Chapter-5
Research Methodology
CHAPTER 5
RESEARCH METHODOLOGY

5.1. Introduction

The earlier chapters are related with the conceptual framework, i.e., background of the study, introduction of retroconversion, review of the related literature and libraries under study respectively. This chapter focuses on the conceptual research design and methodology used in the present study. The methodology used in the present study has been discussed in detail under the following headings:

- Hypotheses
- Research methodology
- Tools used for the study
- Questionnaire design
- Sample and population design
- Variable taken
- Pilot survey
- Data collection procedure
- Data analysis method

5.2. Hypotheses

Hypothesis is an important and indispensable tool of a scientific study. In lack of hypothesis, no scientific study can be completed. Hypotheses are the working instrument of the theory, which can be tested and shown to be probably true and false. It is the hypothesis which makes the way for solution of the problem.

Hypothesis is a supposition or preposition. It is a tentative generalization, which is yet to be proved. The word hypothesis is derived from two words ‘hypo’ which means ‘under’ and ‘tithenas’ means ‘to place’. Thus when hypothesis is placed under the evidence as a foundation, they tend to support one another. It performs this function
by providing a proposed explanation, which will have certain consequences; they may be confirmed by testing.¹

Ordinarily hypothesis simply means a mere assumption or some supposition to be proved or disproved, but for a researcher hypothesis is a formal question that he intends to resolve. Thus a hypothesis may be defined as a proposition or a set of proposition set forth as an explanation for the occurrence of some specified group of phenomena either asserted merely as a provisional conjecture to guide some investigation or accepted as highly probable in the light of established facts. Quite often a research hypothesis is a predictive statement, capable of being tested by scientific methods, that relates to independent variable to some dependent variable.²

For the purpose of the present study, the following hypotheses were formulated so as to make the present study more scientific, purposive and unequivocal. To test these relevant questions have been formulated in the pre-ordained questionnaire designed and administrated for the purpose.

5.2.1 Most of the libraries are doing outsourcing retroconversion process.
5.2.2 Most of the staff members of libraries are trained for retroconversion.
5.2.3 Most of the users are aware of library computerisation in the library.
5.2.4 Most of the libraries have done reclassification and recataloguing for retroconversion work.
5.2.5 Most of the users face problem in using OPAC in the library.

5.3. **Research Design**

Research design can be defined as “the arrangements of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure”. The main aim of research design is to plan and structure a given research project in such a manner that the eventual validity of the research findings is maximized. The existence of the variety of research methods, paradigmatic preferences and differences in phenomena suggests that it is erroneous to assume that a single correct research methodology is appropriate for all studies exist. Major elements in the research process are the methodologies and data collection techniques employed.³

Methodology has its own implication and importance in scientific investigation, because objectively any research investigation cannot be obtained unless it is carried
out in a very systematic and planned manner. Scientific investigation involves careful and proper design, use of standardized tools and tests identifying adequate sample by using sampling technique. There are several methods of collection of data for measuring the performance and quality of libraries. These methods can broadly be grouped into two, namely quantitative and qualitative methods. The quantitative methods include verification of library records, questionnaire and interview methods. The qualitative method comprises of focus groups, observation, and case study methods. But the latest trend is using of both the methods for qualitative study of libraries and information centers. There are several techniques available for collecting data such as (i) Questionnaire method (ii) Interview method (iii) Observation method (iv) Schedules (v) Interview by telephone. For this study, the investigator used questionnaire, observation and interview method for the collection of data.

5.3.1. Questionnaire Method

Questionnaire is the most popular method of collecting data for an evaluation and assessment. It can be used over a whole range of issues from a sample overview survey to a detailed survey of a specific issue. Questionnaire is a tool to collect the data from the diverse and widely scattered group. It is called the heart of survey operation.

There are two types of questionnaire:

1. **Open Questionnaire:**

   In this type of questionnaire no answer is given against the question. Respondent supply the answer in his/her own words.

2. **Closed Questionnaire:**

   In this type of questionnaire, answer is given against the question. The respondent has to select the alternate answer written against the question. The important step in this method is to take care in the design of questions. Questionnaire is given to the person concerned and asks for the opinion or factual information. The questions are formed in such a way that the relation of one question to another can be readily apparent to the respondent, question sequence must be clear and the respondents have to answer the question on their own level.

   To collect the necessary data for the present study, the investigator designed two sets of questionnaire. One set for the under study libraries librarians/Directors, second set for the users of three libraries, i.e., Central Secretariat Library, Zakir Husain Library, JMI, Nehru Memorial Museum and Library.
5.3.2. Interview Method

Since the questionnaire method has certain limitations to collect the data, hence the investigator adopted interview methods for the same purpose. Interview is universal method of obtaining information form respondents in a direct manner. It is the verbal questioning of respondents for collecting data. It is a two-person conversation, initiated by the interviewer for the specific purpose of obtaining research related information and focused by the research objectives of description and explanation. It is a structured activity to probe in detail into the experiences and reactions of respondents. It is a good method for exploring sensitive and confidential issues. It is a skilled activity as it is the interaction between the staff interviewer and user. It can be recorded either in paper or in audio /videotapes.

The interview method is direct and has greater flexibility. This method is unique because the collection of data is through direct verbal interaction between the individuals. In this study, the investigator asked some questions to the users and library staff related to retroconversion, services and facilities provided by the library and clarifies some doubts.

5.3.3. Observation Method

Observation method is normally employed in measuring, testing, characterizing human behavior by the way of the investigators own observation, without interviewing the respondent. For the present study, investigator observed overall activities, library functions and services provided by them. Investigator specially had a close eye on all sections of the library. Moreover, this helped the investigator to know the ground realities qualities. It is a technique in which the investigator observes about the customers or user actually do in the library. It allows the investigator to observe the users in their natural setting, and get correct data. It is a systematic process of acquiring knowledge using sense organs. It is the process of recording non-verbal as well as verbal behaviors and communication.

5.4. Tools Used for the Study:

In order to conduct a qualitative and quantitative analysis, a combination of the questionnaire method along with observation and interview were used as tools for collecting the necessary data.
5.5. Questionnaire Design:

Questionnaire is the most popular method of collecting data for an evaluation and assessment. It can be used to a whole range of issues from a sample overview survey to a detailed survey on a specific issue. While designing a questionnaire, it is good to use standardized methodologies, as it will allow to benefit from the experience of other and to compare the results with similar libraries.

Two sets of questionnaire were designed for the purpose of data collections. First set of questionnaire was designed for the librarians/Directors of three respective libraries and second set of questionnaire was designed for user groups.

**First set of questionnaire** was divided into two parts, i.e., part A and part B. Part A deals with brief profile of libraries, statistics of libraries, such as size of collections, facilities and services and staff etc. Part B deals with the retroconversion, its status, process/options, hardware and software used, training needs for the staff, cost effectiveness and other important aspects related to retroconversion. It includes about 27 open ended and closed-ended questions referring to different aspects libraries and retroconversion.

**Second set of questionnaire (Part-C)** deals with the users perception towards the retroconversion aspect, staff attitude towards users, training need and satisfactory level of users. It includes about 23 open ended and closed-ended questions referring to different aspects of libraries and retroconversion.

5.6. Sample and Population Design

It is not feasible to collect large quantities of data of each and every library users in three under study libraries therefore; samples were selected by using stratified random sampling method. The questionnaires were distributed personally among Librarians/Directors, and Users. Sample size of library users has been limited to approx 10% of the total populations.

5.6.1. Library Wise Distribution of Sample

5.6.1.1. Central Secretariat Library, New Delhi

A sample of 400 questionnaires were distributed among the users of CSL and total of 370, i.e., (92.50%) questionnaires were returned out of which 10, i.e., (2.50%)
questionnaires were rejected because of incomplete responses from the respondents. Therefore, investigator selected 360, i.e., (90%) complete filled questionnaires for analysis.

5.6.1.2. Zakir Husain Library, JMI, New Delhi

A sample of 300 questionnaires were administrated among the users, i.e., research scholars and faculty members of ZHL, JMI and a total of 275, i.e., (91.670%) questionnaires were returned, out of which 10, i.e., (3.33%) questionnaire were rejected because of incomplete responses from the users. Therefore, investigated selected 265, i.e., (88.33%) complete filled questionnaires from analysis.

5.6.1.3. Nehru Memorial Museum and Library, New Delhi

Another 175 questionnaires were distributed among the users of NMML, i.e., research scholars only and a total of 165, i.e., (94.29%) questionnaires were returned, out of which 13, i.e., (7.43%) questionnaires were rejected because of incomplete responses from the respondents. Therefore, investigator selected 152, i.e., (86.86%) filled questionnaire for analysis.

5.6.1.4. Total No. Sample Size and Distributions

A total of 875 questionnaires were distributed to the user community of under studied libraries, of which 810, i.e., (92.57%) responses were received back from the users. The investigator selected 777, i.e., (88.80%) responses from the users. 33, i.e., (3.77%) questionnaires received back from the users were rejected because of incomplete responses from the respondents. Similarly 3 questionnaires were distributed to the Librarians/Directors of three libraries, i.e., 100% and all the three questionnaires were received back and selected for the analysis of data.

5.7. Variables Taken

In order to achieve the objectives of the study and get the meaningful result following variables were taken:

- Librarians/Directors
- Library Users

Since this study is the combination of government library, academic library and research library for social sciences, so the variables differ from library to library.
In the case of Central Secretariat Library users belong different categories. i.e., individual members, casual members, special members, corporate members and central government employees and any user who wish to join their membership. It is very difficult to identify and approach to the users so the investigator selected the users who have easily approached although they are any category for the collecting data related to present study.

Considering Zakir Husain Library, JMI is an academic library and users can be easily identified. So the variables taken for the study purpose are research scholars and faculty members only.

On the other hand Nehru Memorial Museum and Library is a research library for social sciences and users belonging to different categories. i.e., research scholar, faculty members, P.G. students from the various universities and institutions, government employee and any person which is engaged in any research activities. So the investigator selected only research scholars for the data collection.

5.8. Pilot Survey

A pilot study was conducted to verify the reliability of the method chosen. This step also assisted in the adjustment of research method problem. Hence the pilot study served as a practice for the researcher's interviewing techniques. The results from the pilot study was integrated into the current section.

A pilot survey was undertaken to ensure whether the questionnaire was meaningful to the respondents as they were to the investigator and decide about relevant questions for the purpose of the study. So the investigator administrated 75 questionnaires among the users of the three under study libraries. The pilot survey helped substantially in modified the questionnaires, which further helped in collection of data with more accuracy and completeness.

5.9. Data collection procedure

For the collecting of data, the investigator personally visited three libraries and approached the Librarians/Directors for seeking permission to distribute the questionnaire to the users. Questionnaires were personally administrated among users of three respective libraries. Dully-filled questionnaires were collected back on same day or later.
The investigator personally consulted the library staff and users, made an informal talk regarding retroconversion and various aspects of their libraries. The investigator also conducted an informal interview with the librarians/Directors and other library staffs to clarify some doubts; besides this observation method was also used to observe the overall system related to retroconversion and other aspect of libraries.

5.10. Data Analysis Method

The quantitative and qualitative data collected through questionnaire, observation method and informal interview was keyed in Excel file and organized and tabulated by using statistical methods, tables and percentage.

REFERENCES

