

# **SOCIAL RESEARCH METHODS**

**CORE COURSE**

**B.A SOCIOLOGY**

**IV SEMESTER**

(2011 Admission)



**UNIVERSITY OF CALICUT**

**SCHOOL OF DISTANCE EDUCATION**

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STUDY MATERIAL

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**Layout & Settings:**

Computer Cell, SDE



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# MODULE 1:

## FUNDAMENTALS OF RESEARCH

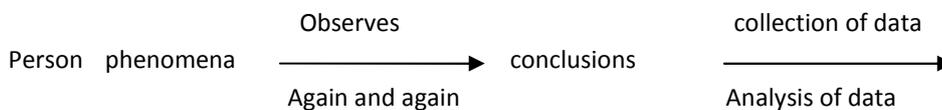
### I: WHAT IS RESEARCH, PURPOSE OF RESEARCH, SCIENTIFIC RESEARCH, RESEARCH AND THEORY?

#### I. 1: What is research?

The unique characteristic of human mind is the curiosity to know about the universe. Innumerable questions arise in our mind about our environment, planet and the universe. Most of these questions starting with what, why, how and soon. For example, what are stars? , why day and night alternate? How is rain formed and why the mode of life and activities of human beings vary from place to place? Whenever such questions arise we seek answer to them or we try to find out solutions to them. Seeking answers to questions and finding solutions to the problems have been the basis of human progress. A systematic search for an answer to a question or a solution to a problem is called research.

Actually research is simply the process of arriving as dependable solution to a problem through the planned and systematic collection, analysis and interpretation of a data. Research is the most important process for advancing knowledge for promoting progress and to enable man to relate more effectively to his environment to accomplish his purpose and to solve his conflicts. Although it is not the only way, it is one of the most effective ways of solving problems.

The term research consist of two words, 'Re'+ 'Search'. "Re" means again and again and "Search" means to find out something. The following is the process ;



Therefore, the research is a process of which a person observes the phenomena again and again and collects the data and on the basis of data he draws some conclusions.

Research seeks to find out explanations to unexplained phenomena to clarify the doubtful propositions and to correct the misconceived facts. It simply means a search for facts, answer to questions and solutions to problems. The search for facts may be made through either (a) arbitrary (unscientific) method or (b) scientific method.

Arbitrary method of seeking answer to questions is based on imagination, blind belief or impression. It is vague and inaccurate.

Scientific method is a systematic rational approach to seeking fact. It is objective, precise and arrives at conclusions on the basis of verifiable evidences. Hence research is systematic and logical study of an issue problem or phenomenon through scientific method. Following definitions may reveal the proper meaning of the concept of research.

### ***Definition of Research:***

- a) According to **Black and Champion**, “scientific research consist of obtaining information through empirical observation that can be used for systematic development of logically related propositions attempting to establish casual relations among variable”.
- b) **Emory** defines research as “any organized inquiry designed and carried out to provide information for solving a problem”.
- c) **Kerlinger** defines research as a” systematic, controlled, empirical and critical investigation of hypothetical relations among natural phenomena”.
- d) **L.V. Redman and A.V.H. Morry** have defined “systematic effort to gain new knowledge we call research”.

### ***Characteristic of Research***

The above definitions reveal the following characteristics of research.

- a) Research is a systematic and critical investigation to a phenomenon.
- b) It aims at interpreting and explaining a phenomenon.
- c) It adopts scientific method.
- d) It is based on empirical evidences and observable experience.
- e) It develops generalizations, principles or theories.
- f) It directed towards finding answer to the questions and solutions to the problems.

### **I. 2: Purpose of Research**

The purposes or objectives of research are varied. They are,

- Research extends knowledge of human beings social life and environment.
- Research reveals the mysteries of nature.
- Research establishes generalizations and general laws and contributes to theory building in various fields of knowledge.

- Research verifies and tests existing facts and theory.
- Research helps us to improve our knowledge and ability to handle situation.
- General laws developed through research may enable us to make reliable predictions of events.
- Research aims to analyze inter-relationship between variables and to derive causal explanations, which help us to better understanding of the world in which we live.
- Research aims to finding solutions to the problem, e.g.:- socio-economic problems, health problems, organizational and human relational problems and so on...
- Research also aims at developing new tools, concepts and theories for better understanding to unknown phenomena.
- Research helps national planning board to focus our national development. It enables the planners to evaluate alternative strategies, on-going programs and evaluation etc.,
- Research provides functional data for rational decision making and formulation of strategies and policies.

### **I. 3: Scientific Method**

All scientists use common methods for their enquiry. All sciences whether natural or social agree up on methods of studying phenomena. But their materials differ. A biologist studying the structure of some flowers, a chemist studying radio active properties of an element and a sociologist studying crime situation in an urban slum. All follows similar scientific methods of inquiry. But their subjects of study are different. Therefore, they use different techniques of investigation for their study. As their materials are different, their purposes also differ. All of them will observe the phenomenon and analyze them to find out their sequences this is called scientific method. Thus scientific method is a systematic step-by-step procedure (three steps-observation, hypothesis and verification) following logical process of reasoning.

According to **prof. Morgan** “**scientific method being highly elastic, can be applicable to all domain of human activity where the discovery of truth is the objective**”. So the scientific method is means for gaining knowledge of the universe. As Karl Person observed “there is no short-cut to truth, no way to gain a knowledge of the universe expect through the gate way of scientific method”. Two elements of scientific method are, a)Procedural components and b)Personal Components.

#### **a) Procedural Components.**

Observation, hypothesis and verification are the three procedural components. Observation helps to collect data and help to build hypothesis. The second step is formation of one or more hypotheses. A hypothesis is tentative conclusion. It guides collection of data. The third stage is verification of hypothesis. It is done by analytical tools.

**b) Personal Components.**

The researcher needs imagination, analytical ability resourcefulness, skill, capacity to find out the hearts of the problem. Researcher's ability and attitude are more important than the method of approach. Ambitions interest and perseverance are very much required to go on successfully with research. Researcher should have an objective scientific and professional qualification and personal quality and interest.

***Meaning and essentials of scientific method***

Scientific method is a way in which one can test opinion, impressions or guess by examining available evidences fore and against them. So it is controlling lot of things and establishing stable belief.

Essentials of scientific method are,

- Scientific method aims at discovering facts.
- It is itself corrective in nature.
- It is itself based on systematic doubts.
- Scientific theories are abstract in nature.

***Basis of scientific method***

Following are the major basis of scientific method,

**(a) Reliance on empirical evidence:-**

Scientific method involves a systematic process. The answer to a question is not decided by intuition or imagination.

Relevant data are collected through observation and experimentation. The validity and the reliability of data are checked carefully and the data are analyzed thoroughly using appropriate methods of analyses.

**(b) Use of concepts:-**

We use concepts to deal with real facts. Concepts are logical constructs or abstractions created from sense impressions. They are the symbols representing the meaning that we hold.

**(c) Commitment to objectivity:-**

Objectivity is the hallmark of the scientific method. It means forming a judgment upon facts unbiased by personal impressions. The conclusion should not vary from person to person. It should be same for all persons.

**(d) Ethical neutrality.**

Science does not pass normative judgment on facts. It does not say they are good or bad. Science aims nothing but making true and adequate statements about its object.

**(e) Generalization.**

Scientist tries to find out the commonality of a series of event. They aim at discovering the uniformity. Assumed a discovered uniformity a logical class and it's observed pattern, a descriptive generalization is formulated.

**(f) Verifiability.**

The findings of a research should be verifiable. Scientist must make know to others, how he arrived at his conclusion. He should thus expose his own methods and conclusions to critical scrutiny. When others test his conclusion under the same conditions, then it is accepted as correct.

**(g) Logical reasoning process.**

The scientist method involves the logical process of reasoning. This reasoning process is used for drawing inference from the finding of a study or for arriving at conclusion. This logical reasoning process consists of induction and deduction.

**Induction:** One of the methods of logical reasoning process. The inductive method consists of studying several individual cases drawing a generalization. It involves two processes-observation and generalization. Conclusion from induction method is subjected to further conformation based on more evidence

**Deduction:** deduction is reasoning from the general to the particular. This reasoning establishes a logical relationship between a major premise. A minor premise and a conclusion. A major premise is a previously established generalization or assumption. A minor premise is a particular case related to the major premise. The logical relationship of these premise lead to conclusion.

E.g. major premise: - All men are mortal

Minor premise: - A is a man

Conclusion: - A is mortal.

The logical process of both induction and deduction are useful in research studies. Both are inseparable parts of a system of reasoning. Both processes are often used simultaneously.

***Difficulties in the use of scientific methods in social science research***

Some theorists argue that scientific method is more applicable to physical or natural sciences: and it can not applicable to social sciences. The following are the major difficulties.

- a) Human behavior is different. It s very difficult to categories.
- b) When human behavior is studied and analyses by another human, there may be personal problems.
- c) Psychological nature of human behavior can not be measurable.
- d) Human behavior is not uniformed and predictable. Uncertainty is existing.
- e) Difference in choice and decision.

## **I. 4: Research and Theory**

### ***Meaning of theory:***

Research is closely related to theory. Theory provides a conceptual model for research. Research in turn contributes to theory. It is important to distinguish the modern scientific usage of the word theory from other meanings the word may have. In common parlance, theory is frequently identified with speculations, what is theoretical is unrealistic, visionary. This is a wrong notion; theory is the accumulated stored facts. It may define as a set of systematically interrelated concepts, definitions and propositions that are advanced to explain and predict phenomena (facts). **Arnold Rose defines theory as “an integrated body of definitions, assumptions and general propositions covering a given subject matter from which a comprehensive and consistent set of specific and testable principles can be deduced logically”.**

### ***Criteria of Theory:***

Theories start out as ideas. How much these ideas conform to the basic demands of proposition formulation that determines whether or not they will assume the status of theory. The criteria to be met by the set of ideas are,

- a) They must be logically consistent.
- b) They must be interrelated.
- c) The propositions should be mutually exclusive.
- d) They must be capable of being tested through research.

### ***Theory and Facts:***

Theory and facts are interrelated. Facts are empirically verifiable observation and theories establish relationship between facts and order them in meaningful way. Theory summaries facts in to empirical generalizations; and it predict facts. Facts in turn, help to initiate theories; facts lead to the reformulation of an existing theory and modify them.

### ***Role of Theory in Research***

Theory helps research in several useful ways. Following are the major contributions of theory to research.

#### **a) Theory delimits the study.**

Theory narrows the range of facts to be studied. It helps to select a few relevant aspects of a phenomenon. Any phenomenon may be studied from different angles. Theory helps the researcher to work with in framework is science.

#### **b) Theory provides conceptual model.**

Theory provides a conceptual framework for a study. It helps a researcher to develop conceptual structure for the proper formulation of the selected problems.

**c) Theory summarizes.**

Theory summarizes what is already known about the object of study. From time to time in any science there will be changes in the structure of relationship between propositions. In each area, scientist move from older systems of theory towards a more acceptable new system.

**d) Theory states universal law.**

Theory states a general uniformity beyond the immediate observation. E.g. A person sitting under mango tree, observe mangoes falling on ground. But beyond this observation there is a general law of gravitation.

**e) Prediction.**

Theory helps to predict further facts. For example we may observe low birth rate in modern societies. From this, we can predict that if modern way of life is introduced into a traditional rural or tribal community, its birth rate would decline.

**f) Theory fills gap in knowledge.**

Theory also points to areas which have not been explored. The gaps in knowledge are brought to light through the questions arising out of theory.

***Contribution of research to theory***

The relationship between theory and research is contributory. Research contributes to the development of theory. Let us discuss major contributions of research to theory.

**a) Research initiate theory.**

The findings of research may lead to the formulation of theories. Scientific experiment have led to the development of various theories in physics, chemistry etc,. Similarly research in social sciences has contributed to the development of several theories.

**b) Research tests an existing theory.**

One major function of empirical research is to test hypotheses deduced from existing theories. If a hypothesis is not conformed by research, the theory from which the hypothesis is deduced in re-examined and tested.

**c) Reformulation of an existing theory.**

When a theory does not fit in to new findings of research, it is rejected and reformulated to encompass the new findings.

**d) Research refocuses theory.**

Empirical research may give a new focus to the existing theory.

**e) Research clarifies theory.**

Concepts are drawn from theory. But researcher cannot proceed on the basis of their theoretical meaning. For research purpose the concepts must be operationalized and defined especially with concrete empirical indications. Such clarifications and redefinitions lead to the discovery of new hypotheses.

In short, theory and research are inseparable complementary components of scientific endeavor.

## II : SOCIAL SCIENCE RESEARCH: MEANING AND SCOPE

### **2.1: Social Science Research**

#### ***Meaning and Scope:***

Sciences are broadly divided into natural (physical) sciences and social sciences. Social sciences include various disciplines dealing with human life, human behavior and institutions. E.g. Anthropology, History, Economics, Education, Commerce, Demography etc.,.

Social sciences are not exact science like physical sciences. It deals with human beings. Human nature and man's environment are so complex, that it is more difficult to comprehend and predict human behavior than the physical phenomena. It is difficult to see the underlying uniformities in the diversity of complex human behavior.

#### ***Social science research***

Social science research is a systematic method of exploring, analyzing and conceptualizing human life in order to extend, correct or verify knowledge of human behavior and social life. Social research seeks to find explanations to unexplained phenomena, to clarify the doubtful and correct the misconceived facts of social life.

It involves the application of scientific method for understanding and analyzing of social life in order to correct and verify the existing knowledge as a system. The main idea behind social research is to discover new inter relations, new knowledge, new facts and also to verify old ones.

Human behavior may be influenced by certain values and laws. The main purpose of social research is to discover those laws which can be proper guidelines for studying human conduct and behavior.

According to P.V. Young, we may define social research as “the systematic method of discovering new facts and verifying old facts. Their sequences, inter relationship, causal explanations and the natural laws govern them”. From the above definition we can identify the following,

#### ***Characteristics of Social Research***

- Social research deals with social phenomena. It studies human behavior and their feelings.
- Social research is carried on both for discovering new facts and verification of the old ones.
- Social research tries to establish causal connection between various human activities.

## ***Nature of Social Science Research***

In contrast to the physical science the social science lack the power of exact prediction; this is attributed to the “erratic”, idiosyncrasy and irregular nature of human behavior. Social scientists point out that the low predictable potential in social science is due to our limited knowledge of relevant variables operative in the group like customs, traditions etc.,. The cause and effect are difficult to be segregated clearly. The present state of development of social science is far behind physical science. Merton advises to social scientists against their despair; it is possible to develop border applicability.

## ***Objectives of Social Research***

The major objectives of social research are listed as follows:-

- a) The aim of social research is to discover new facts and verifying or testing old facts.
- b) It tries to understand the human behavior and its interaction with the environment.
- c) It tries to find out the casual connection between human activities and natural laws governing them.

## ***Functions of Social Science Research***

The important functions of social science research are discussed below;

### **a) Discovery of facts and their interpretation.**

Social research provides answer to questions of what, when, how and why of man, social life and institutions. Discover of facts and their inter relationship help us to discard distortions and contribute to our understanding of social reality.

### **b) Diagnosis of problems and their analysis.**

Our society has innumerable problems such as poverty, unemployment, economic inequality, social tension etc.,. The nature and dimensions of such problems have to be diagnosed and analyzed. An analysis of problems leads to an identification of appropriate remedial actions.

### **c) Systematization of knowledge.**

The facts discovered through research are systematized and the body of knowledge is developed. It contributes to the growth of theory building.

### **d) Control over social phenomena.**

Research in social science provides first hand information about the nature of social institutions. This knowledge helps us to control over the social phenomena.

### **e) Prediction.**

Social research aims at finding an order among social fact and their casual relations. This affords a sound basis for prediction in several cases.

**f) Development planning.**

Systematic research can give us the required data base for planning and designing developmental schemes and programmes.

**g) Social welfare.**

Social research can identify the causes of social evils and problems. It can thus help in taking appropriate remedial actions. It also provides guideline for social welfare.

***Scope of Social Science Research***

The fields of social science research unlimited and the materials of research are endless. Every group of social phenomena, every phase of human life and every stages of past and present development are materials for the social scientist. The area of research in various social sciences provides vast scope for research in social sciences.

The main scope of social research are :

- Social research provides new insight in to the organized society and its social structure.
- Social research also provide new horizon in scientific explanation; advanced and tested principles of procedure and suggested new concepts.
- Another scope of social research is that exemplified by studies and attempt to test or challenge existing theories and revise them the light of new evidence.
- Social research helpful to establish new theory and established techniques of exploration.
- Social research also provides contributions to existing stone of fruitful ideas, methodology and basis understanding of social life and control of its problems.

**2.2 Objectivity in social research.**

The question of objectivity has been central to the methodological debates of the social sciences from the beginning. It means the willingness and ability to examine evidence dispassionately. It is the first condition of research. Objectivity means basing conclusion on facts without any bias and value judgement. The conclusion should be independent of one's personal beliefs, likes dislikes and hopes. Both the data and the inference drawn from their analysis must be free from bias and prejudices. But modern feminist researchers and critical social researchers argued research is a moral-political activity that requires the researcher to commit to a value position. Value freedom is a myth.

***Factors Affecting Objectivity***

It is very difficult to achieve objectivity in social science research. This difficulty arises out of the adverse influences of **(a)** personal prejudices and bias, **(b)** value judgement, **(c)** ethical dilemma and **(d)** complexity of social phenomena.

### ***Personal prejudices and biases***

Prejudices and biases are like fantasies to believe what is comforting to believe. It makes to believe something without considering evidence.

### **Value related problem arises**

Value related problem arises from the social context with in which research occurs. A researcher's attitudes towards socio-economic issues are influenced by his values.

### **Personal preconceptions**

Personal preconceptions of research create not only a distorting effect on the data but are also highly insidious. Research failed to examination objectivity.

### **Ethical dilemmas**

Research relation with other aspect of research creates ethical problems. E.g. Relation with sponsors, relation with source data, relation with research subject etc.,.

### ***Limits of objectivity in social sciences***

Objectivity in social science research has certain limitations, they are:

- a) Social scientist is part of human society and their judgements are subjective and coloured by researchers own experience.
- b) The subject matter of social science research is too complex. All propositions are limited particular social groups and contexts. Thus objectivity in a major issue in social science research.
- c) All members of the society have different values, social researcher will unconsciously influenced by their values.
- d) Social scientist fails to achieve objectivity because the respondents are human beings have certain human problems.e.g. refusal of respondent, improper understanding, reluctance etc.,. All these problems cause biases and invalidate the research findings and conclusions.

### ***Ethical Issues in Social Sciences***

An ethic is more than presence of a basic value or values. It is base of action in any science. The conflict between the ethics of science and personal respects of researcher is the major problem in social science research. Issues of ethics arise primarily out of researcher's relation with different sections of society. E.g. research respondents, sponsors' of research, sources of data etc.,.

When we talk about 'ethics' in social research, we are addressing those issues that concern the behavior of social researcher and the consequences that their research bring to the people they study. As such, ethical issues have the potential to impart at every stage of the research process and

within any research project, therefore all social researchers need to have a clear understanding of the ways in which ethical dilemmas can arise when carrying out their research.

Some of the ethical issues can arise during the course of the research process:-

**The research problem itself:** - determinants of alcoholism or child sexual abuse.

**The research setting:-** hospitals, prisons or schools

**The procedure of research:** - an experiment method has a negative effect on research participants.

**The kinds of people serving as research participants:-** homeless people, patients, children and relatively powerless to resist being studied.

**The type of data collected:-** sensitive, personal or financial information.

**The pressure** put upon research participants by external agencies such as government, employers etc.,.

**The communication of results:-** the sponsors withhold certain results that do not accord with their objectives.

**Ethical issues relating to the respondents and subject:-**

Of all ethical issues, the issues concerned with the respondents are far more important. The respondents constitute the research subjects,

Some respondents are made to participate in a research project without their consent or knowledge; e.g. socio-anthropological studies of rural or tribal community.

The purpose of research is not fully revealed to the respondents.

Another non ethical practice is to expose participants to physical or mental stress.

In depth interviews or disguised projective test and participant observation are may be an attack on privacy.

Other ethical issues related to maintaining anonymity of the respondent. Anonymity might be violated through report and publications.

Another ethical issue in social science research is related to agency or sponsors of research. The granting agencies impose several restrictions up on the researcher.

To overcome above ethical dilemma in social science research, the research must keep a balance between the moral cost of unethical practices and the potential benefits of research.

### **III: QUALITATIVE AND QUANTITATIVE RESEARCH: HISTORICAL DEVELOPMENT AND PRESENT SCENARIO**

#### **3.1: Qualitative and Quantitative Research**

Qualitative research is a broad term that encompasses a variety of approaches to interpretative research. It can be historical, sociological, education and much more. Qualitative research style in social research is not much related to the scientific logic of research, but more close to the world around. Quantitative research focus upon human behavior for better understandings about the world around them. So the emphasis given by quantitative researchers in their studies involves an examination of the perspectives of the people or groups; e.g. their ideas, attitudes, motives, and intensions.

In qualitative research, the researcher's primary goals are an understanding of social processes rather than obtaining a representative sample. The study of one or small number of cases, often over a lengthy period of time.

Qualitative research methods such as in-depth interviews and participant observation have some of the following characteristics,

Research is carried out in reliable settings.

In qualitative research, the objectives are to take detailed descriptions of people behavior and thought.

The focus of the research may change during the course of research. The qualitative approach involves theory construction rather than theory testing.

In qualitative research, when compared to quantitative based research, research designs are often relatively small, loosely structured, encourage research participants to talk in detail about the meaning that they have of the world. There will include one to one in-depth interviews focus groups and qualitative observation based studies. Some of the methodological issues of qualitative research designs are the questions of validity and reliability, objectivity and subjectivity and ethical matters.

#### **3.2: Quantitative research in social science**

Quantitative approaches are typically associated with positivist perspectives in social research. Hammersly (1993) provides a useful definition of this approach.

“The term quantitative method refers in large part to the adoption of the natural science experiment as the model for scientific research, its key features being quantitative measurement of the phenomena studied and systematic control of the theoretical variables influencing those phenomena”. Thus, the major characteristics of quantitative research is,

- Using standardized approaches to collect data.
- Explaining casual relationship between variables.
- Tests hypotheses or given theory.
- High degree of pre-conceptualization.
- Adopting theory then research approach.

The sample survey and experimental method are the most typical example of quantitative research. Sample survey is the most commonly used technique with specific tools and methods to gather information about a particular question

Quantitative approaches differ from qualitative approach in a number of ways. E.g. in terms of objectives of the study, research design, tools and methods etc.,.

## **MODULE II:**

# **TYPES AND METHODS OF SOCIAL RESEARCH**

### **I: Types of Research**

The purpose of research is to discover answer to questions through application of scientific procedures. Research always starts from a question like why, what, how etc,. The nature of questions varies the type research procedure and methods and procedure also varies. Research may be classified crudely, according to its major intent or the method. According to the intent, research may be classified as pure research (basic research), applied research, exploratory research, descriptive study, action research etc,. According to the method of study, research may be classified as experimental research, analytical study, historical research and survey.

The above classification is not a watertight demarcation. It is just a narration to understand the different approaches to research. The different types of research are not sharply distinguishable from one another. There may be overlapping between one type and other.

### **1.1: Pure (Basic) Research and Applied Research**

The reason for asking research questions are of two general kinds; intellectual and practical. Intellectual questions are based on the desire to know or understand for the satisfaction of knowing or understanding. Practical questions based on the desire to do something better or more efficiently. The investigation to which these two types questions lead, sometimes labeled “pure” or basic and applied research.

#### ***Pure Research***

Pure research is focused to collect knowledge without any intention to apply it. It is purely intellectual in character. It is also known as basic or fundamental research. Intellectual curiosity is the only motivational factor behind it. It is not necessarily problem oriented. It aims at extension of knowledge. It may lead to either discovery of a new theory or refinement of an existing theory. The development of various sciences owes much too pure research. The findings of pure research enrich the store house of knowledge. Pure research lays the foundation for applied research. The findings of pure research formed the basis for innumerable scientific and technological inventions like steam engine, auto mobiles and telecommunication etc, which have revloutionalized and enriched our human life.

Basic research had many definitions, most of them unsatisfying in one way or another. It can even authoritatively been said that an adequate or operational definition of basic research is not possible (Kidd-1959).

In many cases basic research is done to test theory to test relations among phenomena in order to understand the phenomena, with little or to thought of application of the results to practical problems (Kerlinger – 1972). The best example is that to Michael Faraday. He said research in electricity, with out knowing that, it would be useful. He did continuous search to find out the truth or knowledge. Knowledge for knowledge sake only.

### ***Contributions of Pure Research***

- ❖ Pure research of solutions to many practical problems by developing principles.
- ❖ Pure research helps to find out the critical factors in practical problems.
- ❖ Pure research provides many alternative solutions and thus enables us to choose best solutions.

### ***Applied Research***

Applied research is focused up on a real life problem requiring an action or policy decision. It tries to find out practical and immediate result. It is thus problem oriented and action directed.

According to Kerlinger (1979) applied research is research directed towards the solution of specified practical problems. Julian Simon has pointed out that applied social sciences help in making policy decision. “Applied research methods are sometimes more sophisticated than any methods used in pure research (Touffers: 1950)

There is vast scope for applied research in the fields of technology, management, commerce, economics and other social sciences. Innumerable problems are faced in these areas. They need empirical study for finding solutions. The immediate purpose of an applied research is to find solutions to practical problems, it may incidentally contribute to the development of theoretical knowledge by leading to the discovering of new facts or testing of a theory or to conceptual clarity.

### ***Contributions of Applied Research***

- ❖ Applied research can contribute new facts. It uncovers new facts which enrich the concerned body of knowledge.
- ❖ Applied research can put theory to the test. It offers an opportunity to test the validity of existing theory.
- ❖ Applied research may aid in conceptual clarification. Many concepts are vague. E.g. small farmer, social responsibility, social structure etc; Applied research aid conceptual clarity.
- ❖ Applied research may integrate previously existing theories. A practical problem has many facts. It cannot be solved by the application of abstract principles from a single science. The solution of a practical problem may require some integration of the theories and principles of various disciplines.

### ***Relation between Pure and Applied Research***

The distinction between pure and applied research is not absolute. Both are not contradictory but are complementary. Pure research may have significant potential for its application to the solution of a practical problem and applied research may end up with making a scientific contribution to the development of the theoretical knowledge.

The terms ‘pure’ and ‘applied’ just represent the polar of a continuum. Morry said “research studies have differing degree of ‘purity’ and ‘applicability’, depending on whether their purpose is solely to advance knowledge in a field or to solve some financial problem

## **1.2: Action Research**

Conventional social scientific research is concerned to analyse and explain phenomena. The role of research is detached, in order to minimize disturbance of the phenomena under investigation. In action research, research is jointed with action. Researcher became participants in planned policy initiatives. It is an action programme launched for solving a problem or for improving an existing situation. Government institutions and voluntary agencies undertake action programmes for achieving specific goals or objectives. Social welfare programmes human resource development programmes, research for improving the qualities of life in factories and offices etc, are some examples of action research programme.

### ***Types of Action Research***

Researchers categorize action research into five types.

#### **1. Classical design.**

Research and action are separated and independent. The connection between research and action is not purposely sought. It may occur by chance.

#### **2. Interdependence of action and research.**

Action is carried out by an agency not connected with a research institution. Research on action may be entrusted to an independent research body. For example government may launch a development programme and a university social scientist may be welcomed to study the on-going programme.

#### **3. Evaluate research built into an action programme.**

In this case, research is dependent upon action, and the action people define the scope of the research.

#### **4. Action for research**

In this type research is joined with action. Researcher became participants in planned policy initiatives.

## **II: QUALITATIVE RESEARCH METHODS**

### **2.1: Case Study**

Social researchers are curious about their social settings. Their interests are virtually unlimited. Any social setting is potential for scientific inquiry. The diversity of social topic and situation made researcher to plan their action. This plan for research is conventionally labeled as research design.

Case study method is considered as one of the popular types of research design used by social scientists. It is an intensive study of a particular case. In sociological investigation a case may be any of the following, taken singly or in combination. (1) A person, (2) A group of person such as family or gang, (3) A class of person such as thieves or professors, (4) An ecological unit such as neighbourhood or community, (5) cultural unit such as fashion or institution.

### **Definitions:**

Kvomvey (1986) defined “case study involves studying individual cases, often in their natural environment and for a long period of time”.

Yin (1991) has defined case study as “an empirical inquiry that investigate contemporary phenomena within its real-life context.

This kind of research design usually involves the qualitative method of data collection. It presents holistic account that offers insights in to the case understudy. Thus case study is not a method of data collection; rather it is a research strategy. An empirical inquiry that investigates contemporary phenomenon by using multiple source of evidence.

### **Characteristics:**

Hartfield (1982) has referred to the following characteristics of case study.

- ❖ It studies whole unit in their totality.
- ❖ It employees several methods in data collection to prevent errors and distortions.
- ❖ It often studies a single unit: one unit in one study.
- ❖ It perceives the respondent as knowledgeable person, not just as a source of data.
- ❖ It studies typically case.

### **Purpose of case study**

Burns (2000) has point out the following purposes of case study.

- ❖ It may be a source of hypotheses for future research.
- ❖ It helps to establish generalizations about the wider population to which the unit belongs.
- ❖ It provides anecdotal evidence that illustrates more general findings.
- ❖ To refute a universal generalization, a single case can represent a significant contribution to theory building.
- ❖ To test the feasibility of the quantitative study.

### **Advantages of case study**

Black champion (1976) enlisted following advantages of case study.

- ❖ It makes in-depth study possible.
- ❖ It is flexible in data collection methods.
- ❖ It could be used for studying any dimension of the topic; one specific aspect of the problem.
- ❖ It could be conducted practically any kind of social setting.
- ❖ Case studies are inexpensive.
- ❖ It helps to study unique case.

### **Disadvantages or criticism.**

Case study method is generally criticised on the following basis,

**1. Subjective bias:**

Research subjectivity in collecting data for supporting or refuting a particular explanation, personal view of investigation influences the findings and conclusion of the study.

**2. Little evidence for scientific generalization:**

The common complaint against case study is; how can generalization be made from a single case? As an answer to this case studies are generalize to theoretical propositions, not to statistical populations.

Object of case study is to expand theory and not to undertake statistical generalization.

**3. Time consuming:**

As it produces a lot of information which is difficult to analyse adequately.

**4. Doubtful reliability:**

The investigator cannot prove his authenticity for obtaining data or having no bias in analyzing them.

**5. Missing validity:**

For investigator, what seems to be true is more important than what is true. The case study can oversimplify or exaggerate leading to erroneous conclusions.

6. Case study has no representatives, i.e. each case studied does not represent other similar cases.

**Yin's criticism**

**1. Findings of case studies are biased because the research is usually sloppy.**

This criticism is probably based on the prejudice that quantitative researchers are against qualitative data. They also believe that qualitative study cannot be replicated.

**2. Case studies are not useful for generalization.**

- It is not possible to generalize from a single case
- If a number of cases are used for generalizations, it will be extremely difficult to establish their comparability.

**3. Case studies take too long time** and produce unmanageable amounts of data. The methods of data collection which are time consuming.

**2.2: Content Analyses**

Human beings communicate through language. Language helps to convey our emotions, knowledge, opinions, attitudes and values. Print media, television, radio; movies also communicate ideas, beliefs and values. The analysis is of communication content-written and pictorial- has now become a methodological procedure for extracting data from a wide range of communications.

**Definition:**

Content analysis is a method of social research that aims at the analysis of the content-qualitative and quantitative- of documents, books, newspapers, magazines and other forms of written material.

According to Berelson (1952), “content analysis is a research technique for the objective, systematic and quantitative description of the manifest content of communication”.

According to Eckhardt and Ermann (1977), as a qualitative technique, content analysis is directed towards more subjective information such as attitude, motives and values.

The content may be manifest or latent. The former refers to the visible actual parts of the text as manifested in the document, sentences, and paragraphs and so on. The latter is the underlying or implied meaning conveyed.

***Characteristics of content analysis***

Gardner (1975) has identified four characteristics of content analysis.

1. **Objectivity:** Explicitly formulated rules of content analysis enable two or more persons to obtain same results from the same document.
2. **Systematic:** It provides enough freedom for the researcher to eliminate unnecessary materials which is not supporting the research hypotheses.
3. **Generality:** In content analysis, the characteristic of the sender or recipient of the communication is little scientific value.
4. **Quantification:** The inferences from the study must be in precise numerical terms. This means that inferences must be derived strictly from counts of ‘frequency’ steps in content analysis.

Sarantakos (1998) formulated following steps in content analysis;

**I step: The selection of the Research Area.**

The topic can be one from the newspaper, TV, magazines, books, movies and the like.

**II step: Formulation of Research Topic.**

It involves explaining and operationalising the topic, selection of units, determining categories and formulating hypotheses.

**III step: Research Design.**

It aims at determining the size of sampling method of data collection and so on.

**IV step: Data Collection**

It involves counting frequencies, gathering information about the study unit and evaluating units.

**V step: Lastly,** the analyses and interpretation of data aims at giving inferences and conclusions.

***Types of content analyses:***

Sanders and piney (1983) have suggested five types of content analysis: (1) word counting analysis, (2) conceptual analysis, (3) somatic analysis, (4) evaluative assertion analyses, (5) contextual analysis.

### ***Strength and limitations of content analysis***

Following are the strength and limitations of content analysis,

#### **Strength:-**

- ❖ It is unobtrusive method; it is not threatens respondent directly
- ❖ It is useful in historical research, studying people who are no longer available to answer questions.
- ❖ It makes possible a variety of cross cultural studies.
- ❖ It can be used to test preliminary ideas, hypotheses or theories etc.
- ❖ It is powerful tool for evaluating personal or social values.
- ❖ It is more useful where research budget is small and resources are limited.
- ❖ It is easier to repeat the study through this method.

#### **Limitations:**

- ❖ Unforeseen aspects of research field.
- ❖ Determining validity is difficult.
- ❖ Some required documents may not be available to the researcher which may affect the conclusion.
- ❖ Its conclusion remains the shadow of personal bias.

### **2.3: Narrative Method**

A **narrative** is a constructive format (as a work of speech, writing, song, film, television, video games, photography or theatre) that describes a sequence of non-fictional or fictional events. The word derives from the Latin verb "narrare" to recount", and is related to the adjective "gnarus", "knowing" or "skilled".

Narrative is often used in case study research in the social sciences. Here it has been found that the dense, contextual, and interpenetrating nature of social forces uncovered by detailed narratives is often more interesting and useful for both social theory and social policy than other forms of social inquiry. Prominent social scientists have pointed out that a social science expressed in terms of narrative case studies would provide better access for policy intervention than the present social science of variables.

Narrative Inquiry emerged as a discipline within the broader field of qualitative research. It is an approach to understanding/researching the way people make meaning of their lives as narratives, linked fields are narrative analysis, narratology and life writing. Narrative Inquiry should be distinguished from storytelling in that the word narrative implies an audience and a narrator. Of interest to narrative inquirers is not what happened so much as what meaning did people make of what happened. Narrative Inquiry is a fairly recent movement in social science qualitative research. It has been employed as a tool for analysis in the fields of cognitive science, organizational studies, knowledge theory, sociology and education studies, among others.

The starting point of the Narrative Method is the story. Story telling is a deeply rooted human phenomenon. It is a natural way of sharing our knowledge, insights and feelings with others.

Stories or personal experiences are especially appropriate for making complicated subjects comprehensible to others. Compared to answers to specific questions, stories (and the context in which they are told) frequently lead to a much richer output and to richer and more profound insights.

## **2.4: Focused Group Interview**

A **focus group** is a form of qualitative research in which a group of people are asked about their perceptions, opinions, beliefs, and attitudes towards a product, service, concept, advertisement, idea, or packaging. Questions are asked in an interactive group setting where participants are free to talk with other group members. The first focus groups were created at the Bureau of Applied Social Research in the USA, by associate director, sociologist Robert K. Merton. The term itself was coined by psychologist and marketing expert Ernest Dichter.

Powell et al define a focus group as

“A group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research. (1996: 499)”

Focus groups are discussions that last one to two hours, usually done with 6-12 people. The discussion is led by a moderator asking open-ended questions. Focus groups can be used to discover

people's general reactions to an interface or services. A wide range of information can be gathered in a relatively short time span.

In the social sciences and urban planning, focus groups allow interviewers to study people in a more natural setting than a one-to-one interview. In combination with participant observation, they can be used for gaining access to various cultural and social groups, selecting sites to study, sampling of such sites, and raising unexpected issues for exploration. Focus groups have a high apparent validity - since the idea is easy to understand, the results are believable. Also, they are low in cost, one can get results relatively quickly, and they can increase the sample size of a report by talking with several people at once.

Focus groups are particularly helpful when used in conjunction with surveys. Your library can follow up a survey with focus groups to clarify the issues revealed, and perhaps hear surprising new ideas or concerns. Unlike doing polls or asking a listserv, the strength of this technique is the interaction between participants. With a skilled moderator, the conversation can go beyond "like it, don't like it" and allow new views to surface. Since there is no pressure to reach a consensus, all views can be encouraged and aired.

The first step is to understand what you want to learn. Focus groups are not polls or surveys; they are in-depth, qualitative interviews with a small number of carefully selected people, to help you develop an idea or specific service. To prepare, you may want to first consider your budget. This is a labor intensive project; time may be the most expensive item. It takes considerable time to plan the sessions, recruit volunteers, and develop your questions. If you hire a professional moderator, that could be a considerable expense, other optional things can add to the cost, including honorariums, refreshments and video taping

### ***Features/advantages of focus group interview***

- Focus group research involves organised discussion with a selected group of individuals to gain information about their views and experiences of a topic.
- Focus group interviewing is particularly suited for obtaining several perspectives about the same topic.
- The benefits of focus group research include gaining insights into people's shared understandings of everyday life and the ways in which individuals are influenced by others in a group situation.

- Problems arise when attempting to identify the individual view from the group view, as well as in the practical arrangements for conducting focus groups.
- The role of the moderator is very significant. Good levels of group leadership and interpersonal skill are required to moderate a group successfully.
- You can get feedback about what people do over a long period of time.
- Focus groups used early in a project can produce insights and questions from the interaction among different users or stakeholders.
- Focus groups are relatively inexpensive (assuming that participants are from the same geographical area) and can be arranged quickly.

### **Disadvantages of focus group interview**

- ***Impersonal***

Group discussions don't lend themselves to personal revelations, so they might not be suitable for sensitive or controversial issues. For example, group discussions might not be suitable for research pertaining to products people might feel ashamed about using, such as alcohol. If people don't feel comfortable sharing their opinions or experiences, the focus group interview won't generate any useful insights. In these situations, anonymous surveys or confidential interviews might be a better means of obtaining information.

- ***Difficult to Control***

For a focus group interview to be revelatory, the conversation must flow naturally to reveal what the participants are thinking. But group discussions can get out of hand quickly, straying from the original topic and getting lost in useless tangents. An effective facilitator will keep the discussion on track, but this might be impossible if the group is rowdy or young.

- ***Dominating Individuals***

The goal of a group discussion is to discover what all the participants think, but outspoken people might skew those results. For example, a shy dissenter might never reveal important insights, or a single persuasive participant might cause other participants to change their original opinions, meaning you never learn about their initial reactions. To avoid these problems, facilitators must involve everyone to ensure all the participants have equal time and that all points of view are heard.

- *Not Representative*

The selection of people for the group discussion is unlikely to be representative of the larger population, so you can't assume the opinions you uncover have any significance past whatever insights they offer into possible thought patterns. For example, unanimous agreement about a product's effectiveness might have no correlation to how most consumers feel about that product, though a discussion of the product's effectiveness might help you generate targeted questions for future research

### **III: QUALITATIVE RESEARCH METHOD: SOCIAL SURVEY**

#### ***Social Survey Method***

Social survey technique is very popular in sociology. Survey research is the systematic gathering of information about individuals and collectivities. The purpose of surveying may be description or casual analysis. Large scale descriptive surveys have long history in social research. National census is the biggest form of social survey in which surveys, the whole nation regarding its population, their economic condition including their earning, birth, death etc.

#### ***Definition***

In general social surveys are concerned with (a) the formation of constructive programme of social reform and (b) amelioration of current or immediate conditions of social pathological nature, which have definite social significance.

Duncan Mitchell's Dictionary of sociology defines social survey as follows, "the social survey is a systematic collection of facts about people living in a specific geographic, cultural or administrative area".

Bogardus says "A social survey is the collection of data concerning the living and working conditions, broadly speaking of the people in a given community".

E.W. Burgess defined "A social; survey of a community is the scientific study of its conditions and needs for the purpose of presenting a constructive programme of social advance".

Social surveys are usually for dealing with many related aspects of social problem. They provide the data for administration, rather than for the illustrative or descriptive material. They are generally quantitative and the history of the social survey is intimately bound up with the development of statistics.

Surveys vary greatly in their scope, their design and their content. The specific characteristics of any survey will determined by the basic objectives, which conducting survey there must be a specific pattern or design to follow to collect data. The research follows a scientific step by step procedure.

### ***Procedural ways of social survey***

The step by step tasks involved in carrying out a survey from the first state off planning to the preparation of the final report in as follows;

#### **a) Statement of the problem or general objectives**

The problem which make survey necessary and the general objectives of the survey are stated. The statement is generally expressed the area and scope of the study.

#### **b) Specific objectives of the survey**

Although the general objectives, usually few in number are formulated with out regarding to the requirements of the survey technique; these general objectives are broken down in to numerous specific objectives. The specification of data to be gathered and the hypotheses to be tested by the survey is accomplished at this stage.

#### **c) Sample**

Two major divisions in the survey sample are (a) the universe of the survey (b) the size and design of the sample. After there two are made the actual selection of the sample units take place.

#### **d) Questionnaire**

After the selection of sample units a questionnaire is prepared, to collect facts from the sample. The questionnaire must be carefully designed with in limits of the problem. The preparation of questions, degree of probing, the sequence of questions and the establishment of rapport, a specific pattern and a skill to be applied. The questionnaire is pre-tested in the field for proper application.

**e) Field work**

The next important step is field work. Gathering facts from sample through personal interview and observation. The interviewers are usually provided with an instruction manual which explain the objectives of the study and the meaning of each question.

**f) Data coding and tabulation**

After careful coding and editing of the data collected through survey may transcribed into tables. This may be done by preparing a code, a numbered list of major items such summing all the responses received to each question.

**g) Data analysis and reporting**

The data are analysed and a report is written which embodying the survey findings. The survey process is a highly interconnected chain of events so the above steps are independent of one another.

***Limitation of survey method***

Even though the survey method is applicable to wide range problems, it has evident limitations. The major limitations are;

- a) Sample error: survey method is subjected to the selection of sample,
- b) Errors of measurement: A score representing a person's attitude, abilities traits or behaviours may not match with reality.
- c) Limitations of questionnaire: the imitations on length of the questions, that can be asked in a survey an there are limits to the number of topics that can be covered.
- d) Limitations of population: A sample survey designed to represent a population over a wide geographical area is likely not to given adequate representation to any population which highly localized in its character.

## **MODULE- III**

# **SOCIAL RESEARCH AND STAGES IN SOCIAL RESEARCH**

### **RESEARCH**

Research is an intensive and purposeful search for knowledge and understanding of social and physical phenomena. It is a method for the discovery of true values in a scientific way.

Research may be defined as the application of the scientific method in the study of problems. At times, the terms research and scientific method are used interchangeably.

Webster's Twentieth Century Dictionary defines the term Research as a careful, patient, systematic, diligent inquiry or examination in some field of knowledge undertaken to establish facts or principles. According to Random Dictionary of English Language "Research as a diligent and systematic enquiry or investigation into a subject in order to discover or revise facts, theories, application etc". Research is an activity undertaken to establish facts or principles in a scientific way.

### **SOCIAL RESEARCH**

Social research Social research may be defined as a scientific undertaking by means of logical and systematized techniques. Social research consists of the process of formulating and seeking answers to questions about the social world. Social research is fundamentally a scientific enterprise aims to:

- ❖ Discover new facts or verify and test old facts;
- ❖ Analyze their sequences, inter-relationships and causal explanations which are derived with an appropriate theoretical frame of reference;
- ❖ Develop new scientific tools and theories which would facilitate reliable and valid study of human behavior.

### **OBJECTIVES OF SOCIAL RESEARCH**

- Development of knowledge
- Scientific study of social life.

- Welfare of humanity
- Classification of facts
- Social control and prediction

### **CHARACTERISTICS OF RESEARCH**

- Research is directed towards the problem
- Research emphasizes the dent of generalizations, principles or theories that will be helpful in predicting future occurrences.
- Research is based upon observable experiences or empirical evidence.
- Research demands accurate observation and description.
- Research involves gathering new data from primary or first hand sources or using existing data for a new purpose.
- Although research activity may at times be somewhat random and unsystematic, it is more often characterized by carefully designed procedures, always applying rigorous analysis.
- Research requires expertise.
- Research strikes to be objective and logical applying every possible test to validate the procedures employed, the data collected ad the conclusion reached.
- Research involves the quest for answers to unsolved problems.
- Research is characterized by patient and unhurried activity.
- Research is carefully recorded and reported.

### **SIGNIFICANCE OF SOCIAL RESEARCH**

- It inculcates scientific and inductive thinking
- It provides new ideas and insights
- It promotes the development of logical habits of thinking and organization.
- It evaluate existing policies and helps to formulate new policies
- It solve various operational problems related to economy, politics, business and Government.
- It studies social relationships and helps to solve various social problems
- It helps to improve the level of living in the society

### **STEPS IN SOCIAL RESEARCH**

- Selection of the problem
- Study of research literature
- Formulating the problem
- Research design
- Formulating the hypothesis
- Selecting the sample

- Collection of data
- Methods and tool for data collection
- Analysis of data
- Interpretation and generalizations

### **SELECTION OF RESEARCH PROBLEM**

- We are aware that the goal of social research is to improve the level of living in the society. Society in general is plagued by several problems which need to be studied for finding a solution.
- The most urgent of them need the attention of the researchers.
- It is thus selection of research problem has high value to the society and the researcher must be able to identify those problems that need an urgent solution.
- Choosing a correct problem for study is a difficult exercise, as it depends on the time, effort and commitment on the part of the scholar.

### **HOW A PROBLEM ORIGINATES**

Basically research problem originates from the following three sources

- Contemporary interest
- own interest
- gaps in the field

### **LITERATURE SURVEY AND EXPERIENCIAL SURVEY**

The process of focusing a research question requires a knowledge of the field, an understanding of previous research, an awareness of research gaps and knowledge of how other research in the area has been conducted.

- The literature review is a major component of the research. It is an analysis of relevant publications that help set the context for and define the research topic. The literature review starts with the selection of a problem for research continues Through the various stages of the research process and ends with report writing. The task of locating previous research on a topic has been made much simpler and faster with widespread access to the internet and the availability of electronic data bases, electronic journals, online journals and sophisticated search engines. The internet is useful in providing access to many types of information.

## **NEED TO SURVEY LITERATURE**

- The main purpose of the survey of literature is to indicate the problems that are already investigated and those that need further investigation.
- A critical reading of relevant literature becomes indispensable not only in locating the research problem but also in analyzing the procedure. Ideas are generated only through this process of reading and re-reading the works done in the chosen field.
- A high degree of reading ability contributes to comprehension of facts which are useful in a consideration of the problem taken up for the study.
- This would help the researcher to know how the same are conducted, the methodology employed, issues covered and prescriptions suggested.
- In order to gain maximum benefit out of this exercise of surveying the literature one has to consider the following points:
  - Reading relevant literature
  - Reforming original works
  - Reading with comprehension
  - Reading in time
  - Indexing the literature

Reviews require a critical understanding of the literature that demonstrates the higher order intellectual skills of analyzing, evaluating and creating. Use both internet and library if possible. Be selective about information on the internet by using only formally published material. Abstracting is a key intellectual skill for analysis and synthesis of key concepts. Set up the word processing package or word processor in a cCommon format for all assignments. Avoid plagiarism that is plagiarism is cheating, as is copying research papers from the internet. Academics take intellectual honesty very seriously indeed. Give due acknowledgement by copying material from other scholarly work with citation.

Academic experience like classroom lectures, discussions seminar discussions and out –of-class exchanges of ideas with fellow students, scholars, experts and professors will provide many stimulating ideas to be studied. Daily experiences, Field visits, internship training and extension work will also provide exposure to practical problems which call for study and such experiences help the investigator to develop new ideas about a problem.

## **FORMULATING THE PROBLEM**

- Besides selection equally important in its formulation. A research scholar should take every care in formulating the problem without any scope for ambiguity.

- The type of the statement to be employed depends on the preferences of the scholar and the nature of the problem. The problem may also be formatted in the form of a few statements.
- There are two ways in studying a problem :
  - (i) posing questions and
  - (ii) Making statements.

**AN EFFECTIVE PROBLEM FORMULATION INVOLVES THE FOLLOWING:**

- Definition of the problem
- Scope for the problem
- Justification for the problem
- Feasibility of a problem
- Originating of the problem

**CRITERIA OF A GOOD RESEARCH PROBLEM**

- Clear and unambiguous: There must be a perfect clarity in the problem taken up for study. It should not give scope for divergent expressions and thus become confusing.
- Logical and systematic :The researcher must be able to establish relationships in a logical manner and they should not look disjointed. Similarly, the problem must be amenable for study in a specified step or in a specified sequence, in accordance with the well defined set of rules and methods.
- Empirical: Research is always related to one or more aspects of real situation and hence deals with concrete data that provides a basis for external validity to research results. Therefore, the problem should be such as to take realities into considerations. It is only through this process that knowledge gets accumulated and society is benefited.
- Relation between variables: the problem selected for study should express a relation between the variables contained in the study. The problem under study must be in a position to highlight the nature, extent and implications of such relation existing among variables of the study. It is through this process of establishing effective relation between variables that meaningful conclusions are derived from the study.
- Verifiable : though results of the research studies in social sciences cannot be reproduced, the problem chosen for study should not look absurd. It should be undertaken with an intention to make the study useful and replicable.
- Management: the scope of the study depends on the purpose in mind. Normally, research studies are undertaken by the students for securing different degrees like M.A., M.Phil, Ph.D. Now the student is required to select such a topic which should be within his reach and yet fulfill the basic requirements of a study at the specified level.
- Interesting: the problem to be studied must be interesting to the student and also to the people working in that field. Unless the problem is interesting, the candidate may lose interest in the middle. The cooperation of the respondents also varies depending how you can make your problem interesting to them. Some studies by nature evoke a lot of curiosity among the researchers and respondents alike.

## **HYPOTHESES**

- Once the selection, formulation and definition of the problem have been accomplished, the derivation of hypotheses is the most important step in the research process.
- It is usually considered as the principal instrument in research.
- “A hypothesis is a tentative generalization, the validity of which remains to be tested in its most elementary stage, the hypothesis may be a mere hunch guess imaginative data, which becomes the basis for action investigation” - George a Lund Berg
- “A proposition which can be put to test to determine validity” -Goode and Hatt
- The hypothesis is a powerful tool in research process to achieve dependable knowledge.
- It helps the researcher to relate theory to observation and observation to theory.

## **IMPORTANCE OF THE HYPOTHESES**

- Hypotheses facilitate the extension of knowledge in an area
- Hypothesis provides the researcher with rational statements
- Hypothesis provides direction of the research
- Hypothesis provide basis for exporting the conclusions for the study

## **FORMULATION OF THE HYPOTHESES**

- Hypotheses are the products of considerable speculation and imaginative guess work.
- They are based partly on known facts and explanations and partly conceptual.
- There are certain necessary conditions which are conducive to their formulation.
- Richness of background knowledge
- Versatility of intellect
- Analogy and other practices

## **CRITERIA OF USEABLE HYPOTHESES**

- Hypotheses should be clearly and precisely stated.
- Hypotheses should be testable
- Hypotheses should state the expected relationship between variables
- Hypotheses should be limited on scope
- Hypotheses should be stated as far as possible in simple terms
- The hypotheses selected should be amenable to testing within a reasonable time

## **CHARACTERISTICS OF HYPOTHESIS**

- It should be conceptually clear, specific and well designed
- It should be available to techniques and capable of being varied
- It should be capable of empirical test

- It should not be mere a judgment
- It should be simple and to the point

### **TYPES OF HYPOTHESIS**

- Descriptive hypothesis: It describes the characteristics of a variable.
- Relational hypothesis: It describes the relationship between the variables.
- Casual hypothesis: It describes the causal relationship between the variables.
- Working hypothesis: Hypotheses which are subject to modification as the investigation proceeds.
- Null hypothesis: They state that no difference exists between the parameter and statistic being compared to it.
- Statistical hypothesis: These are statements about a statistical population. These are quantitative in nature in that they are numerically measurable.
- Commonsense hypothesis: It represents the commonsense ideas. They state the existence of empirical uniformities perceived through day to day observation.
- Complex hypothesis: It aims at testing the existence of logically derived relationship between empirical uniformities.
- Analytical hypothesis: these are concerned with the relationship of analytic variables. These hypotheses occur at the highest level of abstraction. It also specifies the relationship between changes in one variable and changes in another.

### **RESEARCH DESIGN**

- Research design is the basic framework which provides guidelines for the rest of research process.
- “Research design constitute the blue print for the collection, measurement and analysis of data” – Bernard S Philips.
- “Research design as the logical and systematic planning and directing a piece of research” – Pauline and Young
- “Research design is the plan, structure and strategy of investigation conceived, so as to obtain answers to research questions and to control variants” – Fred N Kerlinger

### **NEED FOR A RESEARCH DESIGN**

- It facilitates the smooth sailing of the various research operations
- It gives maximum information with minimum expenditure of effort, time and money
- It stands for advance planning of the methods to be adopted for collecting data and techniques to be used for analysis
- It has a great bearing on the reliability of the results arrived at
- It minimize the bias and maximizes the reliability of the data collected and analysed

## FEATURES OF GOOD RESEARCH DESIGN

- Flexible
- Appropriate
- Efficient
- Economical
- Reliable
- Suitable to the context

## DIFFERENT RESEARCH DESIGN

- Based on fundamental objectives or purposes it has been classified into two types :  
1. exploratory research, 2. conclusive research
- Each of these two general types of research can be subdivided as follows:
- |                                |                               |
|--------------------------------|-------------------------------|
| <u>1. Exploratory research</u> | <u>2. Conclusive research</u> |
| a. search of secondary data    | a. Descriptive research       |
| b. survey of knowledgeable     | I. case study                 |
| c. case study                  | II. Statistical study         |
|                                | b. Experimentation            |

Few others have classified the type of research study into the following four.

1. ***Exploratory or formulative study:*** exploratory or formulative studies are those which aim at gaining familiarity with a phenomenon or which aim at achieving insights into the phenomenon or studies which deal with formulation of a more precise research problem or developing a hypothesis. The major emphasis of such studies is on the discovery of ideas and insights. It basically deals with exploring the Ideas and facts which are new. This is the primary and first research done on that Particular problem which provides the first hand or new knowledge or discovering something new regarding to the study or problem. In general, exploratory research is meaningful in any situation in which the researcher does not have enough understanding to proceed with the research project.
2. ***Descriptive and Diagnostic studies:*** a study which wants to portray the characteristics of a group or individual or situation is known as descriptive study. Under descriptive study the researcher should specify the objectives with sufficient precision to ensure that the data

collected are relevant. Researcher can adopt both primary and secondary sources of data for this study. In descriptive studies, hypotheses are generally formulated on the basis of existing data. The main objective of descriptive study is to acquire knowledge. Descriptive studies are mainly probe into such areas where there is research gap.

3. **Diagnostic study:** a study which wants to determine the frequency of occurrence of an event of its association with something else is known as diagnostic study. It is concerned with an existing problem and its basic nature and cause. The aim of this study is to obtain complete and accurate information. It also deals with the detailed or in depth knowledge of each and every aspect of the problem.
4. **Experimental study or hypothesis-testing research studies:** Experimental studies are mainly designed to find out the cause and effect relationships of the phenomenon under study, or the researcher tests the hypothesis of causal relationships between the variables. The experimental designs are used in researches relating to the phenomena of several disciplines. The experimental designs originated in the context of agricultural operations. The beginning of such designs was made by Professor R.A. Fisher when he was working at Centre of Agricultural Research in England. The principle of replications, the principle of randomizations and the principle of local control are the three main principles of experimental designs given by Prof. Fisher.

Research design is needed because it facilitates the smooth sailing of the various research operations, thereby making research as efficient as possible. Yielding maximum information with minimum expenditure of effort, time and money.

## MODULE – IV

# DATA COLLECTION, METHODS AND TOOL FOR DATA COLLECTION

### *Meaning and importance of data*

Data and facts and other relevant materials, past and present, serving as bases for study and analyses. Data are the facts and figures collected for statistical investigation.

There are two types of data:

1. Primary data,
2. Secondary data (desk research)

### *Method of Collecting primary data*

- a. Observation method
- b. Interview method
- c. Local correspondences
- d. Questionnaire and schedule method

### *Sources of secondary data*

1. Personal sources: auto-biography, life history, diaries, letters, memoirs
2. Public source: I. published source – books, journals, reports, newspapers etc.  
II. Unpublished source

## TOOL FOR DATA COLLECTION

1. Inquiry forms:
  - a) Schedule
  - b) Questionnaire
  - c) checklist
  - d) rating scale
  - e) Score board
2. Observation
3. Interview
4. Socio-metric techniques
5. Psychological test

## **TYPES OF DATA**

### ■ **Quantitative data:**

It applies various scales of measurement. The experiences of people are fit into standardized responses to which numerical values are attached.

### ■ **Qualitative data:**

They are verbal or other symbolic materials. The responses to open ended questions of a questionnaire or a schedule, first hand information from people about their experiences, ideas, beliefs, etc. and selected from content or accepts from documents, case history, personal diaries, and letters are other examples of qualitative data.

## **IMPORTANCE OF DATA**

- It serve as the bases or raw materials for analysis
- It provide correct answers for analysis
- It serves the basis for testing the hypothesis
- It helps for constructing measurement scales and tables
- It determine the quality of the findings of the study

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## **SOURCES OF DATA**

A significant and distinctive stage of research in any science is the collection of necessary information to prove their hypothesis. For this purpose, the researcher should look to diverse sources which provide the necessary information. The sources of information are generally classified as primary and secondary, while P.V. Young feels that sources of data can be divided documentary and field sources.

There are two sources of data:

1. Primary sources (primary data)
2. Secondary sources-desk research (secondary data)

The primary data are those which are collected afresh and for the first time, and thus happen to be original in character or information collected or generated by the researcher for the purpose of the project immediately at hand.

### **Advantages of primary data**

- a. Primary data are the first –hand account of the situation.
- b. There is a greater scope for reliability of the information.
- c. Primary data are the logical starting point for research in several disciplines.
- d. Primary data are the only source to understand one’s opinions, personal qualities, attitudes, etc.

### **SECONDARY SOURCES OF DATA**

- The secondary data are those which have already been collected by someone else and which have already been passed through the statistical process. Secondary data refer to the information that have been collected by someone other than researcher for purposes other than those involved in the research project at hand. Books, journals, manuscripts, diaries, letters, etc., all become secondary sources of data as they are written or compiled for a separate purpose.
- As a matter of fact, the difference between primary and secondary sources is a matter of relativity. Data which are primary in the hands of one, becomes secondary in the hands of the other.

### ***Advantages of secondary data.***

- a. It saves time, energy and money
- b. It provide information that may not be secured by the individual researcher.

### ***Methods/techniques of data collection***

- This is a very important aspect of research design and the ability to achieve the research aims and answer the research question depends on the effectiveness of data collection.

### **Method of collecting data**

1. Observation method
2. Interview method
3. Survey method
4. Experimentation
5. Panel method
6. Projective technique
7. Sociometry
8. Content analysis

### **METHODS OF PRIMARY DATA COLLECTION.**

#### **Interview method**

- It may be defined as a two way systematic conversation between an investigator and an informant, initiated for obtaining information relevant to a specific study.
- It involves not only conversation, but also leaning from the respondents, gestures, facial expression, pauses and his environment.

### **Characteristics**

- The participants – the interviewer and the respondent – are strangers
- The relation between the participants is a transitory one.
- Interview is a conversation with a specific purpose
- Interview is a mode of obtaining verbal answers to questions
- Interaction between the interviewer and the respondent need not be necessarily face-to-face basis
- Conversation need not be limited to a single respondent, it can also be conducted with a group of persons, depending on the study
- Interview is an interactional process
- Information furnished by the respondent in the interview is recorded by the investigator
- Interviewing is a flexible psychological process

### **Requirements**

The successful interview requires:

- Data availability
- Role perception
- Respondents motivation
- Clear objectives
- Pre-test
- Relevant practice
- Plain and unambiguous language
- Reasonable length
- Written field work procedure
- Privacy, consent, confidentiality etc

### **Interviewing process**

- Preparation
- Introduction
- Developing rapport
- Carrying the interview forward
- Recording the interview
- Closing the interview

## ***Types of interviews***

### **1. Structured or directive interview:**

This is an interview made with a detailed standardized schedule. The same questions are put to all the respondents and in the same order. This type of interview is used for large-scale formalized surveys

### **2. Unstructured or non-directive interview**

In this type of interview, a detailed pre-planned schedule is used. Only a broad interview guide is used. Questions are not standardized and not ordered in a particular way. This technique is more useful in case studies rather than large surveys.

### **3. Semi-structured or focused interview**

- The investigator attempt to focus the discussion on the actual effects of a given experience to which the respondents have been exposed.
- The situation is analyzed prior to the interview. An interview guide specifying topics relating to the research hypothesis is used.
- Interview is focused on the subjective experiences of the respondent.

### **4. Clinical interview**

- It is concerned with broad underling feelings or motivations or with the course of the individual's life experiences.
- The 'personal history' interview used in social case work, prison administration, psychiatric clinics and in individuals life history research is the most common type of clinical interview

### **5. Depth interview**

- This is an intensive and searching interview aiming at studying the respondent's opinion, emotions or convictions on the basis of an interview guide.
- This deliberately aims to elicit unconscious as well as extremely personal feelings and emotions

### **6. Telephone interviews**

- It is a non-personal method of data collection.
- It may be used as a major method or supplementary method.

### **7. Group interview**

- It is a method of collecting primary data in which a number of individuals with a common interest interact with each other

### **Interview problems**

- Inadequate response
- Interviewer's bias
- Non-response
- Non-availability
- Refusal

- Incapability or inability
- Inaccessibility

### **OBSERVATION METHOD**

Observation is one of the cheaper and more effective techniques of data collection. Observation, in simple terms, is defined as watching the things with some purpose in view. However, in research activity the term has a wider meaning than simple watching.

Observation, is a systematic and deliberate study through eye of spontaneous occurrence at the time, they occur.

Observation may serve a variety of research purposes, it may be used to explore the given area of subject matter or to gain insight in to the research problem and provide a basis for development of hypotheses.

Observation may also be used as the primary technique of data collection in descriptive studies and also in the experimental studies designed for testing casual hypotheses. Observation many times is a perception.

Observation has mainly three components-Sensation, attention and perception. The accuracy of observation depends on knowledge and experience. Generally, the intellectual, physical and moral conditions are very important in observation.

#### ***General characteristics of observation method***

- a. It is a physical and mental activity.
- b. It is selective and purposeful.
- c. It is a scientific tool of research.
- d. It is a direct study of the situation or phenomenon.
- e. It tries to establish cause and effect relationship in the observed phenomenon.

### **PROCESS OF OBSERVATION**

There are five sequential steps in the observation method.

- a. Preparation and training.
- b. Entry in to the study environment.
- c. Initial interaction.
- d. Observation and training.
- e. Termination of field work.

#### ***Aids in observation process***

In order to make the process of observation effective and reduce the faults of the observer, a researcher may use a range of tools for systematising and recording data. Diaries, field notes, maps, check lists, cameras, audio, video tape recorders, maps ,analogy, checklist, sociometric scales, mechanical devices are the major tools adopted by the researcher to make the observation process as accurate as possible.

### ***Types of Observation***

Observation, which is the most classical method of scientific enquiry, may take many forms. With reference to investigators role, it may be classified into

- a. **Participant observation:** In this observation, the observer is a part of the phenomenon or group which is observed and he acts as both an observer and a participant. The persons who are observed group should not be aware of the researcher's purpose. Then only their behaviour will be natural. The observer can understand the emotional reactions of the observe group, and get a deeper insight of their experiences.
- b. **Non-Participant observation:**In this type of observation, the researcher does not actually participate in the activities of the group to be studied. There is no emotional involvement on the part of the observer. Observer would be simply present in the group to note down the behaviour of the respondents.
- c. **Controlled observation:**This type of observation is found quite useful in either in the laboratory or in the field. This involves standardization of the fields like psychology and sociology. Controlled observation is carried out observational techniques and exercise of maximum control over extrinsic and intrinsic variables
- d. **Uncontrolled observation:** If the observation takes place in the natural settings, it may be termed as uncontrolled observation. The main aim of this observation is get spontaneous picture of life. This does not involve control over any extrinsic or intrinsic variables.
- e. **Direct observation:** In this type of observation, the event or the behaviour of the person is observed as it occurs. This method is flexible and allows the observer to see and record subtle aspects of events and behaviour as they occur.
- f. **Indirect observation;** This does not involve the physical presence of the observer , and the recording is done by mechanical, photographic or electronic devices. This method is less flexible than direct observation. In other words, the behaviour of the person is not observed, rather its effects are observed.

### **Advantages of observation method.**

- a. It is the most direct means of studying a wide variety of phenomena based on actual and first-hand experience.
- b. It enables the observer to code and record behavior at the time of its occurrence.
- c. The behavior of human beings can be best studied.
- d. It is the basis for formulating hypothesis.
- e. Data collected under this method is more accurate and reliable, as it is based on the first hand perception of the eyes.

### **LOCAL CORRESPONDENCE:**

In this method data are not formally collected by enumerations. But they are collected by local correspondence. Such data are not very reliable. Therefore this method can be applied only where a high degree of precision is not necessary.

## PROJECTIVE TECHNIQUES

- It involves presentation of ambiguous stimuli to the respondents for interpretation. In doing so, the respondents reveal their inner characteristics.
- These techniques for the collection of data have been developed by psychologists to use projections of respondents for inferring about underlying motives, urges, or intentions which are such that the respondent either resists to reveal them or is unable to figure out himself.
- These techniques play an important role in motivational researches or in attitude surveys.

### *Types of projective techniques*

Projective techniques may be divided into three broad categories:

1. **Visual:** to show the respondent a picture and ask him to describe the persons or objects in the picture.
2. **Verbal:** these techniques involve use of words both for stimulus and for response.
3. **Expressive:** under this technique subjects are asked to improve or act out a situation in which they have been assigned various roles.

### *1. Visual projective techniques*

- **Rorschach test:** this test was first developed by a Swiss Scientist Herman Rorschach. It consists of ten cards having prints of inkblots. The design happens to be symmetrical and meaningless. The Respondents are asked to describe what they perceive in such symmetrical inkblots and the responses are interpreted on the basis of some pre-determined psychological framework.
- **Rosenzweig Test (Cartoon test):** this test was first developed by Rosenzweig. This test uses cartoon format or a series of cartoons.

In each cartoon has portrayed two characters; one is represented as saying something which is stated in a speech balloon over the character; the other character is provided with an empty speech balloon. The respondent is asked to write in the empty balloon what the second character would probably say. The answer of respondents can be classified according to the attitude, frame of reference and role perceptions that they reflect. The successful administration and interpretation of Rorschach test requires trained investigators and psychologists.

- **Thematic Apperception Test (TAT):** This test was first developed by Murray and his associates at the Howard Psychological Clinic. The TAT Presents highly structured stimuli and requires more complex and meaningfully organised verbal response. This test consists of a set of Pictures that are shown to the respondent who are asked to describe what they think the pictures represent. The respondents response constitute the basis for the investigator to draw inferences about their personality structure, attitude, etc. The interpretations made on the basis of qualitative scoring schemes and rating scales.
- **Picture Frustration Test :** this test consists 24 sets of cartoon pictures in pair, In each pair there is a picture indicating a frustrating situation accompanied by verbal remarks. A blank space is provided for respondents to write his ideas/ views about the picture.

- **Holtzman Inkblot Test (HIT):** this test is a modification of the Rorschach test. It is developed by W.H.Holtzman. This test consists of 45 inkblot cards which are based on colour, movement, shading and other factors involved in inkblot perception. Only one response per card is obtained from the respondent and the response is interrelated at three levels of form of appropriateness.

## 2. Verbal projective techniques

- **Word Association Test:** the method is to ask respondents to associate brands with one word which they associate with the brand
- **Sentence Completion Tests:** this is an extension of word association test. In this type an incomplete sentence is given to the respondent, And he is asked to complete it. The completion of sentences requires the respondent to take a position to express his attitudes. For interpretation of this test requires a trained hand.
- **Story Completion Test:** this test is similar to sentence completion test. In this test the respondents are given a part of a story and are asked to complete it. The investigator can assess the attitude and characteristics of the respondent on the basis of story completion.

## 3. Expressive techniques

- **Play technique:** this test is mainly used to study children's attitude through manipulation of dolls. Dolls representing different racial groups are usually given to children who are allowed to play with them freely. The manner in which the children organise dolls would indicate children's attitude towards the subject under study. Play technique is a well-thought out and research supported approach for helping out people cope with and overcome the problems they experience in the process of living their lives.
- **Finger painting:** it is a one of the major types of test under expressive technique. A set of pots of a special type of paint is given to the respondent who is told to draw what he likes with the paints using his fingers and hands. Variables can be measured by counting numbers of certain kinds of manipulative and approach behaviour.
- **Role playing:** This technique is used in behavioural research. It is the acting out of assigned specific roles for a brief period by two or more individuals. An observation system may be used to measure the variables under study. Group processes, interpersonal interaction, authoritarianism, prejudice and other variables can be studied through this technique.

## INTERVIEW SCHEDULE

Schedule is the Performa containing a set of questions being filled in by the enumerate who are specially appointed for this purpose. In other words, it is nothing more than a list of questions which are necessary to test a particular hypothesis. In schedule, usually a set of questions are asked and filled by an interviewer in a face- to-face situation with another. According to Goode and Hatt, schedule is the name usually applied to a set of questions which are asked and filled by an interviewer, in face to face situation with another.

### *Types of schedules*

Depending on the situations in which schedules are used, we may identify the following types of the schedules:

**Observation schedule:** This is a method used to supplement the collection of data along with observation technique. While the researcher collects the data through observation.

**Document schedule:** These are the schedules which are used to record the information contained in various documents such as files, books, etc.

**Evaluation schedule:** These schedules are generally used by organisations or institutes to measure their performance relating to a particular activity.

***Process of data collection through schedules:***

Data collection under this method proceeds in a systematic manner. The investigators or enumerators proceed to the field with the schedules and administer them on the sample, selected by them. They go on asking the questions incorporated in the schedule and note down the responses of the respondents. The quality of the data depends on the people who go to the field and collect the data. Investigators or enumerator should be trained sufficiently. They should be intelligent and must possess the capacity of cross examination in order to find out the facts. Above all they should be honest, sincere, hardworking and should have patience and perseverance since the quality of data affects the validity of the conclusion, every care should be taken to collect as accurately as possible.

The procedure of constructing a schedule, the analysis and interpretation of data gathered through it are not very different from those of a questionnaire.

**1. Questionnaire**

Questionnaire is the most common instrument of data collection. A questionnaire consists of number of questions printed or typed in a definite order on a form or set of forms. In a questionnaire respondents read the questions, interpret what is expected then write down the answers.

**Mailed Questionnaire**

A questionnaire consists of a schedule of a questions sent by mail to the persons on a list or in a sample survey. Questionnaire can be further classified as follows:

- Structured questionnaire
- Non-structured questionnaire
- Disguised questionnaire
- Non-disguised questionnaire
- Structured disguised questionnaire
- Structured non-disguised questionnaire

***The following are some of the important merits of the use of questionnaire method:***

1. Low cost: The primary advantage of questionnaire method is that it is less expensive to administer. This is because questionnaires are must often mailed or handed over to a large numbers of interviewees simultaneously.
2. Avoid bias: The questionnaire method does not give scope to the investigator to manipulate the data or respondent. It is free from the bias of the interviewer and the answers are in own language of the respondents.
3. Anonymity: It offers greater anonymity. Since the investigator is interested in the answers to the questions, rather than the persons, the respondents may feel free to express their opinion without ambiguity or fear.

4. Less pressure: This method gives less pressure on the respondents for immediate responses. Sometimes. This may be necessary, if the respondent is required to report information which he needs to check up.
5. Wide Coverage: The questionnaire is the best method to reach far off places with very low cost.
6. Dependable and reliable result: Large samples can be made use of and thus the results can be made more dependable and reliable.

### **FORMULATION OF A QUESTIONNAIRE**

The success of a questionnaire depends upon the skills and insights with which the lists of questions are formulated along with the type of questions used. The following considerations in mind while formulating questionnaire.

#### **APPEAL**

The appeal should be short, clear and direct establishing the genuineness of the research and its utility for all concerned.

#### **INSTRUCTION FOR FILLING UP THE QUESTIONNAIRE**

The questionnaire must carry a list of instructions for filling it up and dispatching it.

#### **FORM OF THE QUESTIONNAIRE**

The outlook and appearance of the questionnaire should be attractive. It must be printed in an appealing style on high quality paper.

#### **CLARITY OF QUESTIONS**

The best method is to ensure that our questionnaire does not have any misleading or confusing questionnaire. It should first be tried on a selected group of individuals and suitable modifications should be made in questions in the light of the experience with the selected group.

#### **SEQUENCE OF QUESTIONS**

The order of framing questions is also important. The sequence must be logical and arouse interest in the questions. The disorderly sequence of the questions disturbs the mind of the respondent and he may fail to answer the questions, adequately.

#### **GENERAL FORM**

So far as the general form of a questionnaire is concerned, it can either be structured or unstructured questionnaire. Structured questionnaire are those questionnaires in which there are definite, concrete and pre-determined questions. The questionnaire which do not have definite, concrete and pre-determined questions are termed as unstructured questionnaire. In this type, the researcher/ interviewer is provided with a general guide on the type of information to be obtained.

#### **QUESTION FORMULATION AND WORDING**

In general, all questions should meet the following standards –

- (i) should be easily understood;
- (ii) should be simple that is, should convey only one thought at a time;
- (iii) should be concrete and should conform as much as possible to the respondents way of thinking.

## **CONSTRUCTION OF QUESTIONNAIRE**

The process of drafting a questionnaire should have the following aspects:

- (i) **Information required:** The first step in the formulation of a questionnaire is to decide in advance what type of information is needed for the study.
- (ii) **Type of questionnaire to be used:** Questionnaires may be categorized according to structure and directness. Structure refers to the degree to which the questions and responses are formal and standardized.
- (iii) **First draft:** Before finalizing the questionnaire the researcher should prepare a preliminary draft of the questionnaire based on the aim and objectives of the study. The researcher can check, revise and prepare the final draft of the questionnaire based on pre-testing result of the questionnaire. Revising questions: the researcher should revise the questionnaire before the final edition. This will help the researcher to understand unforeseen problems related to wording, format, sequence etc
- (iv) **Editing of questionnaire:** Researcher must pay proper care and attention to the editing of the questionnaire. Simple words, which are familiar to all respondents should be employed. Words with ambiguous meanings, danger words, words with emotional connotations should be avoided.
- (v) **Explaining the procedure for its use:** the researcher should give or specify the procedure or instructions for its use. If the instrument is meant for mail survey, instructions regarding the mode of answering should be specified at the top of the first page. The anonymity should be assured.
- (vi) **Pre-testing of questionnaire:** Pretest is a try out of the questionnaire to see how it works and whether changes are necessary before the start of full scale study. It provides a means of catching and solving unforeseen problems in the administration of the questionnaire, such as the wording, sequence of questions or even length. It may also indicate the need for additional questions or the elimination of others. Pretests are best done by personal interview even if the survey is to be handled by mail or telephone.
- (vii) **Final draft of the questionnaire:** After pretesting the questionnaire if any mistakes are found, they must be corrected and the draft revised. In fact, there is no final word about the construction of a questionnaire. Improvements can always be thought of and the lacunae existing in the questionnaire would be coming to light as the work is progressing.

### **Various methods/ techniques for getting the response**

There are several methods to get the responses through a questionnaire. They can be listed as:

1. Self addressed envelope
2. Incentives/schemes/prizes
3. Reminders
4. Using mediator
5. Sufficient interval
6. Retention
7. Good and interest creating questions

### **CHARACTERISTICS OF GOOD QUESTIONS**

Good questions should

1. be simple and clear
2. Be suitable to respondent's intelligence level
3. Be relevant
4. Be indirect
5. Have serial order
6. Have classifiability
7. Have verifiable questions
8. Have ambiguous questions
9. Be answerable in few words

### **TYPES OF QUESTIONS**

The different types of questions are framed by the social scientist in order to elicit different types of information on various aspects of a problem. Open ended questions, multiple choice questions and dichotomous questions are the three most common types of questions generally used in the research instruments.

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