Several years back a scientist happened to visit my place. The scientist's attention was drawn to the Meadow's book on science communication lying on my work table, and science communication in India became the topic of discussion that evening. The discussion was mainly focused on the role and responsibilities of scientific and technical libraries in the transfer of information. Many questions were raised such as whether Indian scientific and technical libraries had enough resources to meet the information needs of scientists; whether library personnel were qualified and competent enough and properly trained to play an effective role in the transfer of information; how Indian scientists gathered information whether they were aware of the existing information resources and services; how India had developed the existing infrastructure through various programmes and plans during the process of time, to facilitate communication of scientific information; what were the politico-economic aspects of science communication at international level; and how the existing information services could be improved to facilitate the communication of information more timely and economically, etc.

The above questions prompted me to gather a comprehensive data to make a thorough study of the situation. It was with this background that the present study was undertaken. This work includes a study of the libraries of the national laboratories, a few agricultural universities and IITs. Other universities have not been included within the purview of this study so that it could be kept within manageable limits. The term library used throughout this study denotes a scientific or technical library. The limitations and deficiencies in library services have been studied and suitable measures have been suggested to improve the facilities to meet the information requirements of scientists.
Objectives

Three major objectives of this study are:

1. To assess the existing resources and services of scientific and technical libraries in India.
2. To study the communication patterns and information needs, problems and awareness of Indian scientists, especially in relation to the existing library systems.
3. To formulate some plans and methods by which the existing information services of scientific and technical libraries and documentation and information centres can be improved.

Scope

The present work presents a broad picture of the resources and level of services of about 146 important scientific and technical libraries situated in different parts of the country. The educational qualifications, placement, salary scales and problems of professional and supporting staff of these libraries have been dealt with. About 721 publishing scientists from various institutions were surveyed for a study of their communication patterns, problems and awareness of resources, etc. The details collected through questionnaires are upto February, 1983. The thesis includes a lot of statistical data collected to support various statements and hypotheses.

Hypotheses

1. Many scientists are not fully aware of the resources, tools and methods of information gathering.
2. Many scientists do not get adequate financial assistance for science information communication activities.
3. Majority of the libraries and information centres are functioning in isolation because of lack of networking and resource-sharing.
4. Lack of adequate number of attractive jobs and defective manpower development programmes are the major obstacles in
attracting competent persons for library and information work.

5. There is a lot of duplication of effort due to irregular and unco-ordinated growth of information services and tools. Information services and tools, therefore, require proper regulation and control.

6. India needs to develop a National Institute of Scientific and Technical Information to improve scientific and technical information facilities and services.

**Data Collection**

The data has been collected mainly through three questionnaires. Since questionnaires may not bring out the correct situation, therefore, most of the libraries were personally visited by this researcher to make an on-the-spot study and investigation. About ninety percent of the scientists surveyed were personally contacted to gather accurate and original data and obtain their views on various aspects. Personal contacts facilitated informal discussion with scientists, and provided an opportunity to this researcher to understand their communication patterns and problems intimately. Every care was taken to ensure that a fair representation was provided to different categories of scientists from each institution. The data thus collected has been processed on IBM/1620 Computer.

Informal interviews were also conducted with the library and information personnel associated with scientific and technical libraries and documentation centres.

The field work required more than 30,000 kms of travelling in India. Names and geographical locations of places visited by the present researcher for data collection are given in Fig. 0-1. Some of the cities were visited several times. Fifteen visits were paid to one library alone within a period of two months till the final data was obtained. Extra efforts were needed to collect data from agricultural laboratories since they are generally located 4 or 5 kms from the cities. Several days had to be spent.
MAP OF INDIA INDICATING THE PLACES VISITED FOR DATA COLLECTION

* Numbers with locations indicate the number of times a place was visited

Fig. 0.1
in some of the libraries because of the non-availability of requisite data in a processed form, since they did not maintain the library statistics.

There is no end to the problems and no limit to the prospects for improvement in science communication. Therefore, full justice cannot be done to this subject in a study of this kind. Therefore, only a few of the main problems have been highlighted in this study. However, this study includes some details which will be found useful by others who may desire to study certain aspects of the subject in greater depth.

As no organization provided any financial assistance to me for the field work, I had to spend on my own for extensive travelling, xeroxing of the needed literature, typing and retyping of the manuscript and for meeting certain expenses for computer work.

Considering the vastness of India and its innumerable institutions and legions of scientists and technologists, a study of this kind is beset with many difficulties. Consequently, I am fully aware of its limitations. However, it is my earnest hope that this humble contribution will be found both interesting and useful to my fellow professionals who may wish to carry out similar studies to project the current library and information scenario of India.

CHANDIGARH

Inder Vir (INDER VIR)

25 July 84