access catalogue (OPAC).

Information Seeking Pattern of Faculty members:

Designation	No of Respondents						Total
	Author	**Keyword**	**Subject**	**Title**	**ISBN Number**	**Publisher**	
Professor	4 (7.017)	10 (17.54)	2 (21.05)	16 (28.07)	13 (22.80)	2 (3.50)	57 (100)
Associate Professor	41 (41.41)	9 (9.09)	3 (3.03)	17 (17.17)	15 (15.15)	14 (14.14)	99 (100)
Assistant Professor	78 (19.30)	29 (7.17)	40 (9.90)	83 (20.54)	62 (15.34)	112 (27.72)	404 (100)
Total	123	48	55	116	90	128	560

	(21.96)	(8.57)	(19.82)	(20.71)	(16.07)	(22.85)	(100)

Source: Computed from field survey percentages to total within brackets

Out of 560 respondents, about 22.85 percent of the faculty members used OPAC for the information seeking in the use of library "Publishers" are more and "Author" at 21.96 percent, ISBN Number at 16.07 percent and subject at 9.82 percent and keywords at 8.57 percent respectively.

Time taken for Accessing Information

Information access is the freedom of ability to identity, obtain and make use of th data effectively. Table 5 explains the time taken by the faculty members for accessing information through libraries in engineering colleges.

Table 5
Time spend in Accessing Information

Designation	No of Respondents				Total
	30 Minutes	30 Minutes to 1 hour	1-2 Hours	More than 2 Hours	
Professor	26	12	13	6	57
	(45.61)	(21.05)	(22.82)	(10.52)	(100)
Associate Professor	42	26	16	15	99
	(42.42)	(26.26)	(16.16)	(15.16)	(100)
Assistant Professor	148	116	95	45	404
	(26.44)	(20.73)	(16.98)	(8.05)	(100)
Total	216	154	124	66	560
	(38.57)	2750	(22.15)	(11.78)	(100)

Source: Computed form primary data (with in brackets percentages total Row wise)

The table shows that, in the category of professor accessing information using are "30 minutes" at the top most level at 45,61 percent followed by more than 2 hours 10.52 percent. In the case of Associate Professor category, accessing information using are 38 minutes at 42.42 percent followed by "more than 2 hours" is 15.16 percent. In the case of Assistant Professor, accessing information using are "30 minutes" at the top most level at 26.44 percent followed by "more than 2 hours" is 8.05 percent.

It is inferred from the above analysis that in all the categories of professors, Associate Professors and Assistant Professors, the information using time are "30 minutes" which is mostly followed by "more than 2 hours" is very less.

Purpose of visit to library:

Table 6 shows the details of the purpose of visit of the faculty members to the purpose of visit of the faculty members to the library. Out of 560 respondents, 2.57 percent of the faculty members visit library for the purpose of "Access online resources" followed "writing journals" is 23.39 percent. About 17.50 Percent visit libraries mainly for the purpose: borrow and return and 14. 10 percent visit library to "Read subject books" only. Research scholars 11.07 percent visit library for research work and for visit library for research work and for "Browsing Internet" is 10.35 percent respectively.

Table 6
Purpose of Visit to library

Designation	No of Respondents						Total
	Reading subject Books only	Borrow of Return Books	Access online resources	Writing Journals	Research Work	Browsing Internet	
Professor	19 (33.33)	6 (10.52)	14 (24.56)	12 (21.05)	5 (8.77)	1 (1.75)	57 (100)
Associate Professor	7 (7.07)	23 (23.23)	24 (24.24)	24 (24.24)	10 (10.10)	11 (11.11)	99 (100)
Assistant Professor	53 (13.11)	69 (17.07)	94 (23.26)	95 (23.51)	47(11.63)	46 (11.38)	404 (100)
Total	79 (14.10)	98 (17.50)	132 (23.57)	131 (23.39)	62 (11.07)	58 (10.35)	560 (100)

Source: Primary Date

Satisfaction level of using the library

Table 7 shows the satisfaction level of the respondents about using the library out of 560 respondents, 57.50 prevent of the respondents use the library in a "Highly Satisfied" level and 38.57 percent respondents used the library in a " moderately satisfied level" and remaining about 3.92 percent of the respondents used the library in a " not satisfactory level".

Table 7
Level of Satisfaction in using library

Designation	No of Respondents			Total
	Highly Satisfied	**Moderately Satisfied**	**Not satisfied**	
Professor	35 (61.40)	19 (33.33)	3 (5.27)	57 (100)
Associate Professor	53 (53.53)	41 (41.42)	5 (5.05)	99 (100)
Assistant Professor	234 (57.92)	156 (38.61)	14 (3.47)	404 (100)
Total	322 (57.50)	216 (38.57)	22 (3.93)	560 (100)

Source: Calculated from primary data percentages are given within brackets

The table shows that in professor level, 61.40 percent of the respondents used the library in a "Highly satisfied" level and the remaining 5.26 percent of the respondents used the library in a "Not Satisfied" level. In the case of Associate Professor Category 53.53 percent used the library in a "Highly Satisfied" level and remaining about 5.05 percent of the respondents are "Not Satisfied Level".

It is inferred from the analysis that in all the categories of professors, Associate professors and Assistant Professors using the library in a "Highly Satisfied" level followed by "not satisfied" level of the respondents. However, "Not Satisfied" is at a low level.

Problems faced in Information Seeking Pattern

The data collected with regard to the problems faced by the respondents is information seeking pattern analyzed under table 8. Five point scale such as strongly Disagree, Disagree, No opinion, Agree and strongly agree are used for analysis and interpretation. The Mean Standard Deviation and their Rank for the problems have been calculated and are shown in Table 8.

Table 8
Problems faced in information Seeking Pattern

Designation	SDA	DA	NO	Agree	S.A	x	D.D	R
Time Consuming	141	66	48	201	144	3.94	1.024	6
Slow Speed	18	39	30	159	354	4.64	1.069	1
Not easy to search	18	39	36	163	345	4.56	1.118	2
Not familiar with the systems	18	39	18	330	195	4.13	0.984	4
Not enough terminate to access information	18	39	36	192	315	4.42	1.069	3

| Lack of Trained staff | 42 | 123 | 51 | 219 | 165 | 4.03 | 1.232 | 5 |

Source: Calculated from primary data

Note: SDA- Strongly Disagree, **DA-** Disagree, **NO-** No opinion, **A**-Agree,

A.A- Strongly Agree

It can be inferred from the table 8 that the respondents have given first priority for the problem of "Slow Speed", "Not Easy to search" and "Not enough terminate to access information are the second and third preference given by the respondents. The least preference was given for the type of "Level of trained staff". The mean value of all the variables ranges between 3.94 and 4.64. It can be inferred that all the six variables lies between "Agree and Strongly Agree". The standard deviation of opinion ranges between 0.984 and 1.232

Findings of the Study

The following are some of the findings of the study.

1. The study reveals that the respondents consist of male's 68.a40 percent and females 31.60 percent.

2. 2. The educational qualifications of the respondents are M.E (43.21%) followed by Ph.D (37.14%), M.Phil (9.46%), M.Sc (7.67%) and others are (2.50%)

3. 3.ANOVA test was employed to examine the hypothesis that "There is no significant difference between gender and information seeking behaviour of faculty members of engineering colleges in the selected districts

4. The study reveals that the calculated "F" value is greater than table value 2.99 at 0.05 level of significance. Hence, the null hypothesis, "There is no significant difference between gender and information seeking behavior of faculty members of engineering colleges in the selected districts" is respected.

5. With regard 15 library visits by the faculty members, out of 560 respondents, above 23.21 percent visited library thrice a day followed by 22. 85 percent visited daily about 13.21 percent visited weekly once and 10.53 percent visited rarely.

6. The Study shows that the faculty members information seeking pattern in the use of library OPAC "Publishers" (22.85%) followed by "Author" (21.96%), "Title" (20.71%), " ISBN Number" (16.07%), "Subject" (9.83%) and "Keywords" 8.57 percent

7. The study showed that out of 560 respondents the type of materials used for seeking information, test books at the top most level (26.25%) followed by "Periodicals" (23.03%), "News Papers"(11.78%), Project Reports (7.32%), "Electronic Sources" (7.14%), "Electronic Sources" (7.14%), "Reference Books" (6.07%),"Databases and non nook materials" (2.67%)

8. With regard to the availability a resource materials, out of 560 respondents, about 83.75 percent said "adequate" which is the highest, followed by "Inadequate" is 16.25 percent.
9. The survey showed that the frequency of visit to library by respondents and using internet " Twice a day" (62.14%) followed by "Daily" (23.57%), "Thrice a day" (5.71%), "Weekly" (3.75), "Monthly" (2.51%) and rarely (2.32%).
10. With regard to time taken for browsing internet "1 hour to 2 hours" (43.03%), followed by 1 hour (34.82%), 2 hrs to 3 hours (13.23%) and more than 3 hours (8.92%).
11. With regard to the purpose of visits to library, 83.75% for browsing internet for "Communications" followed by "T collect notes" (4.28%), "For Entertainment" (3.57%), "To download e-resources" (3.21%, "To prepare articles (2.32%) and others are (2.85%).
12. The study shows that the satisfaction level of the faculty members with regard to library services are Highly satisfied (74.46% which is the top most followed by "Satisfied" (17.14%), "Not Satisfied" (7.67%) and "Dissatisfied" (0.73%)
13. The study revealed that majority of the respondents complained that there is "No enough terminals to access information, slow speed and not easy to search and "Time consuming"

Implications of the study

The findings of the study have not implications in the information seeking pattern in library by faculties of engineering colleges in the southern districts of Tamilnadu. An academic library should provide all types of resources like books, journals, databases electronic theses by various modes, especially consortium and individual subscriptions to the individual publisher. It is useful for various teaching activities of teaching, learning, Project works, professional development, Self development, research orientation program and special lectures.

Suggestions:

Based on the finding the following suggestions are recommended.

1. Most of the faculty members suggested that a separate building is required for housing the library.
2. More financial assistance shall be extended for the implementation of training programmes to the college faculty members.
3. The electronic resources as well as the digital resources are more important for the academic and research activities. Hence efforts should be made to develop and extract the access modes to the end users.

4. Present by all are living in a digital and paperless society. Hence, there is a need to increases the web based services in library activities.
5. The awareness and satisfaction of library e-resources and e-services facilities are to be made more satisfactory.
6. The engineering colleges should concentrate more on e-resources and services as it is in western countries. Hence, the authorities of the institutions should provide more priorities to develop infrastructural facilities in the libraries.

CONCLUSION

The university libraries have adopted all the new information and communication Technologies (ICT) and "electronic resources are efficiently used by the academic faculties. Now, the government has initiatives to take several steps to improve the digital library infrastructure. The Information Seeking Pattern in Library by Faculties of Engineering Colleges in the selected districts used for the purpose relevancy. The user satisfaction is the most important in measuring the quantitative and qualitative strategy to each and every library e-resources and e-services. e-resources and digitalization techniques and other resources by e-services to attain the entire satisfaction of academic research communities.

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