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# EXPLOIT OF INFORMATION RESOURCE IN JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA AFFILIATED ENGINEERING COLLEGES LIBRARY USERS : A SURVEY

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## Abstract

Reading interests, information use pattern change from person to person. Libraries differ from college to college. The faculty use libraries for their study research, teaching and publication purpose. Libraries are the central and focal points for educational development. Moreover most of the libraries run by JNTU, Kakinada come under purview of University Grants Commission. There is no study conducted on the state-of-the- art of the libraries run by JNTU, Kakinada, and user's survey of these libraries. Therefore it is thought necessary to conduct a systematic survey of libraries of JNTU, Kakinada run educational institutions and to conduct user's survey of those libraries.

**Keywords:** Information Resource, Engineering Colleges, Users

## Introduction

Information is copiously needed in all the stages of human development. People need information for almost everything in their life. The human being is, thus considered as an 'information-seeker'. However, information-seeking[1] can often be an expensive and time-consuming process. Much time could be required to sift through irrelevant items to locate the required information. As we know, for information to be of optimum use, it must possess the

qualities such as relevance, accuracy, timeliness, currency, completeness, clarity and cost-effectiveness. Information is the end result of processing, manipulating and organizing[2] the data in a way that adds to the knowledge of the receiver. In other words, it is the context in which data is taken. Information as a concept bears a diversity of meanings, from everyday usage to technical settings. Generally speaking, the concept of information is closely related to notions of constraint, communication, control, data, form, instruction, knowledge, meaning, mental stimulus, pattern, perception and representation. Information is anything that can change a person's state of knowledge and physical representations[3] of abstractions that can cause considerable change. It is evident that relevant information increases knowledge, reduces redundancy and is usable for the intended purposes.

Bhatia and Venkata Rao (2011)[4] presents the results of a survey of the information seeking behaviour of students at Dev Samaj College, Chandigarh. The purpose of the survey was to explore the use of information technology by the college students for seeking information and to know how they access e-resources. The study made an effort to determine the sources of accessing e-resources in particular. A questionnaire was randomly circulated to one hundred students, who visited the library. The overall response rate was 64%. It was revealed that less than fifty percent of the respondents were not aware about e-resources. It was found that the students of the College use search engines as a major source to access e-resources for their information needs and for the purpose of updating knowledge on their subjects of interest. In order to overcome the hindrances in accessing the e- resources, the study recommends awareness programmes for the students and to provide training on web searching and retrieval skills.

Korobili and et al. (2011)[5] reports on the methodology and results of a survey studying the information-seeking behavior of philosophy and engineering graduate students at Aristotle University of Thessaloniki in Greece. The article provides statistical analysis regarding students' self-evaluations of information-seeking abilities and habits, as well as various results from the study's findings, including level of experience with computers, usage of electronic databases, and the ability to retrieve data from search engines. The survey revealed that the difference in engineering and philosophy disciplines did not significantly affect information seeking behavior.

Sheela and Shivaram (2011)[6] discussed that the Information Seeking is the process or activity of attempting to obtain information in both human and technological contexts. Information seeking is related to, but yet different from, information retrieval (IR). Much library and information science research is focused on the information seeking practices of practitioners in various fields of professional work. Studies have been carried out on the information seeking behaviour of librarians, academics, medical professionals, engineers and lawyers. Much of this research has been drawn on the work done by Leckw, Petttigrew and Sylvain, who in 1996 conducted an extensive review of the library and information science literature on information seeking behavior of professionals. Some experts report on a study concerned with understanding people's adaptation to new information searching environments. The experts have investigated how people with varying degrees of familiarity with information retrieval systems and varying models of information retrieval processes, interacted in an information retrieval system which did not support exact match retrieval with. Structured queries, but which did support best match ranked output retrieval with unstructured queries and automatic relevance feedback. The results include a classification of normal information retrieval strategies, the description of several adaptation strategies and the relationships between type and strength of people's mental models of information retrieval and their searching behaviours in the new information retrieval context.

Siva Prasad, Prasad Rao and Venkata Rao (2011)[7] reports a study of 52 doctoral theses in Marine Geology submitted to Andhra University during the period 1954-2009. A total of 9,453 citations were analysed for identifying their bibliographic form, authorship pattern, ranking of cited journals and subject wise distributions of citations. The finding reveals that nearly 71.27% citations were from journals and 13.51% from books. The subject wise distribution of theses reveals that sedimentology, Geology, Marine Geology, Oceanography, Geochemistry and General Science and forms 73.16% more than half of the total theses submitted during the period. USA, India and UK are contributes 7875 (83.77%) citations. The authorship patter study reveals that the highest number of journal citations from multi authors nearly 73.7%.

**Objectives**

The following are the objectives of the study.

i. To trace the genesis, growth and development of Engineering and Technical Education in Andhra Pradesh

ii. To survey the engineering college libraries affiliated to Jawaharlal Nehru Technological University, Kakinada, Andhra Pradesh.

iii. To identify the information needs and Information Seeking Behaviour of engineering college faculty affiliated to Jawaharlal Nehru Technological University, Kakinada.

iv. To know the availability of information resources in engineering college libraries.

v. To understand the type of materials preferred by the faculty of these Engineering colleges under study.

**Scope and limitations of the study**

The present study has the following limitations.

i. This study has covered fifty selected engineering colleges affiliated to Jawaharlal Nehru Technological University, Kakinada which were established before 2002.

ii. This study is primarily concerned with the faculty and librarians of selected engineering colleges under Jawaharlal Nehru Technological University, Kakinada.

iii. The students are not covered in the study.

**Research Methodology**

The revised and adapted questionnaire was administered to all the regular faculty members of the affiliated to JNTU, Kakinada library users. Out of 1500 faculty members of the fifty selected Engineering College libraries Affiliated to JNTU, Kakinada of Andhra Pradesh, 1185 have responded and table 1 response rate is 79%

**Table 1: Sample Size**

| S.No. | Name of the Districts | No of colleges | Questionnaires distributed | Questionnaires received | Percentage |
|---|---|---|---|---|---|
| 1 | Srikakulam | 3 | 90 | 71 | 78.89 |
| 2 | Vizianagaram | 4 | 120 | 95 | 79.17 |
| 3 | Visakhapatnam | 8 | 240 | 185 | 77.08 |
| 4 | East Godavari | 8 | 240 | 194 | 80.83 |

| | | | | | |
|---|---|---|---|---|---|
| 5 | West Godavari | 8 | 240 | 188 | 78.35 |
| 6 | Krishna | 5 | 150 | 120 | 80.00 |
| 7 | Guntur | 6 | 180 | 147 | 81.67 |
| 8 | Prakasam | 8 | 240 | 185 | 77.08 |
| **TOTAL** | | **50** | **1500** | **1185** | **79.00** |

Average response rate is **79%**

**Data Analysis and Interpretation**

After the collection of the data from the members of Engineering faculty and librarians, the data were checked and analyzed according to the objectives. The data has been tested with various statistical tools by using the SPSS. The data has been presented in the form of tables and figures.

**Gender-wise classification of Respondents**

The responses of faculty based on gender have been elicited to assess and ascertain the information needs and information seeking behaviour of male and female faculty whether male or female faculty visits library more. The responses based on gender are presented in the table 2 and Figure 1.

**Table 2: Gender-wise classification of Respondents**

| S.No. | Sex | Number of questionnaires distributed | Number of questionnaires received | Percentage |
|---|---|---|---|---|
| **1** | **Male** | **1050** | **853** | **72.00** |
| **2** | **Female** | **450** | **332** | **28.00(74)** |
| **Total** | | **1500** | **1185** | **100.00(79)** |

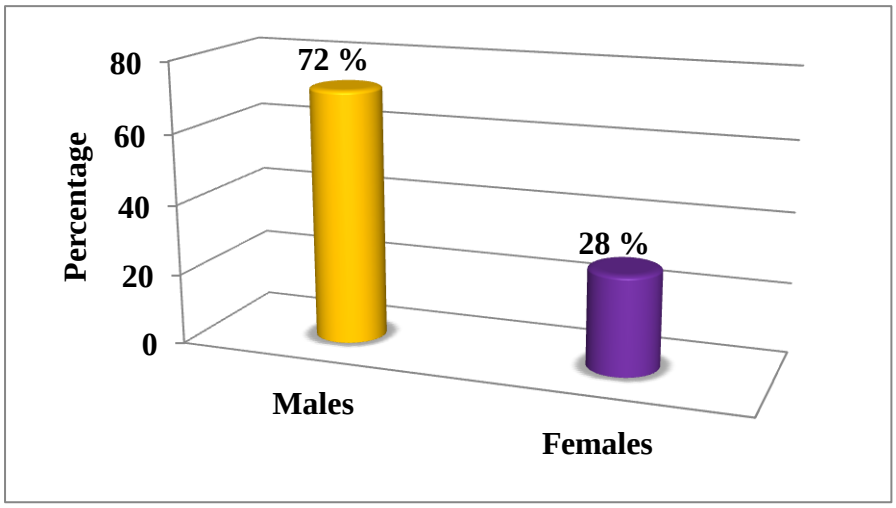


**Figure 1: classification of Gender**

The table 2 depicts that that 853 males (72 %) out of 1050 respondents and 332 females (74%) out of 450 respondents sent questionnaires after filling. It is concluded that majority of the questionnaires were received from females (74%). Female outnumbered males in responding and sending the questionnaires.

**Age-wise classification of Respondents**

Age shows maturity and experience and accrues the responsibility. Hence the responses of the respondents based on age have been elicited to know whether age influence the response and presented in the table 3.

**Table 3: Age-wise classification of respondents**

| S.No. | Age(years) | Number of respondents | Percentage |
|---|---|---|---|
| 1 | Below 30 | 261 | 22.00 |
| 2 | Between31and 40 | 474 | 40.00 |
| 3 | Between41and 50 | 237 | 20.00 |
| 4 | Between51and 60 | 154 | 13.00 |
| 5 | Above 60 | 59 | 5.00 |
| **Total** | | **1185** | **100.00** |

The table 3 portrays the frequency distribution of the respondents by their age. Here the classification contains mainly five types. The classification clearly shows that 261 faculty members (22%) come under below 30 years age group, 474 faculty members (40%) come under 31-40 years age group, 237 faculty members (20%) come under 41-50 years age group, 154 faculty members (13%) come under 51-60 years age group and finally 59 faculty members (5%) come under more than 60 years age group. It is concluded that majority of the respondents responded to the questionnaires belong to 31 – 40 years of age group.

**Classification of Respondents by Department**

The respondents have been identified based on the respective departments, in order to know which department influenced the faculty to depend on library for their information seeking. The table 4 shows various departments in engineering colleges. The most popular departments are considered for the analysis purpose. The departments are civil engineering, electrical and electronics engineering, mechanical engineering, electronics and communications engineering, computer science engineering, information technology and chemical engineering departments. The details of the number of respondents and their parental department have been furnished in the table 4.

**Table 4: Classification of Respondents by Department**

| S.No. | Name of the department | Number of respondents | Percentage |
|---|---|---|---|
| 1 | Civil engineering | 130 | 11.00 |
| 2 | Electrical & Electronics | 189 | 16.00 |
| 3 | Mechanical | 178 | 15.00 |
| 4 | Electronics & Communication | 261 | 22.00 |
| 5 | Computer Science Engineering | 214 | 18.00 |
| 6 | IT | 189 | 16.00 |
| 7 | Chemical | 24 | 2.00 |
| **Total** | | **1185** | **100.00** |

The above table 4 obviously shows that 130 faculty members (11%) responded from civil engineering, 189 faculty members (16%) responded from electrical and electronics engineering, 178 faculty members (15%) responded from mechanical engineering, 261 faculty members (22%) responded from electronics and communication engineering, 214 faculty members (18%) responded from computer science engineering, 189 faculty members (16%) responded from information technology and mere 24 faculty members (2%) responded from chemical engineering. By and large, it is concluded that the Department of Electronics and Communications has influenced more than one fifth of the respondents (22%) to visit library for their information since it is tough and hard to understand and needs more information from many a source.

**Classification of the Respondents by Qualification**

The responses of the respondents based on their qualification have been elicited to know whether the higher qualifications have any impact on information seeking behaviour. The particulars of the responses of the number of respondents and their respective educational qualifications are presented in the table 5..

**Table 5:Classification of the Respondents by Qualification**

| S.No. | Educational qualifications | Number of respondents | Percentage |
|---|---|---|---|
| 1 | B.Tech. | 213 | 18.00 |
| 2 | M.Tech. | 818 | 61.00 |
| 3 | Ph.D. | 130 | 11.00 |
| 4 | Others | 24 | 2.00 |
| **Total** | | **1185** | **100.00** |

The table 5 shows that 213 faculty members (18%) responded have B.Tech. qualification, 818 faculty members (61%) responded have M.Tech. qualification, 130 faculty members (11%) responded have Ph.D. qualification and only 24 faculty members (2%) responded have other qualifications like M.Sc., MCA, MBA etc. Above all, more than 60 per

cent of the respondents have M.Tech. qualification which has become now dire essential in the present day cut-throat competition of job market.

**Frequency of Visits to the Library**

The distribution of faculty members according to their frequency of visits to the library, sex and designation wise is shown in Table 6.

**Table 6: Distribution of faculty members according to their frequency of visiting the library**

| Frequency of visit | Sex | | Designation | | | Total |
|---|---|---|---|---|---|---|
| | Male | Female | Assistant Professors | Associate Professors | Professors | |
| Every day | 183 (21.45) | 19 (5.72) | 120 (19.20) | 70 (18.09) | 12 (6.94) | 202 (17.05) |
| Once in a week | 134 (15.71) | 32 (9.64) | 135 (21.60) | 8 (2.07) | 23 (13.29) | 166 (14.01) |
| More than once in a week | 142 (16.65) | 131 (39.46) | 92 (14.72) | 147 (37.98) | 34 (19.65) | 273 (23.04) |
| Once in a fortnight | 41 (4.81) | 18 (5.42) | 27 (4.32) | 19 (4.91) | 13 (7.51) | 59 (4.98) |
| Once in a month | 21 (2.46) | 6 (1.81) | 6 (0.96) | 9 (2.33) | 12 (6.94) | 27 (2.28) |
| Occasionally | 330 (38.69) | 120 (36.14) | 237 (37.92) | 134 (34.62) | 79 (45.62) | 450 (37.97) |
| Never | 2 (0.23) | 6 (1.81) | 8 (1.28) | 0 (0.00) | 0 (0.00) | 8 (0.67) |
| **TOTAL** | **853 (100)** | **332 (100)** | **625 (100)** | **387 (100)** | **173 (100)** | **1185 (100)** |

It is evident from Table 6 that 37.97 percent of the faculty members are visiting the library occasionally, 23.04 percent more than once in a week, 17.05 percent every day, 14.01 percent once in a week, 4.98 percent once in a fortnight, 2.28 percent once in a month and the

remaining 0.67 percent never visiting the library. It observed that most of the faculty members are visiting the library occasionally.

**Chi-square test between sex, designation, and frequency of visiting the library**

To identify whether there was a significant difference between the faculty members in frequency of visiting the library, the chi-square test has been calculated. Further, to know the relationship between male and female, Assistant Professors, Associate Professors and Professors simultaneously. The result of the data analysis is shown in Table 7.

**Table 7: Chi-square test between sex, designation, and frequency of visiting the library**

| Relationship between | Chi-Square value | Degrees of freedom | Level of significance | Table value | Nature of relation |
|---|---|---|---|---|---|
| Male and Female | 107.15 | 6 | 0.05 | 12.59 | Significant |
| Asst.Prof. and Assoc.Prof | 128.32 | 6 | 0.05 | 12.59 | Significant |
| Asst. Prof. and Professor | 47.61 | 6 | 0.05 | 12.59 | Significant |
| Assoc.Prof. and Professor | 61.84 | 5 | 0.05 | 11.07 | Significant |

It is evident from Table 7 that there is significant difference in the frequency of visiting the library between the male faculty member and female. It is evidenced by the chi-square value which is significant at 0.05 level with six degrees of freedom. That means, more male faculty members are visiting the library frequently compared to female faculty members. It is obvious that there are significant differences in the frequency of visiting the library between the faculty members of Assistant Professors, Associate Professors and Professors. It is proved by the chi-square values, which are significant at 0.05 level with six degrees of freedom. That means, more number of Assistant Professors are visiting the library frequently compared Associate Professors and Professors.

**Use of library services**

The use of different library services namely borrowing facilities, reference service, bibliographical service, current awareness service, Selective dissemination service, Inter library loan service, reprographic service, Abstracting and indexing service, Internet searching, and translation service were discussed in the following paragraphs.

**Borrowing facilities**

The distribution of faculty members according to the level of use of borrowing facilities of the institutional library, sex-wise and designation wise is shown in Table 8.

**Table 8:**

**Distribution of faculty members according to the level of use of borrowing facilities**

| Level of use | Sex | | Designation | | | Total |
|---|---|---|---|---|---|---|
| | Male | Female | Assistant Professors | Associate Professors | Professors | |
| Completely | 679 (79.60) | 218 (65.66) | 479 (76.64) | 301 (77.78) | 117 (67.63) | 897 (75.70) |
| Substantially | 145 (62.26) | 88 (26.51) | 108 (17.28) | 75 (19.38) | 50 (28.99) | 233 (19.66) |
| Marginally | 29 (3.40) | 26 (7.83) | 38 (6.08) | 11 (2.84) | 6 (3.47) | 55 (4.64) |
| **TOTAL** | **853 (100)** | **332 (100)** | **625 (100)** | **387 (100)** | **173 (100)** | **1185 (100)** |

It is evident from Table 8 that 75.70 percent of the faculty members are using the borrowing facilities completely, 19.66 percent of them are using substantially and the remaining 4.64 percent are using marginally. It observed that the majority of the faculty members are using the borrowing facilities.

To determine whether there was a significant difference between the faculty members in the level of use of borrowing facilities, the chi-square test has been calculated. Further, to know the relationship between male and female, Assistant Professors, Associate Professors and Professors simultaneously. The result of the data analysis is displayed in Table 9.

**Table 9: Chi-square test between sex, designation, and level of use of borrowing facilities**

| Relationship between | Chi-Square value | Degrees of freedom | Level of significance | Table value | Nature of relation |
|---|---|---|---|---|---|
| Male and Female | 27.332 | 2 | 0.05 | 5.99 | Significant |
| Asst.Prof. and Assoc.Prof | 5.797 | 2 | 0.05 | 5.99 | Not Significant |
| Asst. Prof. and Professor | 12.392 | 2 | 0.05 | 5.99 | Significant |
| Assoc.Prof. and Professor | 6.660 | 2 | 0.05 | 5.99 | Significant |

It is evident from Table 9 that there is significant difference in the level of use between the faculty members of male and female with regard to borrowing facilities. It is evidenced by the chi-square value which is significant at 0.05 level with two degrees of freedom. That means, more male faculty members are using borrowing facilities compared to female faculty members. It is also obvious from it that there are significant differences in the level of use of borrowing faculties between the faculties of Assistant Professors, Professors and Associate Professors, Professors. It is proved by the chi-square values, which are significant at 0.05 level with two degrees of freedom. That means, more Assistant Professors and Associate Professors are using borrowing faculties when compared to Professors. However, there is no significant difference in this regard between the Assistant Professors and Associate Professors as evidenced by the Chi-square which is not significant at 0.05 level with two degrees of freedom.

**Reference service**

The distribution of faculty members according to the level of use of reference service of the institutional library, sex-wise and designation wise is shown in Table 10.

**Table 10: Faculty members Sex and Designation Vs level of use of reference service**

| Level of use | Sex | | Designation | | | Total |
|---|---|---|---|---|---|---|
| | Male | Female | Assistant Professors | Associate Professors | Professors | |
| Completely | 221 (25.91) | 113 (34.04) | 148 (23.68) | 107 (27.65) | 79 (45.66) | 334 (28.18) |
| Substantially | 548 (64.24) | 190 (57.23) | 418 (66.88) | 249 (64.34) | 71 (41.04) | 738 (62.28) |
| Marginally | 84 (9.85) | 29 (8.73) | 59 (9.47) | 31 (8.01) | 23 (13.30) | 113 (9.54) |
| **TOTAL** | **853 (100)** | **332 (100)** | **625 (100)** | **387 (100)** | **173 (100)** | **1185 (100)** |

It is evident from Table 10 that 62.28 percent of the faculty members are using the reference service substantially, 28.18 percent of them are using completely and the remaining 9.54 percent are using marginally. It observed that the majority of the faculty members are using the reference service substantially. To determine whether there was a significant difference between the faculty members in the level of use of reference service, the chi-square test has been calculated. Further, to know the relationship between male and female, Assistant Professors, Associate Professors and Professors simultaneously. The result of the data analysis is displayed in Table 11.

**Table 11: Chi-square test between sex, designation, and level of use of reference service**

| Relationship between | Chi-Square value | Degrees of freedom | Level of significance | Table value | Nature of relation |
|---|---|---|---|---|---|
| Male and Female | 7.800 | 2 | 0.05 | 5.99 | Significant |
| Asst.Prof. and Associate .Prof | 2.277 | 2 | 0.05 | 5.99 | Not Significant |
| Asst. Prof. and Professor | 39.745 | 2 | 0.05 | 5.99 | Significant |

| | | | | | |
|---|---|---|---|---|---|
| Associate .Prof. and Professor | 26.505 | 2 | 0.05 | 5.99 | Significant |

It is evident from Table 11 that there is significant difference in the level of use between the faculty members of male and female with regard to reference service. It is evidenced by the chi-square value which is significant at 0.05 level with two degrees of freedom. That means, more female male faculty members are using reference service compared to male faculty members. It is also obvious from it that there are significant differences in the level of use of reference service between the faculties of Assistant Professors, Professors and Associate Professors, Professors. It is proved by the chi-square values, which are significant at 0.05 level with two degrees of freedom. That means, more Professors are using reference service when compared to Assistant Professors and Associate Professors. However, there is no significant difference in this regard between the Assistant Professors and Associate Professors as evidenced by the Chi-square which is not significant at 0.05 level with two degrees of freedom.

**Current awareness service**

The distribution of faculty members according to the level of use of current awareness service of the institutional library, sex-wise and designation wise is shown in Table 12.

**Table 12: Faculty members Sex and Designation Vs level of use of current awareness service**

| Level of use | Sex | | Designation | | | Total |
|---|---|---|---|---|---|---|
| | Male | Female | Assistant Professors | Associate Professors | Professors | |
| Completely | 82 (9.61) | 34 (10.24) | 69 (11.04) | 28 (7.23) | 19 (16.38) | 116 (9.79) |
| Substantially | 318 (37.28) | 113 (34.04) | 276 (44.16) | 102 (23.67) | 53 (12.30) | 431 (36.37) |
| Marginally | 453 (53.11) | 185 (55.72) | 280 (44.80) | 257 (40.28) | 101 (15.83) | 638 (53.84) |
| **TOTAL** | **853 (100)** | **332 (100)** | **625 (100)** | **387 (100)** | **173 (100)** | **1185 (100)** |

It is evident from Table 12 that 53.84 percent of the faculty members are using the current awareness service marginally, 36.37 percent of them are using substantially and the remaining 9.79 percent are using completely. It observed that the majority of the faculty members are using the current awareness service marginally. To determine whether there was a significant difference between the faculty members in the level of use of current awareness service, the chi-square test has been calculated. Further, to know the relationship between male and female, Assistant Professors, Associate Professors and Professors simultaneously. The result of the data analysis is displayed in Table 13.

**Table 13: Chi-square test between sex, designation, and level of use of current awareness service**

| Relationship between | Chi-Square value | Degrees of freedom | Level of significance | Table value | Nature of relation |
|---|---|---|---|---|---|
| Male and Female | 1.092 | 2 | 0.05 | 5.99 | Not Significant |
| Asst.Prof. and Assoc.Prof | 44.923 | 2 | 0.05 | 5.99 | Significant |
| Asst. Prof. and Professor | 11.246 | 2 | 0.05 | 5.99 | Significant |
| Assoc.Prof. and Professor | 3.996 | 2 | 0.05 | 5.99 | Not Significant |

It is evident from Table 13 that there is no significant difference in the level of use between the faculty members of male and female with regard to current awareness service. It is evidenced by the chi-square value which is not significant at 0.05 level with two degrees of freedom. It is also obvious from it that there are significant differences in the level of use of current awareness service between the faculties of Assistant Professors, Associate Professors and Assistant Professors, Professors. It is proved by the chi-square values, which are significant at 0.05 level with two degrees of freedom. That means, more Professors are using current awareness service when compared to Assistant Professors and Associate Professors. However, there is no significant difference in this regard between the Assistant Professors

and Associate Professors as evidenced by the Chi-square which is not significant at 0.05 level with two degrees of freedom.

**Selective dissemination of Information service**

The distribution of faculty members according to the level of use of selective dissemination of information service of the institutional library, sex-wise and designation wise is shown in Table 14.

**Table 14: Faculty members Sex and Designation Vs level of use of selective dissemination of information service**

| Level of use | Sex | | Designation | | | Total |
|---|---|---|---|---|---|---|
| | Male | Female | Assistant Professors | Associate Professors | Professors | |
| Completely | 293 (34.35) | 111 (33.43) | 224 (35.84) | 136 (35.14) | 44 (25.43) | 404 (34.09) |
| Substantially | 326 (38.22) | 107 (32.23) | 238 (38.08) | 127 (32.82) | 68 (39.31) | 433 (36.54) |
| Marginally | 234 (27.43) | 114 (34.34) | 163 (26.08) | 124 (32.04) | 61 (35.26) | 348 (29.37) |
| **TOTAL** | **853 (100)** | **332 (100)** | **625 (100)** | **387 (100)** | **173 (100)** | **1185 (100)** |

It is evident from Table 14 that 36.54 percent of the faculty members are using the selective dissemination of information service substantially, 34.09 percent of them are using completely and the remaining 29.37 percent are using marginally. It observed that the majority of the faculty members are using the selective dissemination of information service substantially. To determine whether there was a significant difference between the faculty members in the level of use of selective dissemination of information service, the chi-square test has been calculated. Further, to know the relationship between male and female, Assistant Professors, Associate Professors and Professors simultaneously. The result of the data analysis is displayed in Table 15.

**Table 15: Chi-square test between sex, designation, and level of use of selective dissemination of information service**

| Relationship between | Chi-Square value | Degrees of freedom | Level of significance | Table value | Nature of relation |
|---|---|---|---|---|---|
| Male and Female | 6.285 | 2 | 0.05 | 5.99 | Significant |
| Asst.Prof. and Assoc.Prof | 4.864 | 2 | 0.05 | 5.99 | Not Significant |
| Asst. Prof. and Professor | 8.490 | 2 | 0.05 | 5.99 | Significant |
| Assoc.Prof. and Professor | 5.327 | 2 | 0.05 | 5.99 | Not Significant |

It is evident from Table 15 that there is no significant difference in the level of use between the faculty members of male and female with regard to selective dissemination of information service. It is evidenced by the chi-square value which is not significant at 0.05 level with two degrees of freedom. It is also obvious from it that there are no significant differences in the level of use of selective dissemination of information service between the faculties of Assistant Professors and Associate Professors, Associate Professors and Professors. It is proved by the chi-square values, which are not significant at 0.05 level with two degrees of freedom. However, there is significant difference in this regard between the Assistant Professors and Professors as evidenced by the Chi-square value which is significant at 0.05 level with two degrees of freedom. That means, more Assistant professors are using selective dissemination of information service when compared to Professors.

**Inter library loan**

The distribution of faculty members according to the level of use of inter library loan of the institutional library, sex-wise and designation wise is shown in Table 16.

**Table 16: Faculty members Sex and Designation level of use of inter library loan**

| Level of use | Sex | | Designation | | | Total |
|---|---|---|---|---|---|---|
| | Male | Female | Assistant Professors | Associate Professors | Professors | |
| Completely | 218 (25.56) | 95 (28.61) | 157 (25.12) | 101 (26.10) | 55 (31.79) | 313 (26.41) |
| Substantially | 476 (55.80) | 162 (48.80) | 371 (59.36) | 202 (52.20) | 65 (37.57) | 638 (53.84) |
| Marginally | 159 (18.64) | 75 (22.59) | 97 (15.52) | 84 (21.70) | 53 (30.64) | 234 (19.75) |
| **TOTAL** | **853 (100)** | **332 (100)** | **625 (100)** | **387 (100)** | **173 (100)** | **1185 (100)** |

It is evident from Table 16 that 53.84 percent of the faculty members are using the inter library loan substantially, 26.41 percent of them are using completely and the remaining 19.75 percent are using marginally. It observed that the majority of the faculty members are using the inter library loan substantially. To determine whether there was a significant difference between the faculty members in the level of use of inter library loan, the chi-square test has been calculated. Further, to know the relationship between male and female, Assistant Professors, Associate Professors and Professors simultaneously. The result of the data analysis is displayed in Table 17.

**Table 17: Chi-square test between sex, designation, and level of use of inter library loan**

| Relationship between | Chi-Square value | Degrees of freedom | Level of significance | Table value | Nature of relation |
|---|---|---|---|---|---|
| Male and Female | 4.914 | 2 | 0.05 | 5.99 | Not Significant |
| Asst.Prof. and Assoc.Prof | 7.369 | 2 | 0.05 | 5.99 | Significant |
| Asst. Prof. and Professor | 30.513 | 2 | 0.05 | 5.99 | Significant |

| | | | | | |
|---|---|---|---|---|---|
| Assoc.Prof. and Professor | 10.651 | 2 | 0.05 | 5.99 | Significant |

It is evident from Table 17 that there is no significant difference in the level of use between the faculty members of male and female with regard to inter library loan. It is evidenced by the chi-square value which is not significant at 0.05 level with two degrees of freedom. It is also obvious from it that there are significant differences in the level of use of inter library loan between the faculties of Assistant Professors and Associate Professors, Associate Professors and Professors. It is proved by the chi-square values, which are significant at 0.05 level with two degrees of freedom. That means, more Assistant professors are using inter library loan when compared to Associate professors and Professors.

**Reprographic service**

The distribution of faculty members according to the level of use of reprographic service of the institutional library, sex-wise and designation wise is shown in Table 18.

**Table 18: Faculty members Sex and Designation Vs level of use of reprographic service**

| Level of use | Sex | | Designation | | | Total |
|---|---|---|---|---|---|---|
| | Male | Female | Assistant Professors | Associate Professors | Professors | |
| Completely | 197 (23.09) | 78 (23.49) | 131 (20.96) | 95 (24.55) | 49 (28.32) | 275 (23.21) |
| Substantially | 391 (45.84) | 123 (37.05) | 275 (44.00) | 168 (43.41) | 71 (41.04) | 514 (43.38) |
| Marginally | 265 (31.07) | 131 (39.46) | 219 (35.04) | (32.04) | 53 (30.64) | 396 (33.42) |
| **TOTAL** | **853 (100)** | **332 (100)** | **625 (100)** | **387 (100)** | **173 (100)** | **1185 (100)** |

It is evident from Table 18 that 43.38 percent of the faculty members are using the reprographic service substantially, 33.42 percent of them are using marginally and the remaining 23.21 percent are using completely. It observed that the majority of the faculty members are using the reprographic service substantially. To determine whether there was a

significant difference between the faculty members in the level of use of reprographic service, the chi-square test has been calculated. Further, to know the relationship between male and female, Assistant Professors, Associate Professors and Professors simultaneously. The result of the data analysis is displayed in Table 19.

**Table 19: Chi-square test between sex, designation, and level of use of reprographic service**

| Relationship between | Chi-Square value | Degrees of freedom | Level of significance | Table value | Nature of relation |
|---|---|---|---|---|---|
| Male and Female | 9.309 | 2 | 0.05 | 5.99 | Significant |
| Asst.Prof. and Assoc.Prof | 2.031 | 2 | 0.05 | 5.99 | Not Significant |
| Asst. Prof. and Professor | 4.302 | 2 | 0.05 | 5.99 | Not Significant |
| Assoc.Prof. and Professor | 0.895 | 2 | 0.05 | 5.99 | Not Significant |

It is evident from Table 19 that there is significant difference in the level of use between the faculty members of male and female with regard to reprographic service. It is evidenced by the chi-square value which is significant at 0.05 level with two degrees of freedom. That means, more male faculty members are using reprographic service when compared to female faculty members. It is also obvious from it that there are no significant differences in the level of use of reprographic service between the faculties of Assistant Professors and Associate Professors, Associate Professors and Professors. It is proved by the chi-square values, which are not significant at 0.05 level with two degrees of freedom.

**Abstracting and indexing service**

The distribution of faculty members according to the level of use of abstracting and indexing service of the institutional library, sex-wise and designation wise is shown in table 20.

**Table 20: Faculty members Sex and Designation Vs level of use of abstracting and indexing service**

| Level of use | Sex | | Designation | | | Total |
|---|---|---|---|---|---|---|
| | Male | Female | Assistant Professors | Associate Professors | Professors | |
| Completely | 375 (43.96) | 106 (31.93) | 257 (41.12) | 145 (37.47) | 79 (45.66) | 481 (40.59) |
| Substantially | 349 (40.91) | 138 (41.57) | 267 (42.72) | 138 (35.66) | 82 (47.40) | 487 (41.10) |
| Marginally | 129 (15.13) | 88 (26.50) | 101 (16.16) | 104 (26.87) | 12 (6.94) | 217 (18.31) |
| **TOTAL** | **853 (100)** | **332 (100)** | **625 (100)** | **387 (100)** | **173 (100)** | **1185 (100)** |

It is evident from Table 20 that 41.10 percent of the faculty members are using the abstracting and indexing service substantially, 40.59 percent of them are using completely and the remaining 18.31 percent are using marginally. It observed that the majority of the faculty members are using the abstracting and indexing service substantially. To determine whether there was a significant difference between the faculty members in the level of use of abstracting and indexing service, the chi-square test has been calculated. Further, to know the relationship between male and female, Assistant Professors, Associate Professors and Professors simultaneously. The result of the data analysis is displayed in Table 21.

**Table 21: Chi-square test between sex, designation, and level of use of abstracting and indexing service**

| Relationship between | Chi-Square value | Degrees of freedom | Level of significance | Table value | Nature of relation |
|---|---|---|---|---|---|
| Male and Female | 25.462 | 2 | 0.05 | 5.99 | Significant |
| Asst.Prof. and Assoc.Prof | 13.431 | 2 | 0.05 | 5.99 | Significant |
| Asst. Prof. and | 21.320 | 2 | 0.05 | 5.99 | Significant |

| | | | | | |
|---|---|---|---|---|---|
| Professor | | | | | |
| Assoc.Prof. and Professor | 29.144 | 2 | 0.05 | 5.99 | Significant |

It is evident from Table 21 that there is significant difference in the level of use between the faculty members of male and female with regard to abstracting and indexing service. It is evidenced by the chi-square value which is significant at 0.05 level with two degrees of freedom. That means, more male faculty members are using abstracting and indexing service when compared to female faculty members. It is also obvious from it that there are significant differences in the level of use of abstracting and indexing service between the faculties of Assistant Professors and Associate Professors, Associate Professors and Professors. It is proved by the chi-square values, which are significant at 0.05 level with two degrees of freedom. That means, more Professors are using abstracting and indexing service when compared to Associate professors and Assistant professors.

**Internet searching facility**

The distribution of faculty members according to the level of use of internet searching facility of the institutional library, sex-wise and designation wise is shown in Table 22.

**Table 22: Faculty members Sex and Designation Vs level of use of internet searching facility**

| Level of use | Sex | | Designation | | | Total |
|---|---|---|---|---|---|---|
| | Male | Female | Assistant Professors | Associate Professors | Professors | |
| Completely | 627 (73.51) | 176 (53.01) | 445 (71.20) | 267 (68.99) | 91 (52.60) | 803 (67.76) |
| Substantially | 131 (15.36) | 108 (32.53) | 97 (15.52) | 84 (21.71) | 58 (33.53) | 239 (20.17) |
| Marginally | 95 (11.13) | 48 (14.46) | 83 (13.28) | 36 ((9.30) | 24 (13.87) | 143 (12.07) |
| **TOTAL** | **853 (100)** | **332 (100)** | **625 (100)** | **387 (100)** | **173 (100)** | **1185 (100)** |

It is evident from Table 22 that 67.76 percent of the faculty members are using the internet searching facility completely, 20.17 percent of them are using substantially and the remaining 12.07 percent are using marginally. It observed that the majority of the faculty members are using the internet searching facility completely. To determine whether there was a significant difference between the faculty members in the level of use of internet searching facility, the chi-square test has been calculated. Further, to know the relationship between male and female, Assistant Professors, Associate Professors and Professors simultaneously. The result of the data analysis is displayed in Table 23.

**Table 23: Chi-square test between sex, designation, and level of use of internet searching facility**

| Relationship between | Chi-Square value | Degrees of freedom | Level of significance | Table value | Nature of relation |
|---|---|---|---|---|---|
| Male and Female | 51.938 | 2 | 0.05 | 5.99 | Significant |
| Asst.Prof. and Assoc.Prof | 8.498 | 2 | 0.05 | 5.99 | Significant |
| Asst. Prof. and Professor | 29.630 | 2 | 0.05 | 5.99 | Significant |
| Assoc.Prof. and Professor | 13.943 | 2 | 0.05 | 5.99 | Significant |

It is evident from Table 23 that there is significant difference in the level of use between the faculty members of male and female with regard to internet searching facility. It is evidenced by the chi-square value which is significant at 0.05 level with two degrees of freedom. That means, more male faculty members are using internet searching facility when compared to female faculty members. It is also obvious from it that there are significant differences in the level of use of internet searching facility between the faculties of Assistant Professors and Associate Professors, Associate Professors and Professors. It is proved by the chi-square values, which are significant at 0.05 level with two degrees of freedom. That

means, more Assistant Professors are using internet searching facility when compared to Associate professors and Professors.

**Level of help with regard to information search**

The distribution of faculty members according to the level of library staff help with regard to information search is shown in table 24 and Figure 2.

**Table 24: Level of help for information search**

| Level of help | No. of respondents | Percentage |
|---|---|---|
| No help | 75 | 6.30 |
| Marginal help | 371 | 31.30 |
| Substantial help | 739 | 62.40 |
| **TOTAL** | **1185** | **100.00** |

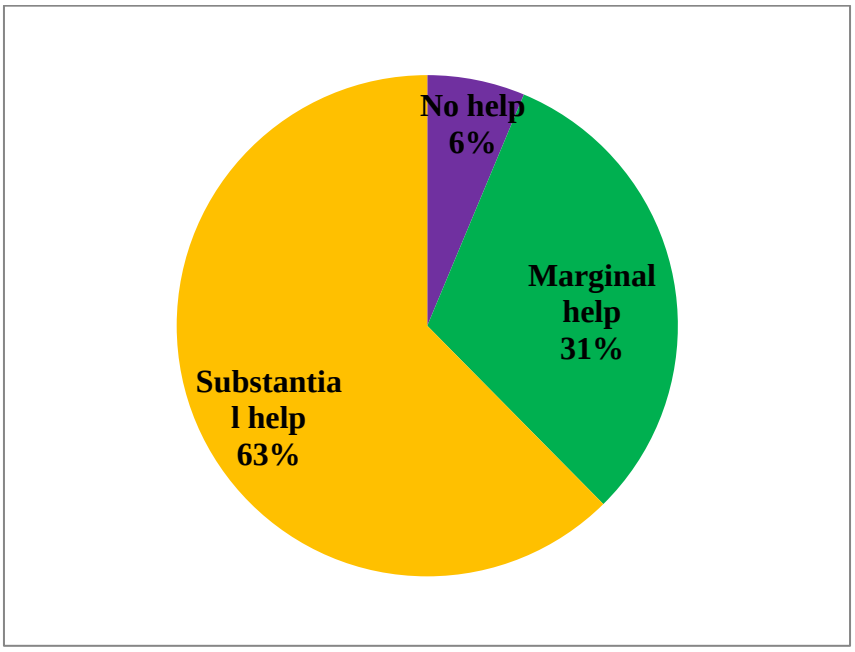


**Figure 2: Level of help for information search**

It is evident from the table 24 that 62.40 percent of the faculty members are feel the institutional library staff members are substantially helpful for their information search, 31.30

percent of them feel marginally helpful and the remaining 6.30 percent of them were not helpful in this regard.

**Conclusion**

In this study it has been obviously found that a few services like book lending, periodicals, journals, reference materials and internet searching are the highly ranked services found from the library. Keeping in view of the importance of a variety of documentations and other useful services, it is amply suggested that all the affiliated engineering colleges should provide such services. To promote the healthy awareness of such services, the librarians should conduct faculty education programmes for the promotion of the availability of library services and resources. It is also suggested for conducting user studies frequently to find out the extent of non utilization of library services.

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