Chapter 4

Research Design

4.1 Preamble

The growth and spread of the undesirable academic practice called plagiarism has been discussed in depth/at length in chapter 3. The current chapter attempts a brief discussion on the research design or framework in terms of sampling design, questionnaire design, data collection procedure, data analysis method and statistical pattern analysis.

The research design used in the present study is clearly delineated in the following paragraphs.

4.2 Preparation of Survey Instrument (Questionnaire) and Pilot Study

The questionnaire was first prepared in the first phase of the project that is in 2013 and has circulated among some heads of department and supervisors in Chennai with a view to improving the content and focus. Their suggestions were incorporated to make the questionnaire enriched in terms of ‘themes’ to be covered in the data collection. Upon completion of this process, the questionnaire was tested in a pilot study, which made possible, further improvement of the same. The final product was a complete questionnaire, but simple enough to be understood by respondents.

The questionnaire (Appendix III) consists of nine major sections:

1. Demographic details of the respondents.
2. Research status of the respondents.
3. Information resources used for writing thesis/research papers by the respondents.
4. The habit of citing resources by the respondents.
5. Awareness about plagiarism among respondents.
6. Attitude towards plagiarism by the respondents.
7. The environments/reasons which made the respondents to reproduce the work of others.
8. The respondent’s interest in avoiding plagiarism.
9. Ways and means of helping research scholars in avoiding plagiarism.

4.3 Data Collection

The study has adopted both primary and secondary data elicitation.

4.3.1 Primary Data

The questionnaire survey was made in Chennai according to action plan. Research scholars from selected eighteen universities in Chennai have been included. Ph.D. Research scholars registered from 2009 to 2014 had been chosen for the purpose of the present study.

4.3.2 Secondary Data

The secondary data elicitation was confined to the documentary sources of data and information such as research articles, scientific reports, monographs, online database: LISTA (Library, Information Science and Technology Abstracts); IEEE Xplore Digital Library, Emerald Insight; Springer Link; Science Direct; ProQuest and J-Gate database, Websites viz. Shodhganga: a reservoir of Indian Theses, Vidhyanidhi: Indian digital library of electronic theses and ETD (Electronic Theses and Dissertations), books and dissertations.
4.4 Sample Size

The researcher followed survey methods for collecting primary data with the help of a structured questionnaire. Since the population is too large to study in view of time and cost involved, and to ensure better response rate, the researcher has chosen eighteen universities in Chennai and distributed the questionnaire among the research scholars in different disciplines viz. Science, Arts, Commerce, Computer Science, Library & Information Science, Engineering, Medicine, Veterinary and Animal Sciences, Education, Law, Physical Education and others.

The 550 structured questionnaires were distributed among the research scholars doing research in eighteen universities situated in Chennai (Appendix I). These universities were grouped under two categories, such as state universities and deemed universities.

Table 4.1 shows the university status wise distribution of the questionnaire and the response received. Out of 550 questionnaires distributed, 419 research scholars responded, and the response rate is 76.18%.

Table 4.1
Quantum of questionnaires distributed and response received

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Status of universities</th>
<th>No. of universities</th>
<th>No. of questionnaires distributed</th>
<th>No. of responses received</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>State universities</td>
<td>7</td>
<td>235</td>
<td>181</td>
<td>77.02%</td>
</tr>
<tr>
<td>2.</td>
<td>Deemed universities</td>
<td>11</td>
<td>315</td>
<td>238</td>
<td>77.55%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>18</td>
<td>550</td>
<td>419</td>
<td>76.18%</td>
</tr>
</tbody>
</table>
It has been inferred from the table 4.1 that out of 235 questionnaires distributed among research scholars doing research in state universities, 181 (77.02%) responded. Further, out of 315 questionnaires distributed among research scholars doing research in deemed universities, 238(77.55%) responded.

4.5 Data Analysis and Interpretation

The data elicited through questionnaires have been analyzed, using the Statistical Package for the Social Sciences (SPSS) software.

4.5.1 Description of Statistical Tools

The newest version of SPSS is SPSS 22.0 and, for this study, the data were analyzed using the IBM SPSS Statistics 21 version. After the analysis, the data have been represented in the form of tables, and diagrams with the help of MS excel; the results have been tested with percentage analysis and chi-square test.

4.5.2 Statistics Applied

Data has been statistically analyzed

- Percentage analysis,
- Cross table
- Mean value
- Standard deviation
- Chi square test
4.5.3 Chi-square Test

The Chi-square ($\chi^2$) test is one of the simplest and most widely used non-parametric tests in statistical work. The symbol $\chi^2$ is the Greek letter Chi. The $\chi^2$ test was first used by Karl Pearson in the year 1890. It is defined as,

$$\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

Where, $O_i$ refers to the observed frequencies and $E_i$ refers to the expected frequencies.

4.6 Conclusion

This section presents the discussion on the questionnaire preparation. Pilot tests of the questionnaire helped refine this further and were exposed to the target population as part of the research work. The data collected have been subject to statistical methods for analysis and the results are presented in Chapter 5.