CHAPTER 4
SCOPE, OBJECTIVES
AND HYPOTHESIS

After finding that no specific study has been done in the field of Information Seeking Behaviour of Engineers and Scientific Personnel in Graphite Industries, as the base of application of Business Process Reengineering in any specific library, it was decided to work in this specific area.

This study is basically of academic nature, though it has its roots firmly placed in the realm of practical librarianship and management science. Thus, a time-bound study of this nature needs clarity in scope. In other words, although it is not a commercial project, the boundaries or contours of the study have to be stated in unambiguous terms, so that it is feasible and result-oriented.

Such an exercise is necessary as the process of research deals, "1. Definition of terms. 2. The posing of question or stating propositions which incorporate the defined terms in an exploratory fashion. 3. The testing of the propositions or the search for answers to the exploratory questions"

Hence, it is necessary to state the scope and set the objectives of the study to be oriented towards a predetermined target.

4.1 Scope

The following are the points covering the scope of this study.

1. This study attempts to cover the factors comprising information seeking behaviour of the Engineering and Scientific personnel.

2. It is essential to stress that the focus is on behaviour and not attitude. However obvious it is, there is necessity to state that attitude is what one thinks; it is difficult to know it. But, behaviour is what one appears to think. In other words, behaviour is external, and at times it may even conceal attitude. To make it further simple, behaviour is the expressed attitude.

3. The 'information seeking behaviour' is considered to be made of all those factors such as what information they seek, how and why. This is oriented to guide the choice of processes for reengineering.

4. Generally, the information seeking behaviour falls under the purview of user studies. User studies
are carried out for various purposes. Most of them are either exploratory or descriptive. These merely state the dimensions of a problem. The scope of this study is beyond this stage.

5. Therefore, the study does not merely confine to knowing the information seeking behaviour of the specific group. Understanding is only the diagnostic part of the study. But more important than that is what one does after knowing it. Hence, the study also aims at learning from this knowledge and to improve the information provision processes. Thus, the emphasis will be more on meeting the users' information requirements expressed in and confirmed by the behaviour by reengineering the information provision processes in the light of systematic assessment.

6. The entire study centres around engineers and scientists in synthetic graphite industries. While graphite is an allotrope, or to put it in more general terms, a form of carbon, its properties and applications make it an amalgam of physics, chemistry, engineering, and management. Thus, scope makes it both narrow and broad based at the same time. (More details about the profile of Graphite Industry in chapter 5, under 'Sample' and Appendix 2, p.176.

In view of these scope notes and the clear connotation of the terms – may be technical words or
phrases/expressions used in the title - in the context of the present study, it is now necessary to formulate precise objectives.

4.2 Objectives

In the light of the title of this work, connotation of each expression in it and the statements of scope, the following Objectives of the study are set.

1. To know the specific nature of information requirements of the engineers and scientists working in the graphite industries.

2. To determine the purpose for which the information is sought.
   (This is to know the specific and momentary or short-term goals that drive the users towards information.)

3. To find what motivates the scientists and engineers to look for information.
   (This is to understand their long-term intentions in using information.)

4. To list the type of sources used for obtaining the required information.

5. To find out the various means by which the users get to know about the availability and existence of information.
6. To know what type of informal sources of information are considered important by the users.

7. To compare the use of formal sources in relation to the informal ones.

8. To know the value attached to information seeking by determining the time spent by the users for this activity.

9. To find out whether users like to delegate information seeking tasks to others or not.

10. To determine the nature of information work delegated by the users.

11. To know the importance attached by the users to information work by finding out the reasons for delegation.

12. Similarly, to find out the reasons for not delegating the information gathering work by some users.

13. To identify three processes, or information service areas which need application of reengineering according to users.

14. To understand the existing practices by process mapping and identify the lacunae in it.

15. To simulate and reengineer the processes identified to get the desired effect.
Further, to see that all these objectives are woven together so that the study or its report remain within limits of the stated contours, it is necessary to formulate a hypothesis.

4.3 Hypothesis

Hypothesis is an essential component of any scientific research. It is a tentative statement about the relationship between two or more variables. It is an attempt to generalise the relationship between the variables. It is this relationship which, when established, will become a theory or a thesis. Thus, hypothesis is a thesis in the making.

Several precise academic definitions of hypothesis are available in books on research methods in both Social Sciences and Library and Information Science. In essence, all such definitions is that hypothesis is an expression of relationship in terms of dependent and independent variables. It is necessary to note that, "The ideal relationship to be expressed as a hypothesis should be one which is universal, invariant and causal." Therefore, a hypothesis,

- is an universal statement;
- which does not change with time; and
- expresses cause and effect relationship.

Depending on the method to be adopted for rejecting or accepting a hypothesis, there are two types. "In inductive statistics, hypotheses are of two sorts; the research hypothesis and null hypothesis."

These two are different in the following way.

a. Null hypothesis is stated in a negative terms to see that it is rejected. However, a "...research hypothesis consists of a guess or a hunch about some thing as a declarative sentence."

b. While both are used in research, null hypothesis needs more statistical rigour to accept or reject it, the other—research hypothesis—is proved by logical discussion.

All the objectives stated under the section 4.2 are based on one major question. If the library is managed by a professionally trained and experienced librarian, he/she must be aware of all that need to be done to make services effective. Then, is it right to expect any significant improvement due to the application of reengineering? It is difficult to answer this question. Therefore, the following research hypothesis, was formulated.

4. Ibid
Although all the procedures are designed and implemented by a professionally trained librarian, the reengineering process results in substantial improvement in terms of quality of information service delivery.

In other words, Reengineering is not just another management buzz word; it is really does something that saves time and other resources and very significant to the end-users.

Also, it was felt that a research hypothesis, and not a null hypothesis, would be suitable for this study. This is because it is a type of case study, data is confined to only one institution, and hence the hypothesis can not be established with statistical rigour.

After deciding the objectives and the hypothesis the next logical step is to deal with the choice of a suitable research method and details of the research design. The next chapter is devoted to this aspect.