CHAPTER 3
RESEARCH METHODOLOGY

3.0. INTRODUCTION

The methodology adopted in the study of information needs and seeking behaviour of different users’ community has been recently developed and it is under the active stage of continuous process. At present various techniques are found to be adopted for carrying out such studies. As far as the present study is concerned, the details methodology used is discussed in this chapter of the work. Identification of the scientists under study, their size, resources consulted for different purposes of the work, tools and techniques used, survey and visit of different research organisations/institutions, libraries and information systems, designing questionnaire, etc. have been discussed here.

3.1. POPULATION AND SAMPLE SIZE OF THE STUDY

The present study has attempted to understand the information needs and seeking behaviour of the social scientist of Manipur in the emerging digital environment. The geographical area of the study is restricted to the state of Manipur only.

Social Scientists who are engaged in various institutions, organisations, departments and agencies, as discussed above, have been included in this study. So all the social scientists engaged in such agencies of both government and private sectors comprise the population size of the study. Around 1000 (one thousand) Social Scientists have been identified for the present study in the first phase. In the next phase, observing their nature of work, the number of scientists has been reduced to 800(eight hundred) only. The identification of the scientists has been done through personal visit in various institutions and organisations,
review of published reports, consultation of experts, supplemented by personal observations, etc.

It has always been difficult on the part of the investigator to cover each and every individual members of the population for a particular study. As such the present study has been done on the basis of a sample selected for the purposes. Of the 800 social scientists finally identified, 600(six hundred) individual scientists have been chosen to cover in the sample size of the present study.

3.1.1. Identifying the Scientists

On the basis of the nature of work carried out by the social scientists, they have been identified and categorised as:

Teachers (T);
Teachers cum Researchers (TCR);
Researchers(R);
Social Workers (SW);
Professionals (P); and
Others (O).

3.2. USE OF ABSTRACTS/DIRECTORIES/REFERENCES/WEBSITES

In order to get a comprehensive knowledge about information needs and information seeking behaviour of users, particularly of social scientists, survey of related literature has extensively been carried out. Some of the resources used for this purpose include:

Library and Information Science Abstracts (LISA),
Indian Library Science Abstracts,
Bibliographies of books, theses, dissertations and reviewed articles,
Different type of references appended in various research papers, etc,
3.3. VISITING OF DIFFERENT LIBRARIES AND INFORMATION SYSTEMS

Different libraries and information systems in Assam, Manipur and Meghalaya have been visited personally while collecting relevant information. Some such agencies are Manipur University Library, College Libraries in Manipur, Libraries of Research Organisations, State Central Library, State Information Centres, Central Library, NEHU, Central Library, Shillong, K.K. Handique Library, Gauhati University, Assam, Cyber Cafes, etc. The information resources particularly digital resources available in the libraries and information systems in Manipur have also been surveyed.

3.4. TOOLS USED

Questionnaire is the main tool used in the collection of data from the identified social scientists. A semi structurally designed questionnaire (as in Appendix-I) has been adopted for the purpose. However as the situation warranted observations and interaction with the scientists and Library and Information Science professionals have also been used as supplementary aspects in collecting data in addition to questionnaire.

3.4.1. Design of Questionnaire

The questionnaire has been constructed on the basis of objectives of the study. The questionnaire has been designed by dividing into six sections as enumerated below:

Section A: Personal Identification: comprising of 16 questions.
Section B: ICT Skills: having 3 basic questions and two sub-questions.

Section C: Information Seeking Behaviour: which has 9 questions including one sub-question.

Section D: Information Channels: containing 7 questions including 2 sub-questions.

Section E: Information Sources and Services: which is comprised of 8 questions including one sub-question.

Section F: Problems and Suggestions: altogether 5 questions including 2 more sub-questions have been given.

3.4.1.1. Use of Point Scales

A three point scale of ‘to a great extent’, ‘to some extent’, and ‘not at all’ have been adopted in some questions in order to identify how far a social scientist depends on a particular information source, service, channel, etc. Some questions on ICT Skills, Information Seeking Behaviour of the Scientists, Yes or No type, use of internet, visiting library, etc. have also been incorporated.

3.4.1.1.1. Value of the three point scale

In the questionnaire a three point scale of ‘to a great extent’, ‘to some extent’; and ‘not at all’ were adopted in some questions in order to analyse the response of the users. The values for the scales have been assumed as cited below:

<table>
<thead>
<tr>
<th>Scales</th>
<th>Assumed values</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) To a great extent</td>
<td>1.00</td>
</tr>
<tr>
<td>b) To some extent</td>
<td>0.50</td>
</tr>
<tr>
<td>c) Not at all</td>
<td>0.33</td>
</tr>
</tbody>
</table>

3.5. TECHNIQUES FOLLOWED

A number of possible techniques have been followed in the collection of data from the social scientists. Because of prevailing situations the investigator
was compelled to use different techniques. Some of the important techniques employed include the following:

3.5.1. **Direct Approach**

This technique has extensively been used in the collection of data from various individual social scientists who are engaged in different institutions, organisations, agencies, centres, etc. of the state. It has been done in a phased manner through different stages.

3.5.2. **Deputing Enumerators**

Some enumerators have been deputed to approach the scientists who are working in remote and hill areas of the state. They were given proper instructions concerning the purpose for which data was to be collected.

3.5.3. **Mail Questionnaire**

As it was difficult on the part of the investigator alone to visit each and every member organisations, institutions, etc. where the scientists are engaged in, self addressed stamped questionnaires were mailed to the addresses of the scientists concerned and the duly filled in ones were collected later on through post.

3.5.4. **Meeting at Various Occasions**

In various occasions such as meetings, conferences, workshops, seminars, etc. the investigator could contact many such social scientists from all walks of life from whom, suggestions, opinions, useful information, etc. were collected. Even identified scientists, sometimes, could also be contacted personally in such occasions during which instantly filled in questionnaires have been collected.

3.5.5. **Electronic Communication**

Some of the scientists have also returned duly filled in questionnaire through e-mail delivering the same as attached file to the investigator.
3.6. SURVEY OF RESEARCH ORGANISATIONS/ INSTITUTIONS AND LIBRARIES

Survey of various research organisations and different libraries and information systems located in Manipur have been carried out for different purposes of the work.

3.6.1. Research Organisations

The research organisations and other institutions covered during the study include the following:

- Different Departments and Centres of Manipur University following within the purview of Social Sciences.
- Some Departments of the Central Agricultural University, Imphal where social scientists are working.
- Different Colleges affiliated to Manipur University where the subjects in social sciences are offered (list of such colleges is enclosed under Appendix-II).
- There are a number of independent organisations engaged in Social Sciences Research activities in the country (as in Appendix-III) and a few such organisations in the state (as in Appendix-IV). Some of the social scientists covered in the present study have represented some such organisations.
- Government Departments, Autonomous Bodies, etc. where Social Workers and Identified Scientists (who are in the subject domain of social sciences) are engaged in.
- Professional Organisations, Associations, Bodies and Non-Governmental Organisations (NGOs) functioning in the state have also been taken into account.
- Different Libraries and Information Centres where LIS professionals are working in considering them as a group of Social Scientists.
3.6.2. Libraries and Information Systems

Different existing libraries and information systems in Manipur have been surveyed to assess the stock of the availability of E-Resources and their accessibility with special reference to the accessibility to such resources by the social scientists. Academic Libraries, Public Libraries, Libraries attached in Research Organisations, Training Centres, etc. located in the state have been given more focus. Some of the newly established Common Services Centres, Cyber Cafes, etc. in and around valley areas have also been surveyed in this regard.

3.7. SURVEY AND SAMPLING TECHNIQUES

While surveying organisations, institutions, other related agencies, library and information systems and collecting data from the individual scientists the following techniques have been followed:

⇒ Pilot survey of organisations, institutions and other agencies located in Manipur in a phased manner.

⇒ Similar technique as in the above in surveying the identification of social scientists working in these various organisations, institutions, etc. of the state.

⇒ Stratified Simple Random Sampling technique in the case of data collection through questionnaire from the individual social scientists in different stages.

⇒ Simple Random Sampling technique in identifying and surveying the existing Library and Information Systems, Common Services Centres, Cyber Cafes, etc.

3.8. DATA COLLECTION

While collecting data the following different methods have been adopted:

⇒ Scanning of published materials,

⇒ Survey of various institutions, research organisations and centres,
⇒ Extensive survey of social scientists, using the questionnaire, to understand their information seeking behaviour in digital environment

3.8.1. Stages in Data Collection

Data from the scientists under consideration have been collected in five different stages through different modes, due to geographical location of the state and law and order situation of the state as well, as enumerated below:

→ **First Stage**: Imphal East and Imphal West Districts

→ **Second Stage**: Chandel and Thoubal Districts

→ **Third Stage**: Churachandpur and Bishnupur Districts

→ **Fourth Stage**: Senapati District

→ **Fifth Stage**: Tamenglong and Ukhrul Districts

3.8.2. Period of Data Collection

The collection of data from the scientists were performed during March, 2009 to March, 2010. However records and different reports of ten years (2000-2009) of various organisations and institutions have been taken into account for necessary record of the study to understand many issues and matters associated with the study.

3.9. TECHNIQUES FOR DATA ANALYSIS

Basic statistical techniques and Microsoft Excel has extensively been used in the process of analysis of data for empirical interpretation. The following statistical techniques were employed to analyse and interpret the data.
3.9.1. **Mean, Median and Percentage**

Mean and median are two types of “averages” or measures of central tendency. Simple measures of location like percentages, mean and median have been adopted in analysing the data.

### 3.9.2. Use of 3-point scales

In certain sections of the analysis, point scales have been used to convert the collected data into scores for making the analysis more empirical. The calculated scores have been drawn to ascertain the variations amongst the variables under considerations by finding out mean deviations and standard deviations, computed as below:

Mean Deviation = $x - \bar{x}$

Where; $x = \text{the value of score}$

$\bar{x} = \text{mean of the score value}$

Standard Deviation = $\sigma = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$

Where; $\sum (x - \bar{x})^2 = \text{sum of the squares of mean deviations}$

### 3.9.3. Calculation of Score

The score had been calculated with the assumption of the following values of the different points as mentioned above:

- To a great extent = 1
- To some extent = $1/2 = 0.5$
- To a little extent = $1/3 = 0.33$
- For no response the value being 0 (zero).
3.10. PRESENTATION OF DATA

Presentation of collected and analysed data have been done through the following aspects:

3.10.1. Coding

Specific codes have been deployed at the time of data generation works to understand classification and grouping of categories of Social Scientists and their characteristics.

3.10.2. Tabulation

The analysed data have been presented in the form of tables to give a clear picture of the nature of the data under consideration.

3.10.3. Graphical Representation

Besides the tables, in some parts of the analysis of data, graphical methods like bars, pie charts, line graphs, etc. have also been employed to give a bird’s eye-view of the analysed data.

3.11. CITATION STYLE

Throughout the course of the study, while making text and reference citations, Harvard Style had been followed. The same had been applied to all types of information resources whatever consulted and referred for various aspects and sections of the study.

3.12. CONCLUSION

The study of the users particularly to assess their information seeking behaviour is not a new area of research in Library and Information Science. Different methods and techniques have been used for the same while collecting information from the target users. The methodology adopted in the present study is
also found to ace be accepted in many such studies as literature review shows us. In the context of the present work, the methodology adopted, was found to be more appropriate and feasible and enabled the investigator to achieve the objectives of the study.