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Satisfaction of Users on Library Collection and Services in Engineering College Libraries of Hyderabad and Ranga Reddy Districts, Telangana

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Abstract
This study is an investigation on the library collection and services in 23 selected engineering college libraries of Hyderabad and Ranga Reddy Districts, Telangana. A structured questionnaire is designed and used for collecting the data from undergraduates, postgraduates, research scholars and faculty members. A sample of 4500 users are selected using stratified random sampling technique and a total number of 2,522 users responded. Results showed that majority of users in all the categories are satisfied with different collections and services provided by their libraries.

Keywords: Engineering College Libraries, Satisfaction of Users, Library Collections, Library Services

1. Introduction
The developments in science and technology improved the standards of living of citizens across the globe. Science and technical education forms the backbone of all efforts pertaining to science and technology in our country. Today, it is being increasingly realized that the only way to improve the nation’s competitiveness is through better science and technological education. Education and training in pure and applied sciences has had a flourishing tradition in India dating back to over 2600 years. Science and technology have been central to India’s development efforts since achieving independence. To provide quality education in science and technology, institutions should have good laboratories, physical infrastructure, well trained and experienced faculty, and well established libraries. Among them, libraries play an important role in providing quality education.

2. Relevant Literature

Das and Mohapatra (2012) studied the collection management of e-resources and services offered by 12 engineering colleges in Bhubaneswar city. Inderjeet Singh Maan (2012) studied the usage of information communication technology products and services by the students and staff of Adesh
Institute of Engineering and Technology, Faridkot, Punjab. Madhuri (2012) studied the usage of Internet services by engineering students in and around Tirupati. Anjan Gohain and Mukesh Saikia (2013) investigated the use and user satisfaction of online public access catalogue service at Tezpur University. Hussain (2013) studied the use of electronic information resources and services among the teachers and students of Sri Chhotu Ram Institute of Engineering and Technology, Meerut. Jotwani (2013) studied the functioning resources, ICT applications and other activities including developments related to digital libraries in 7 libraries of Indian Institutes of Technology.

3. Engineering College Libraries
Among institutions promoting science and technology, engineering colleges are the abodes of higher learning producing highly trained, skilled and competent manpower for nation building. The decade 2010-2020 has been declared in our country as the Decade of Innovation. The Science, Technology and Innovation policy unveiled in 2013, aims at innovation-led development.

Libraries of engineering colleges provide support to their parent institutions to achieve the goals, and vision of their respective engineering colleges by ensuring quality based library and information support services to the students, research scholars and faculty members. Librarians are constantly engaged to update and strengthen collections continuously in order to reinforce and enrich the knowledge base in the process of assisting the stakeholders to achieve excellence in academics, consultancy, research and development activities.

4. Need and Purpose of the Study
The exponential growth of scientific & technological information, the interdisciplinary nature of research and the trend towards specialization, the increasing needs of user community, substantial increase in the subscription cost of the journals and the constraint of limited financial resources forced the libraries to constantly expand their resources and to design and develop new need based information products and services to meet the information requirements of their users. One of the most important and effective means of accomplishing this task is the employment of the library survey. The stakeholders of the library are the best judges to measure the performance of the library. The success of the library depends upon the satisfaction of its users regarding the available infrastructure, resources and services offered by the library.

5. Objectives of the Present Study
The objectives of the study are:
1. To know the level of satisfaction of users about different collections available in the selected engineering college libraries.

2. To find out the level of satisfaction of users about the different services offered by the engineering college libraries.

6. Data and Methodology
The investigator has adopted survey method of research for collecting the data for the present study. A structured questionnaire was designed and used for collecting data from the users. The data collected from the respondents was analyzed according to the objectives formulated. Statistical Package for Social Sciences (SPSS) has been used for the analysis of data. Statistical analysis techniques namely percentage and averages, frequency distribution and Chi-square test have been
employed in the present study.

7. Scope and Limitations of the Study

There are 186 engineering colleges in the study area. However, the present study is limited to 23 engineering colleges in the study area which were started in the year 2000 or before. The main criteria for fixing the scope of this study is that colleges which are of recent origin are not ideal for inclusion in the sample due to the fact that these colleges may not have well established physical as well as information communication technology infrastructure. Besides, 18 colleges out of the 23 selected engineering colleges are offering postgraduate courses in different disciplines of engineering and technology.

8. Selection of Users

There are 41,107 undergraduate students, 2,226 postgraduate students, 120 research scholars and 4,262 faculty members in these 23 engineering colleges. In total, there are 47,715 users in these engineering college libraries. As the population is large, in terms of cost, time and labour involved, the investigator selected a sample of 4500 users out of these 23 colleges using stratified random sampling technique and a total number of 2,522 users responded.

9. Data Analysis and Interpretation

The various categories of users in the sample and their responses are presented in Table 1.

<table>
<thead>
<tr>
<th>Category of Users</th>
<th>Questionnaires distributed</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduates</td>
<td>2600</td>
<td>1839</td>
<td>72.9</td>
</tr>
<tr>
<td>Postgraduates</td>
<td>800</td>
<td>252</td>
<td>10.0</td>
</tr>
<tr>
<td>Research scholars</td>
<td>100</td>
<td>71</td>
<td>2.8</td>
</tr>
<tr>
<td>Faculty members</td>
<td>1000</td>
<td>360</td>
<td>14.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4500</strong></td>
<td><strong>2522</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

It is evident from Table 1 that out of the total respondents, the majority (72.9%) are undergraduates, 14.3% are faculty members, 10% are postgraduates and the remaining 2.8% are research scholars.

9.1 Library Collection and Services

The main objective of academic libraries is to support the educational and research activities of their parent institutions through providing required document collection and services.

The collection in an engineering college library comprises various of types of reading materials such as prescribed textbooks, general books, reference books, journals, technical reports, theses and dissertations, conference and seminar proceedings, standards, patents, audio-visual materials, e-resources etc. Collection management is the selection, acquisition and maintenance of reading materials based on the needs of the students, research scholars and faculty members.
9.2 Library Collection

The satisfaction of users with regard to different kinds of library collection is discussed in the following sections.

9.2.1 Textbook Collection

The responses given by the users regarding their level of satisfaction with the textbook collection are presented in table 2.

<table>
<thead>
<tr>
<th>Level of satisfaction</th>
<th>Users</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UG</td>
<td>PG</td>
</tr>
<tr>
<td>Satisfied</td>
<td>1412</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>(76.8)</td>
<td>(81.0)</td>
</tr>
<tr>
<td>Neither satisfied nor</td>
<td>244</td>
<td>38</td>
</tr>
<tr>
<td>dissatisfied</td>
<td>(13.3)</td>
<td>(15.1)</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>183</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>(10.0)</td>
<td>(4.0)</td>
</tr>
<tr>
<td>Total</td>
<td>1839</td>
<td>252</td>
</tr>
<tr>
<td></td>
<td>(100.0)</td>
<td>(100.0)</td>
</tr>
</tbody>
</table>

**Note:** Figures in Parentheses denote percentages.

\[X^2 (UG - PG): 0.089 \text{ df: 2 TV: 5.991 N.S at 0.05 level}
\[X^2 (UG - RS): 0.016 \text{ df: 2 TV: 5.991 N.S at 0.05 level}
\[X^2 (UG - FM): 0.732 \text{ df: 2 TV: 5.991 N.S at 0.05 level}
\[X^2 (PG - RS): 0.004 \text{ df: 2 TV: 5.991 N.S at 0.05 level}
\[X^2 (PG - FM): 0.784 \text{ df: 2 TV: 5.991 N.S at 0.05 level}
\[X^2 (RS - FM): 0.071 \text{ df: 2 TV: 5.991 N.S at 0.05 level}

Data presented in Table 2 indicates that most of the respondents (77.8%) are satisfied with textbook collection, 13.2% are neither satisfied nor dissatisfied and the remaining 9% are dissatisfied.

It is also evident from Table 2 that there is no significant difference in the level of satisfaction with textbook collection among the various groups of users namely undergraduates and postgraduates, undergraduates and research scholars, undergraduates and faculty members, postgraduates and research scholars, postgraduates and faculty members, and research scholars and faculty members as proved by the Chi-square values which are not significant at 0.05 level with two degrees of freedom.
The satisfaction of users with the textbook collection is graphically represented in Fig.1.

**Fig.1. Satisfaction of users with textbook collection**

![Graph showing satisfaction levels of users across different categories]

9.2.2 General Book Collection

The responses given by the users regarding their level of satisfaction with the general book collection are presented in table 3.

<table>
<thead>
<tr>
<th>Level of satisfaction</th>
<th>UG (%)</th>
<th>PG (%)</th>
<th>RS (%)</th>
<th>FM (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>1348 (73.3)</td>
<td>186 (73.8)</td>
<td>52 (73.2)</td>
<td>247 (68.6)</td>
<td>1833 (72.7)</td>
</tr>
<tr>
<td>Neither satisfied nor dissatisfied</td>
<td>265 (14.4)</td>
<td>32 (12.7)</td>
<td>10 (14.1)</td>
<td>75 (20.8)</td>
<td>382 (15.1)</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>226 (12.3)</td>
<td>34 (13.5)</td>
<td>9 (12.7)</td>
<td>38 (10.6)</td>
<td>307 (12.2)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1839 (100.0)</strong></td>
<td><strong>252 (100.0)</strong></td>
<td><strong>71 (100.0)</strong></td>
<td><strong>360 (100.0)</strong></td>
<td><strong>2522 (100.0)</strong></td>
</tr>
</tbody>
</table>
Note: Figures in Parentheses denote percentages.

\[ X^2 (UG - PG): 0.723 \quad df: 2 \quad TV: 5.991 \quad N.S at 0.05 level \]
\[ X^2 (UG - RS): 0.013 \quad df: 2 \quad TV: 5.991 \quad N.S at 0.05 level \]
\[ X^2 (UG - FM): 9.700 \quad df: 2 \quad TV: 5.991 \quad Sig. at 0.05 level \]
\[ X^2 (PG - RS): 0.112 \quad df: 2 \quad TV: 5.991 \quad N.S at 0.05 level \]
\[ X^2 (PG - FM): 7.263 \quad df: 2 \quad TV: 5.991 \quad Sig. at 0.05 level \]
\[ X^2 (RS - FM): 1.767 \quad df: 2 \quad TV: 5.991 \quad N.S at 0.05 level \]

It is evident from Table 3 that majority of the respondents (72.7%) are satisfied with general book collection, 15.1% of them are neither satisfied nor dissatisfied and the remaining 12.2% of them are dissatisfied.

It is obvious from Table 3 that there is no significant difference in the level of satisfaction with the general book collection among the various groups of users, namely, undergraduates and postgraduates, undergraduates and research scholars, postgraduates and research scholars, and research scholars and faculty members. It is proved by the Chi-square values which are not significant at 0.05 level with two degrees of freedom.

It is clear from the table that there is significant difference in the level of satisfaction with the general book collection between the users of undergraduates and faculty members. It is indicated by the Chi-square value which is significant at 0.05 level with two degrees of freedom. That means undergraduates are more satisfied with the general book collection than the faculty members.

It is also clear from the table that there is significant difference in the level satisfaction with the general book collection between the users of postgraduates and faculty members. It is indicated by the Chi-square value which is significant at 0.05 level with two degrees of freedom. That means postgraduates are more satisfied with the general book collection compared to the faculty members.

The satisfaction of users with the general book collection is graphically represented in Fig. 2.

**Fig. 2. Satisfaction of users with general book collection**
9.2.3 Reference Book Collection

The responses given by the users regarding their level of satisfaction with the reference book collection are presented in Table 4.

Table 4
Distribution of users according to level of satisfaction with the reference book collection

<table>
<thead>
<tr>
<th>Level of satisfaction</th>
<th>Users</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UG</td>
<td>PG</td>
</tr>
<tr>
<td>Satisfied</td>
<td>1492</td>
<td>192</td>
</tr>
<tr>
<td></td>
<td>(81.1)</td>
<td>(76.2)</td>
</tr>
<tr>
<td>Neither satisfied nor</td>
<td>196</td>
<td>28</td>
</tr>
<tr>
<td>dissatisfied</td>
<td>(10.7)</td>
<td>(11.1)</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>151</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>(8.2)</td>
<td>(12.7)</td>
</tr>
<tr>
<td>Total</td>
<td>1839</td>
<td>252</td>
</tr>
<tr>
<td></td>
<td>(100.0)</td>
<td>(100.0)</td>
</tr>
</tbody>
</table>

Note: Figures in Parentheses denote percentages.

\[ X^2 \text{ (UG - PG): 5.814} \]
\[ X^2 \text{ (UG - RS): 0.035} \]
\[ X^2 \text{ (UG - FM): 17.859} \]
\[ X^2 \text{ (PG - RS): 0.971} \]
\[ X^2 \text{ (PG - FM): 1.264} \]
\[ X^2 \text{ (RS - FM): 2.402} \]

df: 2  TV: 5.991  N.S at 0.05 level

It is evident from Table 4 that most of the respondents (79.8%) are satisfied with the reference book collection. It is also clear from the table that 10.5% of them are neither satisfied nor dissatisfied and the remaining 9.7% of them are dissatisfied in this regard.

Table 4 shows that there is no significant difference in satisfaction with the reference book collection among the various groups of users, namely, undergraduates and postgraduates, undergraduates and research scholars, postgraduates and research scholars, postgraduates and faculty members, research scholars and faculty members. It is proved by the Chi-square values which are not significant at 0.05 level with two degrees of freedom.
It is clear from the table that there is significant difference in satisfaction with the reference book collection between the users of undergraduates and faculty members. It is indicated by the Chi-square value which is significant at 0.01 level with two degrees of freedom. That means undergraduates are more satisfied with the reference book collection compared to the faculty members.

The satisfaction of users with the reference book collection is graphically represented in Fig. 3.

### Fig. 3 Satisfaction of users with reference book collection

9.2.4 Journal Collection

The distribution of users according to their level of satisfaction with the journal collection as revealed by their responses is presented in Table 5.

### Table 5

<table>
<thead>
<tr>
<th>Level of satisfaction</th>
<th>UG</th>
<th>PG</th>
<th>RS</th>
<th>FM</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>1363</td>
<td>188</td>
<td>44</td>
<td>263</td>
<td>1858</td>
</tr>
<tr>
<td></td>
<td>(74.1%)</td>
<td>(74.6%)</td>
<td>(62.0%)</td>
<td>(73.1%)</td>
<td>(73.7%)</td>
</tr>
<tr>
<td>Neither satisfied nor dissatisfied</td>
<td>187</td>
<td>32</td>
<td>10</td>
<td>35</td>
<td>264</td>
</tr>
<tr>
<td></td>
<td>(10.2%)</td>
<td>(12.7%)</td>
<td>(14.1%)</td>
<td>(9.7%)</td>
<td>(10.5%)</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>289</td>
<td>32</td>
<td>17</td>
<td>62</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>(15.7%)</td>
<td>(12.7%)</td>
<td>(23.9%)</td>
<td>(17.2%)</td>
<td>(15.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>1839</td>
<td>252</td>
<td>71</td>
<td>360</td>
<td>2522</td>
</tr>
<tr>
<td></td>
<td>(100.0%)</td>
<td>(100.0%)</td>
<td>(100.0%)</td>
<td>(100.0%)</td>
<td>(100.0%)</td>
</tr>
</tbody>
</table>

**Note:** Figures in Parentheses denote percentages.

\[ \chi^2 (UG - PG): 2.675 \text{ df:2} \quad TV: 5.991 \quad \text{N.S at 0.05 level} \]

\[ \chi^2 (UG - RS): 5.274 \text{ df:2} \quad TV: 5.991 \quad \text{N.S at 0.05 level} \]
A study of data in Table 5 indicates that most of the respondents (73.7%) are satisfied with the journal collection. It is also evident from the table that 15.9% of them are dissatisfied and the remaining 10.5% of them are neither satisfied nor dissatisfied in this regard.

The data in Table 5 reveals that there is no significant difference in the level of satisfaction with journal collection among the various groups of users, namely, undergraduates and postgraduates, undergraduates and research scholars, undergraduates and faculty members, postgraduates and research scholars, postgraduates and faculty members, research scholars and faculty members as revealed by the Chi-square values which are not significant at 0.05 level with two degrees of freedom.

The satisfaction of users with the journal collection is graphically represented in Fig. 4.

**Fig. 4. Satisfaction of users with journal collection**

### 9.2.5 Technical Reports, Theses and Dissertations Collection

The responses given by the users regarding their level of satisfaction with the technical reports, theses and dissertations collected are presented in Table 6.

**Table 6**

<table>
<thead>
<tr>
<th>Level of satisfaction</th>
<th>Users</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UG</td>
<td>PG</td>
</tr>
<tr>
<td>Satisfied</td>
<td>831</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>(45.2%)</td>
<td>(47.2%)</td>
</tr>
<tr>
<td>Neither satisfied nor dissatisfied</td>
<td>466</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>(25.3%)</td>
<td>(25.0%)</td>
</tr>
</tbody>
</table>
| Dissatisfied | 542  
29.5 | 70  
27.8 | 25  
35.2 | 110  
30.6 | 747  
29.6 |
|-------------|------|------|------|------|------|
| Total       | 1839 
(100.0) | 252  
(100.0) | 71  
(100.0) | 360  
(100.0) | 2522 
(100.0) |

**Note:** Figures in Parentheses denote percentages.

- $X^2$ (UG - PG): 0.430 df:2 TV: 5.991 N.S at 0.05 level
- $X^2$ (UG - RS): 2.131 df:2 TV: 5.991 N.S at 0.05 level
- $X^2$ (UG - FM): 5.396 df:2 TV: 5.991 N.S at 0.05 level
- $X^2$ (PG - RS): 2.101 df:2 TV: 5.991 N.S at 0.05 level
- $X^2$ (PG - FM): 4.122 df:2 TV: 5.991 N.S at 0.05 level
- $X^2$ (RS - FM): 4.197 df:2 TV: 5.991 N.S at 0.05 level

Table 6 shows that 44.6% of respondents are satisfied with technical reports, theses, dissertation collection. It is also evident from the table that 29.6% of them are dissatisfied and the remaining 25.8% of them are neither satisfied nor dissatisfied in this regard.

It is also clear from the Table 6 that there is no significant difference among the various groups of users namely undergraduates and postgraduates, undergraduates and research scholars, undergraduates and faculty members, postgraduates and research scholars, postgraduates and faculty members, research scholars and faculty members in their level of satisfaction with regard to technical reports, theses and dissertations of the library as revealed by the Chi-square values which are not significant at 0.05 level with two degrees of freedom.

The satisfaction of users with the technical reports, theses and dissertations collection is graphically represented in Fig.5.

**Fig.5. Satisfaction of users with technical reports, theses and dissertations collection**

<table>
<thead>
<tr>
<th></th>
<th>UG</th>
<th>PG</th>
<th>RS</th>
<th>FM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>45.2</td>
<td>47.2</td>
<td>46.5</td>
<td>39.2</td>
</tr>
<tr>
<td>Neither satisfied nor dissatisfied</td>
<td>25.3</td>
<td>27.8</td>
<td>18.3</td>
<td>30.3</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>29.5</td>
<td>25.2</td>
<td>30.6</td>
<td>30.6</td>
</tr>
</tbody>
</table>

### 9.3 Library Services

In science and technology libraries, services are vital in connecting the users to library resources and to make the library understandable, accessible and easy to use. The satisfaction of users with regard
to various services provided by the library is discussed in the following sections.

9.3.1 Circulation Service

Circulation service is the term used to describe many of the important and invisible activities of today's libraries. Circulation services include all the activities that are involved in making library materials directly available to their users. It comprises user borrowing library material and subsequently returning the same material with a designated time frame.

The responses given by the users regarding their level of satisfaction with circulation service are presented in Table 7.

<table>
<thead>
<tr>
<th>Level of satisfaction</th>
<th>UG</th>
<th>PG</th>
<th>RS</th>
<th>FM</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>1347 (73.2)</td>
<td>206 (81.7)</td>
<td>45 (83.4)</td>
<td>281 (78.1)</td>
<td>1879 (74.5)</td>
</tr>
<tr>
<td>Neither satisfied nor</td>
<td>188 (10.2)</td>
<td>18 (7.1)</td>
<td>8 (11.3)</td>
<td>32 (8.9)</td>
<td>246 (9.8)</td>
</tr>
<tr>
<td>dissatisfied</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>304 (16.5)</td>
<td>28 (11.1)</td>
<td>18 (25.4)</td>
<td>47 (13.1)</td>
<td>397 (15.7)</td>
</tr>
<tr>
<td>Total</td>
<td>1839 (100.0)</td>
<td>252 (100.0)</td>
<td>71 (100.0)</td>
<td>360 (100.0)</td>
<td>2522 (100.0)</td>
</tr>
</tbody>
</table>

Note: Figures in Parentheses denote percentages.

\[ X^2 \text{ (UG - PG): 8.390 df:2 TV: 5.991 Sig. at 0.05 level} \]
\[ X^2 \text{ (UG - RS): 4.141 df:2 TV: 5.991 N.S at 0.05 level} \]
\[ X^2 \text{ (UG - FM): 3.753 df:2 TV: 5.991 N.S at 0.05 level} \]
\[ X^2 \text{ (PG - RS): 11.463 df:2 TV: 5.991 Sig. at 0.05 level} \]
\[ X^2 \text{ (PG - FM): 1.264 df:2 TV: 5.991 N.S at 0.05 level} \]
\[ X^2 \text{ (RS - FM): 7.995 df:2 TV: 5.991 Sig. at 0.05 level} \]

Table 7 shows that most of the respondents (74.5%) are satisfied with the circulation service, 15.7% are dissatisfied and the remaining 9.8% are neither satisfied nor dissatisfied in this regard.

It is observed from Table 7 that there is significant difference in the level of satisfaction with the circulation service among the various groups of users, namely, undergraduates and postgraduates, and postgraduates and research scholars. It is indicated by the Chi-square values which are significant at 0.05 level with two degrees of freedom. That means postgraduates are more satisfied with the circulation service compared to the undergraduates and research scholars.
It is also observed from the table that there is significant difference in the level of satisfaction with the circulation services between the users of research scholars and faculty members. It is indicated by the Chi-square value which is significant at 0.05 level with two degrees of freedom. That means faculty members are more satisfied with the circulation service compared to the research scholars.

It is obvious from the table that there is no significant difference in the level of satisfaction with the circulation service among the various groups of users namely undergraduates and research scholars, undergraduates and faculty members, and postgraduates and faculty members. It is indicated by the Chi-square values which are not significant at 0.05 level with two degrees of freedom.

The satisfaction of users with the circulation service is graphically represented in Fig. 6.

**Fig. 6 Satisfaction of users with the circulation service**

![Graph showing satisfaction levels of different user categories](image)

### 9.3.2 Reservation of Document Facility

Reservation of Document facility is a request for a specific book or other item to be reserved for a reader as soon as it becomes available on completion of processing, or on its return from the binder or another reader.

A question has been put to the users to know their satisfaction with the reservation of document facility provided by their libraries. Their responses are shown in Table 8.

**Table 8**

<table>
<thead>
<tr>
<th>Level of satisfaction</th>
<th>UG</th>
<th>PG</th>
<th>RS</th>
<th>FM</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied</td>
<td>1003</td>
<td>140</td>
<td>34</td>
<td>206</td>
<td>1383</td>
</tr>
<tr>
<td></td>
<td>(54.5)</td>
<td>(55.6)</td>
<td>(47.9)</td>
<td>(57.2)</td>
<td>(54.8)</td>
</tr>
<tr>
<td>Neither satisfied nor</td>
<td>380</td>
<td>64</td>
<td>13</td>
<td>71</td>
<td>528</td>
</tr>
<tr>
<td>dissatisfied</td>
<td>(20.7)</td>
<td>(25.4)</td>
<td>(18.3)</td>
<td>(19.7)</td>
<td>(20.9)</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>456</td>
<td>48</td>
<td>24</td>
<td>83</td>
<td>611</td>
</tr>
<tr>
<td></td>
<td>(24.8)</td>
<td>(19.0)</td>
<td>(33.8)</td>
<td>(23.1)</td>
<td>(24.2)</td>
</tr>
<tr>
<td>Total</td>
<td>1839</td>
<td>252</td>
<td>71</td>
<td>360</td>
<td>2522</td>
</tr>
<tr>
<td></td>
<td>(100.0)</td>
<td>(100.0)</td>
<td>(100.0)</td>
<td>(100.0)</td>
<td>(100.0)</td>
</tr>
</tbody>
</table>
Note: Figures in Parentheses denote percentages.

\[
\begin{align*}
X^2 (UG - PG): & \quad 5.418 \quad \text{df:} 2 \quad \text{TV:} 5.991 \quad N.S \text{ at } 0.05 \text{ level} \\
X^2 (UG - RS): & \quad 2.948 \quad \text{df:} 2 \quad \text{TV:} 5.991 \quad N.S \text{ at } 0.05 \text{ level} \\
X^2 (UG - FM): & \quad 0.895 \quad \text{df:} 2 \quad \text{TV:} 5.991 \quad N.S \text{ at } 0.05 \text{ level} \\
X^2 (PG - RS): & \quad 7.181 \quad \text{df:} 2 \quad \text{TV:} 5.991 \quad \text{Sig. at } 0.05 \text{ level} \\
X^2 (PG - FM): & \quad 3.349 \quad \text{df:} 2 \quad \text{TV:} 5.991 \quad N.S \text{ at } 0.05 \text{ level} \\
X^2 (RS - FM): & \quad 3.747 \quad \text{df:} 2 \quad \text{TV:} 5.991 \quad N.S \text{ at } 0.05 \text{ level} \\
\end{align*}
\]

It is evident from Table 8 that the majority of the respondents (54.8%) are satisfied with the reservation of document facility, 24.2% are dissatisfied and the remaining 20.9% are neither satisfied nor dissatisfied in this regard.

It is clear from Table 8 that there is no significant difference in the level of satisfaction with the reservation of document facility among the various groups of users, namely, undergraduates and postgraduates, undergraduates and research scholars, undergraduates and faculty members, postgraduates and faculty members, research scholars and faculty members. It is indicated by the Chi-square values which are not significant at 0.05 level with two degrees of freedom.

However, there is significant difference between the users of postgraduates and research scholars as proved by the Chi-square value which is significant at 0.05 level with two degrees of freedom. That means postgraduates are more satisfied with reservation of document facility compared to the research scholars.

The satisfaction of users with the reservation of document facility is graphically represented in Fig. 7.

**Fig. 7 Satisfaction of users with the reservation of document facility**

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### 9.3.3 Library Catalogue/ Online Public Access Catalogue (OPAC)

The introduction of information and communication technology has changed the way libraries access, store, retrieve and disseminate information. OPAC is one of these technologies to provide access to the any information available in the library. It allows users to search a document by author, title, subject and key words sitting in their respective departments and also allows printing, downloading or exporting records via different electronic means. Users can find out the status of a document in the library’s collection and can reserve and renew a document of their interest.

The responses given by the users regarding their level of satisfaction with library catalogue / OPAC are presented in table 9.
Table 9
Distribution of users according to level of satisfaction with the library catalogue/OPAC service

<table>
<thead>
<tr>
<th>Level of satisfaction</th>
<th>Users</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UG</td>
</tr>
<tr>
<td>Satisfied</td>
<td>1066</td>
</tr>
<tr>
<td></td>
<td>(58.0)</td>
</tr>
<tr>
<td>Neither satisfied nor</td>
<td>329</td>
</tr>
<tr>
<td>dissatisfied</td>
<td>(17.9)</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>444</td>
</tr>
<tr>
<td></td>
<td>(24.1)</td>
</tr>
<tr>
<td>Total</td>
<td>1839</td>
</tr>
<tr>
<td></td>
<td>(100.0)</td>
</tr>
</tbody>
</table>

Note: Figures in Parentheses denote percentages.

- $X^2$ (UG - PG): 6.449 df:2 TV: 5.991 Sig. at 0.05 level
- $X^2$ (UG - RS): 3.668 df:2 TV: 5.991 N.S at 0.05 level
- $X^2$ (UG - FM): 0.481 df:2 TV: 5.991 N.S at 0.05 level
- $X^2$ (PG - RS): 6.012 df:2 TV: 5.991 Sig. at 0.05 level
- $X^2$ (PG - FM): 6.368 df:2 TV: 5.991 Sig. at 0.05 level
- $X^2$ (RS - FM): 3.411 df:2 TV: 5.991 N.S at 0.05 level

Table 9 reveals that the majority of the respondents (58.2%) are satisfied with the library catalogue/OPAC. It is also evident from the table that 23.8% are dissatisfied and the remaining 18.1 per cent are neither satisfied nor dissatisfied in this regard.

It is obvious from the table 9 that there is significant difference in the level of satisfaction regarding library catalogue/OPAC among the various groups of users, namely, undergraduates and postgraduates, postgraduates and research scholars, and postgraduates and faculty members. It is proved by the Chi-square values which are significant at 0.05 level with two degrees of freedom. That means research scholars are more satisfied with library catalogue/OPAC compared to the undergraduates, postgraduates and faculty members.

However, there is no significant difference in the level of satisfaction with library catalogue/OPAC among the various groups of users, namely, undergraduates and research scholars, undergraduates and faculty members, research scholars and faculty members as proved by the Chi-
square values which are not significant at 0.05 level with two degrees of freedom.

The satisfaction of users with the Library catalogue/OPAC service is graphically represented in Fig. 8.

**Fig.8 Satisfaction of users with the library catalogue/OPAC service**

![Satisfaction of users with the library catalogue/OPAC service](image)

### 9.3.4 Photocopying Facility

Photocopying facility is one of the important services. Information required by users can be reproduced or copied from a document if this facility is available. The work load on the circulation section will be reduced to a great extent depending on the performance of photocopying section.

The responses given by the users regarding their level of satisfaction with photocopying facility are presented in table 10.

**Table 10**

<table>
<thead>
<tr>
<th>Level of satisfaction</th>
<th>Users</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UG</td>
<td>PG</td>
</tr>
<tr>
<td>Satisfied</td>
<td>914 (49.7)</td>
<td>127 (50.4)</td>
</tr>
<tr>
<td>Neither Satisfied nor Dissatisfied</td>
<td>359 (19.5)</td>
<td>65 (25.8)</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>566 (30.8)</td>
<td>60 (23.8)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1839 (100.0)</strong></td>
<td><strong>252 (100.0)</strong></td>
</tr>
</tbody>
</table>
Note: Figures in Parentheses denote percentages.

\[
\chi^2\text{(UG - PG): 7.915 df:2 TV: 5.991 Sig. at 0.05 level} \\
\chi^2\text{(UG - RS): 0.066 df:2 TV: 5.991 N.S at 0.05 level} \\
\chi^2\text{(UG - FM): 0.869 df:2 TV: 5.991 N.S at 0.05 level} \\
\chi^2\text{(PG - RS): 2.409 df:2 TV: 5.991 N.S at 0.05 level} \\
\chi^2\text{(PG - FM): 2.694 df:2 TV: 5.991 N.S at 0.05 level} \\
\chi^2\text{(RS - FM): 0.342 df:2 TV: 5.991 N.S at 0.05 level}
\]

Table 10 reveals that the 49.9% respondents are satisfied with the photocopying facility, 29.8% are dissatisfied and the remaining 20.3% of them are neither satisfied nor dissatisfied in this regard.

It is obvious from the table 10 that there is significant difference in the level of satisfaction with the photocopying facility between the users of undergraduates and postgraduates. It is indicated by the Chi-square value which is significant at 0.05 level with two degrees of freedom. That means postgraduates are more satisfied with the photocopying facility compared to the undergraduates.

It is observed from the table that there is no significant difference in the level of satisfaction with the photocopying facility among the various groups of users, namely, undergraduates and research scholars, undergraduates and faculty members, postgraduates and research scholars, postgraduates and faculty members, research scholars and faculty members as proved by the Chi-square values which are not significant at 0.05 level with two degrees of freedom.

The satisfaction of users with the photocopying facility is graphically represented in Fig. 9.

**Fig.9 Satisfaction of users with the photocopying facility**

9.3.5 Internet Searching Facility

The internet provides a wealth of information to all who traverse, and open the door to the world’s resources and for all those who seek it. The institutional repositories hosted by academic and non-profit organizations and video lectures available in websites of international universities provide access to the latest world wide information to students, research scholars and faculty members.

Hence, a question has been put to the users to know their level of satisfaction with the Internet searching facility. Their responses are shown in Table 11.
Table 11

Distribution of users according to their satisfaction with the Internet searching facility

<table>
<thead>
<tr>
<th>Level of satisfaction</th>
<th>Users</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UG</td>
<td>PG</td>
</tr>
<tr>
<td>Satisfied</td>
<td>1243</td>
<td>171</td>
</tr>
<tr>
<td>(67.6)</td>
<td>(67.9)</td>
<td>(60.6)</td>
</tr>
<tr>
<td>Neither satisfied nor dissatisfied</td>
<td>259</td>
<td>42</td>
</tr>
<tr>
<td>(14.1)</td>
<td>(16.7)</td>
<td>(23.9)</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>337</td>
<td>39</td>
</tr>
<tr>
<td>(18.3)</td>
<td>(15.5)</td>
<td>(15.5)</td>
</tr>
<tr>
<td>Total</td>
<td>1839</td>
<td>252</td>
</tr>
<tr>
<td>(100.0)</td>
<td>(100.0)</td>
<td>(100.0)</td>
</tr>
</tbody>
</table>

Note: Figures in Parentheses denote percentages.

\[ X' (UG - PG): 2.029 \quad \text{df:2} \quad \text{TV: 5.991} \quad \text{N.S at 0.05 level} \]
\[ X' (UG - RS): 5.401 \quad \text{df:2} \quad \text{TV: 5.991} \quad \text{N.S at 0.05 level} \]
\[ X' (UG - FM): 12.172 \quad \text{df:2} \quad \text{TV: 5.991} \quad \text{Sig. at 0.05 level} \]
\[ X' (PG - RS): 2.050 \quad \text{df:2} \quad \text{TV: 5.991} \quad \text{N.S at 0.05 level} \]
\[ X' (PG - FM): 3.021 \quad \text{df:2} \quad \text{TV: 5.991} \quad \text{N.S at 0.05 level} \]
\[ X' (RS - FM): 4.279 \quad \text{df:2} \quad \text{TV: 5.991} \quad \text{N.S at 0.05 level} \]

It is evident from Table 11 that the majority of the respondents (68.2%) are satisfied with the Internet searching facility. It is also evident from the table that 16.9% are dissatisfied and the remaining 14.9% are neither satisfied nor dissatisfied.

It is obvious from Table 11 that there is no significant difference in satisfaction with the Internet searching facility among the various groups of users, namely, undergraduates and postgraduates, undergraduates and research scholars, postgraduates and research scholars, postgraduates and faculty members, research scholars and faculty members. It is indicated by the Chi-square values which are not significant at 0.05 level with two degrees of freedom.

It is also evident from the table that there is significant difference in terms of level of satisfaction with the Internet searching facility between the users of undergraduates and faculty members. It is proved by the Chi-square value which is significant at 0.05 level with two degrees of freedom. That means faculty members are more satisfied with the Internet searching facility compared to the undergraduates.

The satisfaction of users with the Internet searching facility is graphically represented in Fig.10.
10. Major Findings:

The following are the major findings and they are based on the analysis of data with regard to the collection of material and services rendered by engineering college libraries.

Findings revealed that 79.8% of the users are satisfied with the collection of reference books, 77.8% of users are satisfied with the collection of textbooks, 73.7% users are satisfied with the collection of journals and 72.7% users are satisfied with the collection of general books.

Findings also revealed that 44.6% users are satisfied with technical reports, theses, dissertations collection, 29.6% are dissatisfied and the remaining 25.8% are neither satisfied nor dissatisfied.

Findings revealed that 74.5% of the users are satisfied with the circulation service and 68.2% users are satisfied with Internet searching facility.

Studies also revealed that 58.2% are satisfied with the library catalogue/OPAC service and 54.8% are satisfied with the reservation of documents facility.

Study also revealed that 49.9% of the users are satisfied with photocopying facility, 29.8% are dissatisfied and 20.3% are neither satisfied nor dissatisfied.

11. SUGGESTIONS AND CONCLUSIONS

Based on the findings of the study it is suggested to strengthen the collection of technical reports, theses and dissertations and also the infrastructure facilities in the photocopying section.

Engineering education in our country represents one of the largest educational system in the world. The libraries attached to the engineering colleges should provide information support to the academic community for study, teaching and research. The efforts of engineering college libraries in developing and nurturing good collection in a viable economic manner are the challenging task for librarians.

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