Objective data and subjective data

Objective data is independent of any single person's opinion, whereas subjective data can be an individual's opinion or it can be dependent upon the researcher.

Qualitative data and quantitative data

Qualitative data is the description of things made without assigning numeric value. For example, facts generated from unstructured interview. It needs researcher's interpretation.

Quantitative data entails measurements in which numbers are used directly to represent properties of things. It is ready for statistical analysis. The larger sample is required in quantitative data, and with proper sampling design, the ability to generalize is also high.

Main methods of Data collection

Most research studies collect fresh data from the respondents even though already existing data are utilized for developing the research design or supplementing the data to be collected. There are various methods of data collection. 'Method is different from a 'Tool' while a method refers to the way or mode of gathering data, a tool is an instrument used for the method. For example, a schedule is used for interviewing. The important methods are (a) observation, (b) interviewing, (c) mail survey (D) schedule. Observations involves gathering of data relating to the selected research by viewing and or listening. Interviewing involves face to face conversation between the investigator and the respondent. Mailing is used for collecting data by getting questionnaires completed by respondents. Experimentation involves a study of independent variables under controlled conditions. Experiments may be conducted in a laboratory or in field in a natural setting. Simulation involves creation of an artificial situation similar to the actual life situation. Projective methods aim at drawing inferences on the characteristics of respondents by presenting to them stimuli. Even method has its advantages and disadvantages.

A researcher can select one or more of the methods keeping in view the above factors. No method is universal. Each method's unique features should be compared with the needs and conditions of the study and thus the choice of the methods should be decided.

Observation

Observation is a basic method of getting information about the world around us. Observation part and parcel of our daily life but many types of data required as evidence to support social research are also obtained through the observational method. The greatest asset of observational technique is that it is possible to record the actual occurrence of social events. While many research technique depend mainly if not entirely on recalling the past events, observational method yields such as are related to real life situations. A trained researcher can even observe and record all the minor details of a community with the help of this technique which to others might seem insignificant.

Observation means viewing or seeing. Most of such observations are just causal and have no specific purpose. But observation in a method of data collection is different from such causal viewing. Observation may be defined as a systematic viewing of a specific phenomenon in its

proper setting for the specific purpose of gathering data for a particular study. Observation as a method includes both 'seeing' and 'hearing'. It is accompanied by perceiving as well.

Observation is a classical method of scientific inquiry. Observation also plays a major roe in formulating and testing hypothesis in social sciences. Behavioral scientists observe interactions in small groups; political scientists observe the behavior of political leaders and political institutions.

Observation may serve a variety of research purposes. It can be used in exploratory research to develop a preliminary understanding of social phenomena. It can be applied to study real life situations as well as to conduct experimental research. Again, it can simply be used to collect supplementary data in support of other tools of data collection. Observation includes the most causal and uncontrolled experiences as well as exact recording as is done in experimentation. In fact, observation is useful for studying simpler as well as complex research problems.

Observation becomes scientific, when it (a) serves a formulated research purpose, (b) is planned deliberately, (c) is record systematically, and (d) is subjected to check and controls on validity and reliability. Validity refers to the extent to which the recorder observations accurately reflect the construct they arc intended to measure. Validity is assessed by examining how well the observations agree with alternative measures of the same construct. Reliability entails consistency and freedom from measurement error.

Characteristics of observation method

Observation as a method of data collection has certain characteristics.

1. It is both a physical and mental activity. The observing eye 'catches' many things which are slighted, but attraction is focused on data that are pertinent to the given study.
2. Observation is selective. Researcher does not observe anything and everything, but selects the range of things to be observed on the basis of the nature, scope and objectives of his study
3. Observation is purposive and not casual. It is made for the specific purpose of nothing things relevant to the study.
4. It captures the natural social context in which persons' behavior occurs.
5. It grasps the significant events and occurrences that affect social relations of the participants.
6. Observation should be exact and be based on standardized tools of research such as observation schedule, social-metric scale, and precision instruments, if any.

Types of observation

Observation may be classified in different ways. With reference to investigator's role, it may be classified into (a) participant observation, and (b) non-participant observation, in terms of mode of observation, it may be classified into (c) direct observation and ( d) indirect observation.