Chapter V

Comparative Analysis of the Response Patterns of Researchers and Faculty
Comparative Analysis of the Response Patterns of Researchers and Faculty

While observing and analyzing various patterns of awareness, access and use of e-journals among researchers and faculty, several similarities and variations have been found in the approach of the respondents belonging to both of the categories. It is inevitably relevant and requisite from the viewpoint of a comprehensive to conduct a comparative analysis of the responses of both the researchers as well as faculty. Therefore, the present chapter carries out a comprehensive comparative analysis of the awareness, use and acceptance of e-journals among researchers as well as faculty of LIS. The attempt is to explore similarities and variations, if any, in the responses of both the researchers as well faculty. The comparative analysis has depicted several noteworthy features that are mentioned analytically and statistically under the relevant tables and charts.

Preferences to Particular format of Journals

In response to the query about which format of research journals attracts more likeliness, 17.50 per cent of researchers and 20 per cent faculty asserted that they liked print journals. Further, 23.33 per cent researchers and 21.67 per cent faculty admitted that they liked electronic journals. Additionally, 59.17 per cent researchers and 58.33 per cent faculty admitted that they liked both the print as well as e-journals equally.
Fig 5.1: Preferences to Particular format of Journals

The data reveals that there are number of variations in the opinions of researchers and faculty with regard to likeliness to journals. The print journals are preferred by faculty while electronic journals are more preferred by the researchers. Reasonably, the faculty has more availability of printers and the papers in comparison to researchers. As far as preference to both types of journals is concerned, the number of both the researchers and the faculty is almost same.

Table 5.1: Preferences to Particular format of Journals

<table>
<thead>
<tr>
<th></th>
<th>Researchers</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td>Electronics</td>
<td>28</td>
<td>13</td>
</tr>
<tr>
<td>Both</td>
<td>71</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>60</td>
</tr>
</tbody>
</table>

Table 5.2: Z Test

<table>
<thead>
<tr>
<th></th>
<th>P2</th>
<th>POOLED</th>
<th>SE</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>0.48</td>
<td>0.445946</td>
<td>0.12217</td>
<td>-0.42096</td>
</tr>
</tbody>
</table>
To check the difference between preference of printed and electronic journals by researchers as well faculty, appropriate statistical test has been applied.

Here \( n_1p_1 > 5 \) (and \( n_2p_2 > 5 \)), a normal test to check the variation has been applied. In the given test \( P_1 \) and \( P_2 \) represent the proportions of researchers and faculty which are interested in printed journal.

So under null hypothesis \( H_0: P_1 = P_2 \)

Against the alternative \( H_1: P_1 \neq P_2 \)

Under null hypothesis, we obtain the pooled estimate for proportion \( \bar{P} \). By using this pooled estimate, one can find out the standard error. From the above table, the value of \( Z \)-statistics is -0.42096

\[ |Z| < 3 \]

There is no significant difference between preferences of researchers and faculty at 1% level of significance for printed and electronic journals.

**Awareness of e-journals**

In response to the query about the level of awareness of e-journals among researchers and faculty, all 100 per cent of the researchers as well as the faculty have agreed that they were fully aware of e-journals.

![Fig 5.2: Awareness of e-journals](image_url)
Interestingly, there is no variation found in the response of the researchers and faculty. Reasonably, the researchers as well faculty of LIS are fully aware of e-journals as it is formal part of their subject curriculum.

**Major Purposes of using e-journals**

With regard to the purpose of using e-journals, 13.33 per cent researchers and 41.67 per cent faculty asserted that they use e-journals for teaching purpose. Additionally, 40 per cent researchers and 23.33 per cent faculty revealed that they use e-journals mostly for their research work. Further, 22.50 per cent researchers and 18.33 per cent faculty admitted that they access e-journals for writing papers. Eventually, 24.17 per cent researchers and 16.67 per cent faculty informed that they use e-journals mostly for updating knowledge.

![Bar chart showing purposes of using e-journals](image)

**Fig 5.3: Major Purposes of using e-journals**

The data shows that for teaching purpose, the faculty gives 28.34 per cent more priority to e-journals in comparison to researchers. Reasonably, the faculty is much more formally attached to the teaching work than the researchers. Simultaneously, the 16.67 per
cent more priority of researchers to use e-journals for research work is due to their more concentration to research work in comparison to faculty. Again, the researchers give 04.17 per cent more preference to writing papers than the faculty, due to their more concentration to enhance their research skills. Simultaneously, again researchers give 07.5 per cent more priority to e-journals for updating knowledge in contrast to faculty; perceptibly, researchers have more aspiration and enthusiasm for updating knowledge.

**Frequency of using or accessing e-journals**

The data regarding the frequency to access e-journals again shows variables. 07.50 per cent researchers and the 05 per cent faculty admitted that they access e-journals every day. There were 23.33 per cent researchers who claimed to access e-journals weekly while 20 per cent faculty also confirmed to visit e-journals weekly. As far as access to e-journals once in a month is concerned, 51.67 per cent researchers and 41.67 per cent faculty asserted to access them on monthly basis. Again, there are 17.50 per cent researchers and 33.33 per cent faculty who accessed e-journals occasionally.

![Frequency of using or accessing e-journals](image)

*Fig. 5.4: Frequency of using or accessing e-journals*
The data expresses that total 15.83 per cent researchers are more frequent to access e-journals regularly over faculty as they have more time and enthusiasm for the same in comparison to the faculty. Interestingly, with regard to accessing e-journals occasionally, the faculty lead the frame by 15.83 per cent, which again shows that the faculty access e-journals approximately 16 per cent less frequently in comparison to the researchers.

**Extent and amount of using e-journals**

In response to the query to know that approximately what numbers of articles from e-journals are accessed by the respondents, again dissimilarities are found in the data received from researchers and the faculty. Total 11.67 per cent researchers and 55 per cent of the faculty access 01 to 06 journals in a month. Additionally, there are as many as 88.33 per cent researchers and 45 per cent faculty who access more than 06 journals in a month.

![Bar Chart]

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**Fig. 5.5: Extent and amount of using e-journals**

The data depicts that the researchers access more e-journals in a month in comparison to the faculty. Most of the faculty access up to
06 e-journals in a month. But contrarily, 88 per cent of the researchers access more than 06 e-journals in a month.

**Table 5.3: Extent and amount of using e-journals**

<table>
<thead>
<tr>
<th></th>
<th>Researchers</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1to 6</td>
<td>14</td>
<td>33</td>
</tr>
<tr>
<td>More than 06</td>
<td>106</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

**Table 5.4: Z Test**

<table>
<thead>
<tr>
<th>P1</th>
<th>P2</th>
<th>POOLED</th>
<th>SE</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.116667</td>
<td>0.55</td>
<td>0.261111</td>
<td>0.06945</td>
<td>-6.2395</td>
</tr>
</tbody>
</table>

To check the difference between extent and amount of using electronic journals by researchers as well as faculty, appropriate statistical test has been applied.

Here \( n_1p_1 > 5 \) (and \( n_2p_2 > 5 \)) normal test can be used to check the significance difference between researchers and faculty who are accessing 1-6 and more than 6 e-journals in a month. In this table \( P_1 \) and \( P_2 \) represent the proportions of researchers and faculty.

So under null hypothesis \( H_0: P_1 = P_2 \)

Against the alternative \( H_1: P_1 \neq P_2 \)

Under null hypothesis, a pooled estimate has been obtained for proportion \( (P) \). By using this pooled estimate, one can find out the standard error. From the above table, the value of Z- statistics is -6.2395

\( |Z| > 3 \)

There is significant difference between researchers and faculty at 1% level of significance.
**Probable sources of finding e-journals**

With regard to the most prominent source of finding e-journals, variations among the researchers and faculty are quite explicit. 55 per cent researchers and 63.3 percent faculty find out e-journals from search engines. Total 12.5 researchers and 05 per cent faculty take help of the mailing lists. Further, 17.5 per cent researchers and 15 per cent faculty relies on the directories. Again 05 per cent researchers and 6.7 per cent faculty finds e-journals from library web sites. Interestingly, 10 per cent each of the researchers as well as faculty depend on the e-mail alerts to find out e-journals.

![Fig. 5.6: Probable sources of finding e-journals](image)

The data establishes that although, variations are found in the responses of the researchers as well faculty, relatively, no significant differences are found in the preferences given to various sources.

**Probable locations to access e-journals**

In response to the query regarding the most prominent and frequent place to access the Internet, 80 per cent preference is given by both the researchers as well as the faculty. Interestingly, there are 20 per
percent of the researchers and the faculty who access e-journals outside
the institutes of their affiliation.

![Bar chart showing access to e-journals]

**Fig. 5.7: Probable locations to access e-journals**

Interestingly, there are no variations found in the responses of
researchers as well faculty with regard to the place from where e-
journals are frequently accessed.

<table>
<thead>
<tr>
<th></th>
<th>Researchers</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institute</td>
<td>96</td>
<td>48</td>
</tr>
<tr>
<td>Outside</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>60</strong></td>
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</table>

**Table 5.6: Z Test**

<table>
<thead>
<tr>
<th>P1</th>
<th>P2</th>
<th>POOLED</th>
<th>SE</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.063246</td>
<td>0</td>
</tr>
</tbody>
</table>

To check the difference between the locations to access e-journals by
researchers as well faculty, appropriate statistical test has been
applied.
Here, $n_1 p_1 > 5$ (and $n_2 p_2 > 5$,) normal test has been used to check the significance of difference between researchers and faculty for accessing e-journals at university campus or outside the campuses. In this table $P_1$ and $p_2$ represent the proportions of researchers and faculty.

So under null hypothesis $H_0$: $P_1 = P_2$

Against the alternative $H_1$: $P_1 \neq P_2$

Under null hypothesis, pooled estimate has been obtained for proportion ($P$). By using this pooled estimate, one can find the standard error. From the above table, the value of $Z$-statistics is 0.

$|Z| < 3$

There is no significant difference between researchers and faculty at 1% level of significance.

**Methods of reading e-journals**

With regard to the method used for reading full text e-journal, noticeable variations are found in the responses of the researchers as well as faculty. There are 62.5 per cent researchers who read e-journals on screen but, only 20 per cent faculty read e-journals on screen. Contrarily, total 80 per cent faculty read e-journals by getting print on paper, while only 37.50 per cent researchers get print on paper for the same.

![Fig. 5.8: Methods of reading e-journals](image)
With regard to the mode of reading full text e-journals, perceptible variations are found in responses of the researchers and the faculty. Most of the researchers read e-journals on screen, while on the other hand, vast majority of faculty preferably get print on paper for the same. Reasonably, the faculty have more availability of printing facilities i.e. printers and papers, in comparison to the researchers.

### Table 5.7: Methods of reading e-journals

<table>
<thead>
<tr>
<th></th>
<th>Researchers</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>On Screen</td>
<td>75</td>
<td>12</td>
</tr>
<tr>
<td>Print on paper</td>
<td>45</td>
<td>48</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

### Table 5.8: Z Test

<table>
<thead>
<tr>
<th>P1</th>
<th>P2</th>
<th>POOLED</th>
<th>SE</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.625</td>
<td>0.2</td>
<td>0.483333</td>
<td>0.079013</td>
<td>5.378861109</td>
</tr>
</tbody>
</table>

The relevant statistical technique was applied to test the significant difference between proportions of researchers and faculty with regard preference of reading e-journals on screen or print on paper.

Here \( n_1p_1>5 \) (and \( n_2p_2>5 \)) normal test is used to check the significant difference between researchers and faculty for preference of reading e-journals on screen or getting print on paper. In this table \( P_1 \) and \( p_2 \) represent the proportions of researchers and faculty.

So under null hypothesis \( H_0: P_1=P_2 \)
Against the alternative \( H_1: P_1\neq P_2 \)
Under null hypothesis, the pooled estimate is obtained for proportion (\( P \)). By using this pooled estimate, one can find out the standard error. From the above table, the value of \( Z \)- statistics is 5.38

\[ |Z|>3 \]
There is significant difference between researchers and faculty at 1% level of significance.

**Preference to particular format of information display**

The researchers and the faculty had diverse views when they were asked that what format they preferred for information display from e-journals. It has been found that total 59.17 per cent researchers and 35 per cent faculty prefer HTML format. Further the PDF format is liked by 40 per cent researchers but total 58.33 per cent faculty preferred the same. With regard to the DOC format, it is preferred by only 0.83 per cent researchers and 6.67 per cent faculty.

![Preference to particular format of information display](image)

**Fig. 5.9: Preference to particular format of information display**

The HTML format is mostly preferred by the researchers because most of the researchers read the text on screen and do not usually get print on paper. Thus the superior readable quality of HTML attracts them more. On the other side, the faculty mostly prefers to get print on paper to read any text from e-journals. Hence, the PDF format is preferred by them due to its more print-friendly features. There are nominal numbers of faculty who like the DOC format. But the same is vastly ignored by the researchers, as the DOC format is generally
considered as highly alterable, thus is disregarded by the researchers to quote or give references because of its less authenticity in the research.

Relevance, Usefulness and Value of e-journals

The researchers and faculty hold different opinions as far as their views regarding the use and value of the information retrieved through e-journals are concerned. There are 47.50 per cent researchers who find the information as most helpful; while there are only 30 per cent faculty who find it most helpful. Total 50 per cent researchers and the 56.67 per cent faculty designate the information as mere helpful. Noticeably, there are only 02.50 per cent researchers who find the information a little helpful, but there exists 13.33 per cent faculty that thinks that the information is little helpful.

![Graph: Relevance, Usefulness and Value of e-journals]

Fig. 5.10: Relevance, Usefulness and Value of e-journals

The data confirms that for researchers, the significance of the use and value of the information obtained through e-journals is much more in comparison to the faculty. It further establishes that the extent of reliability on e-journals as source of relevant information is much more among the researchers in contrast to the faculty.
Subscription of the ToC of relevant e-journals

When asked from both the researchers and the faculty, that whether they had subscribed the ToC services on their e-mails, there was absence of accurate similarities among the views of both. There were 59.17 per cent researchers who had reportedly subscribed the same, but only 46.67 per cent faculty had opted the same. While looking from the other side, 40.83 per cent researchers and 53.33 per cent faculty had not subscribed the ToC of e-journals on their e-mails.

![Subscription of the ToC of relevant e-journals](image)

**Fig. 5.11: Subscription of the ToC of relevant e-journals**

It has been further confirmed by the data of the comparative analysis that e-journals occupy much more acceptance among the researchers in comparison to the faculty. That is the reason that the number of researchers who have subscribed the ToC of e-journals on their e-mails noticeably exceeds the faculty.

<table>
<thead>
<tr>
<th></th>
<th>Researchers</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>71</td>
<td>28</td>
</tr>
<tr>
<td>No</td>
<td>49</td>
<td>32</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>60</td>
</tr>
</tbody>
</table>

**Table 5.9: Subscription of the ToC of relevant e-journals**
To test the significant difference between proportions of researchers and faculty who have subscribed Table of Content (ToC) appropriate statistical test has been applied.

Here $n_1p_1>5$ (and $n_2p_2>5$) so we can use normal test to check the significance difference between researchers and faculty for preference of reading on screen. In this table $P_1$ and $P_2$ represent the proportions of researchers and faculty.

So under null hypothesis $H_0$: $P_1=P_2$

Against the alternative $H_1$: $P_1\neq P_2$

Under null hypothesis, we obtained pooled estimate for proportion ($P$). By using this pooled estimate, one can find the standard error. From the above table, the value of $Z$- statistics is 1.59.

$$|Z|<3$$

There is no significant difference between researchers and faculty at 1% level of significance.

**Usefulness of subscription of ToC service**

The researchers and the faculty who had opted the ToC of e-journals on their e-mails were further asked that whether it was any helpful for them or not. Positively 100 per cent researchers and the faculty shared the similar views by stating that for all of them the application of the ToC was really helpful.
Fig. 5.12: Usefulness of subscription of ToC service

With regard to the application of the subscription of the ToC of e-journals on e-mails, positively, 100 per cent similarity of the views has been witnessed among researchers and the faculty as they all find the ToC service helpful for them.

Recommendation of e-journals to other information seekers

Fig. 5.13: Recommendation of e-journals to other information seekers
The data corroborates that all the researchers as well as faculty enthusiastically recommend e-journals to other information seekers. Hence, no variations have been found in the approach of both of the respondents in regard to that particular enquiry.

**Publication or submission of articles in e-journals**

In response to the enquiry that whether any articles were published or submitted for publication by the researchers and the faculty, both of them expressed variant opinions. There were only 47.50 per cent researchers in comparison to 91.67 per cent faculty who had initiated the same. While observing from the other side, there were 52.50 researchers and merely 08.33 per cent faculty who had not published or submitted for publication their articles in e-journals.

![Chart showing publication or submission of articles in e-journals](image)

**Fig. 5.14: Publication or submission of articles in e-journals**

It is quite understandable that nearly the entire faculty accepted that they had published or submitted for publication their articles/research papers in e-journals. On the contrary, less than half of the researchers had initiated for the same. Reasonably, the researchers are more concentrated on their research at the initial stage; hence they lack the proper expertise to author the articles. On
the other side, the faculty has appropriate time, aspiration, and expertise for the same.

**Recommending and supporting others for publication**

Positively, the researchers and the faculty had shared the similar views in response to the enquiry that whether they encouraged and supported other scholars and colleagues to publish their papers in e-journals. All of them admitted that they were enthusiastically doing the same.

![Graph showing recommending and supporting others for publication](image)

**Fig. 5.15: Recommending and supporting others for publication**

The data confirms that whenever there is question of encouraging and supporting other scholars and colleagues to publish the articles/research papers in e-journals, both the researchers and the faculty have expressed the similar opinions by disclosing that they all were committed to the same.

**Extent of effect of use of e-journals**

In response to the enquiry that whether the access to e-journals had increased their ability, both the researchers as well as the faculty shared almost similar opinions. 85 per cent of the researchers and
86.67 per cent faculty admitted that it had actually enhanced their ability. Contrarily, 15 per cent of the researchers and the 13.33 per cent of the faculty disagreed with that.

![Bar Chart](image)

**Fig. 5.16: Extent of effect of use of e-journals**

Positively, not much variation has been found in the views of both researchers as well as the faculty when they express their views that whether the accesses to e-journals have enhances their abilities.

<table>
<thead>
<tr>
<th></th>
<th>Researchers</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>102</td>
<td>52</td>
</tr>
<tr>
<td>No</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>60</td>
</tr>
</tbody>
</table>

**Table 5.11: Extent of effect of use of e-journals**

**Table 5.12: Z Test**

<table>
<thead>
<tr>
<th>P1</th>
<th>P2</th>
<th>POOLED</th>
<th>SE</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.85</td>
<td>0.866</td>
<td>0.855</td>
<td>0.055</td>
<td>-0.299</td>
</tr>
</tbody>
</table>
To test the significant difference between proportion of researchers and faculty who consider that the accessing of e-journals increase their ability, an appropriate test has been applied.

Here $n_1p_1>5$ (and $n_2p_2>5$) normal test has been used to check the significant difference between researchers and faculty who consider that the accessing of e-journals increase the ability (of research and teaching). In this table $P_1$ and $p_2$ represent the proportions of researchers and faculty.

So under null hypothesis $H_0$: $P_1= P_2$

Against the alternative $H_1$: $P_1 \neq P_2$

Under null hypothesis, we obtained the pooled estimate for proportion $(\bar{P})$. By using this pooled estimate, one can find out the standard error. From the above table, the value of $Z$-statistics is $-0.299$

$$|Z|<3$$

There is no significant difference between researchers and faculty at 1% level of significance.

**Problems while accessing e-journals/if any**

With regard to the opinions associated to the use and access of e-journals, the researchers and faculty again share divergent views. The percentage of researchers who acclaim that they face problems while accessing e-journals is 43.33 per cent, while only 20 per cent faculty feel in the similar manner. Observing from other angle, there are 56.67 per cent researchers and total 80 per cent faculty do not feel any problem while using e-journals.
Fig. 5.17: Problems while accessing e-journals/if any

The comparative analysis confirms that percentage of researchers who face various problems while accessing e-journals is almost double to the number of faculty who feel the same way.

Table 5.13: Problems while accessing e-journals/if any

<table>
<thead>
<tr>
<th></th>
<th>Researchers</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>52</td>
<td>12</td>
</tr>
<tr>
<td>No</td>
<td>68</td>
<td>48</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>60</td>
</tr>
</tbody>
</table>

Table 5.14: Z Test

<table>
<thead>
<tr>
<th>P1</th>
<th>P2</th>
<th>POOLED</th>
<th>SE</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.433</td>
<td>0.2</td>
<td>0.355</td>
<td>0.075</td>
<td>3.082</td>
</tr>
</tbody>
</table>

To test the significance difference between proportions of researchers and faculty who face the problems accessing e-journals, an appropriate test has been applied.

Here \( n_1p_1>5 \) (and \( n_2p_2>5 \)) so we can use normal test to check the significance difference between researchers and faculty who are facing
the problems while accessing e-journals. In this table \( P_1 \) and \( p_2 \)
represent the proportions of researchers and faculty.

So under null hypothesis \( H_0: P_1 = P_2 \)

Against the alternative \( H_1: P_1 \neq P_2 \)

Under null hypothesis, we obtained the pooled estimate for proportion
\((P)\). By using this pooled estimate, one can find out the standard
error. From the above table, the value of \( Z \)-statistics is 3.08.

\[ |Z| > 3 \]

There are significant difference between researchers and faculty at 1%
level of significance.

**Types of problems faces while accessing e-journals**

While disclosing the types of problems associated to accessing of e-
journals, variations were found in the responses of the researchers
and the faculty. Fluctuating internet connectivity was considered the
problem by 15.38 per cent researchers and the 33.33 per cent faculty.
26.92 per cent researchers pointed to the limited access points, but
none of the faculty felt the same way. Slow speed of the internet
server was considered as the problem by 57.69 per cent researchers
and 66.67 per cent faculty.

![Graph showing types of problems faces while accessing e-journals]

**Fig. 5.18: Types of problems faces while accessing e-journals**
With regard to the types of problems associated to access e-journals, fluctuating internet connectivity and the slow speed of the internet server are the major problems for the faculty. But for the researchers, the limited access points and the slow speed of the internet server are the major problems.

**Requirement of any technical training to use e-journals**

When asked that whether any training or technical know-how was required to access e-journals, 45 per cent researchers felt the need for the same but there were only 16.67 per cent faculty who acknowledged the requirement for the same. Observing differently, 55 per cent researchers and 83.33 per cent of the faculty denied the need of any training or technical know-how.

![Bar Chart]

**Fig. 5.19: Requirement of any technical training to use e-journals**

It has been observed that nearly half of the researchers feel the requirement of a formal training or technical knowhow for accessing e-journals appropriately. Contrarily, a vast majority of faculty do not sense any need for the same. Reasonably, the more experience and expertise of the faculty makes them more sufficient to access e-journals, while the researchers have, due to less experience of
accessing, feel the need for more formal training to use e-journals comprehensively.

Table 5.15: Requirement of any technical training to use e-journals

<table>
<thead>
<tr>
<th></th>
<th>Researchers</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>54</td>
<td>10</td>
</tr>
<tr>
<td>No</td>
<td>66</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
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</table>

Table 5.16: Z Test

<table>
<thead>
<tr>
<th>P1</th>
<th>P2</th>
<th>POOLED</th>
<th>SE</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.45</td>
<td>0.166</td>
<td>0.355</td>
<td>0.075</td>
<td>3.743</td>
</tr>
</tbody>
</table>

To test the significance difference between the proportion of researchers and faculty who feel the need a formal training programme, adequate statistical test has been applied.

Here \( n_1 p_1 > 5 \) (and \( n_2 p_2 > 5 \)) normal test has been used to check the significance difference between researchers and faculty who feel the need of the formal training programme. In this table \( P_1 \) and \( P_2 \) represent the proportions of researchers and faculty.

So under null hypothesis \( H_0: P_1 = P_2 \)

Against the alternative \( H_1: P_1 \neq P_2 \)

Under null hypothesis, the pooled estimate has been obtained for proportion \( \bar{P} \). By using this pooled estimate, one can find out the standard error. From the above table, the value of \( Z \)-statistics is 3.74. \(|Z| > 3\)

There are significant difference between researchers and faculty at 1% level of significance.
**Types of technical training**

There are certainly differences as far as the opinions of the researchers and faculty regarding the types of training programmes are considered. 55.56 per cent researchers and 80 per cent faculty feel the requirement of short term training, while 44.44 per cent researchers and 20 per cent faculty advocate online training.

![Bar Graph: Types of technical training](image)

**Fig. 5.20: Types of technical training**

The comparative analysis discloses that the vast majority of faculty are more in favour of the short term training programmes while the researchers are approximately equally favour the short term as well as online training.

**Amount of satisfaction from e-journals**

In response to the query examining the level of satisfaction to access e-journals, the researchers and the faculty delivered the similar views. 62.50 per cent researchers and 63.33 per cent faculty were fully satisfied from e-journals. Additionally, 37.50 per cent researchers and 36.67 per cent faculty were partially satisfied from e-journals.
Fig. 5.21: Amount of satisfaction from e-journals

Positively the level of satisfaction from e-journals among the researchers as well as the faculty has been found almost same with very nominal significant variations.

Table 5.17: Amount of satisfaction from e-journals

<table>
<thead>
<tr>
<th></th>
<th>Researchers</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully</td>
<td>75</td>
<td>38</td>
</tr>
<tr>
<td>Partially</td>
<td>45</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td><strong>120</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>

Table 5.18: Z Test

<table>
<thead>
<tr>
<th>P1</th>
<th>P2</th>
<th>POOLED</th>
<th>SE</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.625</td>
<td>0.633</td>
<td>0.627</td>
<td>0.076</td>
<td>-0.109</td>
</tr>
</tbody>
</table>

To test significance difference between proportions of researchers and faculty regarding the satisfaction level with e-journals, appropriate statistical test has been applied.

Here \( n_1p_1 > 5 \) (and \( n_2p_2 > 5 \)) the normal test has been used to check the significance difference between researchers and faculty who are
satisfied with e-journals. In this table $p_1$ and $p_2$ represent the proportions of researchers and faculty.

So under null hypothesis $H_0$: $p_1=p_2$

Against the alternative $H_1$: $p_1\neq p_2$

Under null hypothesis, the pooled estimate has been obtained for proportion ($\hat{P}$). By using this pooled estimate, one can find out the standard error. From the above table, the value of $Z$-statistics is -0.109.

$|Z|<3$

There is no significant difference between researchers and faculty at 1% level of significance.

**Whether e-journals are replacing print journals**

In response to the query that whether e-journals were replacing the print journal, 67.50 per cent of the researchers feel that e-journals were actually replacing print journals, while only 40 per cent faculty considered the same. Observed otherwise, the data shows that 60 per cent of the faculty acknowledged the same, while there were only 32.50 per cent researchers who did not feel that e-journals are actually replacing the print journals.

![Bar chart](image)

**Fig. 5.22: Whether e-journals are replacing print journals**
The comparative analysis confirms that more than two third of the researchers feel that e-journals are replacing the print journals, but on the contrary, there is only one third of the faculty who feels the same. The overwhelming attitude of the researchers towards e-journals makes them feel the same but the experienced outlook of the faculty forbade them from assuming the same.

**Table 5.19: Whether e-journals are replacing print journals**

<table>
<thead>
<tr>
<th></th>
<th>Researchers</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>81</td>
<td>24</td>
</tr>
<tr>
<td>No</td>
<td>39</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>60</td>
</tr>
</tbody>
</table>

**Table 5.20: Z Test**

<table>
<thead>
<tr>
<th></th>
<th>P1</th>
<th>P2</th>
<th>POOLED</th>
<th>SE</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.675</td>
<td>0.4</td>
<td>0.583</td>
<td>0.077</td>
<td>3.527</td>
</tr>
</tbody>
</table>

To test the significance difference between the proportions of researchers and faculty who consider the printed journals are replaced by e-journals, an appropriate test has been applied.

Here \( n_1p_1>5 \) (and \( n_2p_2>5 \)) normal test has been used to check the significant difference between researchers and faculty member’s views on e-journals are replaced the print journals. In this table \( P_1 \) and \( p_2 \) represent the proportions of researchers and faculty.

So under null hypothesis \( H_0: P_1=P_2 \)

Against the alternative \( H_1: P_1\neq P_2 \)

Under null hypothesis, the pooled estimate has been obtained for proportion (P). By using this pooled estimate, one can find out the standard error. From the above table, the value of \( Z \)-statistics is 3.53.

\[ |Z| > 3 \]
There are significant differences between researchers and faculty at 1\% level of significance.

**Causes of less acceptance of e-journals, if any**

While disclosing the reasons of less use of e-journals in comparison of the print journals, the researchers and the faculty have given diverse views. Total 32.50 per cent assert that the lack of knowledge of e-journals in LIS is the prime cause while none of the faculty member feels the same. Further 58.33 per cent faculty censure it to the lack of time, while only 25 per cent of the researchers feel the same. Again, 25 per cent of the researchers and 36.67 per cent of the faculty reveal that they feel uncomfortable with e-journals. Further, according to 15 per cent researchers and 5 per cent faculty, the quality of e-journals is not equal to the print journals.

![Graph](image)

**Fig. 5.23: Causes of less acceptance of e-journals, if any**

Both the researchers and the faculty have asserted variant reasons for less use of e-journals. For vast majority of faculty, firstly the lack of time and secondly their uncomfortable status while accessing e-journals is the main cause. On the other side, the number of
researchers has been widely divided in variety of the reasons. For them lack of knowledge of e-journals is the prime reason, while none of the faculty feel the same.

**Obstacles in using e-journals**

Regarding the observance of the obstacles in the promotion of e-journals, total 70 per cent researchers and 20 per cent faculty assert the reason as lack of infrastructure. Again, 06.67 per cent researchers and 13.33 per cent faculty observe the lack of training as the cause. For 5.83 per cent researchers and 58.33 per cent faculty, e-journals are not easy to access. For other 17.50 per cent researchers and 08.33 per cent faculty, the preference to the print journals is another obstacle.

![Obstacles in using e-journals](image)

**Fig. 5.24: Obstacles in using e-journals**

For majority of the researchers, the lack of required infrastructure and the preference to the print journals are the prime causes for obstacles in the promotion of e-journals. But on the other side, majority of the faculty observe that the complex usage of e-journals and further the lack of the infrastructure is the cause for the less growth of e-journals.
**Proposed steps to make e-journals more efficient**

While imparting the views and suggestions to make e-journals more efficient, the researchers and the faculty have again disclosed the variant views. There are 25 per cent researchers and 46.67 per cent faculty who assert that the improvement of bandwidth can be the solution. For 19.17 per cent researchers and 35 per cent faculty' sufficient infrastructure should be launched. As many as 55.83 per cent researchers and only 13.33 per cent faculty feel that affordable internet access should be initiated. There are 5 per cent faculty and none of the researchers who feel that e-journals need extra promotion.

![Bar Chart]

**Fig. 5.25: Proposed steps to make e-journals more efficient**

The dissimilarities of the opinions are again explicit between the researchers and the faculty while delivering the views to make e-journals more efficient. For vast majority of the researchers, the affordable internet access and the improved bandwidth can fulfil the cause. But majority of the faculty feels that implantation of sufficient infrastructure along with improved bandwidth can make e-journals more efficient.
The comprehensive comparative analysis of awareness, access and use of both the researchers as well as faculty confirms several similarities and variations in the response patterns of both of the categories. A number of similarities have been found among researchers and faculty those majorly include i.e. awareness of e-journals, place to access e-journals, recommending e-journals to others, satisfaction level etc. On the other side, numerous variables have been found that mainly include i.e. purpose of using e-journals, where researchers mostly use them for research purpose, while the faculty uses e-journals for both teaching and research purpose. Further, the researchers use e-journals more frequently and in more quantity than the faculty. Noticeably, both the researchers as well as the faculty face a number of problems, though the nature of their problems is occasionally variant. But it is an obvious fact that both of them have acknowledged and accepted e-journals enthusiastically as a major source of their information for research as well as teaching purpose.