M.A.(SOCIOLOGY)

SEMESTER - I

PAPER - IV

METHODOLOGIES OF SOCIAL RESEARCH

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Syllabus

SEMESTER-I, PAPER -IV

METHODOLOGIES OF SOCIAL RESEARCH

Course Rationale: The course aims to provide students with an in-depth understanding of various aspects of the research process. It begins with a brief introduction to the philosophical foundations of research and the nature of science and social science as modes of inquiries; and moves on to a detailed study of perspectives and debates in Methodology. The course will also provide training in research methods and in conceiving and designing research as well as in communicating research findings.

Unit I : Introduction

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- Qualitative and Quantitative Methodologies

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- Positivism
- Hermeneutic Intervention
- Reflexivity and Social Research
- Feminist Methodological Perspectives

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- The nature and application of Statistics in Sociological research
- Quantitative Methods: Social Survey-questionnaire, Interview schedule, coding practices
- Qualitative Methods: Participant observation, Interviews, Case studies and life histories

Unit IV: Planning and Communicating Research

- Research Proposal
- Research Design
- Data Collection and Analysis
- Writing Research Finding

Readings:

Worsley, P. (1970). Introducing Sociology. Open University Press.

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1

PHILOSOPHICAL FOUNDATIONS AND THE NATURE OF SCIENCE AND SCIENCE OF THE SOCIAL

Unit Structure

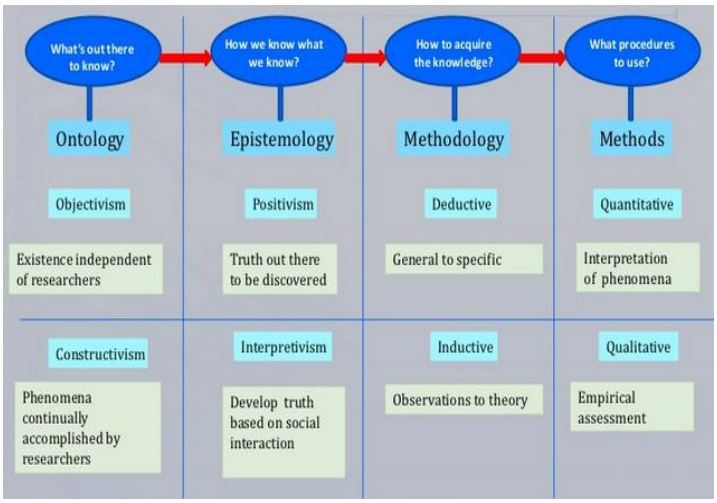
1.0 OBJECTIVES

- To understand the philosophical foundations of social research
- To comprehend the nature of ontology, epistemology and methodology in research.

- To analyze the significance and application of positivism.
- To evaluate the nature of science and social science.
- To have a comparative analysis of its differences.

1.1 INTRODUCTION

Understanding philosophy is important because social science research can only be meaningfully interpreted when there is clarity about the decisions that were taken that affect the research outcomes. Some of these decisions are based, not always knowingly, on some key philosophical principles, as outlined in the figure below.



Philosophy provides the general principles of theoretical thinking, a method of cognition, perspective and self-awareness, all of which are used to obtain knowledge of reality and to design, conduct, analyse and interpret research and its outcomes. The figure below shows three main branches of philosophy that are important in the sciences and serves to illustrate the differences between them. Social science research guide consisting of ontology, epistemology, and philosophical perspectives.

1.2 PHILOSOPHICAL PERSPECTIVES

Stemming from ontology (what exists for people to know about) and epistemology (how knowledge is created and what is possible to know) are philosophical perspectives, a system of generalized views of the world, which form beliefs that guide action.

Philosophical perspectives are important because, when made explicit, they reveal the assumptions that researchers are making about their research, leading to choices that are applied to the purpose, design, methodology and methods of the research, as well as to data analysis and interpretation. At the most basic level, the mere choice of what to study in the sciences imposes values on one's subject.

1.2.1 Ontology:

Ontology is the study of 'being' and is concerned with 'what is', i.e., the nature of existence and structure of reality as such (Crotty, 1998) or what it is possible to know about the world (Snape & Spencer, 2003). The SAGE Online Dictionary of Social Research Methods (2006) defines ontology as "a concept concerned with the existence of, and relationship between, different aspects of society such as social actors, cultural norms and social structures… Ontological issues are concerned with questions pertaining to the kinds of things that exist within society" (no page). For Richards, (2003), ontology is the assumptions we make about the kind and nature of reality and what exists. Snape and Spencer (2003) also define ontology as the nature of the world and what we can know about it. Furthermore, Bryman (2008) introduces the concept of 'social ontology' which he defines as a philosophical consideration in research which concerns the nature of social entities, i.e., whether these social entities are or can be objective entities which exist independently from social actors or rather they are social constructions in themselves built up from the perceptions, actions and interpretations of the individuals in society. Similarly, Ormston et al (2014) assert that ontology concerns the question "whether or not there is a social reality that exists independently from human conceptions and interpretations and, closely related to this, whether there is a shared social reality or only multiple, context-specific ones". In short, ontology concerns our beliefs about the kind and nature of reality and the social world (what exists).

Thus Ontology, or the 'study of being', is concerned with what actually exists in the world about which humans can acquire knowledge. Ontology helps researchers recognize how certain they can be about the nature and existence of objects they are researching. To illustrate, realist ontology relates to the existence of one single reality which can be studied, understood and experienced as a 'truth'; a real world exists independent of human experience. Meanwhile, relativist ontology is based on the philosophy that reality is constructed within the human mind, such that no one 'true' reality exists. Instead, reality is 'relative' according to how individuals experience it at any given time and place.

1.2.2 Epistemology:

Epistemology in general is the assumptions we make about the kind or the nature of knowledge (Richards, 2003) or how it is possible to find out about the world (Snape & Spencer, 2003). For Crotty (1998), epistemology is a way of looking at the world and making sense of it. It involves knowledge and, necessarily, it embodies a certain understanding of what that knowledge entails. He further explains that epistemology deals with the 'nature' of knowledge, its possibility (what knowledge is possible and can be attempted and what is not), its scope and legitimacy. Similarly, but with a particular reference to the contrasting views about how natural and social worlds should be studied, Bryman (2008) defines

epistemology as "an issue concerns the question of what is (or should be) regarded as acceptable knowledge in a discipline" (p.13). To further explain what epistemology is about, I cite Cohen, Manion and Morrison (2007) as saying that epistemology is about the assumptions which one makes about "the very bases of knowledge – its nature and form, how it can be acquired and how communicated to other human beings". Furthermore, the authors stress how the kind of epistemological assumptions which we make or hold about knowledge profoundly affect how we go about uncovering knowledge of social behaviour. Here they refer to the decisions which the researcher will need to make about the kind of method(s) he or she will be using in their research as per their epistemological assumptions. That is, if knowledge, on one hand, is viewed as hard, objective and tangible, this demands of the researcher an observer role together with an allegiance to the methods of natural science such as testing, measuring, etc. If knowledge, on the other hand, is viewed as personal, subjective and unique, then this imposes on the researcher a rejection of the methods used by natural science and a greater involvement with their subjects.

Epistemology is the 'study of knowledge'. Epistemology is concerned with all aspects of the validity, scope and methods of acquiring knowledge, such as:

a) what constitutes a knowledge claim;
b) how can knowledge be acquired or produced; and
c) how the extent of its transferability can be assessed. Epistemology is important because it influences how researchers frame their research in their attempts to discover knowledge.

By looking at the relationship between a subject and an object we can explore the idea of epistemology and how it influences research design. Objectivist epistemology assumes that reality exists outside, or independently, of the individual mind. Objectivist research is useful in providing reliability (consistency of results obtained) and external validity (applicability of the results to other contexts).

Constructionist epistemology rejects the idea that objective 'truth' exists and is waiting to be discovered. Instead, 'truth', or meaning, arises in and out of our engagement with the realities in our world. That is, a 'real world' does not preexist independently of human activity or symbolic language. The value of constructionist research is in generating contextual understandings of a defined topic or problem.

Subjectivist epistemology relates to the idea that reality can be expressed in a range of symbol and language systems, and is stretched and shaped to fit the purposes of individuals such that people impose meaning on the world and interpret it in a way that makes sense to them. For example, a scuba diver might interpret a shadow in the water according to whether they were alerted to a shark in the area (the shark), waiting for a

boat (the boat), or expecting a change in the weather (clouds). The value of subjectivist research is in revealing how an individual's experience shapes their perception of the world.

1.2.2.1 Positivism:
1.2.2.2 Positivism and objectivism:

Positivism, which is an epistemological position, focuses on the importance of objectivity and evidence in searching for truth and the world is unaffected by the researcher. Also, in positivism, facts and values are very distinct, thus making it possible to conduct objective and value-free inquiry What this means is that the researcher should distance him or herself from any impact on their research findings. In addition, positivism epistemology holds the position that meaning and meaningful realities already reside in objects awaiting discovery and they exist apart from any kind of people's consciousness. Therefore, according to this view, when we recognise objects around us, we simply discover meanings which have been lying in them all along. Furthermore, according to the positivism/objectivism paradigm, truth is static and is always objective. This truth is 'objectified' in the people being studied and this objective truth can be 'discovered' if we go about it in the right way. These 'right' ways of discovering knowledge about the world include, as proposed by positivist writers such as Isaac Newton and Francis Bacon, methods such as 'careful direct observation' and not deduction from abstract propositions. In other words, the essence of objectivism derives from the acceptance of natural science as a paradigm to study human knowledge and, necessarily, employs means and methods for data collections and data interpretations similar to those used in natural science including hypothesis testing, causal explanations and modelling. Finally, in this tradition, all knowledge about the world originates in our experiences and is derived through our senses and, as such, only phenomena (and hence knowledge) which can be confirmed by the senses can genuinely be regarded as knowledge. Positivist knowledge, according to Wellington (2000) deemed to be objective, value-free, generalizable and replicable. This is why positivism is often being perceived as a synonymous of 'scientific method'.

1.2.2.3 Epistemological consideration:

An epistemological issue concern the question of what is (or should be) regarded as acceptable knowledge in a discipline. A central issue is whether the social world can and should be studied according to the same principles, procedures, and ethos as the natural sciences. The position that confirms the importance of imitating the natural science is associated with epistemological position known as positivism.

1.2.2.4 Objectivity:

In order to follow positivist approach the sociologists try to achieve objectivity. Objectivity is needed to achieve unbiased results. The British sociologist, Ray Pawson tried to explain its usefulness through personal hygiene. Perfect personal hygience is unattainable but that doesn't mean we shouldn't wash. We attempt to be as clear as we can! Max Weber(1958;Orig.1918) made the distinction b/w selecting a research topic that is value and conducting research that should be value free.

1.2.2.5 Stages of Positivism methodology:

First, as a positivist, Comte believed that scientific study of society is possible only when information collected can be objectivity observed and classified. Comte argued that sociologists shouldn't be concern with internal meanings, motives, feelings and emotions of individual. Since these mental states cannot be observed and thus cannot be measured in objective way.

The Second aspect of positivism concerns its use of statistical data. Positivist believed that its use makes it possible to classify the social world data in objective way and produce statistics. For e.g. Durkheim collected the data on suicide rate and membership of different religion.

The third stage aims to look for correlation between different social facts. In his study of Suicide, Durkheim found a correlation between a particular religion and a high suicide rate.

The fourth stage of positivist methodology involves search of causal connections. If there is a strong correlation between two or more type of social phenomena, then a positivist sociologist might expect that one of these phenomena was causing other to take place. However this is not necessarily the case and it is important to analyze the data carefully before such conclusions can be arrived.

Positivism believe that multivariate analysis can establish causal connections b/w two or more variable. If these findings are checked in a society of context then the researchers can be confident that they have attained the ultimate goal positivism: a law of human behavior.

1.2.2.6 Interpretivism:

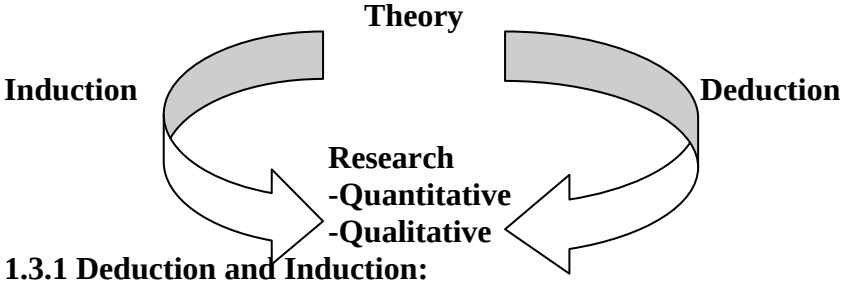
Interpretivism is a term taken to denote a contrasting epistemology to positivism. The term subsumes the views of writers who are critical of applying the scientific model to the study of the social world. They share the view that the subject matter of social sciences is fundamentally different from that of natural sciences. The study of social world therefore requires the different logic and procedures.

The process of construction and reconstruction is based on personal inputs. The key process that facilitates construction and reconstruction is interpretation. Interpretivism is a frame work within which qualitative research is conducted and it looks for cultural and historical interpretation of the social life word. It has its roots in work of Max Weber's notion of 'Verstehen' (understanding), the hermeneutic phenomenological tradition and symbolic interactionism.

Von Wright (1971) has shown the epistemological clash between positivism and hermeneutic. This contrast reflects long standing debates that led to the emergence of modern social sciences. It finds expression in Max Weber`s notion of 'Versthen' approach. Versthen refers to the views, opinion and perceptions of people as they are experienced and expressed in everyday life. Here the qualitative research is interested in the subjective meaning i.e. the way in which they assign meaning to it. The researcher may be interested in what divorce means to children, or in what it means to be a woman working in job traditionally held by men. Methods commonly used in this context are intensive or narrative interviews and content analysis. An emphasis on the subjective meaning is evident in research based on symbolic interactionism and phenomenology.

1.3 METHODOLOGY

Theory and research are equally important to the process of accumulating knowledge through the scientific method. The process can be different points. Theory is something that guides and influences the collection and analysis of data. In considering the relationship b/w theory deductive and Inductive theory are of greater significance. The process can begin at different point as shown in the diagram.



1.3.1 Deduction and Induction:

In logic, we often refer to the two broad methods of reasoning as the deductive and inductive approaches.

Theory

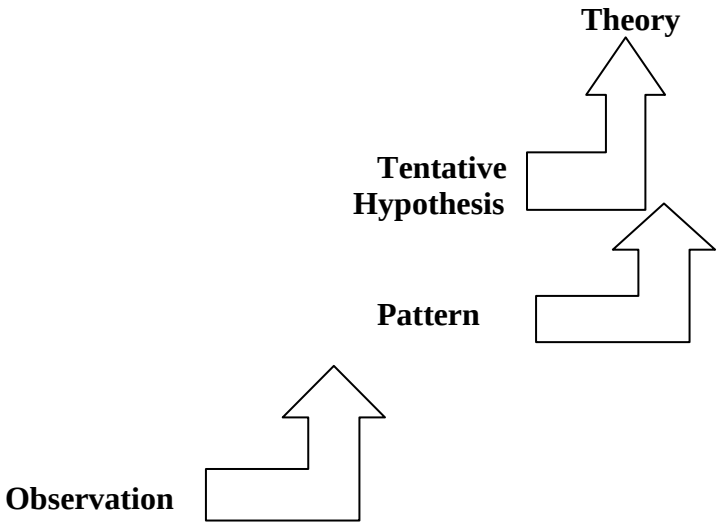
Hypothesis

Observation

Confirmation

Deductive reasoning works from the more general to the more specific. Sometimes this is informally called a "top-down" approach. We might begin with thinking up theory about our topic of interest. We then

narrow that down into more specific hypothesis that we can test. We narrow even further when we collect observations to address the hypothesis. This ultimately enables to test the hypothesis with specific data confirmation (or not) of our original theories.



Inductive reasoning works the other way, moving from specific observations to broader generalization and theories. Informally, we sometimes call this a "bottom up" approach (please note that its "bottom up" which is the kind of thing the bartender says to customers when he's trying to close for the night). In inductive reasoning, we being with specific observations and measures, begin to detect patterns and regularities, formulate some tentative hypothesis that we can explore, and finally end up developing some general conclusions or theories. These two methods of reasoning have a very different "feel" to them when you're conducting research. Inductive reasoning, by its very nature, is more open-ended and exploratory, especially at the beginning. Deductive reasoning is narrower in nature and is concerned with testing or confirming hypothesis. Even though a particular study may look like its purely deductive (e.g an experiment design to test the hypothesized effects of some treatment on some outcome), most social research involves both inductive and deductive reasoning processes at some time in the project. In fact, it doesn't take a rocket scientist to see that we could assemble the two graphs above into a single circular one that continually cycles from theories down to observations and back up again to theories. Even in the most constrained experiment, the researchers may observe patterns in the data that lead them to develop new theories.

1.4 CONCLUSION

Understanding the philosophical basis of science is critical in ensuring that research outcomes are appropriately and meaningfully interpreted. With an increase in interdisciplinary research, an examination of the points of difference and intersection between the philosophical approaches can generate critical reflection and debate about what we can

know, what we can learn and how this knowledge can affect the conduct of science and the consequent decisions and actions.

1.5 THE NATURE OF SCIENCE AND SCIENCE OF SOCIAL

1.5.1 Nature of Science:

Fundamentally, science is seen as an organized human approach, and enterprise and research towards the discovery of the unknown; a theoretical exposition that applies order and logical assessment aimed at developing a body of knowledge about a particular subject or phenomenon. Giddens (2006) sees science as the "use of systematic methods of empirical investigation, the analysis of data, theoretical thinking and logical assessment of arguments to develop a body of knowledge about a particular subject matter". Etymologically, the word "science" is derived from the Latin word scientia meaning knowledge. Science refers to a systematic and organized body of knowledge in any area of inquiry that is acquired using "the scientific method" (the scientific method is described further below). Science can be grouped into two broad categories: natural science and social science. Natural science is the science of naturally occurring objects or phenomena, such as light, objects, matter, earth, celestial bodies, or the human body. Natural sciences can be further classified into physical sciences, earth sciences, life sciences, and others. Physical sciences consist of disciplines such as physics (the science of physical objects), chemistry (the science of matter), and astronomy (the science of celestial objects). Earth sciences consist of disciplines such as geology (the science of the earth). Life sciences include disciplines such as biology (the science of human bodies) and botany (the science of plants). In contrast, social science is the science of people or collections of people, such as groups, firms, societies, or economies, and their individual or collective behaviors. Social sciences can be classified into disciplines such as psychology (the science of human behaviors), sociology (the science of social groups), and economics (the science of firms, markets, and economies).

1.5.2 Principles of science:

i) It is a body of knowledge;
ii) It has the pre-occupation of understanding the natural realm and the world in which the body of knowledge operates;
iii) It is systematically or in an ordered manner, constructs universally acceptable laws that can be rationally investigated, systematically proved, verified and applicable under conditions in all situations and places;
iv) It has laws that operate irrespective of human will and predispositions; and,

v) It operates through certain processes and instrumentalities that are empirical and verifiable.

1.6 SOCIAL AND PHYSICAL / NATURAL SCIENCES

The founding father of sociology, Auguste Comte, divided science into two types. The first is the concrete that deals with the definite objects in all their different aspects. This type deals with the regular and practical unknown, with the technology of subduing nature. It uses a 'nomothethic' or generalizing method as far as it seeks to discover law – like and general relationships and properties. This type of science is known as the Natural or Physical Sciences, or better still, what the empiricists call Science of Positivism. These physical sciences deal mainly with matter and inanimate objects and they include physics, chemistry, mathematics, biology, astronomy, mathematics, geology, theoretical and practical medicine, etc. The other type of science is what is generally known as the social sciences. It is generally associated with the study of society and human relationships. In the German scientific tradition, the social sciences apply the 'ideographic' or individualizing procedure because their interest is in the non-recurring events in reality and the particular or unique aspects of any phenomenon (Marshall, 1998). The social sciences concentrate mainly on the study of social phenomena (social, political and economic organizations; human behaviour, social institutions, social relations, social events, attitude, etc.). The social sciences include sociology, psychology, economics, political science, anthropology, philosophy, business studies, geography, demography and social statistics. These social sciences, though study human beings, involve themselves in systematic methods of empirical investigation. They analyze data in empirical studies. They assess, use and formulate theories based on the evidence and logical arguments from their investigations. Conclusion and recommendations are made there - from. The two groupings – natural and social sciences - are called empirical sciences. This implies that the knowledge that comes from them must be based on observable phenomena and must be capable of being subjected to tests and investigations for validity by other investigators and researchers operating under the same conditions. Auguste Comte, who coined the word 'sociology' and the term 'positive philosophy' (Comte, 1986) argued that there exists a hierarchy of scientific subjects (Giddens, 2006). He posited that sociology was the 'queen' of all scientific subjects and therefore at the pinnacle of that hierarchical structure. His argument is that there is always the possibility of scientific knowledge about society. Human existence and welfare can well be advanced and improved upon through the generated scientific knowledge in such a way that society can be run rationally without religion and superstition posing any hindrance to societal progress. Durkheim (1970), in his study on Suicide indirectly made the same submission on positivist research.

1.7 PRINCIPLES OF SOCIAL SCIENCE

In a concise form, the tenets of the social sciences, according to Iheriohanma (2002) and Giddens (2006) include:

i) All forms of human behaviour – attitude, perception, feelings, etc.

ii) All forms of social life – group, organization, community, society, etc.

iii) All issues relating to individual and group differences – particularly in the area of structure, dynamics, cohesion, conformity, etc.

iv) All concerns about social structure – the forms, organization, structure and interrelationships between people and groups in a society.

iv) All forms of social relations – social, political, economic, inter-group, inter-personal, etc.

v) All forms of social interactions – the relationships between people, group (s) and the interactions that go on.

vi) All the social institutions – structural forms relating to how the society meets some or all the requirements basic to the maintenance of organized social life (the social pre-requisites and functional imperatives). The family, economy, education, polity and law, religion, etc. are examples.

1.8 THE SCIENTIFIC METHOD

Sociology is a social science, sociologists follow the rules of the scientific method in their research. The scientific method is followed in the natural, physical, and social sciences to help yield the most accurate and reliable conclusions possible, especially ones that are free of bias or methodological errors. An overriding principle of the scientific method is that research should be conducted as objectively as possible. Researchers are often passionate about their work, but they must take care not to let the findings they expect and even hope to uncover affect how they do their research. This in turn means that they must not conduct their research in a manner that "helps" achieve the results they expect to find. Such bias can happen unconsciously, and the scientific method helps reduce the potential for this bias as much as possible.

This potential is arguably greater in the social sciences than in the natural and physical sciences. The political views of chemists and physicists typically do not affect how an experiment is performed and how the outcome of the experiment is interpreted. In contrast, researchers in the social sciences, and perhaps particularly in sociology, often have strong feelings about the topics they are studying. Their social and political beliefs may thus influence how they perform their research on these topics and how they interpret the results of this research.

1.9 FUNDAMENTAL DIFFERENCE BETWEEN SOCIAL SCIENCE RESEARCH AND NATURAL SCIENCE RESEARCH

- Social science and Natural science research help in the growth and development of economies.
- In Social science research we commonly find subjectivity. In natural science you will always see objectivity.
- In Social Science research personal prejudices and bias may distort the data and hence the conclusion. In natural science research personal prejudices and bias do not affect the data or result.
- Social scientist lab is society or world at large and a social scientist has no control over the equipments or factors that influence them. Natural Scientists work in lab where they can control the conditions and environments.
- In social science research the result of investigation are at best generalizations. In natural science research the results of investigations are well defined by natural laws.
- Social phenomena are known as symbolically through words as welfare, tradition or systematic. Natural science phenomena can be best known directly through our senses like eyes, ears and nose.
- The data obtained in social sciences may vary simultaneously. The data obtained in physical sciences is more reliable and consists of actual results.
- The rate of progress of social science research is less due to less availability of finance. The rate of progress in scientific research is very high due to high availability of finance.

1.10 CONCLUSION

To sum up, one can easily say that though both sciences are having certain shortcomings both have played significant role in socio-economic and technological developments of many undeveloped and well developed economies.

In short, the major differences between social science research and natural science research lie more in the object than in the subject. The natural scientist bases all his analysis on the data he or she gathers through scientific methods. On the contrary, the social scientists who are known for their outstanding research work do not take a scientific view in day to day affairs of life and society.

The social sciences have a special and unpredictable object as their main subject of preoccupation, they still insist on pure and rigorous scientific methods of investigation. They are characterized by the principles and tenets of science. It must be acknowledged that the social sciences are bedeviled with specific problems that emanate from their

subject matter, such as variability, unpredictability and intractability of human nature and social phenomena, value judgment, terminology, etc., these are not the specific domains of the social sciences alone. These problems, in one way or the other, confront the pure sciences as well. In their methodology, the social sciences delve into the use of quantitative as well as qualitative data in investigations. These and more make it imperative to accept the scientific nature of the social sciences.

1.11 UNIT END QUESTIONS

- Write a detailed account on philosophical foundations of research.
- What is ontology? Critically evaluate its significance in conducting research.
- Critically examine the role of epistemology in carrying out research.
- Elaborate on positivism in epistemological consideration.
- Examine in detail the nature of scientific research and social science research and elaborate on the relevance between the two.

1.12 SUMMARY

Social science research is guided by ontology, epistemology and philosophical perspectives. Ontology refers to what exist for people to know about and epistemology means how knowledge is created and what is possible to know philosophical perspectives reveal the assumptions that researchers are making about their research, leading to choices that are applied to the purpose, design methodology and methods of the research, data analysis and interpretation.

Positivism focuses on the importance of objectivity and evidence in searching for truth. Objectivity is highly important to get unbiased results.

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2

THE NATURE OF SOCIOLOGICAL INQUIRY; SCIENCE AND COMMON SENSE, QUALITATIVE AND QUANTITATIVE METHODOLOGIES

Unit Structure

2.0 OBJECTIVES

- To analyse the sociological approach to research
- To evaluate the difference between sociology and common sense
- To understand the significance and application of quantitative and qualitative research

2.1 INTRODUCTION

The sociological approach goes beyond everyday common sense by using systematic methods of empirical observation and theorization.

The sociological approach goes beyond everyday common sense. Many people believe they understand the world and the events taking place within it, often justifying their understandings by calling it "common sense." However, they have not actually engaged in a systematic attempt to understand the social world.

Sociology, is an attempt to understand the social world by situating social events in their corresponding environment (i.e., social structure, culture, history) and trying to understand social phenomena by collecting

and analyzing empirical data. This scientific approach is what differentiates sociological knowledge from common sense.

Thus, to obtain sociological knowledge, sociologists must study their world methodically and systematically. They do this through induction and deduction. With induction, sociologists gather data on the ground and formulate theories about what they find. These theories are then tested by using the scientific method in order to assess the theory's validity. In order to test a theory's validity, they utilize deduction. Deduction is the act of evaluating their theories in light of new data. Thus, sociological knowledge is produced through a constant back and forth between empirical observation and theorization. In this way, sociology is more rigorous than common sense, because sociologists test and modify their understanding of how the world works through scientific analysis.

2.1.1 The Sociological Approach:

Early sociological studies were thought to be similar to the natural sciences due to their use of empiricism and the scientific method.

Early sociological studies considered the field of sociology to be similar to the natural sciences, like physics or biology. As a result, many researchers argued that the methodology used in the natural sciences was perfectly suited for use in the social sciences. The effect of employing the scientific method and stressing empiricism was the distinction of sociology from theology, philosophy, and metaphysics. This also resulted in sociology being recognized as an empirical science.

Many people mistakenly believe that sociology is the study of the obvious. They claim that sociology is nothing but the application of common sense. But equating any science with simple common sense could not be further from the truth! Common sense is not always "common," nor "sensible." Statements like "Birds of a feather flock together" and "Opposites attract," while supposedly based on common knowledge, contradict each other. Because common sense does not always accurately predict reality, people need something else.

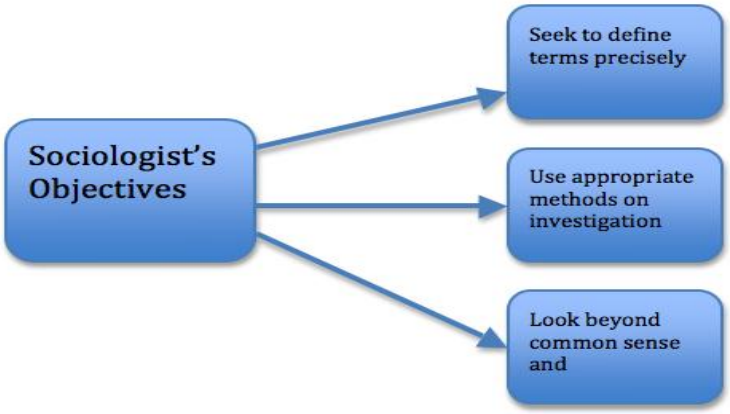
Not every sociological finding is revolutionary; many findings do appear consistent with common sense. By systematically testing common sense beliefs against facts, sociologists can sort out which popular beliefs hold true and which do not. To accomplish this, sociologists use a variety of social science research designs and methods.

Sociology as a discipline is more than common sense. Sociology is a method of inquiry that requires the systematic testing of beliefs against evidence.

Sociology and common sense, unlike popular belief, do not refer to the same thing. Many people believe that sociology is just common sense.

This misconception arises due to people not trying to even study sociology in the first place. In this article, I am going to discuss how sociology and common sense are different from each other.

To study this, we need to define what they exactly are. In layman terms, the social science which helps people to study the structure and dynamics of the society is called *Sociology*. It is more than common sense and this is why it is studied as a **discipline**. *Common sense*, on the other hand, is based on individual and natural hypotheses that one makes and this varies from person to person since opinions are not the same among a group of people. Though there is a close relationship between sociology and common sense, there is still a gap between them. While in sociology, the sociologist's research on whether which theories are fact or fiction by elaborately researching beliefs as well as evidence, in common sense, there is no hard and fast rule that a particular theory applies to everyone (since people have conflicting opinions). Though common sense is of use at times, it is not a systematic study and not everything can be predicted correctly.



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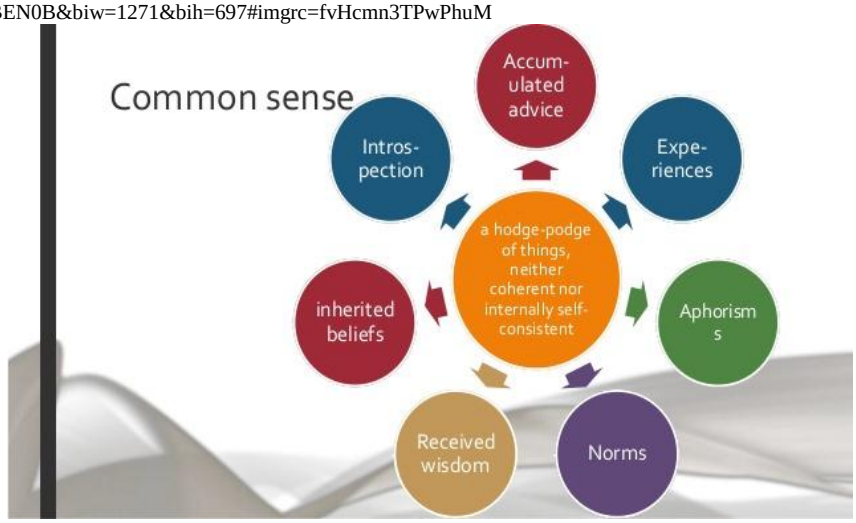

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2.1.2 Differences between sociology and common sense:

- Common sense of a person just an assumption. In this case, one has no evidence to back what one believes. Unlike common sense, sociological theories are not mere assumptions but a sociologist concludes upon the theories by collecting evidences and studying them in-depth. Given this research, the points put forward by these theories are reliable and truly applicable to real life.
- Common sense is based on personal experiences. But Sociology looks at the society not with respect to individuals but as a whole. While common sense develops as one experiences various situations but Sociology demands thoughts that are not merely individual experiences.
- Sociology is a scientific study of society. But common sense is not. Since Sociology is an elaborate study of the society (and includes research), it is a science. But since common sense doesn't require the same it isn't.
- In Sociology, while one is researching, one comes across the patterns that can be found everywhere in the world. But common sense is subjective since it differs from one individual to another based on the society one comes from.
- Common sense is very limited since the person's horizon is nowhere beyond the environment in one's vicinity. But Sociological findings are applicable to a huge number of people who come from varying backgrounds.
- Sociology calls for a great research and this allows for the authenticity of the data provided as well as the theories formulated. But this doesn't imply that common sense is of no use at all. Common sense is very useful and in fact, has helped many sociologists ponder over them and probe into them. So, both common sense and sociology are different but are closely knit.

Check your progress

1) Briefly explain sociological to research approach

2) Differentiate between soiciology and common sense.

2.2 QUALITATIVE AND QUANTITATIVE METHODOLOGIES

The contrast between positivist sociology and the *verstehen* approach has been reformulated in modern sociology as a distinction between quantitative and qualitative methodological approaches, respectively. Quantitative sociology is generally a numerical approach to understanding human behavior. Surveys with large numbers of participants are aggregated into data sets and analyzed using statistics, allowing researchers to discern patterns in human behavior. Qualitative sociology generally opts for depth over breadth. The qualitative approach uses in-depth interviews, focus groups, or the analysis of content sources (books, magazines, journals, TV shows, etc.) as data sources. These sources are then analyzed systematically to discern patterns and to arrive at a better understanding of human behavior.

Drawing a hard and fast distinction between quantitative and qualitative sociology is a bit misleading, however. Both share a similar approach in that the first step in all sciences is the development of a theory and the generation of testable hypotheses. While there are some individuals who begin analyzing data without a theoretical orientation to guide their analysis, most begin with a theoretical idea or question and gather data to test that theory. The second step is the collection of data, and this is really where the two approaches differ. Quantitative sociology focuses on numerical representations of the research subjects, while qualitative sociology focuses on the ideas found within the discourse and rhetoric of the research subjects.

2.2.1 Definition of Quantitative Research:

Quantitative research is a form of research that relies on the methods of natural sciences, which produces numerical data and hard facts. It aims at establishing cause and effect relationship between two variables by using mathematical, computational and statistical methods. The research is also known as empirical research as it can be accurately and precisely measured.

The data collected by the researcher can be divided into categories or put into rank, or it can be measured in terms of units of measurement. Graphs and tables of raw data can be constructed with the help quantitative research, making it easier for the researcher to analyse the results.

Quantitative Research is used to quantify the problem by way of generating numerical data or data that can be transformed into usable statistics. It is used to quantify attitudes, opinions, behaviors, and other defined variables – and generalize results from a larger sample population. Quantitative Research uses measurable data to formulate facts and

uncover patterns in research. Quantitative data collection methods are much more structured than Qualitative data collection methods. Quantitative data collection methods include various forms of surveys – online surveys, paper surveys, mobile surveys and kiosk surveys, face-to-face interviews, telephone interviews, longitudinal studies, website interceptors, online polls, and systematic observations.

2.2.2 Definition of Qualitative Research:

Qualitative research is one which provides insights and understanding of the problem setting. It is an unstructured, exploratory research method that studies highly complex phenomena that are impossible to elucidate with the quantitative research. Although, it generates ideas or hypothesis for later quantitative research.

Qualitative research is used to gain an in-depth understanding of human behaviour, experience, attitudes, intentions, and motivations, on the basis of observation and interpretation, to find out the way people think and feel. It is a form of research in which the researcher gives more weight to the views of the participants. Case study, grounded theory, ethnography, historical and phenomenology are the types of qualitative research.

Qualitative Research is primarily exploratory research. It is used to gain an understanding of underlying reasons, opinions, and motivations. It provides insights into the problem or helps to develop ideas or hypotheses for potential quantitative research. Qualitative Research is also used to uncover trends in thought and opinions, and dive deeper into the problem. Qualitative data collection methods vary using unstructured or semi-structured techniques. Some common methods include focus groups (group discussions), individual interviews, and participation/observations. The sample size is typically small, and respondents are selected to fulfils a given quota.

Difference between qualitative and quantitative research:

Criteria	Qualitative Research	Quantitative Research
Purpose	To understand and interpret social interactions	To test hypotheses, look at cause and effect, and make predictions.
Group Studied	Smaller and not randomly selected	Larger and randomly selected
Variables	Study the whole, not variables	specific variables are studied

Types of data collected	Words, images or objects	Numbers and statistics
Form of data collected	Open ended responses, interviews, participant observations, field notes and reflections	Data based on precise measurement using structured and validated data collection and instrument
Types of data analysis	Identify patterns, features, themes	Identify statistical relationships
Most common research objectives	Explore, discover and construct	Describe, explain and predict
Focus	Wild angle lens; examines the breadth and depth of topic	Narrow-angle lens; test a very specific topic
Result	Findings that are more generalised and directional	Findings that are projectable over population.

Table 2

Difference with respect to.	**Quantitative research**	**Qualitative research**
Underlining philosophy	Rationalism: That human beings achieve knowledge because of their capacity to reason'(Bernard 1994:2)	Empiricism:'The only knowledge that human beings acquire is from sensory experiences'(Bernard 1994:2)
Approach to inquiry	Structured/ rigid/predetermined methodology	Unstructured/flexible/open methodology
Main purpose of investigation	To quantify extent of variation in a phenomenon, situation.	To describe variation in a phenomenon, situation, issue.
Measurement of variables	Emphasis on some form of either measurement or classification of variables.	Emphasis on descriptions of variables

Sample size	Emphasis on greater sample size	Fewer cases
Focus of inquiry	Narrows focus in terms of extent of inquiry, but assembles required information from a greater number of respondents	Covers multiple issues but assembles required information from fewer respondents
Dominant research value	Reliability and objectivity (value-free)	Authetincity but does not claim to be value- free
Dominant research topic	Explains prevalence, incidence, extent, nature of issues, opinion and attitude; discovers regularities and formulates theories	Explores experiences, meanings, perceptions and feelings
Analysis of data	Subjects variables to frequency distributions, cross-tabulations or other statistical procedures	Subject response, narratives or observation data to identification of themes and describes these
Communication of findings	Organization more analytical in nature, drawing inferences and conclusions, and testing magnitude and strength of a relationship.	Organization more descriptive and narrative in nature.

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The differences between qualitative and quantitative research are provided can be drawn clearly on the following grounds:

1. Qualitative research is a method of inquiry that develops understanding on human and social sciences, to find the way people think and feel. A scientific and empirical research method that is used to generate numerical data, by employing statistical, logical and mathematical technique is called quantitative research.
2. Qualitative research is holistic in nature while quantitative research is particularistic.

3. The qualitative research follows a subjective approach as the researcher is intimately involved, whereas the approach of quantitative research is objective, as the researcher is uninvolved and attempts to precise the observations and analysis on the topic to answer the inquiry.
4. Qualitative research is exploratory. As opposed to quantitative research which is conclusive.
5. The reasoning used to synthesise data in qualitative research is inductive whereas in the case of quantitative research the reasoning is deductive.
6. Qualitative research is based on purposive sampling, where a small sample size is selected with a view to get a thorough understanding of the target concept. On the other hand, quantitative research relies on random sampling; wherein a large representative sample is chosen in order to extrapolate the results to the whole population.
7. Verbal data are collected in qualitative research. Conversely, in quantitative research measurable data is gathered.
8. Inquiry in qualitative research is a process-oriented, which is not in the case of quantitative research.
9. Elements used in the analysis of qualitative research are words, pictures, and objects while that of quantitative research is numerical data.
10. Qualitative Research is conducted with the aim of exploring and discovering ideas used in the on-going processes. As opposed to quantitative research the purpose is to examine cause and affect relationship between variables.
11. Lastly, the methods used in qualitative research are in-depth interviews, focus groups, etc. In contrast, the methods of conducting quantitative research are structured interviews and observations.
12. Qualitative Research develops the initial understanding whereas quantitative research recommends a final course of action.

2.3 SUMMARY

It is important for sociologists to study their world methodologically an systematically. This is done through induction and deduction methods.

Quantitative Research is a form of research that produces numerical data and hard facts. On the other end Qualitative Research is used in gaining an understanding of underlying reasons, opinions and motivations. The researcher depending on the topic of his research, chooses quantitative, qualitative or even mixed techniques to obtain first hand or even mixed techniques to obtain first hand information.

2.4 UNIT END QUESTIONS

1. Write a detail note on Sociological approach to research.
2. Critically examine the nature of sociology and the role of common sense in research.
3. What is qualitative and quantitative research? Evaluate the difference and applications of it in social research**.**

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3

POSITIVISM AND HERMENEUTIC INTERVENTION

Unit Structure

3.0 OBJECTIVES

- To understand that 'positivism' is a philosophical paradigm, based upon natural science of reason and logic.
- To understand the methodological perspective of 'Hermeneutics'.

3.1 INTRODUCTION

Positivism is a philosophy of science that rejects metaphysical speculation in favor of systematic observation using the human senses. 'Positive' knowledge of the world is based on generalizations from such observations that, given sufficient number and consistency, are regarded as producing laws of how phenomena coexist or occur in sequences (Lewis-Beck *et al.*, 2004).

The doctrine of positivism was formulated by Auguste Comte, the French philosopher, who is also known for being one of the founding fathers of sociology. Positivism is regarded as the scientific understanding of society. Although positivism, as a research paradigm, concerns itself with the social sciences, it draws heavily from the natural science. Positivism, being based on the principles of natural science, argued for the study of the society driven by scientific investigation and knowledge.

However, as noted by Bryant (1985), the terms 'positivism' and 'sociology' are both commonly supposed to have originated with Comte,

and in particular his *Cours de philosophie positive* (6 vols, 1830-42), although true of the second, this is misleading with respect to the first term in so far as Comte wrote not about 'positivism' but about 'the positive philosophy' and 'the positive method', and Saint-Simon before him had also advocated a positive philosophy.

The methodological perspective of hermeneutics, whereas, relates to the 'interpretation' of texts. It is one of the most complex research paradigms, where even social scientists struggle regarding its application. In hermeneutics, texts are not just read and interpreted for what has been written, but also attempts to understand what it implies, by whom and why it was written, in what contexts was it written, amongst other questions.

3.2 'POSITIVISM' – THE BACKGROUND

The philosophy of positivism was to solve the problems of social life, its progress by following the principles of natural science. In *A General View of Positivism*, French philosopher Auguste Comte (1798-1857), gives an overview of his social philosophy known as Positivism (Comte, [2009] 1848). The French Revolution had deep impact on the thinking of Auguste Comte, to the extent that he rejected religion professed 'religion of humanity'. Comte strongly felt that the scientific study of society would be the only way to solve its problems and thus named it 'sociology'.

Based on scientific principles, Comte formulated the doctrine or philosophy of 'positivism', mainly through his six volume work *Course of Positive Philosophy*, over a decade. Following the natural science principles, Comte proposed to look at the society as being governed by its own set of laws, just as the physical sciences. He, thus laid down the foundation of the scientific study of society, to become popular as 'sociology'. The uncertainty and chaos in the social life was to be resolved by the use and application of these scientific principles. Positivism in philosophy came to be associated with epistemologies which make experience the foundation of all knowledge. and also with their complementary ontologies which propose a division between objects which are accessible to observation and objects which are not Bryant (1985).

Comte was also significantly influenced by the early intellectuals. From David Hume and Immanuel Kant, Comte derived his conception of positivism—i.e., the theory that theology and metaphysics are earlier imperfect modes of knowledge and that positive knowledge is based on natural phenomena and their properties and relations as verified by the empirical sciences ('The New Encyclopaedia Britannica,' 1997). From the beginning, Positivism believed in the reality being accessible through our senses. Human experience plays an important role in acquiring the knowledge of reality. Thus, the validity through experience remains

crucial for positivist approach. In positivism, the scientific knowledge has to be verifiable through human experience.

Comte's main contribution to positivist philosophy falls into five parts: (a) rigorous adoption of the scientific method; (b) law of the three states or stages of intellectual development; (c) classification of the sciences; (d) conception of the incomplete philosophy of each of these sciences anterior to sociology; and (e) synthesis of a positivist social philosophy in a unified form (Duignan, 2010). Comte's law of three stages – a theological stage, metaphysical stage and positive stage – outlined the process of human intellectual development in the history of society.

Check Your Progress:
1. What is 'Positivism'?

3.3 THE FRENCH TRADITION OF POSITIVISM

It is well known that Comte not only coined the term 'sociology' but also introduced and systematized the positivist philosophy in the social science. Saint-Simon, in fact, provides a better starting point for an analysis of the French tradition of positivism than Comte for two reasons: (a) he announced the great nineteenth century project of the construction of a positive science at the start of the century, (b) he did so in a way that attracted admiration from Marx and Durkheim (Bryant, 1985).

The works of Saint-Simon, Comte and Durkheim display interconnections in their thinking and ideas. Bryant (1985) lists twelve tenets, which indicate the basic characteristics of the French tradition of positivism:

i. *There* is *but one world, and it has an objective existence.*
ii. *The constituents of the world, and the laws which govern their movements, are discoverable through science alone, science being the only form of knowledge. Therefore, that which cannot be known scientifically, cannot be known.*
iii. *Science depends upon the combination of reason and observation.*
iv. *Science cannot discover all the constituents of the world, and all the laws which govern them, because human powers of reason and observation are limited. Scientific knowledge will remain forever relative to the level of intellectual development attained and to progress in the social organization of science.*
v. *What man seeks to discover about the world is normally suggested by his practical interests and his situation.*

vi. *There are laws of historical development whose discovery will enable the past to be explained, the present understood and the future predicted.*

vii. *There are social laws which govern the interconnections between different institutional and cultural forms.*

viii. *Society is a reality sui generis.*

ix. *Social order is the natural condition of society.*

x. *Moral and political choice should be established exclusively on a scientific basis.*

xi. *The subjection of man before the natural laws of history and society precludes evaluation of institutional and cultural forms in any terms other than those of conformity with these laws.*

xii. *The positive, the constructive, supersedes the negative, the critical. The positive, the relative, also supersedes the theological and the metaphysical, the absolute.*

Check Your Progress:

1. What are the characteristics of the French tradition of positivism?

3.4 CENTRAL TENETS OF POSITIVISM

Blaikie (2007), through his meta-analysis of the literature on 'positivism', has presented some brief points to be incorporated as positivism's characteristics or its central tenets. There are:

- **Phenomenalism:** This rule asserts the acquisition of scientific knowledge only through human experience. Scientific knowledge is nothing but the perception by the senses, a 'pure experience', without any cognitive interference.
- **Nominalism:** Any abstract concepts used in scientific explanation must also be derived from experience; metaphysical notions about which it is not possible to make any observations have no legitimate existence except as names or words. Hence, the language used to describe observations must be uncontaminated by any theoretical notions. As 'reality' or 'truth' is believed to be observable through one's senses, any theoretical terms, such as 'God', which is non-observable, should be considered as meaningless.
- **Atomism:** The objects of experience, of observation, are regarded as discrete, independent atomic impressions of events, which constitute the ultimate and fundamental elements of the world. In so far as these atomic impressions are formed into generalizations, they do not refer to abstract objects in the world, only regularities among discrete events.

- **General Laws:** Scientific theories are regarded as a set of highly general law-like statements; establishing such general laws is the aim of science. These laws summarize observations by specifying simple relations or constant conjunctions between phenomena. Explanation is achieved by subsuming individual cases under appropriate laws. These laws are general in scope, in that they cover a broad range of observations, and are universal in form, in that they apply, without exception, across time and space.
- **Value Judgments and Normative Statements:** "Facts" and "values" must be separated as values do not have the status of knowledge. Value statements have no empirical content that would make them susceptible to any tests of their validity based on observations.
- **Verification:** The truth or falsity of any scientific statement can be settled with reference to an observable state of affairs. Scientific laws are verified by the accumulation of confirming evidence.
- **Causation:** There is no causality in nature, only regularities or constant conjunctions between events, such that events of one kind are followed by events of another kind. Therefore, if all we have are regularities between types of events, then explanation is nothing more than locating an event within a wider ranging regularity.

Check Your Progress:
1. What are the central tenets of 'Positivism'?

3.5 'POSITIVISM' AND SOCIOLOGY

Positivism in sociology has come to be associated with the very idea of a social science and the quest to make sociology scientific (Bryant, 1985). Positivists look at social reality as scientifically verifiable and measurable. Positivists believed that, just as the physical world is governed by the laws, human existence is also governed by certain laws that should be discovered. And therefore, sociology, from a positivist perspective, is also modelled on the laws of the natural sciences, which necessarily include logic and reasoning.

As sociology deals with the scientific study of society, positivism ensures scientific explanations – which are observed, verified and logically stated – of social phenomena, as it completely rejects theological or supernatural assumptions and explanations. As social actors remain important in the social phenomena, however, the positivist philosophy, within sociology, looks at the factual aspects of the phenomena, devoid of any subjectivity and value judgments of the actors or the researchers.

Romm (1991), through a meta-analysis of existing literature, affirms that the positivist theory of science is not the only theory which has become incorporated into the sociological enterprise, but this theory of science, and the research practice which it inspires, have assumed a dominant position within sociology. Thus the positivist pursuit of the sociological understanding of the society entails understanding the causal aspects of human behaviours, in order to understand how society operates.

Positivism in sociology shares a strange relationship. Sometimes, to be positivist means no more than being scientific, although that fails to discriminate between positivism and all the other sociologies that have claims to be scientific in perhaps different ways, such as Marxism, functionalism, structuralism, and so on; and sometimes, positivist sociology is synonymous with statistical analysis, as in many sociological research reports and methods textbooks; yet some other times, to practice positivist sociology is to seek to establish causal explanations, or to search for fundamental laws of human behaviour or historical change, or to insist upon objective empirical information systematically organized to generate or test hypotheses (Halfpenny, 2014).

Thus, for a positivist sociological investigation, we need necessarily need: an empirical basis of knowledge, where direct observation leads to the theory; the place of deduction and induction in linking 'theory' and 'observation'; constructing an hypothesis; tentative character of scientific statements; demarcation between science and non-science; objectivity; and establishing the causality (Romm, 1991).

Check Your Progress:

1. Elaborate on the positivist research methodology within Sociology.

3.6 HERMENEUTICS – THE BACKGROUND

Hermeneutics has been largely understood as the reading of the theological scriptures texts, with principles of exegesis (critical interpretation). Hermeneutics can also be seen as the moving away from the positivist tradition, as it emphasizes the subjective aspects of interpretation, rather than the objective side of the positivist tradition. And hence, hermeneutics can be seen as the science of interpretation, dealing predominantly with the ways and problems of interpreting these texts. Hermeneutics, in philosophy, emerged as theories of understanding with specific emphasis, such as methodological hermeneutics, epistemological hermeneutics, ontological hermeneutics and so on.

Religious texts thus become more accessible with the help of hermeneutics. It also helps understand what meanings these texts imply. Thus, hermeneutics has been seen as a science which helps in establishing the rules, principles and methodologies for the interpretation of religion and its scriptures, and also its relation to society (Anand, 1997). The term *hermeneutics* has origins in ancient Greek, and its modern term first enters the academic lexicon in Latinate form in the work of the Protestant theologian Johann Conrad Dannhauer (1603–1666); the Latin term *hermeneutica* is a translation of the Greek *hermeneia*, which was used not only to designate the activity of interpretation, but also the activities of declaration, explanation, translation, communication, and even artistic elocution (Keane *et al.*, 2016).

One can trace hermeneutics or the concept of *hermeneia* to the Aristotle. In his second major work on interpretation, known as ***De Interpretatione,*** in Latin (Περὶ Ἑρμηνείας in Greek), Aristotle defines ἑρμηνεία and can be broadly understood as *communication* and more specifically it is (i) any expression, animal or human, (ii) that is meaningful, (iii) that intends to communicate, and (iv) that seeks to stimulate attention, acknowledge, or agreement (Sheehan, 2016).

The next stage of development laid the foundation for modern hermeneutics. This was led by Friedrich Daniel Ernst Schleiermacher, a German Protestant theologian, Bible scholar and philosopher, as he saw hermeneutics as a science for understanding itself, he moved from a concern with the analysis of texts from the past to the problem of how members of one culture or historical period grasps the experiences of members of another culture or historical period (Blaikie, 2007). Schleiermacher, thus, unified and universalized hermeneutics, blending it become "general hermeneutics" (Keane & Lawn, 2016). According to Gadamer (1977), for Schleiermacher, the meaning of text is not at all what it "seems" to tell us directly, but rather its meaning should be recovered by a disciplined reconstruction of its original historical situation.

Hermeneutics evidently plays a central role in Schleiermacher's philosophy as a whole, which he expressly separates in certain respects from his theology, as he also repeatedly insists that there should be no difference in the principles of interpretation for religious and for secular texts (Schleiermacher, 1998). Schleiermacher's ideas and approach have been carried forward, upon which we see the modern hermeneutics.

Check Your Progress:

1. What has been the origins of hermeneutics?

3.7 HERMENEUTICS – THE MODERN TRANSITION

We see a gradual change from its background in scriptural and other textual interpretation, hermeneutics became the core discipline for understanding all great expressions of human life and as such this transition was instigated by Wilhelm Dilthey, a German historian and hermeneutic philosopher (Blaikie, 2007). Dilthey was highly influenced by the work of German philosopher Schleiermacher and developed it further, while simultaneously rooting the study in the history of mankind. The history of views played an important role in Dilthey's understanding or hermeneutics.

As Keane and Lawn (2016) observe, Dilthey attempted to develop hermeneutics as a methodology for the humanities, that has objectivity and as such just as explanation is the method of natural sciences, understanding would be the method for humanities. Hence, hermeneutics moved from the positivist tradition as Dilthey brought in the idea of *Verstehen*, along with hermeneutics, into the philosophy of social sciences. Dilthey based his arguments on the idea that the social science must incorporate the method of understanding to grasp the subjective consciousness of the participants (Blaikie, 2007).

Understanding is defined by Dilthey, as the process in which we grasp something inner, something psychical, which is the experience of an author, by way of an exterior sign, given in sensibility (Keane & Lawn, 2016). With this, Dilthey shifted the focus of the philosophy of social sciences from positivist tradition towards the more objective science with emphasis on the subjective aspects of it: understanding. Dilthey thus professed that a true science of humanities was possible only with the infusion of *Verstehen* into the philosophy.

Another early writer methodologically relevant to hermeneutics, is Edmund Husserl, another German philosopher, who is highly regarded for his contribution to the school of phenomenology. In fact, Blaikie (2007) states that phenomenology can be regarded as a parallel intellectual tradition to hermeneutics. Husserl, too strongly opposed the methods of natural sciences, as for him, humans are conscious of their activities and that it is this consciousness that plays an important role in understanding their social life.

Husserlian phenomenology is built up round the idea of reduction that refers to suspending the personal prejudices and attempting to reach to the core or essence through a state of pure consciousness (Kafle, 2011). Blaikie (2007) observes that, for Husserl believed that it was possible for a human being to exist in a state of pure consciousness. Husserl also promoted bracketing one's thoughts and prejudices in order to interpret. Husserl's ideas were taken forward in a different direction, by his famous disciple, Martin Heidegger.

Martin Heidegger, a German philosopher, conceptualized another school of phenomenology, termed as hermeneutic phenomenology. Heidegger strongly rejected the idea of suspending personal opinions and appealed for the interpretive narration (Kafle, 2011). Heidegger also advocated that the focus of the philosophy should be on the subjective experience of the individuals, which remains the crux of the interpretative process.

As stated by Sheehan (2016), 'phenomenology in Heidegger is entirely about hermeneutical questions' (p.1). Having a sense or meaning of something remained of utmost importance for Heidegger. Thus, the school of thought, hermeneutic phenomenology, was founded with Heidegger's works such as *History of Concept of Time* (1925) and *Being and Time* (1927) and was later enriched by other scholars (Kafle, 2011). However, Heidegger's approach was quite different from that of Husserl and Dilthey.

Check Your Progress:

1. What has been the contribution of Dilthey to modern hermeneutics?

3.8 HERMENEUTICS – RECENT DEVELOPMENTS

There has been a growing interest in the study of hermeneutics recently. Hermeneutical interpretations remain particularly important for debatable topics in the world religions. As observed by Keane and Lawn (2016), that in the latest developments within the hermeneutic tradition there is what might in a very general sense be called a new turn toward, not only self-understanding, but also 'objectivity', different from natural sciences. Since it is the objective that hermeneutics has to reflect upon, it should be first of all a theory of things and of knowledge about objectivities, before being a practical theory of self-understanding and hence new possibilities are opened up.

3.9 SUMMARY

As we saw, for positivism, reality exists and it can be observed with human senses. Thus, the human experience becomes very significant in order to understand the reality of social life. With the application of quantitative research methods, this methodological paradigm aims at understanding social life more and more scientifically.

Prior to classical hermeneutics, the religious texts had limitations for its interpretation. With the advent of hermeneutics, the texts were interpreted to understand what these meant. With Aristotle's major

contribution, hermeneutics moved to Schleiermacher's emphasis on understanding specific contextual cultural or historical experiences. thereafter, hermeneutics was enriched with the infusions of various thoughts and ideas from philosophers such as Dilthey, Husserl and Heidegger, moving on to more recent ones.

3.10 UNIT END QUESTIONS

1. Elaborate on 'Positivism' as a classical methodological perspective.
2. Elaborate on the French Tradition of Positivism.
3. What has been Comte's contribution to the philosophy of positivism?
4. How is 'positivism' incorporated into Sociology?
5. Elaborate on the earliest contributions to the hermeneutic approach to the study of society.
6. Which philosophers instigated the modern transition in hermeneutics?

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4

REFLEXIVITY AND SOCIAL RESEARCH, FEMINIST METHODOLOGICAL PERSPECTIVES

Unit Structure

4.0 OBJECTIVES

- To help the learners understand the emerging methodologies in the field of social research.
- To give a background framework and introductory to the concept of reflexivity and feminist research approach.
- To sensitize and develop awareness on feminist research writings and the interaction between subject and researcher.

4.1 REFLEXIVITY AND SOCIAL RESEARCH

4.1.1 Introduction :

The dominant methodology with which sociology began is that of Positivism started by Auguste Comte. Positivism in certain extent was inclined towards following that of natural science methods where the subject was seen as just as a passive actor. With the emergence of different scholars like Geertz, Max Weber who laid grounding for the Interpretative sociology which emphasised on interaction, meanings and going deeper on the topic.

For example – Imagine you are a researcher who is studying on maggi consumption by teenagers. You go to a classroom and ask students how many people are eating maggi? You count the numbers and come back. Here you are using the natural science method of observation (Positivism). However, you ask students why they consume maggi and have a indepth conversation or discussion then you are using more of qualitative methods, interpretative methodology. While hearing the students stories you recollect your own childhood experiences and you record it in your findings that is reflexivity.

Reflexivity is nothing but the idea that research doesn't happen in vacuum. During the process of research the researcher himself goes through a process/ transformation while studying the subject. This journey is also reported in the findings of the study.

4.1.2 Origin:

The adjective *reflexive* first appeared in English in 1588; it was used as early as 1640 to refer to the capacity of mental operations to be "turned or directed back upon the mind itself." Regarding things grammatical, *reflexive* has been used since 1837 to describe pronouns, verbs, and their significations that are, as the *Oxford English Dictionary* says, "characterized by, or denote, a reflex action on the subject of the clause or sentence." With reference to mental operations, the adjective is frequently confused and used interchangeably with its near synonym, *reflective*[i].

The value of reflexivity has been widely accepted in anthropology during the past two decades. The concept of reflexivity can be seen developing in the work of theorists and ethnographers of the 1960s and 1970s and was brought to flower among theorists and ethnographers of the 1980s and 1990s[ii].

Check Your Progress

1. Discuss the origin of reflexivity ?

2. State the dominant methodology before the interpretative approach?

4.1.3 Sociologists on Reflexivity:

Victor Turner and his students, focused on the study of reflexive moments in social life. Turner was interested in the ways in which social action was accomplished through the manipulation of symbols. Reflexivity, in Turner's sense, refers to moments in which social actors become conscious of and can reflect upon social life in ritual and other cultural performances which are "*reflexive in the sense of showing ourselves ourselves ... arousing consciousness of ourselves as we see ourselves*." (Myerhoff, p. 105)[iii]

According to **Mead,** a self is "that which can be object to itself," (Mead 1964, 204), or that "which is reflexive, i.e. which can be both subject and object.". The self, then, represents reflexive experience, simultaneous organic and mental activity. Only humans are capable of this. Only humans have, and are, selves. Lower animals have feelings such as pleasure and pain, but these belong to the organism, not to the self, for the feelings have no symbolic meaning. Mead found it convenient to express the dual and reflexive nature of the self through the concepts of the "I" and the "me." "The self is essentially a social process going on with these two distinguishable phases." (Mead 1964, 233)[iv].

Geertz while recording his observations on Bali cock fight writes about his own experiences how people rejected him at the initial stage. Later when he and his wife acted like a local they were accepted.

Check Your Progress

1. Explain any two thinkers who used Reflexivity in their work ?

Postmodernists have also used reflexivity to a large extent in the academic writing[v]. Even feminist scholars have used reflexivity to explain the interaction between the researcher and the researched. Reflexivity is different from bias it is the constant voice of one's own socialization, habits, customs or baggage which the research carries in the field. This reflexivity at times can come in face to face while dealing with sensitive topics like child abuse, domestic violence etc. For example- If the researcher has witnessed herself violence he or she would be able to relate and empathize with the subjects.

Now let us look into the second topic of this unit i.e., Feminist Methodological Perspectives.

4.2 FEMINIST METHODOLOGICAL PERSPECTIVES

Feminist methodologies attempt to eradicate sexist bias in research and find ways to capture women's voices. The process of feminist research is characterized by four primary features: (1) expanding methodologies to include both quantitative and qualitative methods (2) connecting women for group-level data collection (3) reducing the hierarchical relationship between researchers and their participants to facilitate trust and disclosure, and (4) recognizing and reflecting upon the emotionality of women's lives[vi].

In simple words, the producers of knowledge for a long span of generations have been only men and they have been writing about how women experience the world. Feminist research basically tries to question this approach. It is women who are writing about themselves.

Reinharz, book titled 'Feminist methods in social research' talks about core components of feminist research like:

1. Feminist research is guided by feminist theory.
2. Feminists use multiplicity of research methods.
3. Interdisciplinary research is used while conducting research like history, psychology, literature.
4. The aim of feminist research is to bring about a social change.
5. Feminist research strives to recognise diversity.
6. It focuses on the experience of the research.
7. It also helps in building a connection between the reader and the people studied[vii].

Haig, points out certain common features of feminist methodology through several literature analysis like –

1. It rejects the positivism methodology of generalization, using methods of science, quantification.
2. It looks into the influence of gender relations.
3. It questions the science.
4. It adopts a liberatory methodology whereby emancipation of women from oppression is seen through writing, questioning.
5. It speaks about non-hierarchical research relationships.
6. It speaks about ethnography, taking feminist standpoints[viii].

Check Your Progress

1. List out some of the common features of feminist methodological perspective?

To understand feminist research methodology we need to look into the background of gender movements. The below given background will

to help us to understand the historical background of the whole of feminist movement, the struggle, the history and its changing form with new form of media like social media.

4.2.1 Feminism:

The Merriam Webster dictionary, describes feminism as the theory of the political, economic, and social equality of the sexes and an organized activity on behalf of women's rights and interest.[ix] Feminist movements for several decades have campaigned for rights of women, like right to vote, to hold public office, to work, to earn fair wages or equal pay, to own property, to receive education, to enter contracts, to have equal rights within marriage and right to have maternity leave. Feminists have also worked on important areas like promoting bodily autonomy, integrity and to protect women and girls from brutal crimes such as rape, sexual harassment, and domestic violence[x]. In other words, feminism talks about women's rights both at home and outside home.

4.2.2 Intersectionality and feminism:

With time the discussion of women's rights also changed its form with intersectionality concept through which women's rights or universal sisterhood idea is not accepted. The term intersectionality was coined by civil rights advocate Kimberle Williams Crenshaw points out how women do not have common experiences all over the world. For example – The black women experiences more problems in terms of being women, racism discrimination and economic marginalisation compared to middle class white women. The feminist research at present doesn't restrict to studying women and her experience but it also talks about the transgender, queer or any other category which does not confine it to a label even.

4.2.3 Misogyny:

Even today the misogynistic behaviour is very common hence studying about women becomes very important. The term "misogyny" is derived from the Ancient Greek word "mīsoguníā" which means hatred towards women. Misogyny has taken shape in multiple forms such as male privilege, patriarchy, gender discrimination, sexual harassment, belittling of women, violence against women, and sexual objectification[xi].

4.2.4 Background to Feminist writings:

For several generations it is the men who have dominated in knowledge production. Even in the West many a times women used to write on the name of men i.e. they used to fake themselves as men and publish. As the society at that time didn't expect a woman to write about topics like sexuality. It was a taboo. So women were forced to use male names. So, often it is men where the knowledge producers. These men with their limited view about women wrote about women. This was often the case where women were shown as weaker sex, as a sexual object or in

a bad light. So, several scholars like Kate Millet question this knowledge production in their work and calls it as sexual politics. Kate Millet work stood as an important book which was contributed in the Feminist movements.

4.2.5 Feminist movements:

The feminist movement could be divided into four waves. The first wave of feminism started with the "Women's suffrage movement" in 1848 in New York under the leadership of Susan B. Anthony and Elizabeth Cady Stanton. This movement aimed at promoting women's right to vote. The second wave which started somewhere in 1960s campaigned for the legal and social equality for women, it included issues about their reproductive rights, legal inequalities, domestic violence, marital rape and divorce law. The third wave which began in the 1990s dealt with issues such as sex positive feminism, intersectionality, transfeminism, vegetarian ecofeminism, and postmodern feminism. Sex-positive feminism or sexually liberal feminism, propagates the idea of sexual freedom being an essential component of women's freedom. The fourth-wave feminism refers to a kind of feminism that began around 2012 which targets sexual harassment, campus sexual harassment, rape culture, workplace discrimination, body shaming, sexist image in the media, online misogyny, assault on public transport, and other type of harassment that is associated with the use of social media. The recent issues which were shocking and horrid like Nirbhaya Delhi Gang Rape, Harvey Weinstein allegations, and Bill Cosby allegations gave birth to campaigns like Everyday Sexism Project, No More Page 3, and the recent #MeToo. (Srivastava, etal. 2017).

Check Your Progress

1. Discuss the meaning of Feminism?

2. How has feminist movement shaped the feminist writings?

4.3 SUMMARY

Thus, two important topics of research was dealt in this chapter. i.e. Reflexivity and feminist research methodological perspectives. Reflexivity relates to sensitivity to the ways in which the researcher and the research process may shape the data collected, including the role of prior assumptions and

experience[xii]. Feminist research methodology on the other hand, talks about how the field of research has been dominated, marginalized. So, feminist approach has been questioning this bias and trying to bring about a change through writing and research with large amount of women contribution.

4.4 UNIT END QUESTIONS

1. What is reflexivity? Explain its origin and need in Social Research?
2. Explain feminism and how feminist ideology shaped feminist writings?

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5

VIRTUAL RESEARCH, THE NATURE AND APPLICATION OF STATISTICS IN SOCIOLOGICAL RESEARCH

Unit Structure

5.0 OBJECTIVES

- To introduce the students to the concept of Virtual Research
- To explore the benefits and uses of Virtual Research
- To know the use of Computers and the softwares useful for Virtual Research
- To Know the Ethics while conducting Virtual Research

5.1 INTRODUCTION TO VIRTUAL RESEARCH

The past couple of decades have seen a rampant shift in the structure of our society, as we move from a traditional society, to a more

digitalized one. With each passing year, the value and importance of technology has increased in fourfold. Digital literacy has become a vital skill in various fields and its importance will only continue to grow into other areas. The field of research holds no exception to this. Over the past couple of years, the role of computers and other digital channels have only gained importance in research and for researchers. While critics are still debating the effects of this transition, it is without a doubt that virtual learning and researchers have aided researchers in a multitude of ways.
As Eynon, Fry and Schroeder mention in their paper "*The Ethics of Internet Research"*-

"The Internet has emerged as a major data resource for social science research. Not only is it a lens through which to observe our subjects of research and how they construct their identities and communities online, but it can also be a tool for gathering and analyzing social science data on a large scale. The uptake of Internet research for quantitative studies in disciplines as diverse as information science, political science, and geography, together with its deployment in the emergent area of e-Social Science, means that the Internet is increasingly taking the form of a laboratory for the social sciences, in much the same way as astronomers might use a virtual observatory to understand the mysteries of the night sky."

Digital literacy has become one of the most essential skills of the 21st century. In brief, this involves the interaction, collaboration and management of data and information through digital platforms. This includes:

- **Digital Information Literacy**- "*Digital Information Literacy (DIL) is the ability to recognise the need for, to access, and to evaluate electronic information. The digitally literate can confidently use, manage, create, quote and share sources of digital information in an effective way."*
- **Digital Media Literacy**- "*Media literacy includes the ability to identify media and its messages and create media responsibly, digital literacy includes both nuts-and-bolts skills and ethical obligations."*
- **Information and Communication Technology (ICT) Literacy**- ***ICT Literacy*** *is* the ability to use tools of information and communication technology to:
  a. **Define** one's information problem clearly
  b. **Access** information efficiently
  c. **Evaluate** the reliability, authority, and bias of sources
  d. **Organize** and synthesize one's information with the best ICT tools available in order to use it effectively and responsibly
  e. **Communicate** one's new ideas effectively and ethically with the appropriate ICT tools available

Virtual research is a relatively new method of study. Hence, there are no comprehensive definitions for it. However, based on the popular and more

common uses for the same, one could try to identify it's benefits and use it to understand the concept of virtual research more clearly

Check Your Progress

1. Can you Explain briefly what is Virtual Research ?

2. What is Digital Literacy ?

5.2 USES AND BENEFITS OF VIRTUAL RESEARCH

5.2.1 How Researchers use virtual tools:

- The virtual world provides researchers with a larger window to the world. This allows them to understand, read and learn about research problems and issues across the globe. This in turns broadens the scope of research.
- Many researchers publish their work on online platforms. This enables researchers from different institutions and countries to refer to each other's work. Subsequently, this also helps to create a more comprehensive literature base for the research.
- The virtual world has reduced the distance between researchers and allows them to collaborate much easier. Especially during unforeseen circumstances like the COVID'19 pandemic, virtual platforms have come as a boon for researchers to share their work and learn from one another.
- The traditional pen/paper method of research has been replaced by digital tools like Microsoft Word, Notepad etc. These provide additional features, which make it easier for compiling the collected data. Other tools like Microsoft Excel, Google Spreadsheet and Scoro allow researchers to organize large amounts of data in a much more organized fashion.
- Additionally, external softwares like SPSS, Stata, Python, R, Sisense, CAT etc provide researchers with a number of features which enable them to clean and analyse the data, transcribe and utilize it in the best way for the research. These allow the researcher to save time and also reduces the number of possible errors which may arise when mathematically manipulating the collected data.

5.2.2 Benefits of Virtual Research:

- Virtual research supports many of the "21st century skills" (i.e., skills, abilities and learning dispositions required for success in the 21st century- predominantly involving the use of technology and economy). As mentioned earlier, societies are rapidly changing to become more digital in nature and it is crucial for researchers- especially social researchers to move with the times.
- It also helps in providing a more accessible and coherent method of connecting researchers across the globe.
- Aside from the traditional sources of literature available, the virtual sphere also provides researchers with a vast range of sources through which they may collect and/or compile data.
- Several softwares have also been created virtually to assist researchers in collecting, analyzing, and presenting data. Hence, the scope of the virtual assistance in research is not restricted to merely one area, but helps the researcher in a number of ways.
- It has become easier for academicians and researchers to work together and help one other with their projects/researches. There is a greater scope, not only for collaborations but also for peer reviews and other forms of assistance. Thus, it reduces the distance between them and also allows researchers from several different fields join forces and work together in ease.

Check Your Progress

1. Can you Explain a few advantages of Virtual Research ?

5.3 USE OF COMPUTERS

Computers are used actively by researchers in various facets of research. Some of them, as mentioned by Dr. Pawan Kumar Oberoi, in his book '*Research Methodology'* are:

1. **Access to Secondary Data:** A vast amount of secondary data- in the form of periodicals, documents, newspapers or articles can be accessed using computers. Many of the big libraries and other platforms allow students and researchers to retrieve and read such files using the internet. Further, one can also use it to access the database of organizations and other groups. Search engines like Google, Firefox have specialized engines which allow researchers to filter and collect the kind of data which they require. They have matching and indexing facilities which make it easier to track and find the desired kind of data.

2. **Data Collection over questionnaire made easy:** In several cases, samples for the research could be spread over a large area. Normally, it would take a number of days for the questionnaire to reach the participants and then for them to fill it and send it back. However, e-questionnaires have made things much easier and economical. Also, it becomes easier and could be accessed by the researcher, since it is saved on the computer.
3. **Useful during interviews:** Researchers use audio-visual tools to record interviews. This allows the researcher to concentrate on conducting the interview and allows him/her focus on the interview without getting distracted. Recording interviews also allows the researcher to go back and refer to the interview at a later stage. Further, Computer Assisted Telephonic Interviews (ATI), automatically selects and prompts the interviewer in asking questions. Hence, it makes the process more efficient and quicker. Additionally, even when conducting the focus group interviews, it becomes more economical for the researcher, as he/she can bring in a number of participants together at a much lower cost, while being concerned with lesser logistics.
4. **Comprehensive Observation:** Several times, observers may be subject to fatigue, halo effects and a lack of concentration when working over a continuous period of time. Hence, the data collected may be invalid or not reliable. Researchers rely on modern technology and use close circuit TV (CCTV) to observe the event carefully. The recorded data may be referred and used at a later stage.
5. **Computers for Data Analysis:** There are a number of softwares available today which ease the work of the researcher, especially with regard to editing, coding and tabulation. This also ensures that there are fewer non-sampling errors in the analyzed data. External computerized softwares are also extremely helpful when the researcher wants to perform complex statistical analysis. With the help of these softwares the data gets scanned and entered and could then be organized or edited using full screen editors, spreadsheets etc.
6. **Data Mining and Data Storage:** *Data mining* refers to the process through which meaningful, relevant data is extracted from a larger raw set of data. Softwares unearth valid, useful patterns from the larger data which is collected. Furthermore, associations between variables can also be found using 'data mining software'. *Data storage*- Within any kind of research, there is a vast volume of data which is collected by the researcher. While it is crucial for the researcher to refine the raw data to collect the desired information, it does not imply that the remaining data can be discarded. In certain cases, the researcher may have to re-do the research if they do not get the desired/ anticipated results. The saved data can thus assist them, instead of starting from scratch. Large amounts of data can easily be stored in data warehouses. Data warehouses shares and organizes large volume of data in a standardized form for retrieval, interpretation and sorting. Digital devices like a USB and hard-drive may be used for

storing the information. They could also be saved virtually on Clouds, backups etc.

7. **Multivariate Analysis:** Multivariate analysis techniques analyze the simultaneous relationship between three or more phenomena. These techniques are complex and cannot be carried out manually by the researcher. Hence, research projects using multivariate techniques of analysis rely on computers or other virtual software packages to perform these tasks easily.
8. **Reporting the Results:** Computers are extensively used even when reporting the results of the research. Whether it is a written or oral presentation, the researcher relies on softwares to aid them. If the research is reported in a written format, most commonly, the researcher would use Microsoft Word to present the findings. Power-point presentations are used when orally presenting a report. Additionally, diagrams and other graphical representations can easily be made with the help of computers. These enable the researcher to present their report in a more appealing fashion.

5.4 RESEARCH SOFTWARES USED IN SOCIAL SCIENCES

As mentioned above, there are a number of tools and softwares available virtually, which assist the researcher in a number of ways. Some of the most popular and commonly used ones are given below:

5.4.1 Statistical Package For Social Sciences (Spss):

SPSS is one the most popular softwares used by social researchers. It covers a broad range of statistical procedures which summarize the collected data (i.e., it computes the mean, standard deviation), determines the significant difference between the groups, examines the relation between the variables being studied by calculating the correlation, regression multiple etc and shows these results through graphs. SPSS is commonly used by researchers working in the field of sociology, political science, psychology for data analysis about people and their behaviour and attitude. SPSS has a number of features which streamline the entire analytical stage, and make it easier for the researcher to accomplish various stage of the data analysis process without having to duplicate their efforts. The most commonly used SPSS Module is called ‘Dimensions”- a system through which one can create and field surveys (in any mode and language), and also provides data analysis and reporting. Hence, using a single software, researchers can manage complex sections of data, as well as global, multilingual projects in a smooth and economical manner.

R:

R is an integrated suite of software facilities for data manipulation, calculation and graphical display. Among other things it has-

- an effective data handling and storage facility,

- a suite of operators for calculations on arrays, in particular matrices,
- a large, coherent, integrated collection of intermediate tools for data analysis,
- graphical facilities for data analysis and display either directly at the computer or on hardcopy, and
- a well-developed, simple and effective programming language (called 'S') which includes conditionals, loops, user defined recursive functions and input and output facilities.

R is very much a vehicle for newly developing methods of interactive data analysis. It has developed rapidly, and has been extended by a large collection of *packages*.

5.4.2 Statistical Analysis System (SAS):

SAS was developed by North Carolina State University and is used for performing tasks like:

1. Data Entry, retrieval and management
2. Report Writing
3. Statistical and Mathematical Analysis
4. Operational research
5. Applications development

SAS has two primary components:

1. **Data Set:** It reads the data from the external sources, manipulates it and combines it together. It consists of information describing the data set and the data value which are stored as table values.
2. **PROC Step:** At this stage, it performs mathematical and statistical analysis and produces the resulting report. It includes categories like report writing, procedures like frequency measures, correlation, univariate analysis etc.

5.4.3 STATA: Software for Statistics and Data Sciences:

STATA is a general-purpose statistical software package created in 1985 by StataCorp. Most of its users work in research- especially in the\field of economics, sociology, political science, biomedicine, and epidemiology. Stata is a modern and general command-driven package for statistical analyses, data management, and graphics. It provides a number of statistical features like survival analysis, regression, time series etc and is also relatively affordable. Thenewer models of STATA make it one of the most sought after softwares for data analysis, as it provides a greater number of options on how to manipulate and present the data.

5.5 OTHER VIRTUAL TOOLS USED BY RESEARCHERS

5.5.1 Google Forms:

Google forms is one of the most commonly used tools for creating and sending questionnaires. It is free of cost and extremely user-friendly. It has a number of options and links the responses to either LINUS or Google Spreadsheet. Both LINUS and Google Spreadsheet have a number of features which aid in organizing the data. However, they do not help with complex data analysis and its features are very limited.

5.5.2 Microsoft Word:

Word is the most popular tools used in the world today. It has a number of features like an in-built dictionary, spell-check, cross-references etc. In addition to all this, it also provides a number of options with regard to graphical representations and diagrams. The newer updates also provide the researcher with options on translation, TTS (text to sound) and also provides over 20 language alternatives and typographies. Word is used by researchers, academicians and students alike in almost every field. Although commercially very successful, word has several limitations and cannot be used when handling scientific typography. It also holds very limited feature scalability, especially when large volumes of data are involved.

5.5.3 Microsoft Excel:

Microsoft Excel is another tool which is widely used by researchers, especially when organizing and analysing quantitative data. Excel provides a number of features which enable data and statistical manipulation and is relatively more user friendly than the other softwares mention. However, Excel is also limited in the number of features it holds (in comparison to R, STATA etc). Some of the key features of Excel are that:

- It is the best way to store data.
- You can perform a number of mathematical and statistical calculations.
- It has at least rudimentary form of all the tools for data analysis.
- Compiled data can be easily visualized with charts.
- Reports can be printed easily.
- It has a number of free templates.
- You can code to automate.
- One can transform and clean the raw data given using a number of ways.

5.5.4 ZOOM/ Skype/ Video Communication Software:

ZOOM, Skype and several other video communication softwares have gained importance in the field of research in the last couple of years. It attempts to reduce the distance between researchers and allows them to collaborate on more projects. These tools allow researchers to connect with one another using audio and visual features. It has a number of in-built features like Breakout rooms (which enable a meeting to be divided into smaller groups), recording, personal messaging etc. This in turn enable researchers and scholars to virtually connect with one another and discuss and work together, in a more economical and convenient way.

Aside from these, there are a number of other tools and softwares which aid researchers in a number of ways. As researchers begin to rely more on the virtual world, the tools available to them also keep updating. There are specific softwares designed for quantitative research (STATA, PYTHON, MATLAB, JPM), as well as for qualitative data (NVivo, ATLAS, Quirkos, MAXQDA etc). In addition to all of this, tools like SlideShare, Google Classrooms, Microsoft PowerPoint, ResearchGate, Google Scholar all enable researchers to present and share their work in a more effective and appealing manner. While all of them may have some disadvantage or the other, it is without a doubt, that research will be depending on virtual tools and softwares and these will only aid in simplifying and making the researchers work much easier.

Check Your Progress

1. Explain any 2 softwares used by the researchers in Virtual Research

5.6 ETHICS IN VIRTUAL RESEARCH

As in any form of research, a number of ethical considerations have to be kept in mind when conducting virtual research. While the larger framework of ethics remains somewhat the same with regard to respecting the participants privacy, objectivity, honesty, keeping confidentiality, maintaining integrity etc virtual research requires certain special considerations.

1. Respecting Anonymity:

As in any other form of research, it is crucial that the researcher respects the anonymity of the participant. Furthermore, care must be taken to ensure that the data collection process does not cause any harm to the participant (emotionally or mentally- especially if the matter being shared is sensitive). Since the interaction do not occur face-to-face, it is almost impossible to fully grasp the effect which the research may have on the

participant. Still, the researcher must take the necessary steps to ensure that the data collection goes as comfortably and conveniently as possible.

2. Handling sensitive data/ Publishing Responsibly:

Due to the anonymity of the internet, the researcher may come across a volume of data which could be sensitive or distressing in nature. They should handle such data with caution as in certain cases this may even hold legal complications for the researcher. Hence, care must be taken to reduce such risk and publish the information responsibly and sensitively.

3. Establishing netiquette and a good rapport:

When conducting the interviews or focus group discussions on an online platform, the liability rests on the researcher to ensure that basic netiquette (net etiquette) and rapport exists between the participants. The researcher must also make sure that the participants are comfortable and at ease to take part in the research.

4. Maintaining Integrity:

It is of utmost importance that the researcher maintains integrity when working on the research and at all stages of it. From ensuring that the secondary data is collected from citable sources, being honest with the participants when collecting data, informing the participants about the purpose of the research, and ensuring that he/she collects informed consent from the participants.

5. Confidentiality:

There is a great amount of risk which comes in when the data is collected and stored in a virtual cloud. Participants may sometimes share confidential data. It is crucial that the researcher respects this information and takes necessary precautions to ensure that the confidentiality of the information is not leaked. There are number of ways in which the researcher can protect this information, but it is equally important to ensure that the research uses the given data in an ethical manner, only to satisfy the purpose of the research.

5.7 PLAGARISM

Enago Academy refers to plagiarism as "*the unethical practice of using words or ideas (either planned or accidental) of another author/researcher or your own previous works without proper acknowledgment. Considered as a serious academic and intellectual offense, plagiarism can result in highly negative consequences such as paper retractions and loss of author credibility and reputation. It is*

currently a grave problem in academic publishing and a major reason for paper retractions."

The availability of information in a virtual, accessible place has made it easier to plagiarise. However, it is an extremely unethical practice. In order to combat and limit it, several external softwares have been created to check plagiarism in researches. Plagiarism is most commonly seen in the literature review of most papers. While referring to other publications is indispensable in research, it is not acceptable to merely copy-paste another person's work- be it a line, a paragraph or section. Additionally, even when referring to another's works, it must be cited and referenced in order to give the publisher due credit. The liability of this lies on the researcher, and care must be taken to ensure that all referred works are duly cited. Many institutes now make it compulsory for papers to go through an anti-plagiarism check to make sure that the work being submitted is original.

With the unprecedent changes that the world has seen in the past couple of months, the value and role of virtual research has once again gained paramount importance. The scope of virtual research is vast and its uses will only continue to grow in the years to come.

5.8 SUMMARY

Virtual Research is relatively new method of study. It involves using internet sources to conduct research. Digital literacy has become one of the most essential skills of 21st century which helps to collaborate and manage data and information using in virtual research which includes statistical package for social sciences (SPSS), Google forms, zoom /skype /video communication softwares are also gains immense popularity. However, certain ethics are required in order to maintain the quality of research.

5.9 UNIT END QUESTIONS

1. What is Virtual Research ? Explain its uses and benefits.
2. What are the various research tool softwares used by the Researchers?
3. What is Plagiarism? Elaborate on the Ethics of Virtual Research

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6

QUANTITATIVE AND QUALITATIVE METHODS

The sociologist, then, is someone concerned with understanding society in a disciplined way. The nature of this discipline is scientific. This means that what the sociologist finds and says about the social phenomena he studies occurs within a certain rather strictly defined frame of reference. —Peter Berger, An Invitation to Sociology, p. 16

Unit Structure

6.0 OBJECTIVES

- To introduce the learners with Quantitative and Qualitative Research Techniques.
- To understand the characteristics of Quantitative and Qualitative Research Techniques
- To help the learners to select appropriate Research techniques suitable to their Research

6.1 INTRODUCTION

Quantitative and qualitative methods are paradigms used in social research. They provide the researcher with a framework or design on the ways of conducting the research, especially with the collection and

analysis of the collected data. Before delving into what these methods are and what their uses entail, let's briefly understand what social research is. Research refers to "*the process of steps used to collect and analyze information to increase our understanding of a topic or issue.*" (Creswell, 2012) Social research, in specific, has been defined as "*one among many ways of constructing representations of social life. It is the product of individuals (or a group of individuals) that addresses a socially significant phenomena, engages directly or indirectly with ideas or social theory, incorporates large amounts of appropriate evidence that has been purposefully collected and results from the systematic analysis of this evidence.*" (Ragin, 2011, p.8) Social research involves an interface between ideas and evidence. While the former allows the researcher to comprehend the evidence collected, the latter allows ideas to be elaborated, tested, revised or in certain cases- even rejected. Social research is hence aimed at exploring, describing, explaining or predicting different social phenomena through data collection and analysis.

Depending on what the research problem, the question(s), and the aim of the study is, the researcher will have to choose an ideal method for data collection. The method the researcher chooses to employ, will then lead them to a research design, which in turn will lead them to the procedures and techniques of conducting the study. It is impertinent that the method chosen should be one which will allow the researcher to obtain the kind of data, which will aid them in achieving the objectives (or test the hypothesis) of the study.

The type of data being collected and analyzed could be broadly classified into 2 categories:

a. Numeric information gathered on scales of instruments (Quantitative)
b. Text information which is recorded and reported from the participants perspective (Qualitative)

Once the data has been collected, it could be inferred either in the form of statistical results (quantitatively) or by identifying the recurring qualities and themes and patterns which may have emerged (qualitatively). In several researches, both quantitative and qualitative data are collected and analyzed (mixed method).

Both quantitative and qualitative methods have a number of techniques which could be used by the researcher- for e.g. surveys, experiments, ethnographies, case studies etc. Despite the contentions by several scholars to depict one method as superior to another, it is interesting to note that quantitative and qualitative methods tend to overlap each other quite often. As Creswell puts it-

All social scientists gather data systematically, make careful comparisons, and use critical thinking. By understanding both approaches, you can best understand the full range of social scientific research and use them in complementary ways."

While the designs and objectives of both methods tend to differ in various ways, it is vital to remember that social research must always be conducted in a scientific manner; and must be consistently backed by adequate evidence- either quantitatively, qualitatively or by both.

6.2 QUANTITATIVE RESEARCH

Quantitative Social Research is understood as one of the most popular streams of research due to its evident and quantifiable configuration. A research which operates under the quantitative methodology, uses statistical and numerical data to test or prove a hypothesis or theory in question. They use standardized test results and value free quantified measures in order to understand a particular social problem.

Theoretically, quantitative researches utilize a POSITIVIST paradigm. This implies that the predictability of the subject matter is taken for granted. It follows the assumption that social subject matters follow a set of laws in a sequential manner and therefore, it is possible to anticipate and predict the course of action in a given similar context.

Quantitative researchers accentuate from theory to hypotheses to data to finally come to conclusions, hence it holds a DEDUCTIVE approach. This implies that it goes from an established law to many departing points. They predominantly deal with material traits, physical development, artifacts and empirical observations when collecting data. It attempts to grasp information at a surface level, and practices a MACRO LEVEL APPROACH when conducting the study.

6.2.1 Characteristics of Quantitative Research:

Some of the other characteristics of quantitative research are:

- In a quantitative research, the research problem is described through a description of trends or by the need to provide a rational for the relationship between the variables involved.
- The literature review is of significance as it provides a justification for the research questions being asked. It also aids in establishing the need for the research.
- The statement of purpose, the research questions and the hypothesis (if there is one) is specific, measurable and should be quantifiable in a structured, uniform manner.
- Numerical Data is collected from a large number of samples using instruments with pre-set questions and responses.
- Once the data has been collected, it is depicted through statistical figures, mathematical processing and manipulation and graphical representation. This allows the data to be analyzed by relating variables, comparing groups or establishing a pattern or trend, which is

then interpreted by comparing them to prior predictions or past research.

- ❖ The final research report must have a fixed structure and evaluation criteria and must be objective in nature.
- ❖ The researcher must take an unbiased approach and ensure that only value-free, measurable facts are presented. He/she should be passive and neutral during the course of the study.
- ❖ Quantitative research is conducted independent of the larger context, and predominantly aims to portray or establish a relationship between the variables in question.
- ❖ Quantitative research puts emphasis on precise and exact measurement of the variables. This is done to ensure that further statistical manipulation, comparison and mathematical processing is feasible.
- ❖ RELIABILITY, OBJECTIVITY and VALIDITY of data are important values in quantitative research.
- ❖ Ontologically, quantitative research deals with numbers and occurs in an artificial setting, with the researcher aiming to come at some kind of generalization.

In a quantitative study, the researcher identifies the research problem based on "trends in the field or the need to explain why something occurs" (Creswell, 2012, p.13). This means that the researcher attempts to establish an overall pattern from the responses provided by individuals and seeks to understand how this may vary among people. Other quantitative studies aim to explain the relation between variables and how one may affect another. Variables are "an attribute or characteristic of individuals that the researcher's study" (Creswell, 2012, p13). In social science, 3 kinds of variables may be used- nominal, ordinal and interval. In corroborating the relation between these variables, the researcher seeks to determine if these variables could be influencing one another. Hence, the focus of the quantitative approach is in *"carefully measuring (or experimentally manipulating) a parsimonious set of variables to answer theory guided research questions and hypotheses*" (Creswell, 2012, p.13)

Since the scope of a quantitative research is narrow, while framing the research question and purpose statement, the researcher must take care to think and identify the variables which they wish to study and also provide a rationale for the same. In studying these variables, the researcher must be able to obtain some measure or assessment on a pre-created instrument or record. Instruments are tools used for "measuring, observing and documenting quantitative data" (Creswell, 2012, p.14). It contains specific questions and possible responses, which has been developed by the researcher earlier.

This instrument or record should allow the data to be marked numerically on a scale of observation. Examples of instruments are

standardized tests, survey questionnaires or checklists. The aim behind this form of data collection is to enable *generalization of results*- i.e. to apply whatever has been studied from a small number of people to a larger group. Once the data has been collected, then it is analyzed through mathematical procedures called statistics. In this stage, the data 'is broken down into parts to answer the research question' (Creswell, 2012, p.16). This includes comparing the responses given by the individuals and relating their scores to support or defend the research questions and the hypothesis. Analysis is done with the help of prior studies or results which may have been predicted earlier and this will enable us to know if the data collected supports the assertions made earlier.

6.2.2 Four main types or designs:

Primarily, in the realm of social research, there are 4 main types or designs used to conduct a quantitative research, namely:

1. Experiment
2. Quasi Experiment
3. Descriptive Surveys
4. Correlational Design

- **Experiment:**

Experiments have been defined as those "in which the researcher manipulates conditions for some research participants but not others and then compares group responses to see whether doing so made a difference". (Neuman, 2014) Experiments aim to understand the influence and relation between the dependent and independent variable. It is predominantly used in psychology and finds limited application in sociological research. They are extremely useful in explanatory researches.

- **Quasi-Experimental/Causal Comparative:**

This is a research design that seeks to find relationships between independent and dependent variables after an action or event has already occurred. The researcher does this by comparing two or more groups of individuals. It is referred to as quasi-experimental or *post-facto research.* Quasi-experiments differ from experiments in the case that the unlike in an experiment- where the sampling is often random, quasi-experiments have pre-determined groups. While the setting may not be natural (just like an experiment), there is no control or manipulation of variables.

- **Descriptive Surveys:**

Surveys are most commonly used for the purpose of descriptive research. These aim to answer or describe a particular phenomenon. A survey is method used in a descriptive quantitative research "in which the researcher systematically asks a large number of people the same

questions and then records their answers." (Neuman, 2014). An integral method of quantitative research, it collects surface level quantitative data from a large number of people, at a given point of time, in order to arrive at conclusions, which may be statistically processed for further studies. For the purpose of conducting a survey, researchers popularly employ a questionnaire. This is done to learn about the preferences, opinions, behaviour and/or attitude of a large group of people, within a limited timeframe. Unlike in an experiment, conditions or variables are not manipulated in a survey to understand the participants response. Often, *a random sampling technique* is used, in order to get a representative sample. This will aid the researcher to generalize the collected information from the smaller group (few people) to the large population. The quantitative value of each question in the survey is pre-set. This enables the researcher to analyze them statistically and present them in the form of graphs, tables or charts.

- **Correlational :**

Correlational designs allow researchers to predict scores and explain the relationship among variables. In correlational research designs, "investigators use the correlation statistical test to describe and measure the degree of association (or relationship) between two or more variables or sets of scores." (Creswell, 2012) In this design, the variables are not controlled or manipulated as in an experiment; instead, using the correlation statistic, they relate two or more scores for each person. This design is utilized the researcher seeks to relate two or more variables to see if they influence each other. This design allows the researcher to predict a possible outcome, which could be backed by statistical data. While social quantitative researchers attempt to establish a relation or correlation between the variables in the study, it is often just a part of a larger study; correlation is not frequently used as the sole, singular method of research.

Irrespective of the design used by the researcher, all these approaches share the common goal of helping the researcher make inferences about the correlation among variables, and how the results derived could be generalized to a broader population.

Check your progress

1) Explain Quantitative Research

2) Which are the main types of the research design ?

6.3 QUALITATIVE RESEARCH

A qualitative research can be defined as-

A detailed study of a phenomenon, conducted in its natural setting, in a planned and scientific manner, in order to arrive at the correct interpretation of the study undertaken by the researcher.

Qualitative research is carried out to understand a particular social phenomenon in greater detail. This could be for a number of reasons:

a. Due to little existing literature on the topic.
b. If it is an emerging issue.
c. If the topic (or a part of it/or an important variable) has not been addressed or studied before.
d. If the researcher is aiming to provide a newer interpretation on the matter.

In a broader sense, qualitative research is used for exploring and understanding how individuals or groups perceive or ascribe to a certain social or human problem. Qualitative research involves working around emerging questions and procedure through the perspective of the participants involved. The questions asked are open-ended and non-directional in order to get the honest perspectives and views of the participants. They begin with the terms *'what'* and *'how'* rather than '*why'*. The questions are often quite broad and not specific or to the point.

Alan Bryman has presented 3 primary aspects of qualitative research:

1. Qualitative research is INDUCTIVE in nature. This means that a theory is generated from associated research.
2. Epistemologically, it is INTERPRETATIVE in nature. In a qualitative study, the researcher attempts to interpret the 'multi-dimensional and multi-variable socio-cultural backdrop' from two angles:
   a. from the participants perspective
   b. from the researcher's viewpoint

Based on his/her interpretation of the same, the researcher then arrives at the real meaning of the social phenomena.

3. Ontologically, the research is said to be CONSTRUCTIVIST. This implies that social properties are an outcome of the interaction between individuals, rather than being caused by an external phenomenon. Hence, the researcher will have to 'construct' the meaning of the phenomena from the several threads of reality which emerges from his/her study.

6.3.1 Characteristics of Qualitative Research :

Several other characteristics of a qualitative research are:

- Qualitative research is DESCRIPTIVE in nature. Hence, it does not aim to quantify- rather it looks to observe, understand and interpret the variables and the larger phenomenon under study using verbal and qualitative interpretations.

- They occur in a NATURAL SETTING. The backdrop for conducting the study is not in an artificial or contrived environment. Since qualitative research aims to understand people's experiences and ideas- these are best appreciated and expressed in an organic context. An artificial setting, defeats the purpose of a qualitative research.

- In a qualitative study, the researcher plays a crucial role. While the participants views are important, the researcher is the key element who controls the situation in order to achieve the objectives of the study. Hence, researchers are crucial for observing the situations, navigating the process and for adequately perceiving and connecting the data collected.

- The sample size of the research is small. However, it covers multiple issues in depth- thereby getting numerous threads and perspectives into the research problem. Qualitative research provides a HOLISTIC account of the research.

- Qualitative research handles non-tangible and non-material traits. It aims to understand the experiences, opinions, aspirations, feelings and perceptions which the participants have.

- Qualitative research does NOT claim to be value free. In the totality of the research, the researchers own perspectives and values are also included in the study.

- AUTHENTICITY and TOTALITY are important values when assessing the quality of a qualitative research.

- Theoretically, qualitative research uses multiple sources of information to understand a phenomenon in its entirety. Hence, it falls under the interpretative paradigm.

- *Hermeneutics* and *Phenomenology* are the basic theoretical assumptions upon which qualitative research rests. Hermeneutics refers to the branch of knowledge concerned with interpretation of texts; it looks beyond the surface level and attempts to understand the more creative meaning of the texts. Phenomenology, on the other hand aims to clarify, describe and make sense of the dynamics of human experiences.

- Emphasis of a qualitative research lies in understanding a particular variable and interpreting it in the larger context of things.

- ❖ In qualitative research, the investigator develops patterns and themes from the data collected in order to crystalize it into a more abstract pattern.
- ❖ Qualitative research doesn't follow a pre-planned, rigid design. Often, the method of designing the research emerges as the study progresses. This is also because there are a number of variables and perspectives which may get introduced to the study as it proceeds. The trajectory of a qualitative research is fluid. The researcher can only work with a general flexible design- which will develop with the research,
- ❖ Since qualitative research is interpretative in/ nature, it is difficult for it to hold *external validity*. Often the studies are executed in a particular social setting. The data being collected may hold relevance in that context and is bound to have some kind of variation in another context or situation.
- ❖ The data collected could be interpreted in a number of ways, even though the final validation may vary from one context to another, and based on the views of the researcher. Hence, it is subjective in nature.

The design of a qualitative research begins with a central research problem or issue, from which a research question and central objectives are formed. When designing a qualitative research, a couple of factors must be considered:

- ➢ Participants must be identified through purposeful sampling rather than random sampling. The people selected should be able to aid the researcher in understanding the social phenomena in a way most suitable for achieving the objectives and aims of the research.
- ➢ Qualitative researches require more interaction with the participants. There is often a greater need to communicate with them (perhaps even multiple times). Prior permission should be taken and it should be feasible to interact with the participant.
- ➢ Since the approach relies heavily on the views given by the participants, care must be taken when developing the instrument; it shouldn't be close ended, insensitive or restrict the views of the participants in any way.

Creswell in "Qualitative Enquiry" summarizes the steps of conducting a qualitative research- the researcher frames the study within the assumptions and characteristics of a qualitative research. They must then begin collecting data (from multiple sources to provide a more holistic view). The researcher acts as the tool for data collection, sensitively amassing the participants views. They then analyze the data inductively to establish themes or patters which may have emerged.

6.3.2 Techniques to collect data Qualitatively:

There are a number of techniques used to collect qualitatively. Some of them are:

- **Narrative Research:**

Narrative research is a qualitative research design which is commonly used in social science. The researcher attempts to study the lives of individuals and asks one or more individuals to provide stories about their lives or a particular social incident (depending on the research question). The researcher must therefore collect information from a number of sources- the central figure as well as from associates in order to get a larger picture. Then base on a theme or chronology, this information is then retold or re-storied by the researcher into a narrative chronology. Additionally, it is crucial that the researcher verifies the validity of the information that is narrated to him. Hence the central source must be chosen with utmost care.

- **Phenomenological Research:**

Phenomenological research is a research design more commonly used in philosophy and psychology. Through this method, the researcher describes the lived experiences of individuals about a phenomenon as described by participants. (Creswell, 2018). The researcher amasses information provided by several individuals who have all experienced the central phenomenon being studied. It is primarily done by conducting a number of interviews with the participants involved.

Grounded Theory:

Grounded theory is a design of inquiry in which "the researcher derives a general, abstract theory of a process, action, or interaction grounded in the views of participants" (Creswell, 2018). Grounded theory approach is popularly used in sociology. It involves a number of stages of data collection and refinement to establish a pattern. This is then processed multiple times by categorizing the information and then creating an interrelation between the categories before deriving an abstract theory.

- **Ethnogrpahy:**

Ethnography is a method of qualitative research in which "the researcher studies the shared patterns of behaviours, language, and actions of an intact cultural group in a natural setting over a prolonged period of time." (Creswell, 2018). It is commonly used in anthropology and sociology. Primary data collection mainly involves observations and interviews in order to understand the participants better. There are however, a number of ethical concerns involved in conducting a ethnography and extra care must be taken to ensure that neither the researcher or the group being studied are impacted to the extent where the integrity of the research is compromised.

- **Case Studies:**

Case studies are utilized in many fields of social research. They are popularly used to evaluate the scope or functioning of an occurrence or phenomena. In this method, the researcher develops an in-depth analysis

of a case (often a program, event, activity, process, or one or more individuals). Cases are bounded by time and activity, and researchers collect detailed information using a variety of data collection procedures over a sustained period of time.

Check your progress

1) Explain Qualitative Research

2) Describe any two methods of the Qualitative Research?

6.4 MIXED METHOD RESEARCH

Mixed methods research is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks. As Creswell put it, "the core assumption of this form of inquiry is that the integration of qualitative and quantitative data yields additional insight beyond the information provided by either alone."

6.5 SUMMARY

Research refers to "*the process of steps used to collect and analyze information to increase our understanding of a topic or issue.*" (Creswell, 2012) Social research, in specific, has been defined as "*one among many ways of constructing representations of social life. It is the product of individuals (or a group of individuals) that addresses a socially significant phenomena, engages directly or indirectly with ideas or social theory, incorporates large amounts of appropriate evidence that has been purposefully collected and results from the systematic analysis of this evidence.*"

Quantitative Social Research is understood as one of the most popular streams of research due to its evident and quantifiable configuration.

A qualitative research can be defined as-

A detailed study of a phenomenon, conducted in its natural setting, in a planned and scientific manner, in order to arrive at the correct interpretation of the study undertaken by the researcher. Qualitative research is carried out to understand a particular social phenomenon in greater detail.

Mixed methods research is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks.

6.6 UNIT END QUESTIONS

1. Explain the Quantitative Technique of Social Research.
2. What is Quantitative Research ? Explain various techniques of collecting data Quanititatively.
3. Explain Qualitative Technique of collecting Data for social research. Explain its advantages.
4. What is Qualitative Technique of Data collection and discuss its types.

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7

RESEARCH PROPOSAL AND RESEARCH DESIGN

Unit Structure

7.0 OBJECTIVES

- To introduce the learners to the concept of Research proposal.
- To explore its components.
- To know various types of Research designs.

7.1 INTRODUCTION

A research proposal is an indispensable part when of a research. It lays out the trajectory which the researcher intends to follow and provides a brief albeit convincing stand on the importance of the research. It should therefore explain what the researcher plans to do, how they propose to take it forward and a justification on why the research (and subsequently methodology) is being carried out.

"Good research proposals both give an overview of the project and a well-informed discussion of the nuts and bolts of the proposed research" (Burnett, 2009)

7.2 DEFINITION OF RESEARCH PROPOSAL

A research proposal is often referred to as the 'outline' or 'blueprint' that is prepared before the actual research begins. A well thought of research proposal is significant in a number of ways:

- It allows the researcher to work in a planned and systematic manner.
- Provides a base for the evaluation of the project
- Introduces the project and offers a background on the area of study
- Clarifies the stand of the researcher and what they aim to accomplish with the research.

The research proposal is vital especially when applying for funding or grants. It must be well articulated so as to convince the committee on why the funding or grant should be allotted to the researcher.

According the Carol Ellison *(Concise Guide to Writing Research Papers),* a research proposal should:

- Identify your topic of research
- Present a working thesis
- Explain the method of conducting your research
- Present a hypothesis and the expected/anticipated result

Hence, with a research proposal, the researcher should be able to justify and defend several key questions such as what the researcher is trying to find out and what are the research questions that he/she is trying to answer. Additionally, the proposal should also cover the significance or relevance of conducting the particular study and how it will add or refine the existing body of knowledge. (Punch, 2005)

Punch further writes in *'Developing Effective Research Proposals'*-

"*The proposal itself needs to be presented as an argument. Seeing it as an argument means showing its line of reasoning, its internal*

consistency and the interrelatedness of its different parts. It means making sure that the different parts fit together, and showing how the research will be a piece of disciplined inquiry. As an argument, the proposal should show the logic behind the proposed study, rather than simply describing the study. In so doing, it should answer the question of why this approach, method and design have been chosen for this study." (Punch, 2005, p.66)

The format of a research proposal may differ from one project to another, yet there are several crucial components to a research proposal. These are:

1. Title of the research
2. Statement of Problem
3. Aims and Objectives
4. Introduction and background
5. Significance
6. Review of Literature
7. Research Methodology
8. Budget
9. Time Frame
10. Anticipated Problems
11. Ethical Concerns
12. Proposed Outcome
13. Bibliography

Check your progress

1) What is a Research proposal?

2) Name a few components of Research proposal.

The researcher must follow the format that is given by their respective organization or guide when submitting a proposal. Care must also be taken to ensure that it doesn't hold any theoretical inconsistencies, grammatical errors or the alike. The research proposal may be modified several times according to the feedbacks provided- however, it must always be well constructed and properly presented.

7.3 COMPONENTS OF RESEARCH PROPOSAL

7.3.1 Title :

The title of the research proposal will be the first thing on the document and hence must make an impact with the committee/audience. It must reflect on what the study aims to achieve and must be framed using appropriate terms. The title should focus on the relevant areas of the research and must be appealing enough to garner the attention of the committee and the larger audience to the rest of the research. Several times, if the research question itself is concise enough, it may be used as the title and could be additionally supported by a subtitle which throws light into the specific focus of the research.

7.3.2 The statement of the problem:

Once the researcher has figured out the research question which he/she choses to focus on, it is necessary that they frame it appropriately. The statement could be declarative, or may take a question form. The researcher must pay attention to ensure that the words used in the statement are appropriate and non-ambiguous and not vague. In doing so, the researcher sets a clear idea on what the focus of the research is. The statement must be concise and yet explanatory enough to give some kind of direction to the research process.

7.3.3 Aims and objectives:

Once the researcher has stated the research problem, they must specify the aims and objectives of conducting the research. The aim of a particular research involves contributing to a "debate or academic thinking on the subject, research on the topic or action-oriented research aimed towards policy or such kind of intervention" (Burnett, 2009, p.82)

Objectives on the other hand are more specific than aims and focuses specifically on the research questions and the research problem. The objectives must be formulated clearly, and should be to the point. In case there are multiple research objectives, it is important to ensure that all of them are related to each other in some way. These objectives should fall under the larger purview of the aim of the research.

7.3.4 Introduction and background:

While the researcher may be abreast about the research topic being studied, the same cannot be said about others. Hence, it is important to provide a concise summary about the background of the topic. This will introduce the topic to the audience. Providing this foundation, will also later assist in explaining the significance of the research topic. The introduction should not be too lengthy, but must deliver the base for which

the rest of the proposal will stand. The introduction should not aim to review the literature- rather it should provide the logical sequencing for taking the proposal forward.

7.3.5 Significance:

It is crucial to explain the significance of conducting a particular research. This provides the utility of the research. The researcher must be able to defend and explain how this particular work would add to the existing body of knowledge. In several cases the research would be aiming to refine work existing in a particular field or provide an extension or in-depth analysis of the existing literature. A strong, well thought of significance is vital in explaining the implication the research would have on a particular area of study. This will also help in explaining the relevance of the research and the benefits it will provide to tackling a problem. The significance should attempt to connect the objectives of the research to the data collected and justify them.

7.3.6 Literature Review:

Literature reviews are a vital part of the research proposal. By having a thorough understanding of the existing literature in a particular field, the researcher is able to justify the relevance and often the novelty of the study he/she is undertaking. As effective research is based on existing knowledge, an exhaustive literature review allows one to justify the need for undertaking a particular research, and explain how it will add to the existing body of knowledge. This will also ensure that there is novelty in the work done and may also provide useful hypothesis or suggestions for the research. The literature review is crucial in establishing how the proposed study can be located in relation to present knowledge and practice. It is not important to quote or mention every piece of literature existing in the field- but one should concentrate on the relevant studies. It is worth noting that the literature reviews are not merely concise summaries of the already published work, rather they could work as arguments to justify the significance of the research in question. In a quantitative research design, the literature review often aids the researcher with suitable theories which could be utilized to strengthen the study. In a qualitative design, it may also be used to sharpen the focus of the study and will aid in reinforcing the design of the research. The search for related literature is valuable in "defining the problem, recognizing significance, suggesting promising data-gathering services, appropriate study design and for other sources of data." (Best, 2017, p.40)

7.3.7 Research Methodology:

Based on the research design which is being employed by the researcher, there are a number of methods to collect data. Primarily, the methodology is concerned with 3 major components, namely, "subjects, procedures and data analysis" (Best, 2017, p.41).

a. Subjects: The selection of a sample is a crucial step in any kind of research. A number of variables are often involved and must be to taken into account to ensure that there is a representative sample. The researcher will also have to plan how and when they would contact their samples. Furthermore, the researcher must justify the number of participants in the sample, the variables (like education qualification, gender etc) which are taken into account, and also how these are important for the research.

b. Procedures: The methods of data collection should also be thoroughly looked into. This involves explaining how and what kind of data will be collected, what kind of data-collecting devices will be used, and how each of these processes will be undertaken.

c. Data Analysis: The researcher must carefully design how he/she plans to utilize the data that will be collected and also how this specific data will be used to justify the aims and objectives of the research.

7.3.8 Timeframe:

Almost all research is conducted keeping a particular time frame in mind. Since a research project involves a number of steps, it is critical to systematically plan ahead how much time each step will take. Carefully planning these steps will allow the researcher to divide and devote time as demanded for by each stage and allow the research to progress in a systematic and disciplined manner.

7.3.9 Budget:

Proposed budgets constitute an extremely significant requirement of any research activity. It should include clear cut allocation of important heads under research. Certain areas are kept flexible to the point that only the upper limit of the cost estimation is presented to ensure brevity and to incorporate last minute changes in the expenditure.

7.3.10 Anticipated Problems:

A good proposal should not only be concerned with the positives, but must also try to calculate the problems or hurdles which may come up during the course of the research. There could be certain limitations and barriers which may affect the research such as access to person or organization, confidential data, resource constraints, language barriers etc. These factors must be calculated as much as possible, and alternatives must be planned or thought of, if these hamper with the research.

7.3.11 Ethical Concerns:

Most researches include human participation in one form or the other. It is imperative that the research being undertaken follows all ethical considerations. Especially with regard to data collections and methods of

data collection, the research must carefully plan and justify how the ethical parameters will be maintained. These include (yet are not restricted to) collecting the participants consent for the research, maintenance of participants autonomy, handling of sensitive data, assurance of confidentiality among others.

7.3.12 Expected Outcome/Results:

It is critical to aim for a kind of outcome or conclusion from the research activity. The conclusion should be linked to the objectives discussed earlier in the paper.

Check your progress

1) It is necessary to maintain anticipated problem in a proposal? Give reason.

7.4 OTHER COMPONENTS

❖ Additionally, a proposal may also include the following (or they may be included with other components):

7.4.1 Research Problem And Research Question:

"A research problem is a definite or clear expression [statement] about an area of concern, a condition to be improved upon, a difficulty to be eliminated, or a troubling question that exists in scholarly literature, in theory, or within existing practice that points to a need for meaningful understanding and deliberate investigation." (Bryman, 2015)

After the researcher has identified the research problem, then they may begin to ask the crucial questions pertaining to the area of the research. These research questions will then be narrowed down and clarified to make the statement of the problem or even frame the hypothesis (if a hypothesis is involved).

When working on the research question(s), the following characteristics must be taken into account:

- Is the research question clear?
- Is it researchable?
- Does it hold some link with existing theory and literature?
- Is it novel? Does it even in a small way, add something new to the existing body of knowledge?

- If dealing with multiple research questions- ensure that they are all linked to each other in some way or the other.
- Ensure that the questions are neither too broad (keeping time and other resources in mind) nor too narrow (should make some kind of contribution to the area of study)

Check your progress

1. What is a Research proposal?

7.4.2 Operational Definitions:

In order to ensure that terms/phrases crucial to the research are not misinterpreted, the researcher must provide operational definitions, i.e. a clear-cut definition on how a term or variable is used in the particular research. This leaves no scope for ambiguity or misinterpretation in a particular study. These also assist the reader or audience to understand the variables of the study in its appropriate way.

7.4.3 Hypothesis:

"A research hypothesis is a tentative answer to a question" (Best, 2017, p.41). The hypothesis is formulated before the data collection begins in order to ensure that the research is not biased. Hypothesis are framed on the basis of already existing research and/or theory. They are an educated guess the researcher makes, which he/she tries to prove through the research being undertaken.

7.5 RESEARCH DESIGN

"The research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data." (De Vaus, 2001).

Creating a research design is a vital step in taking your research forward in a systematic way. It links the earlier stages of the research (i.e. identifying the research problem, formulating the research question, framing your aims and objectives), and strategizes a way to synchronize the various components and collect the data, so as to provide a plausible outcome to the research. Hence, it aims to "ensure that the evidence obtained enables us to answer the initial questions as unambiguously as possible." (De Vaus, 2001)

The research design works as a bridge between the proposal and the actual research process. The research design must be well thought-out, and should explain and justify a number of elements such as:

- Type of research design which is being utilized
- Role of the researcher
- Methods used to execute the various areas of the research (sampling, data collection and data analysis)

When developing a research design, the researcher must keep a number of things in mind:

- What are the methods which will be used and why are they the best option for this research?
- Will the methods used provide the kind of data that is required to answer the research question? Will it help address the aims and objectives of the study?
- Is the method being used feasible and ethical?
- What are the possible limitations which could arise from using that particular method? How can these be tackled?
- What are the devices which will be used for data collection and data analysis? Are they practical and available?
- Can the data collected through this method be deemed as reliable and valid?
- Can this research be replicated?

According to De Vaus, a good research design must hold *Internal and external validity.* An *internally valid* research design must achieve the conclusions it has aimed for. *External validity* implies that the research may be generalized across social setting.

Depending on the broader aim of the research and what the research question looks to answer, research designs may be categorized into 2 broad categories: (De Vaus, 2001)

- **Descriptive Research**

Such a research aims to describe or answer the research question. It is mainly concerned with "what" a particular problem is.

- **Explanatory Research**

It attempts to answer "why a particular social problem exists".

Understanding the purpose of your research will enable the researcher to develop a research design more easily. It is worth noting that descriptive and explanatory researches are not entirely detached from another, and many researches often attempt to both- describe and explain a particular research problem.

Based on the type of research that is being undertaken (quantitative, qualitative or mixed), there are a number of research designs which could be used by the researcher.

Some of these are:
1. Experimental
2. Longitudinal
3. Cross-Sectional
4. Case Study
5. Comparative

- **Experimental Research Designs:**

The experimental research focuses on 2 variables- the independent variable (which is the cause) and the dependent variable (which is the outcome). Through this design, the researcher attempts to remove the influence of all the other variables, in order to clearly understand the effect of the intervention on the outcome. Experimental designs are not very commonly used in sociology.

- **Longitudinal Designs:**

A longitudinal design aims to study a particular sample or phenomena over a period of time. It involves measuring change over time and collecting data during 2 points. Longitudinal studies are often seen as extensions of survey, and are not a very popular research design because of the time and cost involved. However, they allow insight to the role of timing of certain variables and may be useful to make causal inferences.
Longitudinal Designs may be categorized into 2 types- panel study and cohort study. In a panel study, a sample is the focus of the study, and data is collected from within different kinds of people in the panel framework. In a cohort study, a group or a cohort, sharing a common characteristic or feature is studied.

- **Cross- Sectional Design:**

This is a type of research design in which data is collected from many individuals at a single time. A cross sectional research attempts to observe one or more variables influencing a social phenomenon, at a single point of time, without influencing them (unlike in experimental design). Once a form of data is collected, then it is used to find ‘patterns of association’ (Bryman, 2015)

- **Comparative Research Design :**

This design involves studying two contrasting cases using more or less identical methods. These cases are then compared logically, and in doing so it attempts to better understand the social phenomenon and variables involved.

Case Study:

A case study conducts a detailed and intensive analysis of a single case. The case in question must be relevant or crucial in a particular way- due to its nature or complexity. A case could be an individual, an institute, a community- hence there is no 'fixed size' to the case in question.

Bordens and Abbott in *'Research Design and Methods A Process Approach'* mention several other research designs. They have classified these as "*Non-Experimental Research Designs"*.

These designs are purely observational in the sense that:

- They are correlational and do not in any way manipulate the independent variables.
- Data is collected primarily through the trained researchers' observations of the subject's behaviour. (Borden, 2018)

The Non-Experimental Research Designs are:

a. Naturalistic Design:

This involves the collection of data by observing your subjects in their natural environment. Care must be taken to ensure that the observations are made in a non-obtrusive way, since it may affect the quality of the data being collected.

b. Ethnography:

In an ethnographic design, the researcher stays for a prolonged period of time with the community or social group that is being studied. They immerse themselves with the social setting in order to observe and understand the subject(s) being studied in a more thorough manner.

c. Sociometry:

It is a quantitative method for "identifying and measuring social relationships within a group". (Borden, 2018, p.247) In a sociometric study, the research participants evaluate each other along some dimension and this data is quantified to better understand social relations between the subjects being studied.

d. Archival Research:

This is a strategy that involves analysing and collecting data from existing archived records. These records could be "historical accounts of events, census data, court records, police crime reports, published research articles, medical records, social media information, or any other archived information" (Borden, 2018, p.250). However, a number of things must be kept in mind before using this design. The archived records could hold an

expansive collection of data. The researcher must have specific research questions in mind, or they may find themselves lost in the massive amount of information. Secondly, archival records are often not easily accessible. Hence, the researcher must consider whether the project is feasible or not.

e. Content Analysis:

This research design is used when the researcher wishes to "analyse a written or spoken record for the occurrence of specific categories or events (such as pauses in a speech), items (such as negative comments), or behaviour (such as factual information offered during group discussion)" (Borden, 2018, p.251)

7.6 UNIT END QUESTIONS

1. Explain Research Proposal and its various components
2. Explain Research Methodology and its major components
3. What is Research Design ? Explain various types

7.7 REFERENCES AND FURTHER READINGS

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8

DATA COLLECTION AND ANALYSIS, WRITING RESEARCH FINDINGS

Unit Structure

8.0 OBJECTIVES

- To introduce the learners with the concept of Quantitative and Qualitative analysis.
- To understand various steps in the Analysis of Data.
- To understand how to write Research findings

8.1 INTRODUCTION

Data analysis is the most crucial part of any research. In this stage, the researcher summarizes the collected data and constructs or interprets it in a way, so as to fulfill the objectives of the study. It is done through analytical and/or logical reasoning, to reveal patterns, trends, or relations between the variables studied. The method of data analysis and interpretation are starkly different in quantitative and qualitative researches. This is because, since the research designs are distinct, the form in which the data gets collected is also different. However, in either case, the purpose of data analysis is to interpret the data collected, so as reach an inference on the hypothesis or the objectives of the study. The analyzed data can then be used by the researcher, as evidence as they attempt to answer the research problem.

8.2 BASIC STEPS IN DATA ANALYSIS

Although the method of data collection could change based on the research design being used, most data analysis follow 3 basic steps: (Marczyk)

1. Preparing the data for analysis
2. Analysing the data using appropriate methods
3. Interpreting the data

According to John Best, in a research, the stage of data analysis is when the data gets processed by the researcher. How the information collected gets analyzed depends on two things:

1. Type of Information- descriptive, quantitative, qualitative, attitudinal.
2. How the researcher chooses to communicate the findings to the readers.

When analysing and reporting the collected data, the method used for the analysis would depend on whether the researcher is using a quantitative or qualitative design (or a mixed design). It is interesting to note that the distinction between the two, often tends to be more theoretical and academic in nature, as most researches are likely to use some level of both. However, there are methods used exclusively for quantitative and qualitative designs.

Aside from the quantitative and qualitative distinction, the researcher must also take into account whether data analysis would be done manually or with the help of a computer. If the data collected is purely descriptive, then normally the researcher would choose to manually analyse the data. However, if there is a copious amount of data, then the researcher could do it with the help of a computer program. For qualitative researches, there are several computer software like NUD*DIST N6, NVIVO etc for this purpose. If the research is quantitative, then the researcher first has to decide on the kind of analysis required, i.e. if it is a frequency distribution, cross-tabulation or if it requires statistical procedures like regression analysis, factor analysis etc. There are several software programs like SPSS, R and Python which can also be utilized by the researcher for quantitative data analysis.

Data analysis is basically concerned with *data reduction*. At this stage the researcher reduces the data which has been gathered, so as to make sense of it. In case of quantitative data, this is done through some form of mathematical or statistical manipulation (such as averages, tables etc) and in qualitative data, this is done by grouping the collected data into various categories or themes. The preceding stage (i.e. data collection) collects copious amounts of data- only some of which is entirely relevant to the study. Data analysis hence, works as a kind of *data filter*, allowing

the researcher to take that data which helps him/her justify the purpose and needs of their research.

Check your Progress

1) Which are the basic steps in Data analysis?

In terms of the data that is collected by the researcher for the purpose of the study, analysis could be broadly separated into 2 categories:

- Primary Data Analysis
- Secondary Data Analysis

Primary data analysis refers to that data which is collected by the research themselves for the specific focus of the research. This implies that the data being analyzed has been collected by the researcher or a group of researchers to address certain questions. The method of research design and data collection too has been carefully selected by the researcher.

In contrast, secondary data analysis, is concerned with making sense of the data which has been collected by someone else, for another purpose or project. Hence, the researcher has had no direct involvement in the collection of data and it was not done to address the specific research questions of the researcher. Therefore, the same piece of data could be primary data for one researcher and secondary data for another. In case of secondary data analysis, the research attempts to utilize the information gathered by another researcher to support the claims and objectives of his/her study. Since the data has not been collected by the researcher, it is important that he/she familiarizes themselves with the data- method used for data collection, what the response categories were, the population that was being studied, and the other specifics of the data.

As mentioned earlier, data analysis is a crucial stage in research. It is important to ensure that all the steps of the research being conducted is valid, reliable and ethically just. Creswell mentions a few tips researchers should keep in mind when analysing data:

- **Remain Neutral:**

In certain cases, researchers may be tempted to support and embrace the views of the participants. This implies that instead of taking a neutral view, the researcher is inclined towards a particular opinion or view, or to present only that which supports the research hypothesis. In doing so, they may ignore or avoid some of the data that has been collected. In qualitative studies, this implies taking the sides and thereby

presenting the views of the participants only in positive light. In quantitative research, it could mean disregarding data may approve or disapprove the hypothesis the researcher holds.

- **Avoid disclosing only positive results:**

Ethically, it is important for researchers to disclose their complete findings, irrespective of whether or not they may suit the researcher's inclinations. Thus, in a quantitative research, the data analysis should reflect the statistical tests and no part of the data collected should go underreported. In qualitative research, the researcher must take care to report the whole range of findings- even patterns and themes which may not support his/her research.

- **Respect the privacy of the participants**

When analysing the data, the researcher must be careful to respect the privacy of the researcher. While their personal information may be collected during the data collection process, during the transcription stage, the researcher must disassociate the names of the participants from the responses. In qualitative research, the investigators use pseudonyms or aliases to respect the identity and views of the participants.

8.3 QUANTITATIVE ANALYSIS

Quantitative Analysis refers to the process where the data collected is classified and then processed using a set of statistical methods. It involves mathematical processing and manipulation, which is then interpreted and illustrated with the help of graphical representations. The data chosen for quantitative researches are collected randomly and in large samples. Thus, the analysis allows the researcher to apply the patterns or trends found in the sample to the general population.

Quantitative analysis is objective in nature and attempts to understand the occurrence of an event or happening and describe them using statistical methods. It is therefore not concerned with the random or scarce results of a study. However, is it vital to note that researchers must take care not to make sweeping generalizations about the analyzed data.

The kind of data collected in a quantitative design are primarily concerned with measurable quantities like length, weight, speed, width, temperature etc. Since the amount of data collected is expansive, in the process of data analysis, the researcher attempts to simplify the data using statistical techniques like *measures of central tendency, standard deviation* and *measures of dispersion.* This data is then expressed through diagrammatic representations (e.g. charts, graphs etc).

8.3.1 Steps:

Quantitative data analysis can be simplified when broken down to the following steps

1. Organizing the collected data:

The researcher could have collected data for the research from a number of samples. The first stage of data analysis should therefore be to organize the collected responses from the sources so that they may be explored or described in greater detail.

2. Expressing/Depicting the Data:

Once the data has been organized into a number of similar responses, then the researcher can begin to illustrate the data. Graphical representations may be used for this. In certain cases, the numerical figures collected would have to undergo some form of a statistical procedure so that they may be more easily expressed. These could be communicated through tables, figures, pie-charts, histogram etc.

3. Analyzing/ Summarizing to reach conclusion:

In this step, the researcher must evaluate the collected data to understand what the kind of responses have been like. This will allow them to interlink the responses with the hypothesis or research question. By this step, the data collected is no longer just in its raw form. Hence, the analyzed data should be able to assist the researcher in establishing or proving the hypothesis, thus leading to a conclusion of the research.

However, quantitative research is not without its limitations:

1. To ensure greater control over the subjects (such as in cases where experiments are conducted), the research could be conducted in an unnatural environment. Hence, the analyzed data will hold narrow scope and may not be applicable in real life situations.
2. Quantitative data analysis could be affected by structural bias- a result of missing data, unequal measurements and errors from the researcher.
3. Quantitative data analysis is often deemed superficial.
4. It is challenging to use quantitative data analysis when studying about new concepts or phenomenon. It merely deduces the data in hand with the hypothesis, but doesn't elaborate or explain why.

John Best in his book *Research in Education* pens down some of the thing's researchers must keep in mind when doing quantitative data analysis:

- *Are tables and figures used properly?*
- *Is explanation on the text clear and brief?*

- *Is the examination of relations between data based on logic and proper perception?*
- *Is the statistical analysis understood properly?*
- *Are all sections of the experimental design provided with results?*
- *Are they supported with apt statistical analyses and/or charts and graphs?*
- *Are the results projected directly in a straightjacket manner without explaining the reasons for their occurrence?*
- *Are all statistical analyses suitable and presented properly?*

Check your Progress
1.What is Quantitative Analysis?

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2. What are the steps involved in Quantitative Process?

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8.3.2 Types of Quantitative Analysis:

1. **1. Descriptive Analysis :**

A descriptive analysis is considered as the important first step of conducting a statistical analysis. At this stage, the data is described using its most basic features. The data is expressed through basic analytics, such as through the distribution of data, identifying the outliers, finding the basic associations etc. Descriptive analysis could be done with the help of multiple techniques like by finding the mean, range, standard deviation etc.

The 3 main kinds of descriptive statistics are:

- **Measures of Frequency:**

Frequency distribution is concerned with organizing the collected data into a systematic form so as to understand and access the frequency of some of the variables being studied. It simply accounts for the number of times a variable occurs through the course of data collection.

- **Measures of Central Tendency:**

Also referred to as an average, these indicate a "statistical constant, which enable us to comprehend in a single effort, the significance of the

whole." (Prof. Arthur Bowley) It condenses the mass of data into a single value, which then enables us to get a bird's eye view of the entire data. It is useful when comparing the data, either between at a point of time, or over a period of time. Measures of central tendency could be a mathematic average (or mean), or could be locational averages (such as median and mode)

- **Measures of Dispersion or Variation:**

Measures of dispersion or variation study the spread or scatteredness of the data. It enables the researcher to know more about the data, than merely the central term or average. Hence, it aids in supplementing the measure of central tendency, by providing information about how individual items are spread around the mean. There are 4 measures of dispersion- Range, quartile deviation, mean deviation and standard deviation.

2. Inferential Analysis:

According to Best, *"The purpose of inferential statistics is to draw inferences about a population on the basis of sample estimation. Inferential statistics are statistical procedures that are used to infer and draw conclusions about the population undertaken for study based on the data sample collected from them. Inferential statistics use descriptive statistics as the base from which inferences are drawn."*

Statistical tests (like T-Test, Parametric Test, Hypothesis test etc) are used to identify if there is an observed pattern in the data collected. Researchers use inferential statistics to determine the relation between the outcome and the intervention, or to analyze the strength of the relationship being studied.

8.4 QUALITATIVE ANALYSIS

Qualitative Analysis involved understanding and interpreting data which is in a non-quantifiable form. It is made up of words, symbols, actions and observations. It normally pertains to the information which the researcher has collected through qualitative methods like interviews, focus groups, observation etc. The analysis involves both primary and secondary sources, through which the researcher may have collected data. Since it is almost impossible to derive complete meaning from qualitative data, it is commonly used in exploratory and descriptive research.

Qualitative analysis is thus concerned with understanding and looking deeper into the properties or characteristics of a phenomenon. It provides the researcher with a deeper understanding by attempting to uncover "why" a certain event or trend occurs. Qualitative analysis may often be used with quantitative analysis, or may precede it. While the

scope of quantitative enquiry and analysis is restricted to mathematical and statistical manipulation, qualitative data analysis has a much wider range and the involvement of the researcher is also much greater and more important. Qualitative analysis is therefore subjective, descriptive, non-statistical and exploratory.

Since qualitative analysis has much less 'rules' to go by than a quantitative study, the researcher must also be well equipped to handle the large amounts of data which gets collected. Subsequently, in certain cases, the researcher may personally know or have a connection with the participants. It is important to ensure that these do not affect the study or hinder the research in any manner.

8.4.1 Steps:

While the techniques utilized for analysis may differ, most of them follow the same basic steps:

1. DESCRIBING/ Getting familiar with the data:

Qualitative analysis aims to develop a thorough and comprehensive descriptions of the phenomenon under study. Since qualitative data primarily consists of words, the first step in analysis is for the researcher to go through/read the collected data a couple of times to get familiar with it. It involves understanding the context, action and process of the phenomenon under study. This will enable a researcher to identify basic patterns and observations, which may be built on later. In case the data has been collected through an interview, this is the stage in which the researcher will transcribe the data.

2. CLASSIFICATION- Developing a framework:

This step is also known as coding or indexing. The researcher will start assigning codes to important broader areas such as certain ideas, concepts, phrases or characteristics. For e.g. the socio-economic status, age groups, gender etc could be broad areas which could be crucial to the study. This stage is important as it provides a form of structure to the data. By summarizing data, we take away the unnecessary details and delineate more clearly the central characteristics of the data.

3. CONNECTING- Identifying patterns and connections:

Once the data has been coded, the researcher can start to identify and make connections between the data. This could be related to certain themes, recurring ideas, patterns or common responses. These areas could then be interpreted by the researcher in ways to satisfy the objectives of the research. It would not only enable them to find answers to the research questions but it may also aid them in discovering new areas to explore further.

According to Ian Dey, some of the key points to keep in mind when doing a qualitative analysis are:

- Meanings are context-dependent
- Meanings are always negotiable between different observers
- In social science we can ask subjects what they mean
- Subjects intentions are not always a reliable guide to interpretation
- Process involves analysing changes over time
- Change can be analysed through phases, key incidents or the complex interplay of factors.
- Material as well as social factors affect change

The commonly used techniques of qualitative analysis are:

- ❖ Content Analysis
- ❖ Narrative Analysis
- ❖ Discourse Analysis
- ❖ Thematic Analysis
- ❖ Grounded Theory

Check your Progress

1) What is the qualitative analysis?

_____

_____

_____

_____

2) Mention a few techniques of qualitative analysis?

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8.4.2 Content Analysis:

Content analysis is one of the most popular and commonly used forms of qualitative data analysis. It involves analyzing documented information collected from texts, media etc. The data for this may have been collected from primary sources like interview transcriptions or focus group discussion transcriptions or from secondary sources. Content analysis is used to evaluate patterns from a range of sources or from the content available. Content analysis is most commonly done in interview transcripts. Since there could be a large amount of content to analyze, it is crucial for the researcher to have a specific research problem or question in hand when analyzing the data. In a content analysis, the collected data is regrouped and coded and further analyzed into categories or themes. While content analysis is commonly used, it is quite time consuming. It

has often been criticized for losing the smaller nuances of the idea being communicated when it gets coded and categorized.

Narrative Analysis:

The method of narrative analysis is used when the researcher focuses on using the stories and experiences of people in answering the research question. The researcher listens to the stories shared by people; this is done with the assumption that stories have some kind of functional purpose. It is useful when studying the life of a single individual or of a specific, particular phenomenon. It collects data from number of primary and secondary sources, such as the researcher's observations, surveys, interviews of the respondents etc. Narrative analysis is done by analyzing the participants stories, which is then *re-storied* into a particular framework. When the collected data gets re-storied, the researcher reorganizes the gathered stories into a framework, based on key elements or themes. Hence, the collected data is compiled and rewritten in a chronological order, to bring about a new form of narration. The key idea behind a narrative research is understand '*HOW*' something is being said. Narrative analysis is time consuming and requires the researcher to have a good rapport with the participants and also a clear context on the situation/person being studied.

Discourse Analysis:

This method of qualitative data analysis is done on discourses. Discourses may be defined as an interrelated set of texts and the practices of their production, dissemination and reception. It is concerned with analyzing language in a social context and follows the assumption that language is constructed to arrive at an objective. The key idea behind a discourse analysis is to understand the social situation in which a particular dialogue or discourse took place. Discourse analysis can be applied to a number of data sources like texts, talks, newspaper articles, interviews etc. Understanding and analyzing these sources can give an idea about the history, culture and social context being studied and provides an insight into the socio-psychological characteristics of the participant being studied. Within these, the researcher can find patterns and themes. It is very important to have a specific research question in mind when conducting discourse analysis, as there could be a vast amount of data.

Grounded Theory:

Grounded Theory is a method of qualitative data analysis, by which the researcher attempts to construct a theory from the data collected. It involves systematically categorizing and comparing the collected data. The method of grounded theory and its analysis is relatively newer in the field of qualitative research. The collected data is analyzed through 3 stages of coding- namely initial coding (i.e. coding and

identifying them into categories), intermediate coding (i.e. selecting core categories and data saturation) and advanced coding. Throughout this stage, there is a constant comparative analysis which takes place between the data (and specifically the codes, and the subsequent categories which emerge), which then generate abstract concepts and theories through an inductive process. Researchers analyze the data to explain why a certain phenomenon happened by using similar cases in different settings, which are then used to derive causal explanations. These 'theories' may be refined and altered based on new cases which emerge, until reaching an explanation which fits all cases.

Thematic Analysis:

Thematic analysis, much like content analysis, looks to find themes which emerge from qualitative data. What distinguishes it from the latter, is that thematic analysis focuses on both the explicit and implicit meaning which emerges from the data. It is frequently used with other forms of analysis. Thematic analysis is useful when the researcher is trying to identify the themes and patterns emerging from people's opinions, perspectives, experiences or values. Thematic analysis could be done inductively (own themes) or deductively (pre-conceived themes), based on the researcher's choice. It is a flexible method of data analysis, but this also implies that the onus of coding it into themes falls on the researcher.

Interpreting and writing the analyzed results are crucial in ensuring that the research can be understood thoroughly. Care must be taken to ensure that the analyzed data is interpreted in a clear and simple manner. When reporting the analyzed data, the researcher must ensure that the interpretations are clear and non-ambiguous. Poor interpretation and weak analysis, make the findings unstable and hamper the authenticity and reliability of the research.

8.5 SUMMARY

Data analysis is a most important part of research where the data is summarized and interpreted to fulfill the objectives of the study. It involves Quantitative Data analysis as well as Qualitative Analysis each having separate techniques and steps.

8.6 UNIT END QUESTIONS

1. What is Data analysis? Explain the basic steps of Data analysis.
2. What is Qualitative method of Analysing Data ? Explain Its steps and Techniques.
3. What is Quantitative Method of Analysing Data? Explain Its Steps And Techniques?

8.7 REFERENCES AND FURTHER READINGS

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MODEL QUESTION PAPER
PAPER 4
METHODOLOGIES OF SOCIAL RESEARCH

Total Marks : 60 **Duration : 2 Hours**

N.B:
1) Attempt All Questions
2) All Questions carry equal marks

Q1. Explain the Philosophical Foundations of Social Research 15 marks

Or

Explain the Qualitative methods of Social Research 15 marks

Q2. Explain Positivism and Sociology 15 marks

Or

Explain the importance of Reflexivity and Social Research 15 marks

Q3. What is Virtual Research? Explain its benefits and uses 15 marks

Or

Explain the Quantitative Techniques of Social Research 15 marks

Q4. Explain the Components of Research Proposal 15 marks

Or

What is Data Analysis? Explain the Basic steps in Data Analysis 15 marks

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