

SATISFACTION OF LIBRARY SERVICES AT ENGINEERING COLLEGES BY THE FACULTIES AND STUDENT IN CHENNAI DISTRICT: A SURVEY

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Abstract: - *The Purpose of this Title is to investigate the Current state of Satisfaction of Library Services at Engineering Colleges by Faculties and Student in Chennai District. The perception of users for availability and effectiveness of these services has been measured with evidence through survey. Questionnaire followed with personal interview is the method chosen for data collection in this study. The researcher has selected Chennai district for the purpose of present study Chennai District has 9 engineering colleges and most of them are self-finance colleges. Out of the total of 9 institutions, 6 institutions are selected as sample for the purpose of present study, representing almost 66 per cent of the total institutions, in Chennai District. From each institution 300 respondents are selected as sample. In order to give relative weightage to the respondents of different categories, the researchers has adopted a stratification method. The selected respondents include Senior Professors, Professors, Associate Professors, Assistant Professors and Students. The Sampling of the study is stratified random sampling method. For analysis of data are classified and tabulated with the help of computer programming. To test the hypothesis Chi-square test and ANOVA two-way Model are applied. The general data interpretation is done with the application of percentage analysis. The diagrammatic and graphical representations of the data are also made depending on requirement of the situation. The study reveals that lack of ICT Infrastructure and limited computer literacy are the main reason for the under Satisfaction of Library Services.*

Keywords: Keywords: Engineering Colleges, Satisfaction, Library Services, Chennai

1. Introduction:

Revolution in telecommunication coupled with a rapid development in information technology has

changed the routine functioning of libraries throughout the world. This necessitated a need for automation which has made an impact in all

library functions. The present study aims at Satisfaction of Library Services at Engineering Colleges by Faculties and Student in Chennai District. The role of engineering colleges in the technical man power development is quite significant. They need rapid dissemination of information, for updating the knowledge of the staff and students of the engineering colleges. Hence it is necessary to study the networked environment of the engineering college libraries and to evaluate their performance in supporting the academic activities of the institutions.

2. Review of Literature:

This Chapter deals with Review of Literature. The analysis of review of literature is the key focus of any research. It enables one to aware of the past and currents trends in any particular branch of research. Al-Shanabri, H & Meadows, AJ (1995) observe that scholars in developing countries prefer informal sources because of the inadequacy of library collections and information infrastructure, ineffective library services, and lack of trained and cooperative library staff. Singh (1998) conducted a research study on the use of Internet by the librarians in Malaysia. The main findings of the study indicated that 90% of the respondents used the Internet for work related purposes. Most of the respondents were recent users. Chandran (2000) conducted a study at S V University, Tirupathi, which showed that more than 25% of the respondents used the Internet for 2-3 times a week and more than 56% used it for

accessing information. A majority of the respondents used the Web and e-mail services of Internet. The purposes of using Internet included communication and information gathering. The sources used for identifying information about Internet included website itself, journals and magazines, staff and newspapers. A majority of the respondents used general websites as compared to recreational and discipline oriented websites. Anwar (2007) reports that In Pakistan, the evaluation of information needs and information-seeking behavior has gained interest during the last two decades. On different research studies of different groups of people in Pakistan. Biradar, B S (2012), This research study is confined to the study of electronic resources and services in respect of availability, use, usefulness, and reasons for influencing e-resources, amount of time spent on use of e-resources and services etc. in Marine Science research institutions library. A total of 373 structured questionnaires were distributed among marine scientists/faculties of different marine science institutions, taking into account 64 per cent. Received sample questionnaires were analyzed statistically Kumar, K (2013), the purpose of this study was to investigate the observation and use of engineering college libraries by the user's satisfaction of Chittoor, Andhra Pradesh. Structured questionnaires were used to collect data from a representative sample of 150 library users. The study found that a majority of the students were used library and these staff for friendly communication. Physical Facilitates was the

satisfied with users. A number of users visited library are more than once a week. Handling of catalogue cards though the department wise by the users. Hence the hypothesis is tested is accepted.

3. Research Design:

3.1. Objectives:

The following Objectives are framed for the purpose of the Present Study.

- To analyze the respondents' Satisfaction of Library Services (Institution wise)
- To analyze the respondents' Satisfaction of Library Services (Designation wise)

3.2. Hypotheses:

The following hypotheses are formulated, keeping the content and coverage of the framed objectives and they can be tested by applying appropriate statistical tools.

- The respondents differ significantly in their extent of Satisfaction of Library Services (Institution wise)
- The respondents differ significantly in their extent of Satisfaction of Library Services (Designation wise)

3.3. Sampling:

The researcher has selected Chennai district for the purpose of present study Chennai District has

9 engineering colleges and most of them are self-finance colleges. Out of the total of 9 institutions, 6 institutions are selected as sample for the purpose of present study, representing almost 66 per cent of the total institutions, in Chennai District. From each institution 300 respondents are selected as sample. In order to give relative weightage to the respondents of different categories, the researchers has adopted a Stratification Method. The selected respondents include Senior Professors, Professors, Associate Professors, Assistant Professors and Students. The Sampling of the study is **Stratified Random Sampling Method**.

3.4. Methodology & Data Collection:

The relevant data are collected from the respondents of the concerned institutions by employing mailed **Questionnaire Method**. The respondents have properly answered the queries, posed by the researcher. After completion of answering, they returned back the questionnaire to the researcher. The librarians have extended full cooperation in the data collection.

3.5. Statistical Tools:

To test the hypothesis **Chi-Square Test** and **Anova two-way Model** are applied. The general data interpretation is done with the application of percentage analysis. The diagrammatic and graphical representations of the data are also made depending on requirement of the situation.

3.6. Limitations:

The finding of the study applicable to Selected Engineering colleges in Chennai district and it does not represent other institutions.

This study covers almost 66 per cent of the institutions in the Chennai district, because the studying of all institutions is not possible by the level of an individual Faculty and Student, due to constraints imposed by money, time, energy and efforts. This study is mainly based on social science orientation. Hence, this studies undertaken with certain degree of caution.

4. Data Analysis & Interpretation:

4.1. Table. Institution Wise Respondents' Satisfaction on Library Services:

A study on data in table 4.1 indicates the Institution wise Respondents' extent of satisfaction of library services. It could be noted that out of the total 1800 respondents, 38.11 percent of them report to have high level of satisfaction on mode of doubt clarification in library enquiry cell, 23.67 percent of them have satisfaction and the rest 38.22 percent of them state that they are dissatisfied about mode of doubt clarification in library enquiry cell. The

high level of satisfaction about mode of doubt clarification in library enquiry cell is quite common among the respondents of College of Engineering, Guindy (55%), Meenakshi College of Engineering (44%) and Meenakshi Sundararajan College of Engineering (40%). Regarding access to electronic resources, 36.83 percent of the total respondents said to have high level satisfaction, 27.50 per cent of them have satisfaction and the rest 35.67 percent of them have dissatisfaction.

Institutions	Doubt clarification			Access to electronic resources			Physical accessibility of service		
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied
College of Engineering, Guindy	165 (55.00)	96 (32.00)	39 (13.00)	155 (51.67)	96 (32.00)	41 (16.33)	119 (39.67)	101 (33.67)	80 (26.67)
Meenakshi College of Engineering	32 (44.00)	84 (28.00)	84 (28.00)	133 (44.33)	70 (23.33)	97 (32.33)	111 (37.00)	87 (29.00)	102 (34.00)
Meenakshi sundararajan college of engineering	120 (40.00)	70 (23.33)	110 (36.67)	102 (34.00)	66 (22.00)	132 (44.00)	96 (32.00)	76 (25.33)	128 (42.67)
Measi Academy of Architecture	94 (31.33)	62 (20.67)	144 (48.00)	87 (29.00)	101 (33.67)	112 (37.33)	87 (29.00)	80 (26.67)	133 (44.33)
Loyola - ICAM college of Engineering and Technology	90 (30.00)	56 (18.67)	154 (51.33)	90 (30.00)	80 (26.67)	130 (43.33)	76 (25.33)	79 (26.33)	145 (48.33)
Jawahar Engineering College	85 (28.33)	58 (19.33)	157 (52.33)	96 (32.00)	82 (27.33)	122 (40.67)	66 (22.00)	77 (25.67)	157 (52.33)
Total	686 (38.11)	426 (23.67)	688 (38.22)	663 (36.83)	495 (27.50)	634 (35.67)	555 (30.83)	500 (27.78)	745 (41.39)

Institutions	Proper functioning of enquiry cell			Proper attention to users enquiry			Provision of relevant information		
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied
College of Engineering, Guindy	109 (36.33)	111 (37.00)	80 (26.67)	197 (65.23)	86 (28.48)	17 (6.29)	143 (47.67)	87 (29.00)	70 (23.33)
Meenakshi College of Engineering	96 (32.00)	109 (36.33)	95 (31.67)	166 (55.33)	90 (30.00)	44 (14.67)	118 (39.33)	70 (23.33)	112 (37.33)
Meenakshi sundararajan college of engineering	80 (26.67)	76 (25.33)	144 (48.00)	152 (50.67)	82 (27.33)	66 (22.00)	101 (33.67)	68 (22.67)	131 (43.67)
Measi Academy of Architecture	76 (25.33)	87 (29.00)	137 (45.67)	122 (40.67)	85 (28.33)	93 (31.00)	86 (28.67)	76 (25.33)	138 (46.00)
Loyola - ICAM college of Engineering and Technology	65 (21.67)	92 (30.67)	143 (47.67)	101 (33.67)	89 (29.67)	110 (36.67)	77 (25.67)	89 (29.67)	134 (44.67)
Jawahar Engineering College	52 (17.33)	101 (33.67)	147 (49.00)	96 (32.00)	76 (25.33)	128 (42.67)	67 (22.33)	77 (25.67)	156 (52.00)
Total	478 (26.56)	576 (32.00)	746 (41.44)	834 (46.28)	508 (28.19)	458 (25.53)	592 (32.89)	467 (25.94)	741 (41.17)

Institutions	Intellectual accessibility of services			User expectations within stated aims of service			Promotion of resources		
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied
College of Engineering, Guindy	138 (46.00)	96 (32.00)	66 (22.00)	165 (55.00)	96 (32.00)	39 (13.00)	155 (51.67)	90 (30.00)	55 (18.33)
Meenakshi College of Engineering	130 (43.33)	90 (30.00)	80 (26.67)	152 (50.67)	87 (29.00)	61 (20.33)	136 (45.33)	87 (29.00)	77 (25.67)
Meenakshi sundararajan college of engineering	121 (40.33)	76 (25.33)	103 (34.33)	116 (38.67)	76 (25.33)	108 (36.00)	126 (42.00)	60 (20.00)	114 (38.00)
Measi Academy of Architecture	101 (33.67)	80 (26.67)	119 (39.67)	89 (29.67)	66 (22.00)	145 (48.33)	112 (37.33)	66 (22.00)	122 (40.67)
Loyola - ICAM college of Engineering and Technology	86 (29.66)	70 (24.14)	134 (46.21)	76 (25.33)	59 (19.67)	165 (55.00)	109 (36.33)	78 (26.00)	113 (37.67)
Jawahar Engineering College	80 (26.67)	79 (26.33)	141 (47.00)	65 (21.67)	51 (17.00)	184 (61.33)	97 (32.33)	79 (26.33)	124 (41.33)
Total	656 (36.65)	491 (27.43)	643 (35.92)	663 (36.83)	435 (24.17)	702 (39.00)	735 (40.83)	460 (25.56)	605 (33.61)

Institutions	Data based service			Consideration of user needs in library services			Adequate study space		
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied
College of Engineering, Guindy	119 (39.67)	90 (30.00)	91 (30.33)	191 (63.67)	96 (32.00)	13 (4.33)	149 (50.00)	90 (30.20)	59 (19.80)
Meenakshi College of Engineering	118 (39.33)	65 (21.67)	117 (39.00)	180 (60.00)	90 (30.00)	30 (10.00)	140 (46.67)	87 (29.00)	73 (24.33)
Meenakshi sundararajan college of engineering	96 (32.00)	60 (20.00)	144 (48.00)	160 (53.33)	80 (26.67)	60 (20.00)	138 (46.00)	90 (30.00)	72 (24.00)
Measi Academy of Architecture	85 (28.33)	52 (17.33)	163 (54.33)	152 (50.67)	66 (22.00)	82 (27.33)	126 (42.00)	68 (22.67)	106 (35.33)
Loyola - ICAM college of Engineering and Technology	66 (22.00)	59 (19.67)	175 (58.33)	133 (44.33)	58 (19.33)	109 (36.33)	126 (42.00)	68 (22.67)	106 (35.33)
Jawahar Engineering College	65 (21.67)	52 (17.33)	183 (61.00)	122 (40.67)	52 (17.33)	126 (42.00)	90 (30.00)	56 (18.67)	154 (51.33)
Total	549 (30.50)	378 (21.00)	873 (48.50)	938 (52.11)	442 (24.56)	420 (23.33)	769 (42.77)	459 (25.53)	570 (31.70)

Institutions	Ventilation facility			Responsive hours of opening			Provision of facilities to people with special needs		
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied
College of Engineering, Guindy	127 (42.62)	121 (40.60)	50 (16.78)	129 (43.00)	118 (39.33)	53 (17.67)	159 (53.00)	87 (29.00)	54 (18.00)
Meenakshi College of Engineering	116 (38.67)	118 (39.33)	66 (22.00)	118 (39.33)	120 (40.00)	62 (20.67)	150 (50.00)	96 (32.00)	54 (18.00)
Meenakshi sundararajan college of engineering	96 (32.00)	76 (25.33)	128 (42.67)	101 (33.67)	90 (30.00)	109 (36.33)	138 (46.00)	90 (30.00)	72 (24.00)
Measi Academy of Architecture	87 (29.00)	66 (22.00)	147 (49.00)	96 (32.00)	87 (29.00)	117 (39.00)	130 (43.33)	66 (22.00)	104 (34.67)
Loyola - ICAM college of Engineering and Technology	81 (27.00)	62 (20.67)	157 (52.33)	87 (29.00)	92 (30.67)	121 (40.33)	120 (40.00)	69 (23.00)	111 (37.00)
Jawahar Engineering College	69 (23.00)	59 (19.67)	172 (57.33)	72 (24.00)	90 (30.00)	138 (46.00)	119 (39.67)	72 (24.00)	109 (36.33)
Total	576 (32.04)	502 (27.92)	720 (40.04)	603 (33.50)	597 (33.17)	600 (33.33)	816 (45.33)	480 (26.67)	504 (28.00)

Institutions	Provision of innovative work environment			Fire protection measures			Participation of users in selection process		
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied
College of Engineering, Guindy	149 (49.67)	116 (38.67)	35 (11.67)	151 (50.33)	101 (33.67)	48 (16.00)	169 (55.96)	85 (28.15)	48 (15.89)
Meenakshi College of Engineering	146 (48.67)	98 (32.67)	56 (18.67)	148 (49.33)	112 (37.33)	40 (13.33)	152 (50.67)	90 (30.00)	58 (19.33)
Meenakshi sundararajan college of engineering	132 (44.00)	76 (25.33)	92 (30.67)	133 (44.33)	96 (32.00)	71 (23.67)	140 (46.67)	92 (30.67)	68 (22.67)
Measi Academy of Architecture	101 (33.67)	96 (32.00)	103 (34.33)	122 (40.67)	87 (29.00)	91 (30.33)	133 (44.33)	65 (21.67)	102 (34.00)
Loyola - ICAM college of Engineering and Technology	76 25.33	89 29.67	135 45.00	98 32.67	95 31.67	107 35.67	126 42.00	66 22.00	108 36.00
Jawahar Engineering College	95 (31.67)	86 (28.67)	119 (39.67)	96 (32.00)	69 (23.00)	135 (45.00)	118 (39.33)	67 (22.33)	115 (38.33)
Total	699 (38.83)	561 (31.17)	540 (30.00)	748 (41.56)	560 (31.11)	492 (27.33)	838 (46.50)	465 (25.80)	499 (27.69)

Institutions	Acquisition of resources to users' needs			Organizational and institutional culture			Access to standard and patent resources		
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied
College of Engineering, Guindy	201 (67.00)	49 (16.33)	50 (16.67)	191 (63.67)	86 (28.67)	23 (7.67)	149 (49.67)	102 (34.00)	49 (16.33)
Meenakshi College of Engineering	185 (61.67)	96 (32.00)	19 (6.33)	188 (62.67)	90 (30.00)	22 (7.33)	134 (44.67)	116 (38.67)	50 (16.67)
Meenakshi sundararajan college of engineering	165 (55.00)	78 (26.00)	57 (19.00)	176 (58.67)	77 (25.67)	47 (15.67)	110 (36.67)	118 (39.33)	72 (24.00)
Measi Academy of Architecture	152 (50.67)	75 (25.00)	73 (24.33)	156 (52.00)	65 (21.67)	79 (26.33)	92 (30.67)	121 (40.33)	87 (29.00)
Loyola - ICAM college of Engineering and Technology	132 (44.00)	79 (26.33)	89 (29.67)	142 (47.33)	72 (24.00)	86 (28.67)	112 (37.33)	66 (22.00)	122 (40.67)
Jawahar Engineering College	120 (40.00)	92 (30.67)	88 (29.33)	136 (45.33)	86 (28.67)	78 (26.00)	116 (38.67)	72 (24.00)	112 (37.33)
Total	955 (53.06)	469 (26.06)	376 (20.89)	989 (54.94)	476 (26.44)	335 (18.61)	713 (39.61)	595 (33.06)	492 (27.33)

Institutions	Getting suggestions for improvement			Access to multimedia teaching and learning resources			Access to all library websites		
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied
College of Engineering, Guindy	151 (50.33)	86 (28.67)	63 (21.00)	153 (51.00)	82 (27.33)	65 (21.67)	155 (51.67)	76 (25.33)	69 (23.00)
Meenakshi College of Engineering	136 (45.33)	79 (26.33)	85 (28.33)	138 (46.00)	76 (25.33)	86 (28.67)	140 (46.67)	70 (23.33)	90 (30.00)
Meenakshi sundararajan college of engineering	116 (38.67)	120 (40.00)	64 (21.33)	118 (39.33)	116 (38.67)	66 (22.00)	110 (36.67)	111 (37.00)	79 (26.33)
Measi Academy of Architecture	90 (30.00)	112 (37.33)	98 (32.67)	92 (30.67)	102 (34.00)	106 (35.33)	94 (31.33)	92 (30.67)	114 (38.00)
Loyola - ICAM college of Engineering and Technology	104 (34.67)	109 (36.33)	87 (29.00)	106 (35.33)	111 (37.00)	83 (27.67)	107 (35.67)	106 (35.33)	87 (29.00)
Jawahar Engineering College	108 (36.00)	97 (32.33)	95 (31.67)	110 (36.67)	116 (38.67)	74 (24.67)	112 (37.33)	109 (36.33)	79 (26.33)
Total	705 (39.17)	603 (33.50)	492 (27.33)	717 (39.83)	603 (33.50)	480 (26.67)	718 (39.89)	564 (31.33)	518 (28.78)

Institutions	Access to library network			Utilization of internet facility			Access to reprographic service		
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied
College of Engineering, Guindy	159 (53.00)	78 (26.00)	63 (21.00)	169 (56.33)	80 (26.67)	51 (17.00)	171 (57.00)	86 (28.67)	43 (14.33)
Meenakshi College of Engineering	148 (49.33)	72 (24.00)	80 (26.67)	158 (52.67)	74 (24.67)	68 (22.67)	160 (53.33)	76 (25.33)	64 (21.33)
Meenakshi sundararajan college of engineering	112 (37.33)	113 (37.67)	75 (25.00)	117 (39.00)	114 (38.00)	69 (23.00)	119 (39.67)	116 (38.67)	65 (21.67)
Measi Academy of Architecture	96 (32.00)	94 (31.33)	110 (36.67)	98 (32.67)	95 (31.67)	107 (35.67)	101 (33.67)	97 (32.33)	102 (34.00)
Loyola - ICAM college of Engineering and Technology	109 (36.33)	108 (36.00)	83 (27.67)	110 (36.67)	112 (37.33)	78 (26.00)	114 (38.00)	116 (38.67)	70 (23.33)
Jawahar Engineering College	118 (39.33)	112 (37.33)	70 (23.33)	119 (39.67)	109 (36.33)	72 (24.00)	121 (40.33)	108 (36.00)	71 (23.67)
Total	742 (41.22)	577 (32.06)	481 (26.72)	771 (42.83)	584 (32.44)	445 (24.72)	786 (43.67)	599 (33.28)	415 (23.06)

Institutions	Collection of research reviews and abstracts			Attitude of staff members			Library working procedure		
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied
College of Engineering, Guindy	191 (63.67)	76 (25.33)	33 (11.00)	184 (61.00)	56 (18.67)	60 (20.33)	192 (64.00)	76 (25.33)	32 (10.67)
Meenakshi College of Engineering	162 (54.00)	89 (29.67)	49 (16.33)	140 (46.67)	84 (28.00)	76 (25.33)	162 (54.00)	89 (29.67)	49 (16.33)
Meenakshi sundararajan college of engineering	124 (41.33)	112 (37.33)	64 (21.33)	109 (36.33)	102 (34.00)	89 (29.67)	124 (41.33)	112 (37.33)	64 (21.33)
Measi Academy of Architecture	102 (34.00)	98 (32.67)	100 (33.33)	99 (33.00)	89 (29.67)	112 (37.33)	102 (34.00)	98 (32.67)	100 (33.33)
Loyola - ICAM college of Engineering and Technology	111 (37.00)	118 (39.33)	71 (23.67)	79 (26.33)	112 (37.33)	109 (36.33)	111 (37.00)	118 (39.33)	71 (23.67)
Jawahar Engineering College	102 (34.00)	109 (36.33)	89 (29.67)	86 (28.67)	97 (32.33)	117 (39)	102 (34.00)	109 (36.33)	89 (29.67)
Total	792 (44.00)	602 (33.44)	406 (22.56)	697 (38.67)	540 (30.00)	563 (31.33)	793 (44.06)	602 (33.44)	405 (22.50)

Institutions	Lighting			Hygienic maintenance of library environment			Drinking water		
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied
College of Engineering, Guindy	172 (57.33)	86 (28.67)	42 (14.00)	170 (56.67)	80 (26.67)	50 (16.67)	160 (53.33)	78 (26.00)	62 (20.67)
Meenakshi College of Engineering	160 (53.33)	76 (25.33)	64 (21.33)	158 (52.67)	74 (24.67)	68 (22.67)	148 (49.33)	72 (24.00)	80 (26.67)
Meenakshi sundararajan college of engineering	119 (39.67)	116 (38.67)	65 (21.67)	117 (39.00)	114 (38.00)	69 (23.00)	112 (37.33)	113 (37.67)	75 (25.00)
Measi Academy of Architecture	101 (33.67)	97 (32.33)	102 (34.00)	98 (32.67)	95 (31.67)	107 (35.67)	96 (32.00)	94 (31.33)	110 (36.67)
Loyola - ICAM college of Engineering and Technology	114 (38.00)	116 (38.67)	70 (23.33)	110 (36.67)	112 (37.33)	78 (26.00)	109 (36.33)	108 (36.00)	83 (27.67)
Jawahar Engineering College	121 (40.33)	108 (36.00)	71 (23.67)	119 (39.67)	109 (36.33)	72 (24.00)	118 (39.33)	112 (37.33)	70 (23.33)
Total	787 (43.72)	599 (33.28)	414 (23.00)	772 (42.89)	584 (32.44)	444 (24.67)	743 (41.28)	577 (32.06)	480 (26.67)

Institutions	Toilet facility inside the library			Access to e-journals			Total
	Highly satisfied	Satisfied	Dissatisfied	Highly satisfied	Satisfied	Dissatisfied	
College of Engineering, Guindy	156 (52.00)	76 (25.33)	68 (22.67)	154 (51.33)	82 (27.33)	64 (21.33)	300
Meenakshi College of Engineering	140 (46.67)	70 (23.33)	90 (30.00)	138 (46.00)	76 (25.33)	86 (28.67)	300
Meenakshi sundararajan college of engineering	110 (36.67)	111 (37.00)	79 (26.33)	118 (39.33)	116 (38.67)	66 (22.00)	300
Measi Academy of Architecture	94 (31.33)	92 (30.67)	114 (38.00)	92 (30.67)	102 (34.00)	106 (35.33)	300
Loyola - ICAM college of Engineering and Technology	107 (35.67)	106 (35.33)	87 (29.00)	106 (35.33)	111 (37.00)	83 (27.67)	300
Jawahar Engineering College	112 (37.33)	109 (36.33)	79 (26.33)	110 (36.67)	116 (38.67)	74 (24.67)	300
Total	719 (39.94)	564 (31.33)	517 (28.72)	718 (39.89)	603 (33.50)	479 (26.61)	1800

Source computed

Figures in parenthesis denote percentages

Chi Square Summary Result

Institutions	Chi square calculated value	Degrees of freedom	Chi square tabulate value
Doubt clarification	185.7	10	18.3
Access to electronic resources	101.8	10	18.3
Physical accessibility of service	60.27	10	18.3
Proper functioning of enquiry cell	111.03	10	18.3
Proper attention to users enquiry	172.7	10	18.3
Provision of relevant information	80.93	10	18.3
Intellectual accessibility of services	73.02	10	18.3
User expectations within stated aims of service	240.8	10	18.3
Promotion of resources	66.24	10	18.3
Data based service	91.04	10	18.3
Consideration of user needs in library services	183.2	10	18.3
Adequate study space	93.77	10	18.3
Ventilation facility	178.9	10	18.3
Responsive hours of opening	91.92	10	18.3
Provision of facilities to people with special needs	63.48	10	18.3
Provision of innovative work environment	128.7	10	18.3
Fire protection measures	114.0	10	18.3
Participation of users in selection process	71.91	10	18.3
Acquisition of resources to users' needs	104.1	10	18.3
Organizational and institutional culture	98.66	10	18.3
Access to standard and patent resources	104.4	10	18.3
Getting suggestions for improvement	47.82	10	18.3
Access to multimedia teaching and learning resources	50.89	10	18.3
Access to all library websites	52.38	10	18.3
Access to library network	57.24	10	18.3
Utilization of internet facility	69.28	10	18.3
Access to reprographic service	69.34	10	18.3
Collection of research reviews and abstracts	108.6	10	18.3
Attitude of staff members	115.5	10	18.3
Library working procedure	110.5	10	18.3
Lighting	70.76	10	18.3
Hygienic maintenance of library environment	70.56	10	18.3
Drinking water	58.26	10	18.3
Toilet facility inside the library	53.38	10	18.3
Access to e-journals	51.84	10	18.3

The dissatisfaction about access to electronic resources is quite common among the respondents of Meenakshi Sundararajan College of Engineering (44%), Loyola - ICAM college of

Engineering and Technology (43.33%) and Jawahar Engineering College (40.67%).

Out of the total 1800 respondents, 30.83 per cent of them are highly satisfied with physical access

to library service, 27.78 percent of them are satisfied and the rest 41.39 percent of them are dissatisfied. The low level of satisfaction on physical access to library service is quite common among the respondents of Meenakshi Sundararajan College of Engineering (42.67%), Measi Academy of Architecture (44.33%), Loyola - ICAM college of Engineering and Technology (48.33%) and Jawahar Engineering College (52.33%). Out of the total 1800 respondents, 26.56 per cent of them are highly satisfied with proper functioning of library enquiry cell, 32 percent of them are satisfied and the rest 41.44 per cent of them are dissatisfied. A more than 40 percent of the respondents of Jawahar Engineering College (49%), Loyola - ICAM college of Engineering and Technology (47.67%), Measi Academy of Architecture (45.67%) and Meenakshi Sundararajan College of Engineering (48%) are dissatisfied with proper functioning of library enquiry cell. In this study, 45.28 per cent of respondents are highly satisfied with proper attention to library users' enquiry, 28.19 percent of them are satisfied and the rest 25.53 percent of them are dissatisfied with proper attention to library users' enquiry. A more than half of the respondent of College of Engineering, Guindy (65.23%), Meenakshi College of Engineering (55.33%) and Meenakshi Sundararajan College of Engineering (50.67%) are highly satisfied with proper attention to library users' enquiry. Regarding provision of relevant library information, 32.89 percent of the total respondents are highly satisfied, 25.94 percent of

the respondents are satisfied and the rest 41.17 percent of them are dissatisfied. Majority of the respondents of Jawahar Engineering College (52%), Loyola - ICAM college of Engineering and Technology (44.67%), Measi Academy of Architecture (46%) and Meenakshi Sundararajan College of Engineering (43.67%) are dissatisfied about provision of relevant library information. In the case of intellectual access to library service, 36.65 percent of them state that they have high level satisfaction, 27.43 per cent of them are satisfied and the rest 35.92 percent of them are dissatisfied. The high level satisfaction about intellectual access to library services is quite common among the respondents of College of Engineering, Guindy (46%), Meenakshi College of Engineering (43.33%) and Meenakshi Sundararajan College of Engineering (40.33%).

Out of the total 1800 respondents, 36.63 percent of them are highly satisfied with users' aim and expectations based library service, 24.17 percent of them are satisfied and the rest 39 per cent of them are dissatisfied. A half of the respondents of College of Engineering, Guindy (55%) and Meenakshi College of Engineering (50.67%) are highly satisfied with users' aim and expectations based library service. In the case of promotion of resources, 40.83 per cent of them have high level satisfaction, 25.56 per cent of them are satisfied and the rest 33.61 per cent of them are dissatisfied. The high level satisfaction about promotion of resources is quite common among the respondents of College of Engineering,

Guindy (51.67%), Meenakshi College of Engineering (45.33%) and Meenakshi Sundararajan College of Engineering (42%). Regarding data based service, 30.50 percent of the respondents are highly satisfied, 21 per cent of them are satisfied and the rest 48.50 per cent of them are dissatisfied. The dissatisfaction about data based service is quite common among the respondents of Jawahar Engineering College (61%), Loyola - ICAM college of Engineering and Technology (38.33%), Measi Academy of Architecture (54.33%) and Meenakshi Sundararajan College of Engineering (48%).

Out of the total 1800 respondents, 52.11 percent of the respondents are highly satisfied with consideration of users' needs in library services, 24.56 percent of the respondents are satisfied and the rest 23.33 percent of them are dissatisfied. The respondents of College of Engineering, Guindy occupy the first position with respect to their high level satisfaction about consideration of users' needs in library services and the respondents of Jawahar Engineering College lag behind others. In this study, 42.77 per cent of the respondents state that they have high level satisfaction about adequate library study space facility, 25.53 per cent of them have satisfaction and the rest 31.70 per cent of them have dissatisfaction in this regard. The high level of satisfaction about adequate library study space facility is quite common among the respondents of College of Engineering, Guindy (50%), Meenakshi College of Engineering (46.67%) and Meenakshi

Sundararajan College of Engineering (46%).

It could be noted that out of the total 1800 respondents 32.04 per cent of them are highly satisfied with library ventilation facility, 27.92 percent of them are satisfied and the rest 40.04 per cent of them are dissatisfied. A more than half of the respondents of Jawahar Engineering College (57.33%) and Loyola - ICAM college of Engineering and Technology (52.33%) are dissatisfied with library ventilation facility. In this study, 33.50 per cent of respondents are highly satisfied with library responsive hours of opening, 33.17 percent of them are satisfied and the rest 33.33 percent of them are dissatisfied with library responsive hours of opening. Majority respondents of College of Engineering, Guindy (43%) have high level satisfaction on library responsive hours of opening and the respondents of remaining Institutions are considerably satisfied. Regarding provision of facilities to people with special needs, 45.33 percent of the total respondents are in high level satisfaction, 26.67 percent of the respondents have satisfaction and the rest 28 percent of them have dissatisfaction. The high level of satisfaction about provision of facilities to people with special needs is quite common among the respondents of College of Engineering, Guindy (53%) and Meenakshi College of Engineering (50%).

Out of the total 1800 respondents, 38.83 percent of them report to have high level satisfaction about provision of innovative work environment, 31.17 percent of them have satisfaction and the

rest 30 percent of them state that they are dissatisfied with access to innovative work environment. The high level satisfaction about provision of innovative work environment is quite common among the respondents of College of Engineering, Guindy (49.67%), Meenakshi College of Engineering (48.67%) and Meenakshi Sundararajan College of Engineering (44%). Regarding placement of fire protection measures in library, 41.56 percent of the total respondents said to have high level satisfaction, 31.11 per cent of them have satisfaction and the rest 27.33 percent of them have dissatisfaction in this regard. The dissatisfaction about placement of fire protection measures in library is quite common among the respondents of Jawahar Engineering College (45%) and Loyola - ICAM college of Engineering and Technology (35.67%). Out of the total 600 respondents, 46.50 per cent of them are highly satisfied with participation of users in library resource selection, 25.80 percent of them are satisfied and the rest 27.69 percent of them are dissatisfied. The high level satisfaction about participation of users in library resource selection is quite common among the respondents of College of Engineering, Guindy (55.96%) and Meenakshi College of Engineering (50.67%). In the case of acquisition of library resources to users' needs, 53.06 percent of them state that they have high level satisfaction, 26.06 per cent of them have satisfaction and the rest 20.89 percent of them have dissatisfaction in this regard. The dissatisfaction is quite common among the respondents of Loyola - ICAM college of

Engineering and Technology (29.67%) and Jawahar Engineering College (20.89%).

Out of the total 1800 respondents, 54.94 percent of them are highly satisfied with library organizational and institutional culture, 26.44 percent of them are satisfied and the rest 18.61 per cent of them are dissatisfied. A more than half of the respondents of College of Engineering, Guindy (63.67%), Meenakshi College of Engineering (62.67%), Meenakshi Sundararajan College of Engineering (58.67%) and Measi Academy of Architecture (58.33%) are highly satisfied with library organizational and institutional culture. In the case of provision of access to standard and patent resources, 39.61 per cent of them have high level satisfaction, 33.06 per cent of them have satisfaction and the rest 27.33 per cent of them have dissatisfaction. The high level satisfaction of access to standard and patent resources is quite common among the respondents of College of Engineering, Guindy (49.67%), and Meenakshi College of Engineering (44.67%). Regarding seeking users' suggestions for library improvements, 39.17 percent of the respondents have high level satisfaction, 33.50 per cent of them have satisfaction and the rest 27.33 per cent of them have dissatisfaction. The high level satisfaction on seeking users' suggestions for library improvements is quite high among the respondents of College of Engineering, Guindy (50.33%) and Meenakshi College of Engineering (45.33%).

Out of the total 1800 respondents, 39.73 percent of the respondents are highly satisfied with access to multimedia teaching and learning resources, 33.50 percent of the respondents have satisfaction and the rest 26.67 percent of them have dissatisfaction in this regard. The respondents of College of Engineering, Guindy occupy the first position with respect to high level satisfaction on access to multimedia teaching and learning service and the respondents of Jawahar Engineering College lag behind others. In this study, 39.89 per cent of the respondents state that they are highly satisfied access to all library websites, 31.33 per cent of them are satisfied and the rest 21.78 per cent of them are dissatisfied in this regard. The dissatisfaction of access to all library websites is quite common among the respondents of Measi Academy of Architecture.

It is observed that out of the total 1800 respondents, 41.22 per cent of them are highly satisfied with access to library network, 32.06 percent of them are satisfied and the rest 26.72 per cent of them are dissatisfied. A more than half of the respondents of College of Engineering, Guindy (53%) are highly satisfied with access to library network. The dissatisfaction of access to library network is quite common among the respondents of Measi Academy of Architecture (36.67%) and Loyola - ICAM college of Engineering and Technology (27.67%). In this study, 42.83 per cent of respondents are highly satisfied with utilization of library internet facility, 32.44 percent of them are satisfied and the rest 24.72 percent of them are dissatisfied in

this regard. A more than half of the respondent of College of Engineering, Guindy (56.53%) and Meenakshi College of Engineering are highly satisfied with utilization of library internet facility and the respondents of remaining Institutions are considerably satisfied with this service. Regarding access to reprographic services, 43.67 percent of the total respondents are highly satisfied, 33.28 percent of the respondents are satisfied and the rest 23.06 percent of them are dissatisfied with this regard. The dissatisfaction of access to reprographic service is quite common among the respondents of Measi Academy of Architecture (34).

Out of the total 1800 respondents, 44 percent of them report to have high level satisfaction with collection of research reviews and abstracts in library, 33.44 percent of them have satisfaction and the rest 22.56 percent of them state that they have dissatisfaction in this regard. The high level satisfaction of collection of research reviews and abstracts in library is quite common among the respondents of College of Engineering, Guindy (63.67%), Meenakshi College of Engineering (54%) and Meenakshi Sundararajan College of Engineering (41.33%). Regarding attitude of staff members, 38.67 percent of the total respondents said to have high level satisfaction, 30 per cent of them have satisfaction and the rest 31.33 percent of them have dissatisfaction in this regard. The dissatisfaction about attitude of staff members is quite common among the respondents of Jawahar Engineering College (32.33%), Loyola - ICAM

college of Engineering and Technology (37.33%), and Meenakshi Sundararajan College of Engineering (34%). It is observed that out of the total 1800 respondents 44.06 per cent of them are highly satisfied with library working procedure, 33.44 percent of them are satisfied and the rest 22.50 per cent of them are dissatisfied. A more than half of the respondents of College of Engineering, Guindy (64%) and Meenakshi College of Engineering (54%) are highly satisfied with library working procedure. The dissatisfaction about library working procedure is quite common among the respondents of Measi Academy of Architecture (33.33%). In this study, 43.72 per cent of respondents are highly satisfied with lighting facility inside the library, 33.28 percent of them are satisfied and the rest 23 percent of them are dissatisfied in this regard. A more than half of the respondents of College of Engineering, Guindy (57.33%) and Meenakshi College of Engineering (53.33%) are highly satisfied with lighting facility inside the library and the respondents of remaining Institutions are considerably satisfied with this service. Regarding hygienic maintenance of library environment, 42.89 percent of the total respondents are highly satisfied, 32.44 percent of the respondents are satisfied and the rest 24.67 percent of them are dissatisfied with this regard. The dissatisfaction of hygienic maintenance of library environment is quite common among the respondents of Measi Academy of Architecture (35.67%). Out of the total 600 respondents, 41.28 percent of them report to have high level satisfaction with drinking

water facility inside the library premises, 32.06 percent of them have satisfaction and the rest 26.67 percent of them state that they have dissatisfaction in this regard. The high level satisfaction with drinking water facility in library is quite common among the respondents of College of Engineering, Guindy (53.33%), Meenakshi College of Engineering (49.37%) and Meenakshi Sundararajan College of Engineering (37.33%). Regarding toilet facility inside the library, 39.94 percent of the total respondents said to have high level satisfaction, 31.33 per cent of them have satisfaction and the rest 28.72 percent of them have dissatisfaction in this regard. The dissatisfaction about toilet facility is quite common among the respondents of Measi Academy of Architecture (38%), Meenakshi College of Engineering (30%). In this study, 39.89 per cent of respondents are highly satisfied with access to E-journals, 33.50 percent of them are satisfied and the rest 26.61 percent of them are dissatisfied in this regard. A more than half of the respondents of College of Engineering, Guindy (51.33%) are highly satisfied with access to E-journals and the respondents of remaining Institutions are considerably satisfied with this service.

The Chi square test is applied for further discussion. The computed chi square value is 185.7 is greater than its tabulated value at 5 percent level of significance. Hence the difference in institutional status is statistically identified as significant with respect to respondents' extent of

satisfaction with users' doubt clarification. A similar result has been observed with respect to respondents' views on extent of satisfaction on access to electronic resources, physical accessibility of service, proper attention to users enquiry, provision of relevant information, intellectual accessibility of services, user expectations within stated aims of service, promotion of resources, data based service, consideration of user needs in library services, adequate study space, ventilation facility, responsive hours of opening, provision of facilities to people with special needs, provision of innovative work environment, fire protection measures, participation of users in selection process, acquisition of resources to users' needs, organizational and institutional culture, access to standard and patent resources, getting suggestions for improvement, access to multimedia teaching and learning resources, access to all library websites, access to library network, utilization of internet facility, access to reprographic service, collection of research reviews and abstracts, attitude of staff members, library working procedure, lighting, hygienic maintenance of library environment, drinking water, toilet facility inside the library and access to e-journals. It could be seen clearly from the above discussion that a more than half of the respondents are highly satisfied with library organizational and institutional culture, acquisition of resources to users' needs and consideration of user needs in library services. A more than 40 per cent of the respondents are highly satisfied with participation

of users in library resource selection process, proper attention to users enquiry, provision of facilities to people with special needs, library working procedure, collection of research reviews and abstracts, lighting facility inside the library, access to reprographic service, hygienic maintenance of library environment, utilization of internet facility inside the library, adequate study space inside the library, fire protection measures inside the library, drinking water facility inside the library, access to library network and promotion of resources. Nearly 35-40 per cent of the respondents are highly satisfied with toilet facility inside the library, access to all library websites, access to e-journals, access to multimedia teaching and learning resources, access to standard and patent resources, getting suggestions for improvement from the users, provision of innovative work environment, attitude of staff members, doubt clarification, access to electronic resources, user expectations within stated aims of service and intellectual access to services. Nearly 25-30 per cent of the respondents are highly satisfied with responsive hours of library opening; provision of relevant information, ventilation facility inside the library, physical access to electronic service, data base service and proper functioning of enquiry cell. The respondents of College of Engineering, Guindy occupy the first position with respect to their high level satisfaction on proper functioning of library enquiry cell, proper attention to users' enquiry, provision of relevant information, doubt clarification procedure, and all other library

facilities and services. In general, the respondents of Meenakshi College of Engineering take the second position with respect to their overall satisfaction on library facilities and services, respondents of Meenakshi Sundararajan College of Engineering the third, respondents of Measi Academy of Architecture the fourth, respondents of Loyola - ICAM college of Engineering and Technology the fifth and the respondents of Jawahar Engineering College the last.

4.2. Table. Designation Wise Respondents’ Extent on Satisfaction of Library Services:

Designation	Doubt clarification			Access to electronic resources			Physical accessibility of service		
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied
Senior Professors	160 (49.23)	89 (27.38)	76 (23.38)	155 (47.69)	112 (34.46)	58 (17.85)	79 (24.31)	111 (34.15)	135 (41.54)
Professors	136 (50.37)	87 (32.22)	47 (17.41)	142 (52.59)	85 (31.48)	43 (15.93)	85 (31.48)	80 (29.63)	105 (38.89)
Associate Professors	115 (28.75)	116 (29.00)	169 (42.25)	111 (27.75)	131 (32.75)	158 (39.50)	90 (22.50)	69 (17.25)	241 (60.25)
Assistant Professors	79 (26.33)	67 (22.33)	154 (51.33)	87 (29.00)	52 (17.33)	161 (53.67)	98 (32.67)	52 (17.33)	150 (50.00)
Students	196 (38.81)	67 (13.27)	242 (47.92)	168 (33.27)	115 (22.77)	222 (43.96)	203 (40.20)	188 (37.23)	114 (22.57)
Total	686 (38.11)	426 (23.67)	688 (38.22)	663 (36.83)	495 (27.50)	642 (35.67)	555 (30.83)	500 (27.78)	745 (41.39)

Designation	Proper functioning of enquiry cell			Proper attention to users enquiry			Provision of relevant information		
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied
Senior Professors	100 (30.77)	96 (29.54)	129 (39.69)	200 (61.54)	72 (22.15)	53 (16.31)	132 (40.62)	101 (31.08)	92 (28.31)
Professors	89 (32.96)	85 (31.48)	96 (35.56)	167 (61.85)	69 (25.56)	34 (12.59)	112 (41.48)	87 (32.22)	71 (26.30)
Associate Professors	119 (29.75)	72 (18.00)	209 (52.25)	226 (56.50)	85 (21.25)	89 (22.25)	101 (25.25)	136 (34.00)	163 (40.75)
Assistant Professors	102 (34.00)	65 (21.67)	133 (44.33)	155 (51.67)	76 (25.33)	69 (23.00)	89 (29.67)	69 (23.00)	142 (47.33)
Students	68 (13.47)	258 (51.09)	179 (35.45)	84 (16.63)	206 (40.79)	215 (42.57)	158 (31.29)	74 (14.65)	273 (54.06)
Total	478 (26.56)	576 (32.00)	746 (41.44)	832 (46.22)	508 (28.22)	460 (25.56)	592 (32.89)	467 (25.94)	741 (41.17)

Designation	Intellectual accessibility of services			User expectations within stated aims of service			Promotion of resources		
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied
Senior Professors	95 (29.23)	101 (31.08)	129 (39.69)	84 (25.85)	99 (30.46)	142 (43.69)	165 (50.77)	81 (24.92)	79 (24.31)
Professors	80 (29.63)	78 (28.89)	112 (41.48)	69 (25.56)	59 (21.85)	142 (52.59)	121 (44.81)	68 (25.19)	81 (30.00)
Associate Professors	65 (16.25)	79 (19.75)	256 (64.00)	110 (27.50)	86 (21.50)	204 (51.00)	241 (60.25)	76 (19.00)	83 (20.75)
Assistant Professors	112 (37.33)	85 (28.33)	103 (34.33)	115 (38.33)	78 (26.00)	107 (35.67)	115 (38.33)	85 (28.33)	100 (33.33)
Students	314 (62.18)	148 (29.31)	43 (8.51)	285 (56.44)	113 (22.38)	107 (21.19)	93 (18.42)	150 (29.70)	262 (51.88)
Total	666 (37.00)	491 (27.28)	643 (35.72)	663 (36.83)	435 (24.17)	702 (39.00)	735 (40.83)	460 (25.56)	605 (33.61)

Designation	Data based service			Consideration of user needs in library services			Adequate study space		
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied
Senior Professors	135 (41.54)	110 (33.85)	80 (24.62)	239 (73.54)	55 (16.92)	31 (9.54)	159 (48.92)	86 (26.46)	80 (24.62)
Professors	87 (32.22)	56 (20.74)	127 (47.04)	180 (66.67)	33 (12.22)	57 (21.11)	118 (43.70)	66 (24.44)	86 (31.85)
Associate Professors	112 (28.00)	89 (22.25)	199 (49.75)	205 (51.25)	87 (21.75)	108 (27.00)	248 (62.00)	79 (19.75)	73 (18.25)
Assistant professors	95 (31.67)	75 (25.00)	130 (43.33)	155 (51.67)	59 (19.67)	86 (28.67)	110 (36.67)	87 (29.00)	103 (34.33)
Students	120 (23.76)	48 (9.50)	337 (66.73)	159 (31.49)	208 (41.19)	138 (27.33)	120 (23.76)	139 (27.52)	246 (48.71)
Total	549 (30.50)	378 (21.00)	873 (48.50)	938 (52.11)	442 (24.56)	420 (23.33)	755 (41.94)	457 (25.39)	588 (32.67)

Designation	Ventilation facility			Responsive hours of opening			Provision of facilities to people with special needs		
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied
Senior Professors	131 (40.31)	101 (31.08)	93 (28.62)	143 (44.00)	96 (29.54)	86 (26.46)	200 (61.54)	86 (26.46)	39 (12.00)
Professors	80 (29.63)	46 (17.04)	144 (53.33)	85 (31.48)	48 (17.78)	137 (50.74)	136 (50.37)	72 (26.67)	62 (22.96)
Associate Professors	111 (27.75)	87 (21.75)	202 (50.50)	118 (29.50)	85 (21.25)	197 (49.25)	210 (52.50)	79 (19.75)	111 (27.75)
Assistant Professors	98 (32.67)	79 (26.33)	123 (41.00)	96 (32.00)	76 (25.33)	128 (42.67)	116 (38.67)	112 (37.33)	72 (24.00)
Students	156 (30.89)	189 (37.43)	160 (31.68)	161 (31.88)	292 (57.82)	52 (10.30)	154 (30.50)	131 (25.94)	220 (43.56)
Total	576 (32.00)	502 (27.89)	722 (40.11)	603 (33.50)	597 (33.17)	600 (33.33)	816 (45.33)	480 (26.67)	504 (28.00)

Designation	Provision of innovative work environment			Fire protection measures			Participation o users in selection process		
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied
Senior Professors	170 (52.31)	76 (23.38)	79 (24.31)	165 (50.77)	80 (24.62)	80 (24.62)	189 (58.15)	90 (27.69)	46 (14.15)
Professors	126 (46.67)	59 (21.85)	85 (31.48)	122 (45.19)	62 (22.96)	86 (31.85)	171 (63.33)	66 (24.44)	33 (12.22)
Associate Professors	180 (45.00)	86 (21.50)	134 (33.50)	256 (64.00)	77 (19.25)	67 (16.75)	160 (40.00)	87 (21.75)	153 (38.25)
Assistant Professors	116 (38.67)	96 (32.00)	88 (29.33)	112 (37.33)	89 (29.67)	99 (33.00)	121 (40.33)	92 (30.67)	87 (29.00)
Students	107 (21.19)	244 (48.32)	154 (30.50)	113 (22.38)	252 (49.90)	140 (27.72)	195 (38.61)	130 (25.74)	180 (35.64)
Total	699 (38.83)	561 (31.17)	540 (30.00)	768 (42.67)	560 (31.11)	472 (26.22)	836 (46.44)	465 (25.83)	499 (27.72)

Designation	Acquisition of resources to users' needs			Organizational and institutional culture			Access to standard and patent resources		
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied
Senior Professors	204 (62.77)	86 (26.46)	35 (10.77)	210 (64.62)	80 (24.62)	35 (10.77)	195 (60.00)	90 (27.69)	40 (12.31)
Professors	180 (66.67)	52 (19.26)	38 (14.07)	190 (70.37)	42 (15.56)	38 (14.07)	181 (67.04)	22 (8.15)	67 (24.81)
Associate Professors	262 (65.50)	99 (24.75)	39 (9.75)	202 (50.50)	97 (24.25)	101 (25.25)	162 (40.50)	86 (21.50)	152 (38.00)
Assistant Professors	118 (39.33)	86 (28.67)	96 (32.00)	116 (38.67)	85 (28.33)	99 (33.00)	95 (31.67)	86 (28.67)	119 (39.67)
Students	191 (37.82)	146 (28.91)	168 (33.27)	271 (53.66)	172 (34.06)	62 (12.28)	80 (15.84)	311 (61.58)	114 (22.57)
Total	955 (53.06)	469 (26.06)	376 (20.89)	989 (54.94)	476 (26.44)	335 (18.61)	713 (39.61)	595 (33.06)	492 (27.33)

Designation	Getting suggestions for improvement			Access to multimedia teaching and learning resources			Access to all library websites		
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied
Senior Professors	186 (57.23)	86 (26.46)	53 (16.31)	191 (58.77)	81 (24.92)	53 (16.31)	185 (56.92)	79 (24.31)	61 (18.77)
Professors	167 (61.85)	67 (24.81)	36 (13.33)	170 (62.96)	65 (24.07)	35 (12.96)	177 (65.56)	63 (23.33)	30 (11.11)
Associate Professors	159 (39.75)	85 (21.25)	156 (39.00)	162 (40.50)	84 (21.00)	154 (38.50)	166 (41.50)	87 (21.75)	147 (36.75)
Assistant Professors	98 (32.67)	76 (25.33)	126 (42.00)	95 (31.67)	75 (25.00)	130 (43.33)	96 (32.00)	79 (26.33)	125 (41.67)
Students	95 (18.81)	289 (57.23)	121 (23.96)	99 (19.60)	298 (59.01)	108 (21.39)	94 (18.61)	256 (50.69)	155 (30.69)
Total	705 (39.17)	603 (33.50)	492 (27.33)	717 (39.83)	603 (33.50)	480 (26.67)	718 (39.89)	564 (31.33)	518 (28.78)

Designation	Access to library network			Utilization of internet facility			Access to reprographic service		
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied
Senior Professors	197 (60.62)	72 (22.15)	56 (17.23)	201 (61.85)	66 (20.31)	58 (17.85)	251 (77.23)	52 (16.00)	22 (6.77)
Professors	171 (63.33)	69 (25.56)	30 (11.11)	176 (65.19)	57 (21.11)	37 (13.70)	196 (72.59)	44 (16.30)	30 (11.11)
Associate Professors	152 (38.00)	81 (20.25)	167 (41.75)	155 (38.75)	89 (22.25)	156 (39.00)	202 (50.50)	101 (25.25)	97 (24.25)
Assistant Professors	90 (30.00)	73 (24.33)	137 (45.67)	96 (32.00)	79 (26.33)	125 (41.67)	101 (33.67)	87 (29.00)	112 (37.33)
Students	132 (26.14)	282 (55.84)	91 (18.02)	143 (28.32)	293 (58.02)	69 (13.66)	36 (7.13)	314 (62.18)	155 (30.69)
Total	742 (41.22)	577 (32.06)	481 (26.72)	771 (42.83)	584 (32.44)	445 (24.72)	786 (43.67)	598 (33.22)	416 (23.11)

Designation	Collection of research reviews and abstracts			Attitude of staff members			Library working procedure		
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied
Senior Professors	198 (60.92)	52 (16.00)	75 (23.08)	158 (48.62)	110 (33.85)	57 (17.54)	199 (61.23)	52 (16.00)	74 (22.77)
Professors	133 (49.26)	76 (28.15)	61 (22.59)	144 (53.33)	80 (29.63)	46 (17.04)	133 (49.26)	76 (28.15)	61 (22.59)
Associate Professors	102 (25.50)	190 (47.50)	108 (27.00)	110 (27.50)	139 (34.75)	151 (37.75)	102 (25.50)	190 (47.50)	108 (27.00)
Assistant Professors	87 (29.00)	112 (37.33)	101 (33.67)	89 (29.67)	110 (36.67)	101 (33.67)	87 (29.00)	112 (37.33)	101 (33.67)
Students	272 (53.86)	172 (34.06)	61 (12.08)	195 (38.61)	101 (20.00)	209 (41.39)	272 (53.86)	172 (34.06)	61 (12.08)
Total	792 (44.00)	602 (33.44)	406 (22.56)	696 (38.67)	540 (30.00)	564 (31.33)	793 (44.06)	602 (33.44)	405 (22.50)

Designation	Lighting			Hygienic maintenance of library environment			Drinking water		
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied
Senior Professors	252 (77.54)	52 (16.00)	21 (6.46)	202 (62.15)	66 (20.31)	57 (17.54)	198 (60.92)	72 (22.15)	55 (16.92)
Professors	196 (72.59)	44 (16.30)	30 (11.11)	176 (65.19)	57 (21.11)	37 (13.70)	171 (63.33)	69 (25.56)	30 (11.11)
Associate Professors	202 (50.50)	101 (25.25)	97 (24.25)	155 (38.75)	89 (22.25)	156 (39.00)	152 (38.00)	81 (20.25)	167 (41.75)
Assistant Professors	101 (33.67)	87 (29.00)	112 (37.33)	96 (32.00)	79 (26.33)	125 (41.67)	90 (30.00)	73 (24.33)	137 (45.67)
Students	36 (7.13)	314 (62.18)	155 (30.69)	143 (28.32)	293 (58.02)	69 (13.66)	132 (26.14)	282 (55.84)	91 (18.02)
Total	787 (43.72)	598 (33.22)	415 (23.06)	772 (42.89)	584 (32.44)	444 (24.67)	743 (41.28)	577 (32.06)	480 (26.67)

Designation	Toilet facility inside the library			Access to e-journals			Total
	Highly satisfied	Satisfied	Dis satisfied	Highly satisfied	Satisfied	Dis satisfied	
Senior Professors	186 (57.23)	79 (24.31)	60 (18.46)	192 (59.08)	81 (24.92)	52 (16.00)	325
Professors	177 (65.56)	63 (23.33)	30 (11.11)	170 (62.96)	65 (24.07)	35 (12.96)	270
Associate Professors	166 (41.50)	87 (21.75)	147 (36.75)	162 (40.50)	84 (21.00)	154 (38.50)	400
Assistant Professors	96 (32.00)	79 (26.33)	125 (41.67)	95 (31.67)	75 (25.00)	130 (43.33)	300
Students	94 (18.61)	256 (50.69)	155 (30.69)	99 (19.60)	298 (59.01)	108 (21.39)	505
Total	719 (39.94)	564 (31.33)	517 (28.72)	718 (39.89)	603 (33.50)	479 (26.61)	1800

Source Computed

Figures in parenthesis denote percentages

Chi Square Summary Result

Institutions	Chi square calculated value	Degrees of freedom	Chi square tabulate value
Doubt clarification	156.7	8	15.5
Access to electronic resources	168.1	8	15.5
Physical accessibility of service	160.6	8	15.5
Proper functioning of enquiry cell	158.1	8	15.5
Proper attention to users enquiry	266.8	8	15.5
Provision of relevant information	114.4	8	15.5
Intellectual accessibility of services	351.8	8	15.5
User expectations within stated aims of service	161.8	8	15.5
Promotion of resources	198.8	8	15.5
Data based service	156.4	8	15.5
Consideration of user needs in library services	202.9	8	15.5
Adequate study space	163.8	8	15.5
Ventilation facility	86.94	8	15.5
Responsive hours of opening	297.1	8	15.5
Provision of facilities to people with special needs	150.0	8	15.5
Provision of innovative work environment	142.8	8	15.5
Fire protection measures	207.5	8	15.5
Participation of users in selection process	117.3	8	15.5
Acquisition of resources to users' needs	167.5	8	15.5
Organizational and institutional culture	125.5	8	15.5
Access to standard and patent resources	423.0	8	15.5
Getting suggestions for improvement	318.3	8	15.5
Access to multimedia teaching and learning resources	349.6	8	15.5
Access to all library websites	283.0	8	15.5
Access to library network	349.3	8	15.5
Utilization of internet facility	349.3	8	15.5
Access to reprographic service	583.6	8	15.5
Collection of research reviews and abstracts	181.9	8	15.5
Attitude of staff members	127.8	8	15.5

Library working procedure	182.6	8	15.5
Lighting	586.4	8	15.5
Hygienic maintenance of library environment	350.9	8	15.5
Drinking water	351.1	8	15.5
Toilet facility inside the library	284.5	8	15.5
Access to e-journals	351.4	8	15.5

A study on data in table 4.2 indicates the designation wise respondents' extent of satisfaction of library services. The Senior Professors respondents occupy the first position with respect to their high level satisfaction on consideration of users' needs in library service (73.54%), adequate study space inside the library (48.92%), ventilation facility inside the library (40.31%), responsive hours of library opening (44%), provision of facilities to people with special needs (61.54%), provision of innovative working environment (52.31%), access to reprographic service (77.23%), collection of research reviews and abstracts (60.92%), library working procedure(61.23%) and lighting facility inside the library (77.54%). The reader respondents take the first position with respect to their high level satisfaction on proper attention to users' enquiry (61.85%), provision of relevant library information (41.48%), doubt clarification (50.37%), access to electronic resources (52.59%), participation of users in library resources selection process (63.33%), acquisition of resources to user needs (66.67%), library organizational and institutional culture (70.37%), access to standard and patent resources (67.04%), getting suggestion from users for library improvement (61.85%), access to multimedia teaching and learning resources (62.96%), access

to all library websites (65.56%), access to library network (63.33%), utilization o library internet facility (65.19%), attitude of library staff members (53.33%), hygienic maintenance of library (65.19%), drinking water facility inside the library (63.33%), toilet facility inside the library (65.56%) and access to E-journals (62.96%). The Associate Professor respondents rank the first position with respect to their high level satisfaction on promotion of library resources (60.25%). The student respondents rank the first position with respect to their high level satisfaction on intellectual access to library resources (62.18%), and user expectations within stated aims of services (56.44%).

The Chi square test is applied for further discussion. The computed chi square value is 156.7 is greater than its tabulated value at 5 percent level of significance. Hence the difference in designation status is statistically identified as significant with respect to respondents' extent of satisfaction with users' doubt clarification. A similar result has been observed with respect to respondents' views on extent of satisfaction on access to electronic resources, physical accessibility of service, proper attention to users enquiry, provision of relevant information, intellectual accessibility of services, user

expectations within stated aims of service, promotion of resources, data based service, consideration of user needs in library services, adequate study space, ventilation facility, responsive hours of opening, provision of facilities to people with special needs, provision of innovative work environment, fire protection measures, participation of users in selection process, acquisition of resources to users' needs, organizational and institutional culture, access to standard and patent resources, getting suggestions for improvement, access to multimedia teaching and learning resources, access to all library websites, access to library network, utilization of internet facility, access to reprographic service, collection of research reviews and abstracts, attitude of staff members, library working procedure, lighting, hygienic maintenance of library environment, drinking water, toilet facility inside the library and access to e-journals. It could be seen clearly from the above discussion that Professors occupy the first position with respect to their high level satisfaction on overall library facilities and services and Senior Professors respondents take the second position. Majority of the Assistant Professors and Associate Professors are dissatisfied with proper functioning of library enquiry cell, provision of relevant information, doubt clarification, physical access to services, data base service, ventilation facility inside the library, access to library network, utilization of internet facility, drinking water facility inside the library and access to E-journals. In general, majority of the student respondents are

satisfied with some library services and facilities and they have dissatisfaction particularly in getting relevant library information, access to electronic resources and data base service.

5. Findings & Conclusion:

The findings of the present study lead to the concluding remarks.

The findings of the **Satisfaction on Library Services** reveal the following facts. That a more than half of the respondents are highly satisfied with library organizational and institutional culture, acquisition of resources to users' needs and consideration of user needs in library services. A more than 40 per cent of the respondents are highly satisfied with participation of users in library resource selection process, proper attention to users enquiry, provision of facilities to people with special needs, library working procedure, collection of research reviews and abstracts, lighting facility inside the library, access to reprographic service, hygienic maintenance of library environment, utilization of internet facility inside the library, adequate study space inside the library, fire protection measures inside the library, drinking water facility inside the library, access to library network and promotion of resources. Nearly 35-40 per cent of the respondents are highly satisfied with toilet facility inside the library, access to all library websites, access to e-journals, access to multimedia teaching and learning resources, access to standard and patent resources, getting

suggestions for improvement from the users, provision of innovative work environment, attitude of staff members, doubt clarification, access to electronic resources, user expectations within stated aims of service and intellectual access to services. Nearly 25-30 per cent of the respondents are highly satisfied with responsive hours of library opening; provision of relevant information, ventilation facility inside the library, physical access to electronic service, data base service and proper functioning of enquiry cell. The respondents of College of Engineering, Guindy occupy the first position with respect to their high level satisfaction on proper functioning of library enquiry cell, proper attention to users' enquiry, provision of relevant information, doubt clarification procedure, and all other library facilities and services. In general, the respondents of Meenakshi College of Engineering take the second position with respect to their overall satisfaction on library facilities and services, respondents of Meenakshi Sundararajan College of Engineering the third, respondents of Measi Academy of Architecture the fourth, respondents of Loyola - ICAM college of Engineering and Technology the fifth and the respondents of Jawahar Engineering College the last.

The Designation analysis wise that Professors occupy the first position with respect to their high level satisfaction on overall library facilities and services and Senior Professors respondents take the second position. Majority of the Assistant Professors and Associate Professors are

dissatisfied with proper functioning of library enquiry cell, provision of relevant information, doubt clarification, physical access to services, data base service, ventilation facility inside the library, access to library network, utilization of internet facility, drinking water facility inside the library and access to E-journals. In general, majority of the student respondents are satisfied with some library services and facilities and they have dissatisfaction particularly in getting relevant library information, access to electronic resources and data base service.

5.1. Suggestions:

The following suggestions made by the Researcher on the basis of analysis of the data suggestions received from the Users. It is suggested that the following will be helpful for Library, Librarians and the Users of the Engineering Colleges Libraries to use its resources to be maximum extent. It will help the user for their extensive ready and intensive research.

- First all departments should have digital library. If it is already having in this facilities, It should be updating the latest technology.
- Arrangement should be made to provide more internet access facilities to the users in the library for e-mail, browsing internet, accessing e-journals, Web OPAC and accessing as in other libraries.

- Periodical/Book misplaced should be corrected every day.
- Orientation program should be arranged for fresher in each library.
- It is suggested that new arrival of books and Journals should be displayed in separate rack.
- It is suggested that more Book Bank Books may be purchased.
- Library should be fully Air-Conditioned.
- Library hour should be marked in student's time table.
- Faculty and research scholars are exposed to the internet search technique and online information retrieval. Lot of awareness should be created to the users to know about the available in various departments.
- Untraceful register should be keeping it in every stack area for users. (In case any difficulty to find out the books from stack area).

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