CHAPTER - 3

METHODOLOGY

3.1 INTRODUCTION:

The research endeavours in organisational behaviour depend upon a rigorous research methodology in order to better understand various processes. This search for truth of why humans behave the way they do in organisations is a very delicate and complex process. In fact, the problems are so great that many scholars, chiefly from the physical and engineering sciences, argue that there can be no precise science of behavior. They maintain that humans cannot be treated like chemical or physical elements; they cannot be effectively controlled or manipulated. For example, the critics state that, under easily controllable conditions, 2 parts hydrogen to 1 part oxygen will result in water and that no analogous situation exists in human behavior. Human variables such as motives, learning, perception, values etc. which influence Communication and Decision making processes in organisations are very difficult to assess or control. For these reasons, organisational behavior researchers are often on the defensive to comply with accepted methods of science.

Scientific Perspective

Behavioral scientists in general and organisational behavior researchers in particular strive to attain the following hallmarks of any science :

(i) The overall purposes are understanding/explanation, prediction and control
(ii) The definitions are precise and operational
(iii) The measures are reliable and valid
(iv) The methods are systematic
(v) The results are cumulative

Figure 3.1. summarises the relationship between the practical behavioral problems facing today's managers and unanswered questions, research methodology, and the existing body of knowledge. When a question arises or a problem evolves, the first place to turn for an answer is the existing body of knowledge, It is possible that the question can be immediately answered, or the problem solved, without going any further. Unfortunately, this usually is not true in the case of organisational processes such as Communication or Decision making. One reason is that the amount of knowledge directly applicable to these processes in various organisational environment is relatively very small.

Simple Relationships between problems, methodology and knowledge

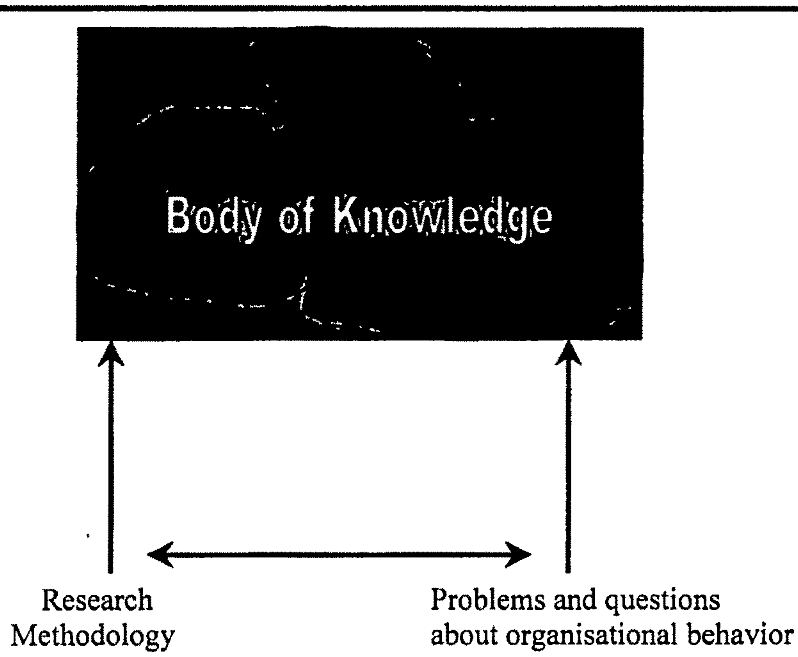

Figure 3.1.

Source: Luthans, Fred; Organisational Behaviour, McGraw-Hill, 1992, p 30

Behavioural science is relatively young and that organisational behavior is even younger - it is really a product of the 1970s. The Hawthorne studies go back over sixty years, but a behavioral science-based approach to the study and application of organisational behavior is very recent. The sobering fact is that many questions and problems in organisational processes such as Communication and Decision making cannot be directly answered or solved by existing knowledge. Thus, a working knowledge of research methodology becomes especially important to managers, both as knowledgeable and critical consumers of the rapidly expanding literature reporting the results of organisational process research and as sophisticated practitioners who are capable of applying appropriate research methods to solve difficult problems in the workplace.

It has often been said (usually by theoreticians) that there is nothing so practical as a good theory. Yet students of organisational behavior are usually "turned off" by all the theories that pervade the field. The reason for all the theories, of course, is the newness of the field and the fact that there are not yet many definitive answers. The purpose of any theory, including all those found in organisational behavior, is to deduce logical propositions or hypotheses that can be tested by acceptable designs. Theories are ever changing on the basis of the research results. Thus, theory and research go hand in hand.

John Miner, in the introductory comments in his *book Theories of Organisational Behavior*, gives several criteria for how to "know a good theory when we see one":

(i) It should contribute to the goals of science by aiding understanding, permitting prediction and facilitating influence.

(ii)There should be clear boundaries of application, so that the theory is not used in situations for which it was never intended.

(iii) It should direct research efforts toward important, priority problems and issues.

(iv) It should produce generisable results beyond single research efforts.

(v)It should be readily subject to further testing by using clearly defined variables and operational terms.

(vi) Not only should it be confirmed by research directly derived from it, but it should also be consistent within itself and with other known facts.

(vii) It should be stated in the simplest possible terms.

The research design is at the very heart of scientific methodology; it can be used to answer practical questions or to test theoretical propositions/hypotheses. The three designs most often used in research in organisational processes such as Communication and Decision making today are the experimental, the case, and the survey designs. All three have played important roles in the development of meaningful knowledge. The experimental design is borrowed largely from psychology, where it is used extensively and the case and survey designs have traditionally played a bigger role in sociology. All three designs can be used effectively for researches in organisational processes.

3.1.1. Experimental Design

A primary aim of any design is to establish a cause-and-effect relationship. The experiment method offers the best possibility of accomplishing this goal. All other factors being equal, most researchers prefer this method of testing hypotheses. Simply defined, an experiment involves the manipulation of independent variables to measure their effect on, or the change in, dependent variables, while everything else is held constant or controlled. Usually, an experimental group and control group are formed. The experimental group receives the input of the independent variables, and the control group does not. Any measured change in the dependent variable in the experimental group can be attributed to the independent variable, assuming that no change has occurred in any other variable and that no change has occurred in the control group. The controls employed are the key to the successful use of the experimental design.

If all intervening variables are held constant or equal, the experimenter can conclude with a high degree of confidence that the independent variable caused the change in the dependent variable.

3.1.2. Case design

The case design makes a complete examination and analysis of one or a few behavioral entities (worker, supervisor, work group, department, organisation) over an extended period. The purpose is to discover and analyse every aspect of the particular case under investigation. The case researcher typically uses field observations, existing records and questionnaires and interviews to gather data. As applied to organisational behavior research, the case design should not be confused with the case-study approach used by social workers and psychotherapists or even with the 'case' approach widely used in courses in business policy. The case method as used in organisational behaviour research is much more rigorous and comprehensive.

The actual conduct of case research is most crucial to its success. Three areas are generally recognized as being crucial for successful case research:

(i) *The attitude of the investigator.* In order for the case technique to be successful, the investigator must be alertly receptive and must be seeking rather than testing. The investigator should be continuously reformulating and redirecting as new information is uncovered.

(ii)*The intensity of the study.* An effective case analysis should obtain all information unique to the particular unit being studied and also those features, which are common to other cases.

(iii) *The integrative ability of the investigator.* The case approach must rely on the talent of the researcher to successfully pull together many diverse findings into a unified interpretation. The final interpretation should not, however, merely reflect the investigator's predisposition.

If careful attention is given to key points such as those just outlined, the case technique can be a very effective research design. The depth of analysis attained through the technique is its major advantage. With the increasing importance of qualitative measures (techniques which try to fully describe and then interpret the meaning, not the frequency, of naturally occurring events in organisations) in organisational behavior research, the case approach has taken on new respectability. This is especially true to internal validity, and also of the traditional control group experimental designs. However, like the experimental design, single-case designs can have a problem with external validity.

It is generally neither practical nor logical to generalize the results of one case analysis to other cases or to the whole. The limitation drastically reduces the external validity of the case method for building a meaningful body of knowledge. The case method does not normally provide enough evidence to prove cause and effect. On the other hand, this method does usually uncover some very meaningful insights, research questions, and hypotheses for further testing by an experimental design. In addition, its generalisability can be enhanced by replication. A case could also be made for single-case studies actually being more useful to management practitioners than large-survey studies. As one research methodologist points out, large-group comparisons may not generalize to individual cases, but it is these individual, single cases that practitioners must deal with on a day-to-day basis.

An indirect measurement technique, questionnaires reflect perceptions of behavior rather than the actual behavior in the real setting. 'The prospects of discovering, for example, whether leaders really do structure subordinates' paths to goals (e.g. the path-goal approach) or whether such procedures can actually be effective, is more likely to be answered through real-time, in-situation observational studies, than through questionnaire investigations which are many times removed from the actual behavior'. For example, there is evidence that the way subordinates describe their managers' behavior on standardised questionnaires is not necessarily the same as the way the managers are observed to behave in the actual day-to-day organisational setting. Observational studies are beginning to reveal managerial behavior that is quite different from what has been typically portrayed by both non-research-based management textbooks and research-based studies that have depended solely on questionnaires of interview describing managerial behavior.

There is little doubt that the field of organisational behavior has depended too much on questionnaire instruments to obtain data for all three designs - experimental, case, and survey. A multiple-measures approach that gives a degree of convergence among the various data collection techniques is needed for the future.

The key is that organisational behavior researchers need to use all the measurement techniques. In particular, more attention should be given to observational techniques that allow measurement of the interactive nature of behaviors, persons and situations. In their rush for respectability, organisational behavior researchers may be guilty of bypassing the most widely recognized first stage of any scientific development - observation of naturally occurring events. Obviously, it is much easier to ask than to observe and this path of least resistance is the one that has too often been followed in accumulating knowledge about organisational processes such as Communication and Decision making.

3.1.3. Survey Design

The third major design available to researchers on human behaviour is the survey. This easy-to-use technique depends upon the collection of empirical data via questionnaires and interviews. It is extremely useful in dealing with some questions and problems of organisational behaviour. In particular, it is useful to get at information and attitudes from a large group of subjects. The only way to get at people's feelings is to ask them in a survey or an interview.

The survey can overcome the generalisability problems facing the experimental and case designs. Whereas the case is restricted to a single unit, or to very few units of analysis, the survey has very broad coverage. Another advantage is that the survey collects original data that are adaptable to statistical analysis. Its major drawback is the lack of depth of information obtainable from the two major data collection under the questionnaire and the interview.

3.1.4. Methodology of this study

A combination of various aspects of the research designs explained above is employed in this study. Questionnaires, observation or discussion methods were widely used. The methodology of this research endeavour could be named as descriptive diagnostic study design. The descriptive diagnostic study design helps in understanding the problem and then describing it from various dimensions using appropriate tools for data collection. This understanding provides a systematic basis for categorising and analysing various aspects of the problem. This study, with its focus on Communication and Decision-making practices in Education and Industry, first describes these processes in organisation development context, then tries to explore the strengths and constraints of these practices in respective organisations. The study further proceeds to a deep diagnosis of the merits and demerits of the findings. This diagnostic approach which is vital in this research design, takes the research process towards achieving its objectives systematically. The method of establishment of content validity of the tools used in this study is explained else where in this chapter. The qualitative nature of the data facilitated this study design at different stages of analysis and interpretation. Finally, this research design helped in arriving at certain conclusions, on the basis of which an action plan or model was devised.

3.2 STATEMENT OF THE PROBLEM:

"A study of Organisation development in Education and Industry with respect to Communication and Decision-making practices."

3.3 OBJECTIVES OF THE STUDY:

3.3.1 To find the strengths and constraints of communication and decision-making practices in Educational institutions imparting professional courses, based on the opinions of experienced teaching professionals.

3.3.2 To find the strengths and constraints of communication and decision-making practices in industrial organisation based on the opinions of practicing management professionals.

3.3.3. Identifying the ideal practices of communication and decision-making for education based on the fusion of findings related to practices of communication and decision-making in industrial organisation and educational institution.

3.3.4 Recommending a model of communication and decision-making practices suitable for professional educational institutions with the objective of enhancing the development of the organisation.

3.4 POPULATION AND SAMPLE OF THE STUDY:

The research setting of this study includes educational institutions and industrial organisations. The two sets of respondents under the study are defined :

Educational Managers :

Heads of the departments and Professors of educational institutions imparting professional education who are responsible for decision-making and communication practices in the institution.

Industry Managers :

Managers working in industrial organisations who have a professional degree and more than five years experience in responsible positions.

Primary focus while selecting samples from Education sector was those educational institutions that have direct impact on industrial management processes. From this dimension, the elementary institutions in education such as primary/secondary schools and colleges, etc. have been ignored and higher educational institutions have been considered for sampling. From among the higher educational institutions, the institutions imparting professional courses have been considered as part of the next step for sampling. Professional educational institutions in Engineering and Management disciplines have been further narrowed down from the universe of educational institutions imparting professional courses. Obviously, these are the disciplines that have direct connection with management processes in industry. Further, the respondents under this study from industry sector hail from these disciplines. Another aspect taken into account for sampling from education sector is the geographical location. Initially, the investigator planned to include all institutions imparting professional courses in Gujarat and Maharastra - the two most industrially developed states of India. The practical difficulty of collecting data from such a sample however, prevented the investigator from such an attempt and thus, the study concentrated on selected institutions.

Based on the rationale of sampling explained above, Educational managers from Faculty of Technology and Faculty of Management Studies of M.S.University of Baroda, L.D. Engineering College, Ahmedabad, B.K.School of Business Management, Ahmedabad and from Tata Institute of Social Sciences, Bombay have been selected for collecting data for the study..

For the sampling from Industry sector, the investigator had an initial plan of selecting industrial organisations from private, public and joint sectors. The objectives of the study, however, demanded more focussed sampling as it centered around two of the major management processes, viz. Communication and Decision-making practices. The fundamental characteristics of these processes are similar in industrial organisations of all sectors. Further, the main economic goal of 'profit making' is the same for all industrial endeavours and the structure of these organisations are also more or less hierarchically oriented. The study concentrated on private sector industry, primarily because in the present fast changing economic environment 'privatisation', 'liberalisation', 'globalisation' etc. have more or less became ordinary terminology reflecting the modern trend in Education and Industry towards development of more private enterprises.. Apollo Tyres Ltd., Baroda has been selected based on the following reasons :

First and foremost, the investigator was working with this company during the period of data collection. The nature of the study with its focus on Communication and Decision making practices also required certain first hand information and involvement in these processes in order to achieve its objectives systematically. The investigator had enough opportunity to involve himself in the selected company's Communication and Decision-making practices. The investigator's familiarity with this research setting made the study more focussed and systematic.

This company is in existence for more than 20 years and the professionals working with this company are well educated and have relevant exposure to the communication and decision-making practices in industry sector. The policies and programmes of this company are also development-oriented and clearly reflect the parameters of the company's communication and decision-making processes. The big size of the company was another aspect that influenced the investigator to select this company. This company employs around 2500 people. The Baroda unit, setting of this research, was headed by a Vice President (Manufacturing). General Manager - Production, General Manager -

Technology and General Manager - Engineering report to the Vice President. While the heads of Personnel, Accounts and Systems departments also report directly to the Vice President, other departments come under the three General Managers. *Figure 3.2.* shows a more detailed organisation chart of the company.

Organisation Chart of Apollo Tyres Ltd., Baroda

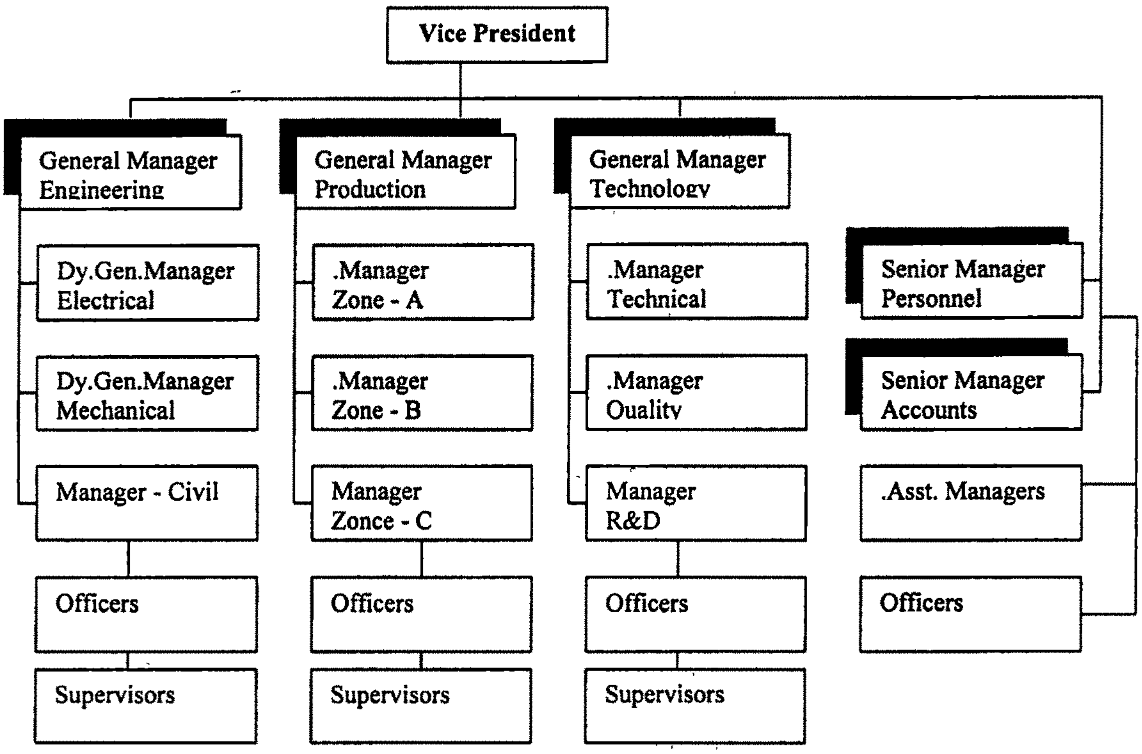

Figure 3.2

Universe of the study, thus, would represent heads of the departments and professors of educational institutions imparting professional education that have direct link with industry, viz. Engineering and Management. Also, the universe of this study consists of practicing industry managers who hail from these disciplines and have considerable experience in these fields.

Considering the small size of the sample comprising of Educational managers belonging to selected five institutions and Industry managers from a single industry, census sampling method was adopted for sampling. From the Industry sector, the investigator selected all the management staff of M/s Apollo Tyres Ltd., Baroda.

3.5 TYPES OF DATA COLLECTED FOR THE STUDY:

The nature of the study demanded more qualitative type of data than the quantitative type. As there were a few studies and research endeavours related to the problem of this study, the investigator had to depend on views and ideas of experts in the field. Also at certain stages of data collection, the investigator had the opportunity to witness the Decision-making process or involve in the Communication processes.

The types of data collected for the study fall into three groups as follows:

Concepts: The investigator collected much of the data relevant to Communication Decision making practices from various books on Organisation Behaviour, Organisation Development and Management. The articles in Management and Education journals and findings of previous studies also helped in collecting data and information.

Perceptions: The second group of data consisted of the opinions and perceptions of the respondents on organisational communication and decision making practices, collected through administration of questionnaires.

Empirical: The ideas and facts shared by experts based on their experience in the field of Education and Industry constituted the third group of data for the study. This group of data in fact, is the synthesis of the other two groups.

3.6 SOURCES OF DATA COLLECTION:

The main sources of data collection for this study were literature and studies related to organisational processes and the respondents. Respondents include Educational managers and Industry Managers. The Educational Institutions were Faculty of Management Studies and Faculty of Technology of M.S.University of Baroda, L.D. Engineering College, Ahmedabad, B.K.School of Business Management, Ahmedabad, and Tata Institute of Social Sciences, Bombay. The management staff of M/s. Apollo Tyres Ltd., Baroda were the respondents from Industry. Apart from collecting data from respondents using questionnaires, the investigator had carried out extensive discussions with experts in the fields of Education and Industry.

3.7 TOOLS USED FOR DATA COLLECTION:

The value of any research study is dependent on its validity, that is, whether the study really demonstrates what it is supposed to demonstrate. In particular, a study must have both internal validity and external validity in order to make a meaningful contribution to the body of knowledge. The tools used for the research are the major determinants of validity of a study.

The investigator applied the following tools prepared by him for collection of data for the present research study :

1. Questionnaire for collection of data from teaching professionals from educational institutions selected for the study.
2. Questionnaire for collection of data from professionals from the industry (Apollo Tyres Limited, Baroda) selected for the study.
3. Supplementary Interview schedule for collection of data from the experts in Education and Industry.

The establishment of validity of the tools is explained below.

3.7.1. Reliability and Validity of tools

Multiple tools can help in search for knowledge about organisational processes, but the crux of the research gets down to the reliability and validity of the tools that are used. In order for a tool to be valid, it must also be reliable. The accuracy of application of the tools and the consistency of results are the parameters for reliability. From this perspective this study had appropriate degree of control over the measurement conditions. The researches in organisation development or organisation behaviour usually have three types of validity focussing on empirical derivation. They are content validity, predictive validity and construct validity. In content validity the criterion is the representativeness of the measure. Predictive validity, on the other hand, calculates an objective, statistical relationship between the measure's predictors and an outside criterion. Construct validity is an important issue for measuring more complex concepts or constructs such as personality dimensions (aggressiveness or confidence), motivation (needs or expectations) and leadership.

The content validity and construct validity have been given importance in this study. The questionnaires were constructed based on the objectives of the study. Important variables or dimensions of Communication and Decision making practices in organisation have been identified (these dimensions are explained in detail in the next chapter) and the questionnaires were constructed to measure the responses from the respondents. As the very meaning of validity is nothing but that the *validity* is present when the tools measure what it is supposed to measure, the investigator had spent considerable time testing the tools. The tools used in this study have been tested for its content validity through *a pilot study*. The investigator administered the tools to fifteen experts in the field of education and industry. A preliminary analysis of the data collected through this pilot study helped in modifying the tools, in order to make the study more focussed. For instance, aspects related to participative decision making have been given more emphasis in the questionnaire after understanding through the pilot study that most of the decision making situations in Education and Industry have elements of participation.

3.8 PROCESS OF DATA COLLECTION:

The investigator has adopted various methods for collection of data for the study. He has collected the data from teaching professionals by mail. The questionnaire was sent to them by post along with self-addressed envelope. Also personally visited many of the respondents and carried out extensive discussions.

The data collection from Apollo Tyres Limited was done by personally administering the questionnaire to the respondents (Officers and Managers). During this period, the investigator was working with this company as Officer - Personnel & HRD.

The investigator also collected useful information and data by his personal contact from experts in the field of Education (Professors from Indian Institute of Management - Ahmedabad, Tata Institute of Social Sciences, Bombay) and from Industry (Chief Executives of different organisations, renowned Management consultants). Some of the experts with whom the investigator carried out discussions were:

Dr. A Ganghopadhyay, Head of Personnel Management and Industrial Relations, Tata Institute of Social Sciences, Bombay.

Dr. A H Kalro, Professor, Indian Institute of Management, Ahmedabad.

Prof. Dhaval Mehta, Professor & Director, B K Institute of Business Management, Ahmedabad

Dr. Ramnarayanan, Professor, Indian Institute of Management, Ahmedabad

Mr. N Sreekumar, Vice President, Apollo Tyres Limited.

Dr. C M Lamba, Director, Personnel, Indian Petrochemical Company Ltd., Baroda.

Dr. Srikantiah, Dean (Retired), Faculty of Management Studies, M S University of Baroda

3.9 ANALYSIS OF DATA:

As stated above, the investigator collected data by employing three tools. There were both open ended and closed-end items in the tools used for collection of data. The major portion of the data was qualitative in nature. The responses to each closed-ended items (ie., with limited choice for the responses) were analysed in terms of frequency of the respondents and converted the frequency into percentage. The responses to the open-ended items were recorded and analysed suitably. The meaning and relevance of variables used in each sections of the questionnaire were explained in detail before analysing and interpreting the data. The data obtained through interviews and informal discussions were used to supplement the questionnaires and analysed and interpreted as required using tabulation method and diagrammatic presentation.