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## Module No 1

### **Introduction to Social Research – Philosophy of Social Research**

1. Social Research – Meaning and Significance
2. Types of Social Research – Pure and applied research
3. Values and ethics in social research

#### **1) Social Research – Meaning and Significance**

##### **What is Research?**

The word research is composed of two syllables, *re* and *search*. Scientific Research is a systematic and objective attempt to provide answers to certain questions. The purpose of scientific research is to discover and develop an organised body of knowledge. Therefore, scientific research may be defined as the systematic and empirical analysis and recording of controlled observation. Which may lead to development of theories, concepts, generalizations and principles, resulting in predication and control of those activities that may have some cause – effect relationship.

Research is an attempt to know new things, facts, information, etc. in a scientific manner. Its main purpose is to diffuse knowledge and establish theories on the basis of the believable facts. A researcher makes an untiring effort to collect new facts, information and knowledge about things or phenomena. He may not become always successful in all his efforts to collect new facts. But the desire to know new things persists in him.

**According to L.V. Redman –**

‘Systematised effort to gain new knowledge we call research’.

‘Research is a more system activity directed towards discovery and the development of an organised body of knowledge’

संशोधन म्हणजे वैज्ञानिक पध्दती प्रत्यक्षात कार्यान्वीत करण्याची नियमबद्ध सुव्यवस्थीत व सखोल प्रक्रीया होय

### **Social Research Meaning and Significance:-**

सामाजिक घटना व समस्या याबाबत नविन ज्ञान प्राप्त व्हावे म्हणुन केलेल्या क्रमबद्ध संशोधनाला सामाजिक संशोधन म्हणतात.

### **Meaning and Definition:-**

Social research may be defined as a scientific understanding which by means of logical and systematized techniques seeks to discover new facts of verify and test old facts. Analyse their sequences, interrelationships and casual expiation which were derived within an appropriate theoretical frame of references as well as develop new scientific tools, concepts and theories which would facilitate reliable and valid study of human behaviour.

Not only in the field of physical science but also in the realm of social sciences research are taking place. The youngest of the social science that is sociology is also doing a lot of research work. Sociological research is highly interesting and exciting. Research in sociology is really a kind of systematic detective work. It faces innumerable puzzles and suspicions, withstands disappointments and discouragements, Challenges blind faith and hearsays and finally becomes successful in unravelling the mystery that clouds the truth. Research today has become a part of sociology. Research in sociology is where the real action takes place.

### **Definition of Social Research:-**

#### **1. According to Wallace and Wallace:-**

“Sociological research refers to the structural observation of social behaviour”

#### **2. According to Pauline v. Young. :-**

“Social research is a systematic method of exploring, analysing and conceptualising social life in order to extend , correct or verify knowledge, whether that knowledge aids in the construction of a theory or in the practice of an art.”

## **Significance of Social Research:-**

Research is carried on in the social field not just with academic interests. It has both academic and non academic purposes and importance. Significance of research can be briefly stated here.

1. Research is essential to diffuse knowledge and to expand its horizon.
2. Research helps us to verify or disprove, confirm or reject, modify and re-assert the existing theories and to establish new ones.
3. Research provides practical clues, to undertake measure that leads to social improvement, social changes or social progress.
4. Research by probing into the perplexing problems of the day ... provides new insight re-grading their nature. Research helps us to know the nature and the magnitude of the problems.
5. Research has commercial importance also. Industries, business firms and commercial establishments can get lot of information and clues about their endeavours in society.
6. Research can provide all the required data and facts to the administrators to adopt and undertake appropriate policies, plans and programmes.
7. Research has educational importance. It is mainly an intellectual activity. Information obtained through research may have their educational importance
8. Research motivates interdisciplinary studies. It stresses the interdependence of different sciences. It thus strengthens the “interdisciplinary *approach*” which is emerging out these days.
9. Other uses and importance
  - i) Those working in the academic field can obtain a new degree known as Ph.D ( Doctor of Philosophy ) by successfully carrying out research as per the stipulated rules.
  - ii) Those working in the research department attached to industries, other types of establishment have made research their profession and obtained salary for their service. It provides job opportunities for a few intellectuals.

- iii) For the philosophers and scientists research can be intellectually delighting and mentally satisfying
- iv) Those who are in the field of literature, art architecture, etc., can seek to establish new styles and trends through research.

## **Types of Research**

There are different types of research. A detailed description of the same can be had from below

### **1. Applied Research**

### **2. Pure Fundamental Research**

#### **1. Applied Research :-**

Applied research is an investigation for ways of using scientific Knowledge to solve practical problems. (Hunt) Applied Research aim at finding a solution for an immediate problem faced by any business organization. This research deal with real life situations. Applied research has a practical problem solving emphasis. It brings out many new facts. Applied research is designed to solve practical problem of Morden world, rather than to acquire knowledge's sake. The goal of applied research is to improve the human condition . It focuses on analysis and solving social and real life problems. This research is generally conducted on a large scale basis and is expensive. As such, it is often conducted with the support of some financing agency like the national government, public corporation, world bank, UNICEF, UGC, Etc. Example, Use of Fibre glass body for cars instead of metal. And improve agriculture crop production, treat or cure a specific disease, improve the energy efficiency of homes, offices, how can communication among workers in large companies be improve.

#### **2. Pure Fundamental or Basic Research:-**

Gathering knowledge for knowledge's sake is known as basic research. It is not directly involved with practical problems. There is no intention to apply this research in practice conducts such studies. This research is conducted largely for the enhancement of Knowledge,

and is research which does not have immediate commercial potential. The research which is done for human welfare, animal welfare and plant kingdom welfare. It is called Basic Pure or Fundamental research. The main motivation here is to expand man's knowledge, not to create or invent something. This research generates new ideas, principles, and theories which may not be immediately utilized but nonetheless form the basis of progress and development in different fields. Today's computers, for example, could not exist without research in pure mathematics conducted over a century ago, for which there was no known practical application at the time. Basic research rarely helps practitioners directly with their everyday concern, nevertheless, it stimulates new ways of thinking that have the potential to revolutionize and dramatically improve how practitioners deal with a problem in the future.

### ***Values and Ethics in social research :-***

Value is an abstract generalized principle of behaviour to which the members of a group feel a strong emotionally toned positive commitment and which provides a standard for judging specific acts and goals. To the sociologists, values are constituent fact of social structure. The sociologist does not try to assess their intrinsic worth, but he treats them as scarce objects of socially conditional desire, unevenly distributed and differently ranked.

The problem of value judgement is one of the most debatable topics in social. A judgement of what is desirable or worthwhile is called value judgement value judgements are essential in all human activities except where they lead to rigidities and dogmatism. Value judgements are undesirable in sociology if they exclude or obscure available or obtainable facts, knowledge, or insights. On the other hand value judgements influence the selection of problems for investigation and practical application of scientific findings. Moreover even in the course of scientific investigation itself, it is impossible to eliminate all value judgements. However the scientific method constantly strives to maximize objectivity and strives to maximize objectivity and stick to the facts. The control of value judgements allows sociologists and social scientists of diverse value system to communicate and co-operate with each other in the attempt to increase our understanding of social life.

The issue of value is discussed by Durkheim and Weber in sociological study. Durkheim rejects the importance of values in sociological inquiry and theorizing to avoid subjectivity. Weber advocated that value orientation cannot be avoided although a sociologist must avoid value judgements. Value neutrality is considered as indispensable for scientific sociology.



### ***Ethics in social research:-***

Ethical Neutrality is very important in social research for collecting good facts. In order to discover what is and to properly conceptualize what is, it is necessary for social scientist to bring no personal prejudice or bias to his study. The position of ethical neutrality arose curiously among those who adopted a subjective approach to social problems. It was felt that proper understanding of social structure, processes and behaviour demanded interference from data and an interpretive appreciation of abstract human relations.

Value freedom was essential, For the data to be obtained only in this way, the observer would have to hold his feelings in check for the duration of his observation and conceptualization. Since all data collection was subjective in nature, if there were no attempts at ensuring ethical neutrality, the social scientific ventures would surely raise controversies of opinion. In sum, it was thought that the social scientist should describe things as they are; to the best of his ability, keeping moral values out. He needed techniques that would actually measure things he wants to measure and not fool himself by measuring sometimes else.

## **Module 02 Research Process :**

As a research progresses from the formulation of the problem through collection of data to presenting the conclusions, the focus of researcher's attention necessarily shifts from one kind of activity to the other. Such shifts, it should be remembered, reflect differing emphases at different points on specific operations involved in research process, rather than a singular concentration at any time on any particular step.

### **Steps in social research**

Sociological research consists of several stages. The researcher must first choose a topic to investigate and then become familiar with prior research on the topic. Once appropriate data are gathered and analyzed, the researcher can then draw appropriate conclusions. This section discusses these various stages of the research process.

#### ***1. Formation of Research Problem:-***

The first stage in research process is choosing of research topic. There are countless topics from which to choose, so how does a researcher go about choosing one

#### ***2. Conducting a Literature Review :-***

Whatever topic is chosen, the next stage in the research process is a review of literature. A researcher who begins a new project typically reads a good number of studies that the researcher wants to investigate. In sociology, most of these are published in journals, but many are also published as books. The government and private research organizations also publish reports that researchers consult for their literature reviews.

Regardless of the type of published study, a literature review has several goals. First the researcher needs to determine that the study she or he has in mind has not already been done. Second, the researcher needs to determine how the proposed study will add to what is known about the topic of the study. How will the study add to theoretical knowledge of the topic? How will the study improve on the methodology of earlier studies? A third goal of a literature review is to see how prior studies were conducted. What research design did they use? From where did their data come? How did they measure key concepts and variables? A thorough literature review.

#### ***2. Formulating a Hypothesis:-***

Once the problem to be answered in the course of research is finally instituted, the researcher may, if feasible proceed to formulate tentative solutions or explanations are called

hypotheses which the researcher is obliged to test on the basis of facts already known or which can be made known. The hypothesis guides the researcher through a bewildering jungle of facts to see and select only those facts that are relevant to the problem of difficulty he proposes to solve.

### **3. Collecting Data:-**

After the hypothesis has been formulated, the sociologist is now ready to begin the actual research. Data must be gathered via primary or secondary sources. Data can either be quantitative (numerical) or qualitative (non-numerical). Data gathered through a questionnaire are usually quantitative. The answers a respondent gives to a questionnaire are coded for computer analysis.

Data also gathered through observation and interviewing, research designs.

### **4. Sampling:-**

After any measurement issues have been resolved, it is time to gather the data. For the sake of simplicity, let's assume the unit of analysis is the person. A researcher who is doing a study 'from scratch' must decide which people to study. Because it is certainly impossible to study everybody, the researcher only studies a sample, or subset of the population of people in whom the researcher is interested. Depending on the purpose of the study, the population of interest varies widely.

### **5. Analysing Data :-**

After all data have been gathered, the next stage is to analyze the data. If the data are quantitative, the analysis will almost certainly use high sophisticated statistical techniques beyond the scope of this discussion. Many statistical analysis software packages exist for this purpose, and sociologists learn to use one more of these packages during graduate school. If data are qualitative, researchers analyze their data what they have observed and what people have told them in interviews. Many researchers now use qualitative analysis software that helps them uncover important themes and patterns in the qualitative or data they gather. However, whether qualitative or quantitative data are analyzed, it is essential that the analysis be as accurate as possible.

## **1. Drawing a Conclusion:-**

Once the data are analyzed, the researcher finally determines whether the data analysis supports the hypothesis that has been tested, taking into account the criteria of causality just discussed. Whether or not the hypothesis is supported, the researcher typically also discusses what the results of the present research imply for both prior and future studies on the topic. If the primary purpose of the project has been to test or refine a particular theory, the conclusion will discuss the implications of the result for this theory. If the primary purpose has been to test or advance social policy, the conclusion will discuss the implications of the results for policy making relevant to the project's subject matter.

## **Formation of Research Problem:-**

The Formation of a research problem is the first and most important step of the research process. It is like the identification of a destination before undertaking a journey. As in the absence of a clear research problem, a clear and economical plan is impossible.

A research problem is like the foundation of a building. The type and design of the building. The type and design of the building is dependent upon the formation is well designed and strong you can expect the building to be also strong and well designed. in case of research the research problem serves as the foundation of a research study. If it well formulated, you can expect a good study to follow.

A research problem may take a number of forms from the very simple to the very complex. The way you formulate a problem determines almost every steps that follows, that is 1. The type of study design that can be used 2. The type of sampling strategy that can be employed 3. The research instrument that can be used or developed 4. The type of analysis that can be undertaken.

The formation to a problem is like the input into a study and the output the quality of the contents of the research report and the validity of the associations or causation established is entirely depend upon it. Hence the famous saying about computers garbage in garbage out is equally applicable to research problem.

## ***Hypothesis – meaning, characteristics and types***

### **Definition of Hypothesis :-**

**1.According to Kerlinger** – A hypothesis is a conjectural statement of the relation between two or more variables.

**2.George A. Lundberg :** A hypothesis is a tentative generalization. The validity of which remains to be tested. In its most elementary stage the hypothesis may be any hunch, guess, imaginative idea, which becomes the basis for action or investigation.

**3.Goode and Hatt:-** A position which can be put to test to determine validity

### **Characteristics of Hypothesis :**

#### **1 .Specific:**

The hypothesis should not be vague or general, It is specific. One may hypothesize that something will happen in next five munities, with absolute

#### **2.Hypothesis gives point to enquire:**

It makes the enquire more specific and to the point. The research has to proceed along certain lines only.

#### **3.Capable of empirical test :**

The hypothesis is should be such as can be put to empirical test. It should not be a mere moral judgement.

### **The hypothesis should conceptually clear.-**

#### **4.Simple:**

The hypothesis should be simple and to the point. The hypothesis should be as sharp as razor's blade. In forming of hypothesis neither more nor less onerous causes are to be assumed than are necessary to account for the phenomena.

#### **5. Related to available technique:**

It has been pointed in the hypothesis should be capable of being tested or verified. For this purpose we have to take into consideration the technique of study that is available. The theorist who does not know what techniques are available to test his hypothesis is a poor way to formulate usable question.

#### **Hypothesis helps in deciding the direction in which to proceed:**

Just as a person proceeding in the right direction is likely to reach ultimately his goal even if the actual path is not known to him in the same way a scientist with proper hypothesis can arrive at right conclusion.

### **6. Hypothesis helps in selecting pertinent facts :**

We have to study only those factors that are relevant to our study. It requires the process of delimiting and singling out pertinent facts and hypothesis is essential for purpose, the use of hypothesis prevents a blind search and indiscriminate gathering of masses of data which may later prove irrelevant to the problem under study.

### **7. Hypothesis helps in drawing specific Conclusion:-**

Hypothesis is useful not only in proceeding in our study on right lines, it is also important in drawing conclusions. Without hypothesis the research is unfocussed, a random empirical wandering. The results can not be stated as facts with clear morning. Hypothesis is necessary link between theory and investigations, which lead to discovery of addition to knowledge.

## **OBSERVATION**

### **Nature of Observation:-**

Observation is the basic technique of scientific method. A study is scientific if there is enough evidence consists of facts which can be verified through scientific observation. Observation may take place in the natural or real life setting or in a laboratory. Observation is one of the principal techniques of social sciences. Observation is essential for any scientific study or research. Observation may take many forms and is at once the most primitive and most modern of research techniques. It includes the most casual uncontrolled experiences as well as the most exact firm records of laboratory experimentation. There are many observational techniques and each has its own uses. This method had been and continues to be one of the methods for the study of social problems.

### **Definition of Observation:-**

*(निरीक्षण म्हणजे कान व वाणी या पेश्या डोळ्यांचा स्वतंत्र प्रयोग करणे होय.)*

**1. According to C. A. Mozar:- ‘ Observation means use of eyes than Ear or Speech’**

**2. According to Wallace and Wallace:- ‘In an observational study the researcher actually witnesses social behaviour in its natural setting ‘**

**3. According to P.G. Gisbert :-** “Observation consists in the application of our mind and its cognitive powers to the phenomena which we are studying”.

### **TYPES OF OBSERVATION**

Observation may be of two broad types

#### **a) Uncontrolled Observation :-**

In this type of observation no stringent criteria or hard and fast rules can be laid down as to how the observer will go about observing a particular situation it would be helpful. However, to indicate some of the significant aspect that the observer can overlook only at his peril.

#### **b) Controlled observation :-**

In this type of observation observer tries to systematise the process of observation and does not try to limit the activities of the observed individuals. This is most useful in exploratory studies. The observer makes use of the carefully drawn schedules and questionnaires and better techniques of observation. He tries to check his own biases, his selective perception, and the vagueness of his senses. He makes use of standardised instrument like camera, tape-records, maps, sociometric scales etc. to record his observation with more precision.

#### **C) Participant Observation:-**

In this type of observation. The degree of participation of the observer depends largely upon the nature of the study and practical demands of the situation. The observer must identify himself closely with the group studied, since the subject matter is quite new and requires intensive study

For example –Erving Goffman 1961, an American social psychologist spent many months as an observer in mental hospital. His description gives us an idea as to how the organization of an asylum systematically depersonalises the patients and may even aggravate their problems.

#### **D) Non Participant Observation:-**

In this type of observation observer to take part in many activities of the group so as to avoid the awkwardness of complete non-participation. This has been a classic pattern in

social research. It was used by Leplay in his study of European working Families. In such studies the investigators have lived as a member of the family as participants in community activities taking part in games and dance or even in study groups. They nevertheless made clear that their purpose was to gather facts.



## Module 03

### Techniques of Data Collection

- 1.Observation – nature, types, advantages and limitations
- 2.Interview – nature, advantages and limitations
- 3.Questionnaire – nature, types, advantages and limitations

### **OBSERVATION**

#### **Nature of Observation:-**

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#### **Definition of Observation:-**

*1.According to P.G. Gisbert :-*“Observation consists in the application of our mind and its cognitive powers to the phenomena which we are studying”.

#### **Characteristics of Observation**

1. It serves formulated research purpose
2. It planned systematically rather than occurring haphazardly
3. It systematically recorded and related to more general propositions. २

4.It is based mainly on visual-audio science.

## **TYPES OF OBSERVATION**

Observation may be of two broad types

### **a) Uncontrolled Observation :-**

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### **C) Participant Observation:-**

In this type of observation when the observer can so disguise himself as to be accepted as a member of the group under study. The degree of participation of the observer depends largely upon the nature of the study and practical demands of the situation. The observer must identify himself closely with the group studied, since the subject matter is quite new and requires intensive study

### **D) Non Participant Observation:-**

In this type of observation observer to take part in many activities of the group so as to avoid the awkwardness of complete non-participation. This has been a classic pattern in social research. It was used by Leplay in his study of European working Families.

## **Merits and Limitations of Observation: -**

### **Merits of Observation:-**

1. Observation whether of participant or non-participant type, has, it is to be acknowledged, its own advantages. As Robertson has pointed out "Observational studies have the advantage that they come to grips with 3

real-life situations and so offer insights that years of experimenting and surveying might overlook”.

2.The great advantage of the observational study is that the research is accomplished by directly observing subject’s behaviour as opposed to a survey or an analysis of existing sources in which the researcher must rely of others’observation and reports .Observational techniques are also greatly superior to either the survey or the document study in providing information about non –verbal behaviour ”

3.Obsevertional techniques allow the researcher to observe the subject in a natural setting, and they provide the study of the subject over a time rather than at one point as a survey usually does .

4.The peculiar strength of participant observation demands not complete detachment, but the involvement of the research workersin the lives of the people he is studying. This gives him a deeper insight into the behaviourof the people he is studing.

#### **Demarits of Obsrvation:-**

1.One of the limitation of observation is that the data collected through observation can not always be quantified

2.Observation is essentially the study of occurrences at the time they occur. Hence it is very much limited by the duration of the event. Events do not wait for the conveniences of the observer.

3. Observation can not be effectively used to study the private and secret behaviour of the individuals. For example, observing the criminal behaviour of a so called decent person is not an easy task.

4. There is no guarantee that the observer studies the phenomenon in an impartial manner and without prejudice. Hence, there is scope for the danger of bias, especially hidden bias.

#### **Conclusion:-**

Observation is one of the effective methods of collection reliable information about the social behaviour of man through it has its own limitations In this method the role of the observer is very significant. The effectiveness of the method depend to a great exent on the efficiencie of the observer.

- **Interview – nature, advantages and limitations**

**Meaning:-** An interview means gathering or collecting information in which one person ask and another either in person directly, or indirectly. Interview , is an effective, informal verbal or non-verbal conversation, initiated for specific purposes and foused on certain planned content areas.

**Definition of interview:-**

**1.According to Young-**“ as the very term implies, “ interviewing is an interactional process”.

**Characteristics of Interview Method**

- 1.Close contact or intertaction between two or more persons.
- 2.Defined object to know the views and ideas of others.
- 3.Face –to- face relationship between individuals.
- 4.Data is collected about a related social problem.

**Nature of Interview:-**

A systematic interview may consist of the following stages:

1. At the beginning of the interview, the interviewer has to introduce himself to the interviewee in a very polite manner to win over his confidence.
- 2.Thevery nature and purpose of the interview must be made known to the interviewee so as to dispel the undesirable anxiety and tension.
3. The interviewer may ask some serious questions in the beginning and later on talk freely with the interviewee.
- 4.The interviewer may also assist the interviewee in electing information from him and must prompt here and there depending upon the need.

## **Types of Interview:-**

**Interviews are generally of the following types:-**

**1. Structured interview:-** It is known as controlled, guided or direct interview. In this kind of interview a complete schedule is used. The interviewer is asked to get the answer to these questions only.

**2. Unstructured Interview:-** It is known as uncontrolled unguided or undirected interviews. No direct or predetermined questions are used in this type of interview. The field worker may be told certain broad topics upon which the information is to be collected.

**3. Focused interview:-** Such an interview is generally used to study the social and psychological effects of mass communication e.g. the reaction of a film show or radio programme. The type of interview is also in form of free story or narrative type, and is in many respects similar to non structured interview.

## **Advantages of Interview Techniques-**

1. Possible to study the events that are not open to observation (hidden factors), e.g., feelings, attitudes, fear, emotions, interests, reactions.
2. Complete answers are possible.
3. Clarification from respondents so that misunderstanding can be minimised.
4. Questions can be pursued in depth.
5. A higher response is possible and the reliable information can be obtained.

## **Disadvantages of Interview Technique.**

1. The data collected are of a doubtful nature.
2. Costly method
3. Validity measurement problems due to differences in social characteristics, e.g., race, ethnicity, perceived status differences.
4. Too much dependency on the memory of the respondent.

## QUESTIONNAIRE

### **Introduction :-**

Questionnaires are widely used to collect data, particularly when data are to be collected from a large number of people who are scattered over a wide area. Questionnaire is a common and popular research tool of sociologists these days. The questionnaire is a list of important and pertinent questions concerning a problem.

### **Definitions-**

**1. According to Lundberg** – “Fundamentally, the questionnaire is a set of stimuli to which literate people are exposed in order to observe their verbal behaviour under these stimuli”.

### **Types of Questionnaire –**

**1. Structured / closed questionnaire :** Contains definite, concrete and pre-ordained questions with additional questions limited to those necessary to classify inadequate answers or to elicit a more detailed response.

**2. Non structured /open questionnaire** – Often known as interview guide is used for focused, depth and non directive interviews.

### **George A Lundberg has classified questionnaire in two parts**

**1. Questionnaire of Fact-** Which requires certain information of facts from the respondent without any reference to his opinion or attitude about them

**2. Questionnaire of opinion and attitude** – In which the respondent's opinion, attitude or preference regarding some phenomena is sought.

### **Advantages of Questionnaire-**

Questionnaires as a tool of data collection, have strengths and weaknesses and thus advantages and disadvantages are listed below.

**1. Lower cost-** Questionnaires are less expensive than other methods. Even the staff required is not much as either the researcher himself ☹

may mail or one or two investigators may be appointed for hand-distributing the questionnaire. Giving salary and TA/DA to the investigators and the research officers increases the cost of the survey. In questionnaire the research has only to spend money on postage for sending the questionnaires and stamped envelopes for getting back the filled-in questionnaires or on follow-up letters. The mailed questionnaires thus cost less.

**2. Time Saving-** Since the respondents may be geographically dispersed and sample size may be very large, the time required for getting back the questionnaire may be little greater but usually less than that for face to face interviews. Thus, since all questionnaires are sent simultaneously and most of the replies are received in 10-15 days, schedules take months to complete. In simple terms, questionnaires produce quick result.

**3. Accessibility to widespread respondents** – When the respondents are separated geographically, they can be reached by correspondence which saves travel cost.

**4. No interviewer's bias** – Since the interviewer is not physically present at interviewee's place, he cannot influence his answers, either by promoting or by giving his own opinion or by misreading the question.

**5. Greater anonymity** – The absence of the interviewer assures anonymity which enables respondent to express free opinions and answers even to socially undesirable questions. The absence of the interviewer assures privacy to the respondents because of which they willingly give details of all events and incidents they would have not revealed otherwise.

**6. Respondent's convenience**–The respondent can fill-in the questionnaire leisurely at his convenience. He is not forced to complete all questions at one time. Since he fills up the questionnaire in spare time, he can answer easy questions first and take time for difficult questions.

**7. Standardised Wordings-** Each respondent is exposed to same words and therefore there is little difference in understanding questions. The comparison of answers is thus facilitated. ८



**8.No variation-** Questionnaires are a stable, consistent and uniform measure, without variation.

### **Disadvantages of Questionnaire-**

- 1.The mailed questionnaires can be used only for educated people. This restricts the number of respondents.
- 2.The return rate of questionnaires is low. The common return rate is 30 to 40 percent.
- 3.The mailing address may not be correct which may omit some eligible respondents. Thus the sample selected many a time is described as biased.
- 4.Sometimes different respondents interpret questions differently. The misunderstanding cannot be corrected.
- 5.There may be bias in the response selectivity because the respondent having no interest in the topic may not give response to all questions . Since the researcher is not present to explain the meaning of certain concepts, the respondent may leave the question blank.
- 6.Questionnaires do not provide an opportunity to collect additional information while they are being completed.
- 7.Researchers are not sure whether the person to whom the questionnaire was mailed has himself answered the questions or somebody else has filled up the questionnaire.
- 8.Many questions remain unanswered. The partial response affects the analysis.
9. The respondent can consult other persons before filling in the questionnaire. The responses, therefore, cannot be viewed as his opinions.
- 10.The reliability of respondent's background information cannot be verified. A middle class person can identify himself as rich person or a person of intermediate caste can describe himself as uppercaste person.
- 11.Since the size of the questionnaire has to be kept small ,full information cannot be secured from the respondent .
12. There is lack of depth or probing for a more specific answer.

## ***Module 04***

### ***Quantities and Qualitative Research:***

Difference between Quantitative Research and Qualitative research

*Survey – Meaning, nature advantages and disadvantages*

Qualitative research methods

*Casestudy–meaning, nature advantages and disadvantages*

*Recent strategies – combining the Quantitative and*

*Qualitative Methods in research .*

### ***Qualitative and Quantitative Research***

#### ***Introduction-***

Research problem can be studied with different approaches. A researcher may take into consideration the phenomenon as a whole and describe it as it exists or may wish to analyze it by its components in measurable or quantifiable terms. The former approach is termed as qualitative approach. These are further described as under

#### **Qualitative Research –**

Qualitative research is a scientific method of observation to gather non – numerical data. This type of research “refers to the meanings, concepts, definitions, characteristics, metaphors, symbols, and description of things” and not to their „count or measures“. This research answers why and how a certain phenomenon may occur rather than how often. Qualitative research approaches are employed across many academic disciplines on the social and natural sciences.

Qualitative approach takes into consideration „detailed description“ of situations, events, people, interactions and observed behaviours. These data are also available in the form of „direct quotations“ from people about their experiences, attitudes, beliefs and thoughts. Data in qualitative approach are collected through direct observations, participant

observations, in-depth interviewing, case studies, recorded documents, open-ended questionnaires and journals.

Qualitative methods are best for researching many of the why and how questions of human experience in making a decision for example and strong basis in the field of sociology to understand government and social programs. Qualitative research is widely used in sociology, political science, social work, and education researchers.

In contrast, a qualitative researcher might argue that understanding of a phenomenon or situation or event, comes from exploring the totality of the situation. Qualitative research is of great value to sociological studies that can shed light on the intricacies in the functionality of society and human interaction. This approach describes the experiences of people in depth and permits the researcher to record and understand people thoroughly in their own perceptions. This approach helps us to examine the nature of human behaviour and experience and social conditions. It also permits the researcher to study selected issues, cases or events in depth. While using this approach, the researcher seeks to capture what people have to say in their own words.

The validity and reliability of qualitative data depends to a great extent on the methodological skills, sensitivity and integrity of the researcher. Systematic and rigorous observation involves far more than just being present and looking around. Skilful interviewing involves much more than just asking questions. Content analysis requires considerably more insight into the data than reading to see what's there. Thus, generating useful, credible qualitative findings through observation, interviewing and content analysis requires discipline, knowledge, training, practice, creativity and hard work.

### **Qualitative Approach –**

Quantitative approach focuses on objective and standardized means of inquiry and application of statistical analysis for attainment of objectivity and generalizations. Quantitative researchers use interview, questionnaire and structured observation as major methods to collect data. Quantitative approach uses standardized measures that fit diverse options and experiences into predetermined response categories. This approach measures the reactions of a large number of individuals to a limited set of questions, thus facilitating comparison and analysis of data with the help of closed-ended questionnaires, attitude scales, rating scales and postal surveys.

## ***Difference between Quantitative Research and Qualitative research***

**Qualitative Research-** *Involves analysis of data such as words(e.g., from interviews) pictures (e.g., vedio), or objects (e.g.,an artefact)*

➤ **Quantitative Research** – *Involves analysis of numerical data*

### **Qualitative Research**

- 1.The aim is a complet, detailed description.
- 2.Researcher may only know roughly in advance what he/she is looking for.
- 3.Recommended during earlier phases of research project.
- 4.The design emerges as the study unfolds.
- 5.Researcher is the data gathering instrument.
- 6.Data is in the form of words, picieres or objects.
7. Subjective-„, individuals“ interpretation of events is important e.g., uses participant observation, in-depth interviews etc.
- 8.Qualitative data is more „rich“, time consuming, and less able to be generalized.
- 9.Researcher tends to become subjectively immersed in the subject matter.

### **Quantitative Research**

- 1.The aim is classify featur, count them, and construct statistical models in an attempt to explain what is observed
- 2.Researcher knows clearly in advance what he/she is looking for.
3. Recommended during latter phases of research project.
- 4.All aspects of the study are carefully designed befourdata is collected.
5. Researcher uses tools, such as questionnaires or equipment to collect numerical data.
6. Data is in the form of numbers and ststistics.
7. Objective – seeks precise measurement & analysis of target concepts, e.g., uses surveys, questionnaires etc.
8. Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.
- 10.Researcher tends to remain objectively separated from the subject matter.

**Computer in Social Research:**

- 1.E-research : using the internet as object and method of data Collection
- 2.Use of computer in data analysis

**E- research : using the internet as object and method of data Collection**

**Introduction -**

In our research, the data are gathered in the laboratory on a DEC PDP- 11/24 minicomputer. Once the data are gathered, they are analog -to-digital (*AID*) converted and sent by the PDP to an IBM 370-3031. The data are submitted to a Fast Fourier Transform (FFT) on the IBM computer. Once the FFT is completed, the data are accessed by an m M PC-XT that is equipped with an IRMA system. The PC is used in its emulation mode to access the data in the mainframe. In the mainframe, SPSS or SAS is used to do the initial statistical analyses. When necessary, subsets of the data are transferred to the PC, where other computer programs are used to analyze the data. In many instances, they are returned to the mainframe from the PC, where they are submitted to multivariate statistical analysis. Finally, all of the data are stored on floppy disks, which are prepared on the PC. The gathering, handling, and analysis of EEG and EKG data have always been difficult. The sensitivity of the instruments, the rate at which the data are gathered, the transformation of the data needed prior to statistical analysis, and the number of data gathered from each subject make the entire experimental process one which is filled with tasks that must be carried out with great care. Each step of the experiment must be conducted with care for results to be valid. The power and sophistication of computers now assist us in the gathering and managing of complex data. The gathering and handling of EEG and EKG data consist of a series of complex tasks. The initial gathering and storage of the data require a computer to work with analog data. Also, a computer that can electronically control the delivery of a stimulus as a part of the experiment is frequently needed. Once the data are gathered, they must be transformed from their original analog form to a digital form. The performance characteristics of the computer used to transform the data from one form to another are typically different from those used to control experiments and gather the data. Finally, the data must be reviewed, edited, and

statistically analyzed, which usually requires the use of another computer. This third type is usually a large, powerful computer designed to do mathematical calculations. Through networking or interfacing, the data The authors' mailing address is: Department of Psychology, Trinity University, San Antonio, TX 78284. can be passed from one computer to another without having to be re entered. This article describes the review, analysis, and decision-making process involved in developing the computer network used in our laboratory to gather and analyze EEG and EKG data.

### **Computer Network –**

A network of three computers is used to conduct our research. Figure 1 contains a graphic description of the network. The data are gathered and the experiments are controlled by a DEC PDP-11/24 computer located in the neuropsychology laboratory. Basically, the PDP-11/24 is configured as a process-control computer. Using this computer in conjunction with a Vetter analog tape recorder, we can gather up to seven channels of data at a sampling rate of 256 data points per second. The PDP computer and Vetter tape recorder can be used to gather these data while the computer simultaneously controls the delivery of stimuli to subjects. The data are gathered in analogue form. Prior to analysis, the data are *AID* converted to digital form by the PDP computer at a rate of 256 points per second per channel. A dedicated coaxial line connects the PDP computer to the campus mainframe computer, an *ffim* 3031 with 12 MB of virtual memory. A program called *KERMIT* is used to send the digitized data from the PDP computer to the University *ffim*. The process of identifying, acquiring, and using *KERMIT* is described elsewhere in this<sup>157</sup> Copyright 1985 Psychonomic Society, Inc. 158 *YOST AND BREMNER* Figure 1. Computer network. issue (Yost, Holcombe, & Eddy, 1985). Once the data are sent to the mainframe, they are stored on tape and then submitted to a computer program that performs a Fast Fourier Transform (FFT) on them. To perform the FFT, either a program developed by Benignus (1969) or the Statistical Analysis System (Ray, 1982) is used. Either can be used with an IBM 3278 terminal attached to the mainframe. These terminals are available at a number of locations on campus. The editor and control functions of the Conversational Monitoring System (CMS) are used to operate these programs. The principal advantage of using the mainframe to perform the FFT is speed. Many data are generated when we gather from multiple channels at a rate of 256 data points per second for as much as 20 sec. A large, powerful mainframe is required to perform this mathematical task. Usually we submit the data to the FFT on the

IBM computer at nonprime times. The output from the FFT program is the data used in the statistical analyses, which, prior to analysis, often must be reviewed, and, in some instances, edited. Because of the loads on the IBM mainframe and the availability of terminals during the working day, it is best to take the data from the IBM mainframe to a microcomputer for editing and initial analyses. To do this, we pass the data from the IBM mainframe to an IBM PC-XT that has been networked with the IBM mainframe.

## **Selecting an Intelligent Workstation**

A number of different networking options were evaluated prior to selecting the IBM PC-XT. Our first attempt was to use a dumb terminal with a 1200-baud modem. This configuration gave us access to the mainframe to perform our data-analysis tasks, but due to the load on the mainframe, its use during prime-time hours was often limited. There were several other limitations to the use of this configuration. When our IBM mainframe was accessed through a telephone line, the user was limited to the use of the EDIT editor and could not use the XEDIT editor. The XEDIT editor allows full screen editing, whereas the EDIT editor allows only one-line-at-a-time editing. EDIT is more cumbersome and is slower than XEDIT. Also, a 1200-baud transmission rate seems to be acceptable at first, but after a very short time becomes very slow, and the terminal appears to lack responsiveness. Finally, even with a hard disk attached to the dumb terminal, the process of storing and retrieving data is difficult and cumbersome. Our second attempt at networking was to use a microcomputer in conjunction with a modem as an intelligent workstation. This configuration allowed a little more flexibility but it still proved to be impractical. The speed with which we could work was about the same as with the dumb terminal, and we still could use only the EDIT and not the XEDIT editor. The fact that this was man intelligent workstation provided some added flexibility over the dumb terminal, in that the microprocessor could be used as a stand-alone unit when not connected to the mainframe. Passing files between the microprocessor and the mainframe was a complex task and one that was time consuming. The data-transfer rates between the two computers was very limited for the size of the data files that we use in our analyses. In a final attempt at networking, we chose to acquire the IBM PC-XT computer with 512K bytes of core and a to-MB hard disk. In addition, we purchased an IRMA communications card and the accompanying software programs to use in our research. The combination of the PCXT, the hard disk, the IRMA card, and the IRMA software seems to satisfy our research needs very well. The IRMA card is installed inside the PC-XT, and the

software is installed both on the hard disk and in one of our CMS machines on the IBM mainframe. The IRMA card is hardwired directly into the mainframe. The IBM PCXT is a very powerful machine in itself and is capable of performing a great deal of work. We keep several statistical packages: a graphics package, a database manager, and a work processing package resident on the disk for immediate use at all times. We also have a printer, a plotter, a colour graphics monitor, and a monochrome monitor as peripherals on the PC-XT. These peripheral devices serve to make the research efforts more efficient and provide independence from the computer centre. The use of the PC-XT as a terminal is very simple. Once the computer is booted, it automatically seeks out and connects itself to the mainframe. To use the mainframe, the user simply signs on and gives the necessary identification and account information. The transfer rate between the PC-XT and the mainframe is 9600 baud. Because of the way that the PC-XT is connected to the mainframe, it is possible to use the XEDIT editor. One of the powerful assets of the IRMA communications system is that the PC-XT can be used as a microprocessor and a terminal to the mainframe simultaneously. That is, it is possible to boot the PC-XT, sign on to the mainframe, and submit several jobs to be processed, and, while they are being processed, switch back to the PC-XT and use it as a microprocessor. Switching back and forth between systems is done by pressing two keys simultaneously. Transferring files between the mainframe and the PC-XT is a menu-driven process. The files are transferred directly between a CMS machine and the PC-XT. The process is started by executing a program on the PC-XT that brings a menu on the screen. Simple non programming responses to the menu are required to transfer programs or data in either direction between the two computers. Large data sets can be transferred between the two computers in reasonable amounts of time. It is easier to store large data sets on floppy disks with the PC-XT and the IRMA system than it is to store them on tapes at the computer centre. In 1983 the M Corporation announced the availability of a of a 3278/79 emulation system. This system is available at present for the M PC and the M PC-XT. The system requires installation of a board inside the computer, and installation of software in both the mainframe and the microcomputer. The function, use, and operation of the M system are almost identical to the IRMA system. Both of the systems cost approximately \$1,100.00. We have been successful in developing a method that permits the use of the same data sets with programs on both the PC-XT and the mainframe. The data on the mainframe are accessed with either SAS or SPSS. Both of these programs have options that permit the user to generate data files within the mainframe. We begin work on the mainframe by developing a data set that we want to analyze. Standard data-set generation techniques are used to insert the common delimiters and end-of-file marks required



by the programs on the PC-XT. Once the file has been generated, it is transferred to the PC-XT, where it is read into the directory of our Total Information Management System (TIM), a database management program. We then use the utility programs within TIM to transfer

### **Computer Network**

The data to the directory containing the statistical program or the directory containing the graphics program. The entire process can be reversed when data are transferred from the PC-XT to the mainframe. When the data are in the mainframe, they are in an EBCDIC form; in the PCXT, they are in an ASCII form. When the IRMA system is used to transfer the data from one computer to another, the data are automatically transformed from one form to the other. At the present, we feel very comfortable with our ability to use three computers to conduct research. Each of the three computers is used to perform the tasks that it does best, and there are no problems in passing the data from one computer to another. This provides a very efficient and effective research working environment.

## Module 06

### **Report Writing:**

1. Importance of report writing
2. Writing Qualitative and a Quantities research –
3. presentation and interpretation Qualities of good research report.

### ***Importance of Report Writing in social research –***

Research report is considered a major component of the research study for the research task remain incomplete till the report has been presented or written. The purpose of research is not well served unless the findings are made known to others. ‘Research report is a research document that contains basic aspects of the research project’. Mostly research work is presented in a written form. The practical utility of research study depends heavily on the way it is presented to those who are expected to act on the basis of research findings. Research report is a written document containing key aspects of research project. Research report is a medium to communicate research work with relevant people. It is also a good source of presentation of research work for the future reference. The research work is not complete until the report has been written. The hypothesis and findings of study, however brilliant and original.

The meaning and significance of research report is considered a major component of the research study for the research task remains incomplete till the report has been presented and written. As a matter of fact even the most brilliant hypothesis highly well designed and conducted research study and the most striking generalizations and findings are of little value unless they are effectively communicated to others.

The purpose of research is not well served unless the findings are made known to others. Research results must invariably enter the general store of knowledge. All this explain the significance of writing research report. There are people who do not consider writing of report as an integral part of the research process, but the general option is in favour of treating the presentation of research results of the writing of the report as part and parcel of the research project. Writing of the report is the last steps in a research study and require a set of skills somewhat different from those called for in respect of the earlier stages of research.

This task should be accomplished by the researcher with utmost care he may seek the assistance and guidance of experts for the purpose.

Each research has a purpose and each report could be prepared and read by different publics. For example, it may be prepared only as an academic exercise to be published in a book form, to be read by college/university students, or it could be submitted to the funding organisation which may use it for policy purposes, or it may be used for writing a research paper to be presented at a professional meeting, or it may be used for writing a paper for some academic journal, or it may be published in a newspaper to be read by common people , and so on. Whatever the purpose may be, the general form of the report is roughly the same.

### **Presentation and interpretation**

The analysis is the ordering of data into constituent parts in order to obtain answers to research questions. For example, a researcher formulates a hypothesis pertaining to relation between high educational level and positive attitude towards a certain phenomenon. He conducted a study, gathers a data from the respondents in a college/university. He then breaks down the data and so orders them that he can obtain an answer to the question does high education change the attitudes? However merely analysis does not provide answers to research questions. Interpretation of data is also necessary. Interpretation takes the result of analysis, makes inferences and draws conclusions about the relationship. Thus to interpret is to explain, to find meaning. In most case, it is difficult to explain raw data. One must first analyse the data and then interpret the result of the analysis. Data are interpreted in two ways one the relations within the study and its data are interpreted and two, the results of the study and the inferences drawn within the data are compared to theory and to other research results. Thus, in this methods one seeks meaning

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