CHAPTER THREE

METHODOLOGY

To aim at studying the role of Documentation Centres in communication and dissemination of scientific and technological ideas in Bangladesh, the present study identified two sectors, namely, Documentation Centres in Bangladesh and their users. The detailed methodology used for this study is discussed in the following sections.

A. OBJECTIVES

The objectives of the present study are:

1. To assess the role of Documentation Centres in economic development;
2. To examine the present situation of Documentation Centres in Bangladesh;
3. To identify the problems and prospects of Documentation Centres in Bangladesh;
4. To ascertain the channels of communication and dissemination among the scientists and technologists in Bangladesh;
5. To examine the role of networking of Documentation Centres in communication and dissemination of scientific and technological ideas; and
6. To evaluate the existing networks and suggest changes and improvement.
B. HYPOTHESIS

The hypotheses of this study are whether-

1. Documentation Centres in Bangladesh differ significantly in their number of users, collections, facilities and services;

2. There is no significant difference in the use of Documentation Centres by age, gender, qualifications and status of the scientists and technologists;

3. More dependence on informal channels by scientists and technologists is likely to result in lesser use of Documentation Centres;

4. Lack of linkages among Documentation Centres necessitates networking for accelerating the process of communication and dissemination of information.

C. METHODOLOGY

The present study has adopted survey method for studying the existing situation of Documentation Centres in Bangladesh and the needs of their users. The survey was conducted with the help of questionnaires supported by observation and interviews. The main reason for choice of questionnaire method was that the area of population sample was quite large. Another reason was that this survey includes various statistical data and information which were not possible to be acquired by observation or interview method alone.

1. POPULATION AND SAMPLE
   a. Documentation Centres

This study selected all those scientific and technical Documentation Centres in Bangladesh which had been providing documentation and information services in large scale and were having the word 'Documentation' or 'Information' in their name. It was found that there were in total six such scientific and technical Documentation Centres in Bangladesh (Details are shown in Appendix-I). All these
six scientific and technical Documentation Centres in Bangladesh were included for studying the existing situation. Questionnaires were served to all these centres and most of them were collected personally and some of them were received through mail. The response rate is 100 percent.

b. **Users**

There are six scientific and technical Documentation Centres in Bangladesh (See Appendix-I). Out of these, SAIC is providing services only on institutional basis and it is not open for individuals. The other three, namely, BANSDOC, AIC, NHLDC are providing services to the scientists, technologists, researchers, teachers and students spread all over the country. It was therefore, found difficult to assess the needs of the users for the purpose of this study from these four centres. So, the researcher had no other alternative but to select two remaining scientific and technical Documentation Centres, namely, DISC and FRILDOC which are providing services to the individual scientists and technologists who work there. In these two cases, it was easier and more convenient to identify the users and assess their needs. DISC is attached to International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), Dhaka and FRILDOC is attached to Fisheries Research Institute (FRI), Mymensingh.

All 246 scientists and technologists of ICDDR,B and FRI irrespective of age, gender, qualifications and status (rank) were selected for user survey. Out of these, questionnaires were administered to only 220 scientists and technologists as the rest were either abroad or on long leave. Out of 220, only 121 scientists and technologists filled and returned their questionnaire correctly representing 55 percent response rate which is adequate for an empirical study. The details of the population and samples chosen are shown in Appendix-II.
2. **DATA COLLECTION TOOLS**

Two full length questionnaires were designed for conducting the survey. One was to measure the present status of scientific and technical Documentation Centres in Bangladesh. It consisted of three parts. The first part entitled 'organisation' contained general information about the organisation, namely, identity, year of establishment, organisational links, type of organisation and level. The second part entitled 'facilities' contained questions relating to area, staff, budget, holdings, users, equipments, computers and other infrastructural facilities. Third part entitled 'services and products' contained various services, publications and products.

The other questionnaire was to measure the needs of scientists and technologists in Bangladesh. This questionnaire consisted of two parts. The first part of the questionnaire, entitled 'Personal Data', aimed at collecting background data on such aspects as age, gender, educational qualifications, present position/status and organisational affiliation. The second part consisted of information needs, information channels, information sources, and information about the documentation centres and services.

The questionnaires contained a combination of open-ended and closed-ended questions with various types of rating scales. The scales used were as: 5=Always, 4=Frequently, 3=Occasionally, 2=Rarely, 1=Never; 5=Very good, 4=Good, 3=Fairly good, 2=Poor, 1=Very poor and some other different point scales from 1 to 6 depending upon the type of variables.

3. **DATA COLLECTION**

The researcher went to Bangladesh to conduct the survey in July 1996 and in October 1998. At first the researcher contacted the head of each Documentation Centres by telephone and informed them about the research. Then the survey package was sent to them by mail, including a covering letter, and a stamped
self-addressed envelope. After three weeks, a follow-up reminder phone call was made to the heads of non-responding Documentation Centres. After six weeks, a second follow-up reminder phone call was again made to the heads of remaining non-respondents Documentation Centres, and lastly, the researcher personally visited the centres to collect the questionnaires. The survey was conducted during July 1996 to October 1996. The observation and interviews were conducted in October 1998.

4. **DATA ANALYSIS**

The data collected from the targeted respondents through questionnaires have been analysed and interpreted using statistical techniques, namely, Proportion, Mean, Analysis of variance, Factor analysis with varimax rotation and Karl Pearson's coefficient of correlation. These have been computed by using software named, Statistical Package for the Social Science, namely, SPSS PC 4.0.1 (1990) version. To compute data by the SPSS PC software, the researcher has followed the following steps:

- coding of all the questionnaires after editing;
- data input in worksheets;
- feeding data on the computer;
- conducting validation checks of data to make sure that it has been duly and correctly entered on the computer;
- preparing programme to compute data; and
- framing output tables.

The results and interpretation of the study have been presented in the chapter numbers 5, 6 and 7.