RESEARCH METHODOLOGY

3.0 INTRODUCTION

Research in common parlance refers to a search for knowledge, through objectives, formulating a hypothesis, collecting data, analyzing facts and systematic method of finding solution to a problem towards the concern problems. It is a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation (1). Before, embarking on the details of research methodology/techniques and tools, it is appropriate to present a brief overview of the research process adopted during the present study. Various series of steps used to carry out research are:

3.1 METHOD OF RESEARCH

This study was carried out on the use of Information Technology in academic departments of Library and information science in universities of Iran. It was conducted on LISc faculty teachers and a group of LISc students in academic year 2004 and 2005. Keeping the above points in consideration, the circumstances and objectives of the study descriptive–analytical (survey method) method was used as the research method. Questionnaires, interviews, observations were employed as the tools for data collection. However, indirect studies of records were adopted for collection and analysis of relevant data to supplement the data collected through questionnaires to enhance and strengthen its reliability and to gather, some additional information on specific aspects of IT utilization by Iranian LISc faculty teachers and students. A descriptive study describes and interprets what is. It is also concerned with conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evident, or trends that are developing (2). The major purpose of descriptive research is description of the state of affairs as it exists at present. Consequently, above method was closely related to carry out the present study, however methods of research utilized in descriptive research is survey method (3). This procedure gives each item an equal probability of being selected. The questionnaires were divided into two parts, firstly personal information, secondly, use and awareness of IT.
3.1.1 Formulation of Research Problems

Firstly, the research problems were formulated and for this purpose detailed literature survey was carried out, this was followed by discussions with colleagues, experts and research guide. This helped to understand the problems thoroughly and reshaping the same into meaningful terms from an analytical point of view.

3.1.2 Literature Search

Secondly, at the same time (simultaneously) an extensive literature survey related to problems was carried out and this was supplemented by new ones from time to time. This helped a lot to get acquainted with the proposed problems. In this process two type of literature were reviewed: conceptual literature, concerning the concept and theories, and empirical literature consisting of studies carried out earlier, which are similar to present proposed study. For this purpose various: Primary, Secondary, Tertiary and cross references were consulted. This included primary journals and review articles, Library and Information Science Abstract (LISA), Indian Library Science Abstract (ILSA) full text journals, published/unpublished documents, bibliographies, conference proceedings, government reports, books, etc. were also tapped. This was also supplemented by use of the Internet, based references and cross references.

3.1.3 Preparation of Research Design

Decision regarding the designing the present study (what, where, when, how) was taken into consideration after consulting various earlier studies, experts’ opinions and frequent discussions with the research guide. Keeping in view the above stated design decisions, the whole study was split into: (i) statement of research problem; (ii) procedures and techniques to be used for gathering the data/information (iii) the population to be studied and (iv) Methods to be used in processing and analyzing the data. After formulating the research problems, a research design was prepared i.e conceptual structure within which research/study is supposed to be conducted. To prepare the research design above points were considered i.e. what is study about, why the study is needed, where will the study be carried out? What type of the data is required and period of time to be covered? How data will be analyzed? and finally what style will the report be prepared?
LISc departments in Iran were selected for data collection, while University of Pune in India was selected to analyze the data and report preparation.

3.1.4 Population and Sample Design

Each study is related to a research population. Population means all members of any well defined class of people, events or objects. The population of this study comprises, all of the full time LISc faculty members and LISc students in universities of Iran. There were 86 LISc departments in Iran with 180 full time faculty members and 13900 students. Out of these, 6900 were Associate of Arts (A.A) and Distance Education (part time) students, who were not studied in this research. So the total population of the present research is: full time faculty members-180 (Lecturers, Assistant Professors, Associate Professors and Professors), students-7000 (Bachelors, Masters, and PhDs). As the total population of faculty members were 180 and it was a small population so all the 180 faculty members were selected as the research samples. Krejcie and Morgan’s Table (see appendix-D) was applied to determine the sample size for students (4). According to this table, 209 samples were the appropriate number, which can represent the over all number of 7000 of the population. However more samples is taken, the more information and good result is gained, It was decided to add double number for the process of sample selection for students. The total number of sampling in this particular became 500 samples, consequently, 500 questionnaires were distributed randomly among the LISc students in universities of Iran. For the data collection LISc departments in Iran were selected as the research place, while University of Pune in India was selected to analyse the data and report preparation. (Table-3.1).

Table-3.1: Category-Wise Response Rates

<table>
<thead>
<tr>
<th>No.</th>
<th>Users</th>
<th>Population</th>
<th>Samples and No. of Distributed Questionnaires</th>
<th>Response- Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number</td>
<td>Count</td>
<td>Number</td>
</tr>
<tr>
<td>1</td>
<td>Faculty Members</td>
<td>180</td>
<td>180</td>
<td>120</td>
</tr>
<tr>
<td>2</td>
<td>Students</td>
<td>7000</td>
<td>500</td>
<td>390</td>
</tr>
</tbody>
</table>
3.1.5 Tools Used for Collection/Analysis of Data

There are several ways and tools to collect the data. Hence, questionnaire was used as the main instrument/tools for the data collection. Observation, interview and the documentry (references) sources were included to support the study as well as to give the authenticity of the data. However, Statistical Package for Social Science (SPSS) was used for data analysis and interpretation, while computer for other word processing work and analysis.

3.1.5.1 Questionnaires

The questionnaire was utilized extensively in order to collect the necessary data. Two sets of questionnaires have been used to collect data. One questionnaire for faculty members survey and another for students survey. The survey questionnaires were pre-tested as a part of pilot study by faculty members and students as the samples. The suggestions were incorporated and questionnaires were modified accordingly. The suggestions and recommendations by faculty members and students problems raised by the users during the pilot study, were taken into consideration. After the pilot study, the questionnaires were mailed to faculty members as well as students with the request return the same. However, majority of respondents were personally contacted and in case of any difficulty, the details were explained.

3.1.5.2 Statistical Tools

After the data collection procedure, the collected data was processed, condensed, classified, coded, edited, tabulated and entered the computer. The data was analyzed statistically using descriptive (frequency and percentage) and inferential statistic (Chi- Square Test) including in the SPSS. The descriptive statistics, including frequency and percentage were used to provide a general picture of the current major trends in respect to the use of IT by LISc faculty members and students. Inferential statistics including Chi Square Test ($X^2$) were used to test the relationship between the research variables. The computer was used at this juncture, which was based on the computation of various percentages, coefficient, etc. by applying various well defined statistical formula.
3.1.5.3 Computerized Softwares

MS Office Word was used for typing the texts and drawing the tables while MS Office Excel was also used to draw the necessary figures. SPSS was applied for data analysis.

3.1.6 Execution of the Study

As execution of the research/project is a very important step in the research process, the questions as well as the possible answers were coded. From time to time respondents were personally contacted to ensure that the respondents are doing their assigned jobs sincerely and efficiently.

3.2 ANALYSIS OF DATA

Analysis of data is an important aspect of any research. After the data was collected the same was coded, tabulated, computerized and analyzed for statistical inferences using SPSS software.

3.3 GENERALIZATION AND INTERPRETATION

The real value of a research lies in its ability to arrive at certain generalization. If the researcher had no hypothesis to start with, he might seek to explain his findings on the basis of some theory. It is known as interpretation. The process of interpretation may quite often trigger off new questions which in turn may lead to further researchers.

3.4 PREPARATION OF THE REPORT/THESIS

Finally report was prepared based on guideline given by the university of Pune. It comprises of preliminary pages viz. certificate and declaration, acknowledgements, followed by contents, list of tables, figures and abbreviation used in the report.

3.5 CONCLUSION

The study of IT utilization in academic LISc departments, faculty teachers as well as students are vast areas of research works, all together made the survey
more challenging. Taking into consideration the circumstances and the objectives of the study, descriptive analytical approach was used for research method, employing the use of questionnaires, interviews, literature analysis, data based on secondary sources, indirect studies/analysis of records has been adopted.
3.6 REFERENCES


