

Unit –One

(3)

Types of Research Design: Descriptive, Diagnostic Exploratory and Experimental

- A research design is a plan according to which observations are made and data assembled. It provides the empirical and logical basis for drawing conclusions and gaining knowledge.
- There are different kinds of research designs. They vary from general and sketchy statements of intent to carefully detailed and highly complex investigations.
- The research designs can be divided into four types viz. descriptive, diagnostic exploratory and experimental.
- Whichever type of research design the investigator selects, it is important that s/he should have a research design and the design should be made explicit before the research begins.
- The quality of results and the degree of confidence that the researcher can place depend upon the design according to which the data were collected.
- It is important for the social scientists to know the uses and the strengths and weakness of each type of research design.

Descriptive Design:

- The descriptive designs enable researchers to describe or presents picture of the phenomenon or phenomena under investigation.
- The methodology involved in such designs is mostly qualitative in nature producing descriptive data i.e. people's own written or spoken words and observable behaviour.
- There are at least three such approaches, which enable us to record or analyze the behavioural patterns.

- (a) Participant Observation
- (b) Personal Documents, and
- (c) Unstructured Interviewing.

(A) Participant Observation:

- It refers to research characterized by a period of intense social interaction between the researcher and the subjects; in the milieu of the subjects. During this period, data are unobtrusively and systematically collected.
- Participant observation, as a research design has three stages;
 - (i) Pre-field work;
 - (ii) Field work, and
 - (iii) Data analysis

Pre-field Work:

- Usually all researchers have some general questions in mind when they enter the field.
- They typically fall into one of the two broad categories; one substantive and other theoretical.
- The first includes questions related to specific substantive issues in specific setting. The second category of interests is more closely tied to basic sociological problems and broader theoretical issues.
- These two categories are inter-related. What distinguishes participant observation and all qualitative methods from other methods is that the participant's observers question are frames in general terms.
- There is no hard and fast rules for the participant observer. Research in the field will always involve the researchers in a great deal of soul searching and negotiation.
- Detail field notes should be kept during the process of gaining access to any setting.
- The pre-field work consists of decisions that the observers must make before they enter the field and initial contacts they must make to conduct their research.

Field Work:

- For during a meaningful fieldwork, skill in the area is a pre requisite.
- Usually in the first days of fieldwork, researchers remain relatively passive throughout the course.
- A sound rule to follow, in the initial states of field work is not to challenge the behaviour or statements of the subject or to ask questions that are likely to put them on the defensive.
- They have to be exposed to their subjects so that the subjects can become familiar with them, develop trust in them, and feel at ease in their presence.
- It is important for researcher to select their own places and times to observe. They must be able to observe the setting on all days and at all hours of the day.
- The goal of the researchers is to blend into the setting they observe.
- Probably, the easiest way for the observer to gain rapport with their subjects is to establish what they have in common with them, i.e. by containing interaction with the subjects they must feel for themselves as to reciprocate on some level.
- Another way for observer to establish rapport is to participate in activities with subjects with some limitations.
- The observer must remember that his or her primary purpose is to collect data. Any participation that interferes with the ability to do so should be avoided.
- After each observation period, field notes should be recorded. Observer must develop a level of concentration sufficient enough to enable them to commit to memory, everything they see, hear, smell, think etc.
- After they have left the field, they must transcribe what is in their memories onto tapes, which are later typed or subscribed directly onto paper.

Data Analysis:

- Data analysis refers to a process, which entails an effort to formally identify themes and to construct hypotheses as they are suggested by data and an attempt to demonstrate support for these hypotheses.
- Data analysis is often a time consuming and pain staking process.
- The particular techniques to be followed and the amount of time depend upon the quantity of field notes and the research goals.
- Once the observers have collected what they feel all the sufficient data to understand those aspects of settings in which they are interested they leave the field to engage in a period of intensive analysis. Although there is no precise formula, which enables the researchers to construct hypotheses and recognize theme, some suggestion, given below could be helpful.
- (a) All data (field notes, observer's comment and other materials) should be carefully read.
- (b) The important conversation topic should be coded, read, sorted, and examined for patterns.
- © Typologies or classification schemes can be useful aids in forming hypotheses and discovering themes the purpose of typologies is merely to sensitize to subtle aspects of the setting that may have otherwise overlooked.
- Literature pertinent to researcher's interest and research setting must be read thoroughly.
- After formulation of hypothesis, the researcher should turn to an analysis of the extent to which they are supported by data and the conditions under which they hold true.
- The exact number of hypotheses the researcher seeks to analyze will depend upon the quality and quantity of data and his/her own interests and goals.

(B) Personal Documents:

- The phrase "personal documents" is used to refer to an individuals descriptive, first person/hand account of the whole or in part of his or her life or an individual's reflection on a specific event or topic.

- All personal documents are valuable, and they may encompass a person's entire life or may focus on a single incidental time period or theme.
- Personal document may be presented either on their original form or more likely in edited and recognized version.
- More precisely such materials are available in the form of autobiographies, diaries, letters and long open-ended interviews that are recorded verbatim.

Process of Collecting Personal Documents

- The most affective way to locate personal documents is to place an advertisement in the paper describing the kinds of materials you want and the uses to which they will be put.
- Some people will be willing to share with the researcher such intimate document as diaries.
- By interviewing also one can collect, solicited personal documents.

(2) Diagnostic Design:

- Diagnostic refers to scientific differentiation among various conditions or phenomenon for the purpose of accurately classifying these conditions.
- In its broadest sense diagnosis corresponds to the fact-finding aspects of clinical practice.
- Its objective includes screening and classification personality description, prediction of outcome and attainment of insight by the client.
- The diagnostic research paradigm represents the most typical and simple problem solving strategy of the helper faced with problems and crises on the job.
- It consists of:
 - (a) the emergence of a problem'
 - (b) a diagnosis of its causes
 - (c) formulation of all possible avenues of remediation, and
 - (d) recommendations for a possible solution.
- Data for diagnosis can be obtained in four major ways:

- (i) A Case History or Interview
- (ii) Clinical Observation
- (iii) Informal Testing, and
- (iv) Formal Standardised Testing.

Case Study Method

- Case study method is concerned with everything that is significant in the history or development of the case.
- The purpose is to understand the life cycle, or an important part of the life cycle, or an important part of life of an individual unit.
- This unit may be a person, a family, a group, a social institution or an entire community.
- This method probes deeply and intensively, analyses interactions between the factors that produce change or growth.
- It emphasis longitudinal orgenetic approach showing development over a period of time.
- In each case, the element of typicalness is the focus of attention, with emphasis
- On the many factors that characterize the type.
- The characteristics of a good case study include an adequate data which is valid, continues, carefully synthesized, confidential and which should be useful for follow up.

Interview Method

- The nature of the personal relationship between interviewer and subject requires an expertness and sensibility that might well be called an art.
- It requires a skilful interviewer to obtain a maximum amount of useful data.
- The interviewers must try to establish a feeling of mental trust with the persons being interviewed being careful not to ask questions that might alarm them.

- His attitude should convey a spirit of cooperation, acceptance and empathy while maintaining a degree of professional objectivity to guard against excessive emotional involvement and consequent ineffectiveness.

Clinical Observation:

- Many attributes are inadequately identified through other standardised test instruments or through interviews.
- The skilful diagnostician should be able to detect through observation or the behaviour and through the proficient use of informal test.
- The informal tests and observations of behaviour provide an opportunity to corroborate findings of the other two areas of assessment.
- Diagnostic tests provide a microscopic view of the component elements of some area of performance. Such tests enable the diagnostician to analyze the individual's functioning within specific subskill areas and supply direction for remediation.
- Formal standardised tests are useful in testing particular aspects of behaviour however, it is important to know the limitations of the test and to use the information in proper perspectives.

Collaborative Diagnosis

- Many of the problems which have been attached through field experiment have in fact been problems related to highly developed professional skills in such areas as human relations training, therapy, community organizations etc.
- For such problems there are already available highly skilled professional people who may be called upon to conduct the manipulation.
- Once the basic role relationships are worked out, there should be a collaborative diagnosis of the situation by the researcher and at least some part of the client organization.

- The purpose of this diagnosis is to assess various factors that will be involved in executing the research design the resistance that may be encountered, the dynamics of the situation, in regard to the problem of bring about a change.
- The ways of going about such a collaborative diagnosis will varies tremendously depending upon the problem to be studied, the setting, etc., all relevant experiences and information should be used, but whatever the source, a useful diagnosis will have to be formulated in theoretical terms.
- The next step should be joint planning based on an adequate diagnosis of the action that must be taken in order to manipulate the independent variable and to control other possibly confounding factors.
- Among the descriptive and diagnostic designs, descriptive research is particularly appropriate in the behavioural sciences; because many types of behaviour that interest the researcher can not be arranged in a realistic setting.
- Descriptive research, some times known as non experimental research, deals with the relationships between variables, the testing of hypothesis, and the development of generalization, principles, or theories that have universal validity. It concerns with functional relationships.

Exploratory Method:

- The exploratory method represents the earlier stage of science (According to Katz).
- It implies that all sciences must have at the beginning had an approach, which was purely exploratory.
- Even in practical life, if we go to a doctor for some treatment, he systematically explores the complaints and tries to categories our symptoms.
- On the basis of this exploration, he arrives at a conclusion, at least, tentatively, about the disease.
- All these steps, starting with exploratory questions helps him or her to arrive at correct diagnosis.

- This approach clearly points out the universality of exploratory approach, which cuts across the barrier of natural and social sciences.
- The social scientist has the freedom to follow interesting leads and to utilize his/her own ingenuity in obtaining information. However she/he should exercise judicious temperance in this approach.
- The major advantage of the exploratory method lies in its ability to generate many ideas that could be further explored in more controlled conditions, apart from overcoming the most difficult portion of an inquiry, which is its initiation.
- In order to attain research objectivity the exploratory method should adopt the following steps:
 - Review up of social science and other pertinent literature; it helps in deriving workable hypothesis with precise meaning.
 - Survey of people who had practical experience with the problem to be studied because they are in a position to throw light on the subject matter of interest to the investigators.
 - The analysis of insight stimulating examples, social scientists working in an area which is yet to be explored, which incidentally is the usual experience of an innovative social scientist, have found the intensive study of the selected samples to be a particularly fruitful method of stimulating insight.
 - Profound changes in our conception of the relationship between man and society have been brought out largely by intensive anthropological studies of primitive cultures.
 - An investigator should remember that his inquiry is constantly in the process of reformulation and redirection as new information is obtained.
 - Lastly, the approach is characterized by its reliance on integrative powers of the investigator, on his ability to draw many diverse bits of information into a unified interpretation.
- Exploratory studies have been conceptualized at two levels: the first is the discovery of the significant variable in the situation and the second is the discovery of relationship between variables.

- It is imperative for the investigator to delineate the area to be studied specially at the first level. Exploratory studies which do not set limits for themselves have limits imposed by various practical matters, some of which may not be released by the investigator at the formative stages.

Experimental method:

- This is based on experiments conducted in a laboratory. It is also known as laboratory research.
- An experiment in social sciences is not only different but also more difficult than an experiment in natural sciences.
- A student in natural sciences deals with things that are palpable, tangible and more often than not inert, and consequently more amenable to the rigours of an experiment.
- The livelihood of an error creeping into an experiment in the natural sciences probably is more due to the person performing the experiment, rather than the substance, which is being subjected to the experimental verification.
- On the other hand, in social sciences, in addition to the danger of an error on the part of the researcher, there is also the difficulty to understanding what is being measured.
- The phenomenon in social sciences may themselves be intrinsic states of the organism, and may have to be measured as inferred properties.
- There is also every livelihood that the substance is less amenable to the rigours of an experiment.