SREENARAYANAGURU
OPEN UNIVERSITY

Fundamentals of Social Research

Postgraduate Programme in Sociology

SELF LEARNING MATERIAL

COURSE CODE: M21SO02DC

SREENARAYANAGURU OPEN UNIVERSITY

The State University for Education, Training and Research in Blended Format, Kerala

Vision

To increase access of potential learners of all categories to higher education, research and training, and ensure equity through delivery of high quality processes and outcomes fostering inclusive educational empowerment for social advancement.

Mission

To be benchmarked as a model for conservation and dissemination of knowledge and skill on blended and virtual mode in education, training and research for normal, continuing, and adult learners.

Pathway

Access and Quality define Equity.

Fundamentals of Social Research

Course Code: M21SO02DC

Semester-I

Master of Arts
Sociology
Self Learning Material

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Development of the content

Dr. Reeja P.S., Dr. Soorya Gopi,
Dr. Aswathy Kunjumon, Dr. D.N. Sudheesh

Review

Content: Dr. Deepa S.V.
Format: Dr. I.G. Shibi
Linguistic: Dr. Jaya Thekkayyam

Edit

Dr. Deepa S.V.

Scrutiny

Dr Suraj G., Dr. Soorya Gopi, Dr. Aswathy Kunjumon, Dr. Abdul Razak Kunnathodi, Remya Mol M.R., Jan Elizabeth Joseph

Co-ordination

Dr. I.G. Shibi and Team SLM

Design Control

Azeem Babu T.A.

Production

March 2023

Message from Vice Chancellor

Dear

I greet all of you with deep delight and great excitement. I welcome you to the Sreenarayanaguru Open University.

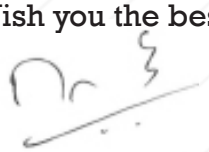
Sreenarayanaguru Open University was established in September 2020 as a state initiative for fostering higher education in open and distance mode. We shaped our dreams through a pathway defined by a dictum 'access and quality define equity'. It provides all reasons to us for the celebration of quality in the process of education. I am overwhelmed to let you know that we have resolved not to become ourselves a reason or cause a reason for the dissemination of inferior education. It sets the pace as well as the destination. The name of the University centers around the aura of Sreenarayanaguru, the great renaissance thinker of modern India. His name is a reminder for us to ensure quality in the delivery of all academic endeavors.

Sreenarayanaguru Open University rests on the practical framework of the popularly known "blended format". Learner on distance mode obviously has limitations in getting exposed to the full potential of classroom learning experience. Our pedagogical basket has three entities viz Self Learning Material, Classroom Counselling and Virtual modes. This combination is expected to provide high voltage in learning as well as teaching experiences. Care has been taken to ensure quality endeavours across all the entities.

The university is committed to provide you stimulating learning experience. The PG programme in Sociology is a logical development of the grammar of our UG programme. It is considered to be a progression of the finer aspects of theories and practices. The discussions are meant to arouse interest among the learners in understanding the discipline in the real context and therefore, the examples are drawn heavily from the real life experiences. The provision for empirical evidences integrated endeavour of the academic content makes this programme special and relevant. We assure you that the university student support services will closely stay with you for the redressal of your grievances during your studentship.

Feel free to write to us about anything that seems relevant regarding the academic programme.

Wish you the best.



Regards,

Dr. P.M. Mubarak Pasha

01.03.2023

Contents

INTRODUCTION TO SOCIAL RESEARCH

BLOCK-01

Historical Background: Enlightenment, Reason and Science, Ontology, Epistemology, and Hermeneutics. Cartesian Philosophy

Learning Outcomes

On completion, the learner will be able to:

- Identify the historical background of social research.
- Familiarise the concept of positivism as a method in social research.
- Understand the various research paradigms that used in social research.

Background

As human beings, we are born into a world that is already structured. When conducting research, the researcher plays an important role in understanding the social reality they are studying. Therefore, the researcher should strive to maintain a neutral and objective stance towards social realities. Research is not only about the methodology, but also about the research approach, which involves certain beliefs and perspectives underlying the situation being studied. Philosophical perspectives are crucial because they reveal the assumptions that researchers make about their research, which affect decisions made about the purpose, design, methodology, methos, data analysis and interpretation of the research. At a basic level, the choice of what to focus on the sciences implies value about the subject being studied.

Keywords

Dependent variable, Independent variable, Validity, Inference, Intuition, Constructionism.

Discussion

1.1.1. Enlightenment

Ideology

The era known historically as the Enlightenment marks the intellectual beginning of the modern world. Ideas originating in this era would gradually spread around the world creating challenges to existing traditions and ways of governing. Many governments today have Enlightenment principles as the basis of their constitutions and forms of government. In addition, the expansion of suffrage to women, and people of all classes and colour is a legacy of Enlightenment. Enlightenment ideas on equality also helped to end the dominance of social elites such as the aristocracy and the church. Enlightenment also led many countries to establish systems of public schools and put an end to the idea that education was only a privilege for the upper classes.

Historical understanding

When historians discuss the "Enlightenment," they are usually referring to 18th-century Europe (France and England in particular), although other parts of the world (including the U.S.) are often included as well. Enlightenment was a period of intellectual ferment that gave rise to a range of new theories about society, government, philosophy, economics, and religion. The period produced more than just abstract theorizing, however: it offered a whole new way of conceptualizing the world and one's place in it. In many ways, this change in perception marked the beginning of the modern era, as institutions and traditions of the past began to shift—and even crumble—in the face of new ideas and approaches.

Enlightenment known as the Age of Reason, grew out of the Scientific Revolution of the 1500s & 1600s.Scientists understand the physical world using reason, which could also be used to discover natural laws which shape human experience.

Etymology

The term "enlightenment" was first coined by Immanuel Kant, a German philosopher. "Sapere aude" means "dare to know" in Latin. Kant also wrote in this essay, "All that is required for this enlightenment is freedom; and particularly the least harmful of all that may be called freedom, namely, the freedom for man to make public use of his reason in all matters." In other words, in order to be "enlightened," a person had to think independently rather than simply

follow society's customs and traditions. Thus, Enlightenment encouraged free thought (or at least freer and more wide-ranging thought than had occurred in the recent past).

Development

The most important factor in the development of Enlightenment was the Scientific Revolution of the 16th and 17th centuries. Enlightenment grew largely out of the new methods and discoveries achieved in the Scientific Revolution. Sir Francis Bacon laid the theoretical groundwork for what became known as the scientific method. In Europe, science had been almost a combination of magic and academics, and scientists were not concerned with careful practices, methodical actions, logic, or theory. Bacon believed that all scientific research should rely on careful observation and experimentation rather than simply relying on one's own thought and reasoning, as earlier scientific thinkers had. The data obtained should be recorded and analysed according to logic and reason, then used to produce a testable hypothesis.

Role of Newton

Although earlier scientists had already put Bacon's ideas into practice, Sir Isaac Newton is the scientist most associated with the scientific method. Newton made a range of groundbreaking discoveries in the fields of mathematics, physics, optics, and more. Newton's achievements provided the inspiration for the Enlightenment: if the scientific method had worked so well for finding scientific truth, perhaps it could be applied to social sciences as well so that the truths about society itself could be discovered.

Importance of reason

The era of Enlightenment was characterized by secularism, challenges to authority, and the glorification of reason. Many Enlightenment thinkers felt that although the great minds of the medieval and Renaissance eras had achieved much, they also had been overly constrained by religion, tradition, and superstition. To truly achieve independent thought, one had to throw off all limits and rely solely on reason. Like the pioneers of the Scientific Revolution, Enlightenment thinkers also strove to make conclusions based on observation, logic, and reason, rather than on faith. Enlightenment thinkers revived the spirit of the Renaissance quest for knowledge, choosing to focus on human nature and the workings of society rather than on spiritual matters and religious tenets. This secular approach led to the development of the social sciences.

This approach was empirical, scientific and philosophical. The world was an object of study, and the Enlightenment

Empiricism

thinkers thought that people could understand and control the world by means of reason and empirical research. Social laws could be discovered, and society could be improved by means of rational and empirical inquiry. This form of thought was reformist, and one that challenged the old order. Enlightenment thinkers were generally optimistic in outlook, looking on their system of thought as a way of improving the social world.

Ritzer summarizes the effect of the Enlightenment as follows:

People can comprehend, change and perhaps control universe.

Philosophy and science – combination of reason and empirical research.

Abstract systems of ideas that made rational sense, but with study of the real social world.

Application of scientific method to social issues – discover social laws.

Social analysis and social scientists should be useful to the world – create better world.

Criticism of traditional authority, institutions and beliefs – irrationality of these.

Human growth and development of society occur if tradition gives way to reason.

Emphasis on the individual rather than society.

1.1.2. Reason and Science

Rationality

Kant argues that reason plays a crucial role in scientific knowledge, as it provides certain concepts and principles that are distinct from those of sensibility and understanding. Reason is a higher faculty of knowledge that is contrasted with empirical knowledge. Regardless of how a particular mode of knowledge is acquired, if it is simply accepted and retained without any active engagement of reason, then it remains empirical. For instance, if one has learned a system of philosophy by memorizing its principles, explanations and proofs, this knowledge is merely historical, and the individual has not truly engaged with reason to generate new insights. In contrast, modes of rational knowledge, that are objectively rational are derived from universal sources of reason, such as principles, and can be subject to criticism and rejection. Reason generated knowledge can be derived from concepts or the construction of concepts.

Types of reasoning

The process of thinking about something, in a rational manner, so as to draw valid conclusions, is known as reasoning. It is a daily activity that we use to make decisions, which involves the construction of thoughts and converting them into a proposition to give reasons on why we have opted for a particular alternative over the other. Reasoning (logic) can take two forms – inductive reasoning or deductive reasoning. Deductive reasoning uses available information, facts or a premise to arrive at a conclusion. These two methods of logic are exactly opposite to each other. Still, they are often juxtaposed due to lack of adequate information. In inductive reasoning, there are certain possibilities that the conclusion drawn can be false, even if all the assumptions are true. The reasoning vests on experience and observations that support the apparent truth of the conclusion. Further, the argument can be strong or weak, as it only describes the likelihood of the inference, to be true.

The points provided below, clarify the difference between inductive and deductive reasoning in detail:

1. The argument in which the premise gives reasons in support of the probable truth of the conjecture is inductive reasoning. The elementary form of valid reasoning, wherein the proposition provides the guarantee of the truth of conjecture, is deductive reasoning.

2. While inductive reasoning uses the bottom-up approach, deductive reasoning uses a top-down approach.

3. The initial point of inductive reasoning is the conclusion. On the other hand, deductive reasoning starts with a premise.

4. The basis of inductive reasoning is behaviour or pattern. Conversely, deductive reasoning depends on facts and rules.

5. Inductive reasoning begins with a small observation, that determines the pattern and develops a theory by working on related issues and establishes the hypothesis. In contrast, deductive reasoning begins with a general statement, i.e., theory which is turned to the hypothesis, and then some evidence or observations are examined to reach the final conclusion

The ultimate aim of science is to produce an accumulating body of reliable knowledge, which enable us to understand the world in which we live and its ways. First, science describes the various phenomena that interest us, such as: What was the population growth rate of our country in the last decade? Description of a phenomenon is followed by explanation. The explanation answers the question: Why is there a higher rate of population growth in underdeveloped countries than in developed countries? In other words, a scientist first describes the situation and then explains it. The explanation of situation brings meaning to the description. Finally, science contributes to the body of knowledge by way of prediction. Prediction means making inferences from the facts. For example, if the present conditions continue, the population of the country will cross 1000 million by the end of this decade. It is true that the scientists rarely make absolute predictions, they instead infer in terms of probabilities. The final step of science prediction has been referred to as one of 'the most desirable fruits of scientific labour.

Science and prediction

1.1.3. Ontology

Ontology as a branch of philosophy and it mainly discusses the nature of being and its existence as well as the kinds and structures of objects. There are many philosophical questions addressed in ontology, such as the questions whether or not there is a god, or the problem of the existence of universals, what is the nature of the social world and what is there to know about it? etc. These are all problems in ontology in the sense that they deal with the nature of reality. Simply we can say that ontology is the study of what there is. Ontology helps researchers recognize how certain they can be about the nature and existence of objects they are researching. For instance, what 'truth claims' can a researcher make about reality? Who decides the legitimacy of what is 'real'? How do researchers deal with different and conflicting ideas of reality? Ontological requests concern whether or not there is a social reality that exists independently of human beings and interpretations and, immovably related to this, whether or not there is a mutual social reality or simply various, setting specific ones. In simple terms, ontology seeks the categorization and elucidation of entities. Ontology is concerning the object of query, what you set to analyse.

Nature of Ontology

Ontology helps researchers recognize how certain they can be about the nature and existence of objects they are researching. For instance, what 'truth claims' can a researcher make about reality? Who decides the legitimacy of what is 'real'? How do researchers deal with different and conflicting ideas of reality?

Social reality

Ontology is concerned with the study of the existence of being, and philosophers have explored various questions related to this object. These questions include the intention of existence, the nature of a priori reasoning, the meaning of sensory experience, and what constitutes a valid argument. In the social sciences, cosmology refers to beliefs about the fundamental nature of social reality. There are two primary questions related to understanding social realities and entities; the existence of an objective reality that exists independently of the observer, and the reality as it appears subjectively or as negotiated within groups. Objectivist/realist ontology suggests that there is a single reality that can be studied, understood and experienced as a truth, and that this real world exists independently of human experience. Social entities exist in reality external to social actors concerned with their existence. In contrast, relativist ontology is based on the philosophy that reality is constructed within the human mind, and that no single 'true' reality exists. Instead, reality is relative and depends on how individuals experience it at any given time and place.

Existentialism

Subjectivism (also known as constructionism or interpretivism) perceives that social phenomena are created from the perceptions and consequent actions of those social factors concerned with their existence. Philosophy appears to be unique as a thought; however, inquiries of metaphysics are key to the inquiries posed in social exploration, to the ideas we use and the means taken. For example, the positivist may ask cause and effect type questions, such as, 'how does class background affect educational attainment?', while the anti-positivist may rephrase this question to ask 'what different meanings have been ascribed to concepts of class and attainment?' and 'what type of explanation has been put forward to argue that class influences educational attainment?'. Ontology therefore sits at the top of a hierarchy under which epistemology, methodology and methods all 'get into line'.

1.1.4. Epistemology

Etymology

The term "epistemology" originated from the Greek words "episteme" and "logos". The word "Episteme" means that "knowledge" or "understanding" and the word "logos" can be converted as the meaning of "science, argument and reason". Epistemology is associated with ways of knowing and learning about the world and focuses on issues such as how we can learn about reality and what forms the basis of our knowledge. This deals with learning the 'How' and 'What' part in exploring the truth. i.e., if we know that there is knowledge or a phenomenon than 'what is it' and 'how do we discover or reveal it.

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;

c) how the extent of its transferability can be assessed.

Types of Epistemology

Epistemology is meaningful because of the methods that researchers frame their research process to find information. By looking at the connection between a subject and an object, we can investigate the possibility of epistemology and how it impacts research design. Objectivist epistemology presumes that reality exists outside, or independently, of the individual mind. Objectivist research is useful in providing reliability and external validity. 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 producing contextual understandings of a characterised subject or issue. Subjectivist epistemology identifies with the possibility that reality can be communicated in a range of symbol and language frameworks, and is extended and moulded to fit the reasons for people to such an extent that individuals force significance on the world and decipher it such that it sounds good to them. The value of subjectivist research is in uncovering how a person's experience shapes their impression of the world.

All research methods assimilate a variety of epistemological and ontological assumptions. As indicated by Bryman,

Conceptual meaning

Epistemology is a theory of knowledge and concern of what is considered as admissible information in a specific discipline. Another scholar, Saunders, points out that epistemology is a branch of philosophy that studies the nature of knowledge and what concocts acceptable knowledge in the field of study. Epistemological presumptions can be viewed as a question of what seems to be (or ought to be) viewed as worthy knowledge in a discipline. The focal issue of epistemology in social science is the issue whether the social world can and ought to be concentrated by similar standards and strategies as the natural sciences. The answer to that question directs the route toward the agreeableness of the information created from the research process. Therefore, epistemological assumption can be regarded as associated with the nature of knowledge and the methods through which that knowledge can be gained.

Aristotle on the human mind

As Aristotle quoted 'All men by their nature desire to know.' This is because people understand the importance and power of knowledge in human life. We know from very ancient times human beings have tried to know themselves and even the many natural and supernatural forces which confront them. Very often, the common person takes for granted that what he or she perceives to be true is true. However, closer examination often shows that it is not so. Epistemology makes us aware of the power of the human mind and the limits of the human mind. It challenges the way we think.

Social concerns

We humans desire to know the world and our place in it. This search for knowledge is not merely for an academic requirement or a drive for formal correctness. Rather this search is carried out of our existential concern to express ourselves. When we ask, 'What can I know?', we simultaneously ask, 'What is real'? Knowing the reality of the world and ourselves helps to achieve different goals of life and to make life beautiful. In epistemology our primary aim is to find truth which frees us from falsehood. Therefore, it exhorts us to pursue truth thoughtfully by giving us principles by which we may accept something as true or reject it as false. It assists us to sift between truth and falsehood. In a word, the 'uncovering of being' takes place. And such true knowledge is necessary for wisdom. Thus, as Vincent G. Potter says, 'To be wise does not require that we know everything about everything, but that we know the place of things relative to each other and to ourselves. It is to know what life as a whole is about.' Accordingly, we can say

epistemology assists human beings in realizing the Socratic maxim, 'Know Thyself.

Epistemology is 'a way of understanding and explaining how we know what we know', Epistemology is also 'concerned with providing a philosophical grounding for deciding what kinds of knowledge are possible and how we can ensure that they are both adequate and legitimate.'

1.1.5. Hermeneutics

Nature of Hermeneutics

Hermeneutics is the theory and philosophy of comprehension and interpretation. The term derived from Hermes, a son of Zeus, who deciphers messages from the Greek gods. Hermeneutics as the approach of interpretation is concerned with issues that emerge when dealing with meaningful human activities and the products of such activities, in particular the text. Simply, treating issues of the interpretation of human activities, texts and other significant material. Hermeneutic hypothesis perceives that interpretive difficulties can be investigated from different perspectives that set various suppositions about what understanding involves and what the objectives of interpretation ought to be.

Logic and science

Hermeneutics alludes to an interpretive way to deal with science as opposed to a solitary bound together logical way of thinking. Hermeneutics began during the seventeenth century as a methodology for deciphering scriptural writings. During the late nineteenth century, the area of hermeneutic inquiry began to incorporate the study of human conduct. Philosophers like Wilhelm Dilthey gave more preference to understanding human beings than gaining empirical knowledge of nature. The nature of interpretation in various subjects is different from the interpretation associated with natural science.

Philosophical explanation

If you trace out the history of Hermeneutics tradition related to four philosophical phases.

The first hermeneutics research heritage is related to the philosopher Friederich Schleiermacher. The distinctive characteristic of this hermeneutic research tradition is the conviction that the right interpretation of a text is achieved by the author and how it was enacted in the appropriate situation.

The second hermeneutic tradition is associated with the

contribution of **Dilthey** known as hermeneutic re-enactment and reproductive Hermeneutics. This tradition gives more emphasis to interpretation and empathetic process. Empathetic understanding can be acquired through thinking from someone else's point of view and recreating the real and possible experiences of others.

Philosophical explanation

The third hermeneutic research method is referred to as hermeneutic reconstruction or basic hermeneutics. This line of thinking was put forward by **Carl-Otto Apple** and **Jurgen Habermas**. One of the characteristics of this tradition is the presence of a "false consciousness" that deliberately loses our understanding of human experience. Supporters of hermeneutic reconstructionism propose that science must create theory and techniques touchy to social and tyrant structures so as to comprehend human activity.

The last hermeneutic research convention has been alluded to as productive or projective hermeneutics. These marks help us to recognize this hermeneutic custom from hermeneutic re-authorization. The reader presumes a unique meaning to text due to hermeneutics objectivism. Conversely, hermeneutics keeps up that researchers cannot "bracket" their assumptions, nor can they really with another's insight.

The *hermeneutic* approach holds that the most basic fact of social life is the meaning of an action. Social life is constituted by social actions, and actions are meaningful to the actors and to the other social participants. Moreover, subsequent actions are oriented towards the meanings of prior actions; so, understanding the later action requires that we have an interpretation of the meanings that various participants assign to their own actions and those of others. So, the social sciences (or the human sciences) need to be *hermeneutic:* researchers need to devote their attention to the interpretation of the meanings of social actions.

Emergence of Hermeneutics

Instead, they believe that achieving a completely impartial understanding of a text is impossible and that the interpreter plays an active role in constructing meaning. Typically, the interpreter or researcher helps generate meaning during the process of analysis. Hermeneutics emerged in Germany during the 18th century and was further developed by Friederich Daniel Ernst Schleiermacher in the 19th century. In the 20th century, philosophers Martin Heidegger and Hans Georg Gadamer made significant contributions to the advancement of philosophical hermeneutics. According to hermeneutic approach, the meaning of an action is the most

fundamental aspect of social life. Social life is built upon social activities, which are significant to both the actors involved and future social members.

In addition, subsequent activities are based towards the meaning of earlier activities; so, understanding the later activity necessitates that we have an interpretation of the meanings that different members assign to their own activities and those of others. So, the different disciplines in social science should be hermeneutic: researchers need to give their attention for the interpretation of the meaning of social activities. The significant element of philosophical hermeneutics that is so crucial to research is interpretation. The huge component of philosophical hermeneutics that is so important to research is translation. Interpretation of text and discourse can accordingly be diagnostically isolated into two separate domains. On one side, the researcher needs to analyse the text and speech by placing it into its authentic and social setting, by interfacing the part to the entire.

Application in research

This development isn't to be puzzled with recreating the original meaning of the text. Because no total reproduction of all relevant factors will ever be possible and there will be no need for that reproduction. Rather, the second analysis emphasises that one can arrive at an adequate comprehension of the text or speech being referred to that is grounded in one's own chronicle situatedness.

The task of accurately understanding a person does not require completely changing the foundations on which current statements are based. As individuals, we all have a shared goal of constructing our reality in ways that are meaningful to us. Language plays a crucial role in this endeavor, as our constructions of reality rely heavily on language as the primary means of expression and communication across generations and cultures. Hans-Georg Gadamer highlights that language is inherently interpretive, nuanced and self-expressive and therefore, words cannot be reduced to mere components to be counted or measured. He suggests that even forms of effective evaluation must be approached with caution. Philosophical hermeneutics regards understanding as fundamentally linguistic and language as inherently interpretive.

Communication

1.1.6. Cartesian philosophy.

Background of Descartes

René Descartes was born in 1596 at La Haye, Touraine in central France. He was the son of a minor nobleman and belonged to a family that had produced a number of learned men. At the age of eight he was enrolled in the Jesuit school of La Flèche in Anjou, where he spent the rest of his schooldays. Besides the usual classical studies, Descartes received instruction in mathematics and scholasticism, which attempted to use human reason to understand Christian doctrine. Upon finishing school, he studied law at the University of Poitiers, graduating in 1616. He never practised law, however; in 1618 he entered the service of Prince Maurice of Nassau, leader of the United Provinces of the Netherlands, with the intention of following a military career. In succeeding years Descartes served in other armies, but his attention had already been attracted to the problems of mathematics and philosophy, to which he was to devote the rest of his life. One of the important influences on Descartes during this period was Dutch mathematician Isaac Beeckman, who encouraged him to pursue his studies.

Primary aim

Descarte's primary objective was to obtain philosophical truth through the use of reason. He believed that philosophy should be based on pure reason and not on tradition. He aimed to construct a comprehensive philosophical system consisting of true propositions that were interconnected and self-evident, without presuppositions. In doing so, he sought to establish a foundation for philosophy that was certain and beyond.

Descartes' philosophy

Descartes believed that knowledge begins with self-evident innate ideas or principles, from which other truths can be deduced. He sought to establish a new foundation for philosophy, one that rejected authority and instead prioritised clarity and certainty, similar to that found in mathematics. To achieve this, Descartes aimed to apply the method of mathematics to philosophy, in order to create a more systematic and rigorous approach. His goal was to create a philosophy that was based on logical deduction from clear and distinct ideas, rather than on tradition or authority. The approach employed in mathematics involves employing only two cognitive processes that enable the attainment of accurate knowledge; intuition and deduction. Intuition pertains to our comprehension of evident principles that no rational individual can question, while deduction refers to the methodical and rational thought process or conclusion

derived from evident propositions. To be certain about philosophy, he came up with a method called 'methodical doubt'. This means that he questioned everything and considered something false if there was even a small doubt. He did this to get reliable knowledge. This is different from the Sceptics who thought that certainty was impossible. He doubted what the senses told him because they can make mistakes.

Descartes' Theory

Despite doubting his own mathematical beliefs, which he once considered to be the epitome of certainty, Descartes proceeded to subject all of his knowledge to systematic doubt. In the process, he stumbled upon an undeniable truth that he could not doubt. He realised that from the mere act of thinking, (even if that meant doubting), he could be certain of his own existence because he was performing these mental activities. This became the foundation of Descartes entire philosophy – "I think, therefore I am" or *cogito ergo sum.* He intuited that he could not possibly think if he did not exist.

Descartes, however, still doubts the existence of his body. Hence, the self he arrives at is only an immaterial thinking self, thinking substance *(res cogitans)*. It is certain that I doubt or think. Doubt implies a doubter; thinking implies a thinker, a thinking thing *(res cogitans)* or spiritual substance; thus he reaches what seems to him a rational, self-evident proposition. To doubt means to think, to think means to be; '*cogito ergo sum*'. "I think, therefore I am." It is the first and most certain knowledge that occurs to one who philosophizes in an orderly manner. Here is the principle we have been seeking- a certain, self-evident starting-point. In this process of doubting, we finally reach a solid foundation, for while we are doubting we are using the thinking process. In fact, our doubts imply the reality of our thoughts. Descartes' *cogito ergo sum* in many ways is the most famous principle in modern philosophy. Descartes regarded it as a primary truth of all human reason.

Theoretical explanation of Thinking

Descartes' first axiom has significant implications. "I think, therefore I am" means that the existence of reason is more important than anything else; man's reality lies in his thinking process. Descartes reminded that the student of philosophy and science not to base his conclusions upon the work of the ancients. Even knowing all of Aristotle will not make philosophers out of us. We must have originality and the capacity to discriminate between permanent and transitory knowledge. The power of judgment is not increased

through academic studies. Principles can be memorized, but philosophy must be understood and digested. According to Descartes, instead of accepting the traditional views, we must study the great book of the world. "We shall never become philosophers even though we should read all the reasoning of Plato and Aristotle if we cannot form a sound judgment upon any proposition."

Cartesian philosophy stands in direct opposition to empiricism, the school of philosophy that originated with Aristotle, but was later expounded by David Hume and others. Cartesians, however, maintained that sensory experiences could be fallible. This led to the understanding that science could remain uncertain, since God could make falsehoods appear to be truth.

Truth and reason

The fundamental aim of Descartes was to attain philosophical truth by reason. Philosophy must rest on pure reason and not on tradition. He wanted to develop a whole system of philosophy based on true propositions which were part of an organic whole, so that nothing was presupposed but each would be self-evident and certain. For Descartes knowledge begins with some self-evident innate ideas or principles and deduce other truth from them. Hence, he wanted to give philosophy a new start, desiring to reject any authority. His aim was to bring into philosophy the kind of clarity and certainty which is found in mathematics. Therefore, he wanted to use the method of mathematics in philosophy. The method of mathematics consists in the use of only two mental operations by which true knowledge can be achieved: intuition and deduction.

Intuition and deduction

By intuition he means our understanding of self-evident principles, such as the axioms of geometry (a straight line is the shortest distance between two points; or, things equal to the same thing are equal to each other.) They are self-evident. No rational mind can doubt them. By deduction he means orderly, logical reasoning or inference from self-evident proposition. According to Descartes, the chief secret of method is to arrange all facts into a deductive, logical system. Descartes' goal is to build a system of philosophy based upon intuition and deduction which will remain as certain and as imperishable as geometry. What he is determined to find is a self-evident principle which will serve as the axiom or first principle for his mathematical philosophy, and which will serve as the foundation from which absolutely certain philosophy can be deduced.

Summarised Overview

The field of sociology has been characterised by diverse methodological approaches, which have undergone refinement over time. Each methodological orientation involves specific techniques for collecting and analyzing data in social research. It is important to consider the ontological and epistemological assumptions associated with each method when using them in social research. Enlightenment thinkers viewed science as more than a mere academic subject. They saw it as a resounding victory of the empirical method, which involved testing hypotheses against evidence. This approach was not limited to scientific inquiry but could be applied to all aspects of human knowledge, including moral and religious questions.

Self Assessment

1. Define Enlightenment.
2. Explain the factors responsible for the development of Enlightenment.
3. Discuss reason and science.
4. Define rationality.
5. Briefly discuss the different forms of reasoning.
6. Explain the major differences between inductive and deductive reasoning.
7. Explain the concept and the nature of 'Ontology'.
8. Define subjectivism.
9. Briefly discuss the significance of epistemology to understand social reality.
10. Define Hermeneutics.
11. Define Methodical doubt.
12. Evaluate the role of Descartes in understanding truth and reason.

Assignments

1. Discuss the historical origin of the era of Enlightenment.
2. Critically evaluate the role of reason and logic in the era of enlightenment.
3. Critically analyse Ritzer's perception in understanding enlightenment.
4. Briefly discuss the role of reason in understanding scientific knowledge.
5. Discuss the difference between science and prediction in under standing social facts.
6. How do you evaluate the concepts of truth in understanding Ontology.
7. Discuss the different types of epistemology to understand social reality.
8. Briefly explain Descartes' application of mathematics to philosophy and logical reasoning.
9. Critically evaluate Cartesian philosophy.

Suggested Readings

1. Grbich, C. (2004). *New Approaches in Social Research.* London: Sage
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9. Creswell, J. (2009). *Research Design*. United States: Sage.
10. David, M. & Sutton, C. D. (2011). *Social Research: An Introduction*. USA: Sage.

Space for Learner Engagement for Objective Questions

Learners are encouraged to develop objective questions based on the content in the paragraph as a sign of their comprehension of the content. The Learners may reflect on the recap bullets and relate their understanding with the narrative in order to frame objective questions from the given text. The University expects that 1 - 2 questions are developed for each paragraph. The space given below can be used for listing the questions.

UNIT 2

Positivism as a Method. Critique of Positivism

Learning Outcomes

On completion, the learner will be able to:

- Understand the concept of Positivism
- Be aware of the significance of Positivism as a method in social science research
- Explore the critical perspectives on Positivism in social research.

Background

Enlightenment was important in the development of sociology because it emphasised reason, individualism, and freedom while also considering society as an objective force. Three ideas that influenced sociology in the 19th and early 20th centuries were humanist historicism, mechanistic social theory, and critical rationalism. Humanist historicism, emphasized the creativity and activity of humans while rejecting natural science methods to study culture. Mechanistic social theory focused on objective facts and the use of natural science in understanding society. Critical rationalism, pursued a scientific understanding of society to free people from superstitious beliefs. The Enlightenment valued modern science, rejecting metaphysics, separating facts from values, and promoting objectivity based on facts.

The origins of nineteenth-century positivism were traced to the work of Montesquieu and Ferguson, who emphasized facts over conjecture, and their approach was revolutionary at the time. During the Enlightenment, people believed that science and facts were more important than speculation and metaphysics. This belief gave rise to positivism, which Auguste Comte continued in the 19th century. Comte also rejected metaphysics, much like Hume did, who believed that metaphysical philosophy was just "sophistry and illusion". Hume's philosophy was based on experience and objective facts, which is also a common standpoint of sociological positivism. Although empiricism is related to positivism in history and theory, it is not the same thing.

Keywords

Empiricism, Social reality, Natural world, Objective reality, Humanity

Discussion

Empirical Knowledge

The philosophers Bacon, Locke, and Descartes believed that human knowledge came from experience and experiments. Empiricists said that only knowledge that could be proven by experience was true, and that knowledge was functional and useful. But, turning experiences into knowledge wasn't easy - the mind had to process the data using things like judgement, measurement, and comparison. While Descartes believed in sensory experience, he also believed that knowledge came from mathematics and logic. Empiricism was inconsistent because it believed in both the laws of the mind and laws of thought, which existed independently of experience. Positivism focused on the mechanical, passive aspects of human experience and reinforced the idea that society could be studied and understood through observation and experimentation.

Conceptual framework

Positivism was all about understanding society, while empiricism focused on understanding concepts. Both theories downplayed the active role of human consciousness. Some Enlightenment thinkers wanted to do away with the idea of innate human abilities, suggesting that people are shaped by their environment. The philosophy of the Enlightenment was contradictory, as it sought progress through reason and education but also believed that ideas were merely the product of external factors. Therefore, the human subject was seen as passive, with ideas being a byproduct of other factors. Not every Enlightenment philosopher agreed with this view, as some believed that knowledge could be obtained through logical deductions and that reason could lead to objective understanding once freed from religious and mystical thought.

1.2.1. Positivism as method

The evolution and consolidation of positivism is in the French sociological tradition, then reached to the other regions of the globe and becoming a strong scientific

Discovery of Positivism

method. Positivism had its appeal. It was rendered acceptable by the quest for accuracy, objectivity, causality, and neutrality of values. Positivistic social scientists have discovered its logical culmination in the numerical cults, in the mathematization of social phenomena, in the desire to decrease qualitative human experiences into quantified statistical figures. The philosophical system which confines itself to the data of experience and experimentation and excludes the metaphysical and theological speculation is known as positivism.

Positivists and social world

Positivism assumes that reality exists independently of humans. The ontological position of positivists is that of realism. Positivists strive to understand the social world like the natural world. In nature, there is a cause-effect relationship between phenomena, and once established, they can be predicted with certainty in the future. For positivists, the same applies to the social world because reality is context free, different researchers working in different times and places will converge to the same conclusions about a given phenomenon. The epistemological position of positivists is that of objectivism. Researchers come in as objective to study phenomena that exist independently of them and they do not affect or disturb what is being observed. They will use language and symbols to describe phenomena in their real form, as they exist, without any interference whatsoever. Positivists believe that there are laws governing social phenomena, and by applying scientific methods, it is possible to formulate these laws and present them through factual statements.

Positivism is an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond

Positivism is also taken to entail the following principles:

1. Only phenomena and hence knowledge confirmed by the senses can genuinely be warranted as knowledge (the principle of phenomenalism).
2. The purpose of theory is to generate hypotheses that can be tested and that will thereby allow explanations of laws to be assessed (the principle of deductivism).
3. Knowledge is arrived at through the gathering of facts that provide the basis for laws (the principle of

inductivism).

Principles

4. Science must (and presumably can) be conducted in a way that is value free (that is, objective).
5. There is a clear distinction between scientific statements and normative statements and a belief that the former is the true domain of the scientist. This last principle is implied by the first because the truth or otherwise of normative statements cannot be confirmed by the senses.

The fundamental characteristics of research that is normally situated within the Positivist paradigm are as follows:

Characteristics

1. Belief that theory is universal and generalizations can be made across contexts.
2. The conviction that research discovers truth or knowledge.
3. The belief that causes and effect can be distin guished and analytical.
4. The conviction that inquiry results can be quanti fied.
5. The belief in the scientific research method.
6. Employs empirical or analytical approaches.
7. Goal of finding out facts
8. Believes in the ability to observe knowledge.
9. The ultimate aim of the researcher is to establish a comprehensive universal theory, to take hu man and social behavior into account
10. Scientific method application.

a) Positivistic View of Reality

Meaning of Ontology

Ontology is a field of philosophy that aims to comprehend the fundamental nature of reality and existence. In particular, ontological assumptions involve the nature of truth, what is significant, and the core essence of social phenomena being examined. According to Scotland (2012), ontology involves a philosophical inquiry into the assumptions we make about reality, including the type of social phenomena

that exists and their interrelationships. Blaikie (2000) argues that ontological assumptions are essential to understanding the factors that bring about social phenomena and how they occur in the world.

Positivism as method

Positivism is a significant method for examining social phenomena. This methodical approach relies on the inductive method, which supposes that the universe is organized and consists of distinct, observable events. Generalized statements that represent the association between concepts are regarded as a representation of this order. Positivists maintain that only the aspects that can be observed and sensed are authentic. In the area of social science, positivism postulates that causal relationships exist between concepts in social reality, with external factors serving as the causes of human behavior.

Positivism and ontology

Despite the criticisms leveled at positivism due to its shortcomings, it continues to exert a significant influence in various fields, such as the natural sciences and some domains of social science. The fundamental assumptions of ontology that provide the basis for positivism can be beneficial in comprehending the circumstances that lead to social phenomena, as well as in constructing theories that elucidate the connections between these phenomena. Ultimately, the selection of ontology and methodology hinges on the nature of the research inquiry and the particular situation being examined.

b) The Epistemological Foundations of Positivism

Scientific laws and knowledge

Epistemology is a field of philosophy that deals with how we gain knowledge and what qualifies as knowledge. Its focus is on understanding reality and truth. Epistemology seeks to answer questions such as what kind of knowledge is possible, how we obtain knowledge, and when knowledge is valid. According to positivism, which is an epistemological assumption, knowledge is verified through the use of human senses. To acquire reliable knowledge, a researcher or trained observer must have an accurate perception of reality. Knowledge is deemed certain when it accurately reflects the external world. It is obtained through human senses, experimental or comparative analysis, and objective observation. Scientific laws are based on regularities observed objectively, and general laws are produced by applying inductive reasoning to carefully recorded observations and experimental outcomes. Researchers are required to put aside preconceptions about the world and gather data

using objective techniques. Positivism has been criticized, but it remains a dominant approach in many fields such as natural sciences and some social sciences. Ultimately, the selection of epistemology and methodology is determined by the research question and the specific context of the investigation.

c) Exploring Inductive Research and Positivist Epistemology

Types of research strategy

Research strategies are processes used to answer research questions, and there are four primary types: inductive, deductive, retrodictive, and abductive. Each research strategy is distinct and uses different methods to answer research questions. Inductive research aims to make limited generalizations about patterns of association among observed or measured characteristics of people and social phenomena. This type of research starts with specific observations and ends with general or universal propositions. It assumes that explanations of how the world works should be based on facts derived from neutral observation, rather than preconceived ideas, and that a passive mind can learn from nature. Inductive research is useful when a researcher is seeking to understand a pattern or trend and is a useful tool for making predictions.

Nature of Inductive strategy

The inductive strategy is a method of scientific inquiry that starts with observations, and from there, tries to draw broader generalisations and theories. This approach assumes that knowledge can be obtained from observations and that the truth can be directly perceived through our senses. The more observations we make that show a relation between events, the more likely it is that our general statement will be true. This method goes beyond just the facts we observe and tries to create a broader understanding of the world around us. In other words, we use inductive reasoning to go from specific observations to wider generalizations and theories. The method of verification of these generalizations is done through observations of specific phenomena that seem to support the generalization. Inductive reasoning is important in scientific inquiry as it allows us to create theories that can be tested and refined through further observation and experimentation.

The inductive research strategy is a method that begins with collecting data and then uses certain types of logic to make generalizations from specific observations. The

Critique of inductive strategy

goal is to identify patterns or regularities in social life. This approach is particularly useful for answering "what" questions, such as identifying the characteristics of people who engage in drug abuse. Researchers must collect data on factors such as demographics, social status, and individual features, and then identify the most common characteristics among this group. While this approach is limited in its ability to answer "why" questions, it is useful for generating hypotheses and identifying patterns that can be further investigated through other research methods. The inductive research strategy assumes that observations provide a solid foundation for knowledge extraction and that truth is directly related to sensory experiences. As more observations show a relationship between events, the more likely a general statement is to be true.

According to Blaikie (2001), the inductive research approach has four main phases:

- All facts are observed and recorded
- There is no hypothesis about these facts
- The relationship between the facts is drawn up inductively
- The generalizations are tested further.

The inductive strategy is used to answer descriptive questions and to describe the phenomenon. It can also be used to pursue explanatory questions, to establish regularities that need to be explained, and to pursue exploratory questions, to discover general regularities that can explain observed regularities.

Under the Positivist research paradigm, several methodologies are often used, including:

- Survey research methodology,
- Quasi-experimental methodology,
- Experimental methodology,
- Correlational methodology,
- Causal comparative methodology,
- Randomized control trials methodology.

These methodologies are used to help researchers observe and record facts and draw generalizations using inductive logic.

1.2.2. Critique of Positivism

Positivism was the main way of thinking in the field of science for a long time. It was widely believed that it was the only valid method for conducting research in social sciences such as psychology, sociology, communication science, and political science. In fact, the term philosophy of science was often used interchangeably with positivism. However, this changed in the 1930s when the Frankfurt School began to criticize positivism. By the 1960s, philosophers of science had intensified the critique of positivism, leading to a significant shift in contemporary philosophy of science.

Today, there are many different schools of thought that are critical of positivism. They argue that the principles of replicability and universality, which are key to positivism, are flawed and cannot be applied to all areas of social research. As a result, alternative methods and approaches to social research have become more popular in recent years.

a) Early Critique: Hermeneutic School (1990s)

Dilthey and natural world

The German Historical School was the first to challenge the universal and replicable claims of positivism. They argued that it is necessary to consider each society as a specific whole within the framework of its cultural structure, rather than applying universal assumptions. Dilthey, a prominent member of the school, believed that all knowledge, including natural sciences, is a product of the world of thought in a historical period. The principles of causality and logic that we seek in nature are the product of our own historicity, not of nature itself. The historian school believes that consciousness, which is influenced by historical context, cannot make universal explanations about history and social reality. This means that different cultures have different ways of approaching the world, and it is important to understand them in their own unique context, rather than trying to impose universal assumptions on them.

Verstehen and social reality

W. Dilthey believed that the laws we discover about society will only agree with our existing ideas about it, which makes it a self-fulfilling prophecy. This leads us to ask how we can study society if there is no absolute truth or independent variables. Weber proposed a unique method, known as *Verstehen*, which means understanding, to investigate society. This approach allows us to comprehend subjective experiences and interpret social reality through

history without relying on laws. Therefore, studying society demands a different approach than natural science, and we must recognize that social reality is subjective.

b) Phenomenology (1920s)

Individual perception

The concept of phenomenology involves observing the world by considering how individuals perceive the reality around them. This idea was introduced by Hegel and expanded upon by Edmund Husserl, who placed great importance on human consciousness. Husserl suggested focusing on facts and interpreting the world through our own experiences. Alfred Schütz, a prominent sociologist, further developed phenomenology by advocating for a more comprehensive approach that included physical objects. He acknowledged that these objects can only be perceived through our senses, which makes it difficult to have an accurate understanding of their true nature.

Perception of social reality

Phenomenology also recognises that social reality is shaped by people's interpretations. As a result, we must set aside our own beliefs, knowledge, and experiences to comprehend the world around us. This process is referred to as bracketing or phenomenological reduction. Phenomenology is a perspective that prioritizes the significance of human consciousness and interpretation. It argues that positivism is insufficient in explaining human actions and that we must look beyond our individual experiences to understand social reality.

Husserl's perception

In the 20th century, people realised that the scientific community did not live up to the ideals of the Enlightenment. The optimistic idea of progress did not always bring about the expected freedom and prosperity. In Europe, the political balance shifted and science and philosophy faced a crisis. In 1935, Husserl referred to European nations as "sick patients" and believed that it was not the mind that caused the crisis, but the positivist worldview. The positivist view ignores the life-world, which is the main basis for experience, and reduces it to a single observation. Husserl opposed the positivist sciences that focus only on objectivity, value-independence, and the alienating nature of scientific methods. He did not completely deny reality, but believed that positivism had blown away philosophy.

Husserl and humanity

Husserl believed that irrationality and meaninglessness led humanity into a crisis, but he did not completely reject

the mind's impact on humanity. He wanted to go back to the origin of things. According to him, people are in a non-authentic state of thinking and being, which means they are separated from the life-world. Scientists and scientific thinking do not consider the nature of things in and of themselves. Philosophy should investigate the structures and origins of things, and return to their essence. This is possible through Epoche, which means suspending judgment. The philosopher will suspend everything that has been built and once they find the definitive source, they will establish a new science. Husserl proposed a new attribute called transcendental phenomenology, which is not a new method or theory, but a new philosophy.

Subjectivity and common sense

Alfred Schütz, who examined how people go through their daily lives. He argued that our cultural beliefs and judgments always affect our ability to be completely impartial. Instead of individual experiences, Schütz encouraged focusing on shared experiences among people. He also spoke about how people learn from each other by exchanging experiences, which he referred to as intersubjectivity. This helps develop common sense knowledge that is a general understanding of the world. We use this knowledge to categorize things according to their similarities, which Schütz named typification. The process of typification allows us to see events and objects regularly. Schütz argued that common sense knowledge and typification lead to a shared perception of the world, and we assume that others see the world as we do.

Phenomenological perspectives

Phenomenology is an alternative way of studying society that is unlike the traditional scientific approach used in positivist social science. It gathers information through methods such as interviews and observation to understand the participant's experiences, rather than measuring or predicting outcomes. Unlike traditional scientific research, phenomenology doesn't require a hypothesis to be tested and therefore cannot be replicated. Phenomenologists think that every event is unique and can't be entirely comprehended or predicted.

c) Frankfurt School (1930s)

Criticism on logical positivism

The Frankfurt School philosophers were worried about the effects of positivism. Max Horkheimer criticized positivism in his book *Dialectic of Enlightenment* and examined new ideologies. Herbert Marcuse and Theodor

Adorno also rejected positivist universal worldviews. They argued that positivist suggestions only explain the world as a perceptible phenomenon, leaving out important aspects. Horkheimer argued against the idea that all sciences must be materialized and reduced to sole theorizing. He claimed that positivism tries to destroy the spirit of science, which is its main component. He also said that positivism is the superstructure of capitalism and opposes the fetishization of facts. Horkheimer was critical of logical positivists whom he considered to be fake opponents of fascism. Although logical positivists deny dogmatism, they create dogmatism themselves by describing the functioning of science based only on empiricist observation.

Frankfurt school perception on positivism

The Frankfurt School criticized positivism for saying that it is related to important ideas like freedom, justice, and tolerance. The Frankfurt School argued that these ideas lost their importance with the development of positivism. Marcuse, a member of the Frankfurt School, believed that positivists serve the powerful instead of promoting justice. The Frankfurt School did not want to separate sociology from Enlightenment because they believed that sociology should consider philosophy and not just examine social realities as objects. They thought that the method of trying to fit all knowledge into a certain framework limits the value of social sciences.

Adorno's perception on positivism

Theodor Adorno, believed that positivism has changed the way we think about reality. He argued that the terms universal and singular/particular are important but can also be misleading. He said that both terms need each other to exist. The singular or particular term exists only when it is described universally, and the universal term can only exist when it describes the particular. In other words, we need to use both terms to understand the whole picture of reality, and one term alone can be misleading.

Social science and social reality

Positivism has a unique approach to comprehend reality by making it into universal relationships between phenomena and thought, leading to a uniform understanding of science. Nevertheless, Jürgen Habermas, another philosopher, did not agree with this viewpoint. In his book *On the Logic of the Social Sciences,* he stated that the positivist concept of universal science is unsuccessful because it ignores the link between social sciences and history. Social sciences are based on specific meanings in different circumstances, which cannot be comprehended solely through observation.

For a more comprehensive perception of structured reality, it is necessary to consider history and meanings, not just universal principles.

Scientific method and natural phenomena

One of the most commonly repeated criticisms is that scientific methods, though appropriate for studying natural phenomena, fall short when they are used to study individuals and social phenomena. Although this criticism is not without merit, one must remember that sometimes, those leveling this criticism at positivism might have different worldviews. Antipositivists, for all their criticisms, "have never been able to formulate an alternative conception that answers the most important questions". Despite the barrage of criticism from antipositivists, there has been no decline in positivistic research. The human sciences can be messy, people unpredictable and factors leading to events hard to unravel. Positivism attempts to overcome this messiness by seeking rules and laws with which to render the social world understandable.

The main criticism of positivism can be depicted from the below-mentioned points:

a. It can be said what is applied in the field of nature is not necessarily applied in the field of human society. The subject matter of natural science and social science is different. The causality in natural science is invariant, while in social science it is contingent. Natural science aims at prediction, while, in social science aims at self-fulfilling prophecies.
b. The creativity, reflexivity, and agency of social actors undermine by positivism. The interpretative sociology was a refreshing departure from the positivist tradition.
c. Popper was strongly against the Inductive approach of positivism. Inferences based on many observations according to Popper are a myth. It is absurd to think that we can start with pure observation alone without anything in the nature of theory.
d. Critical rationalists believe that making a pure observation is impossible. Positivism is not a suit-

able foundation for creating scientific theories. Critical rationalists believe that observation is always made within a frame of reference, with certain expectations in mind.

e. Hermeneutics believes that social reality lies in the objectification of meaning that cannot be reduced only to observation

f. Positivism is Reductionist: one of the primary critiques of positivism is that it is reductionist. This means that it attempts to reduce complex phenomena to simple, measurable variables that can be studied using scientific methods. However, many critics argue that this reductionism oversimplifies the complexity of social phenomena, and fails to capture the rich nuances of human experience. In particular, positivism tends to ignore the social, cultural, and historical contexts in which phenomena occur, and assumes that objective reality can be studied in isolation from these factors.

g. Positivism Ignores Subjectivity: Another critique of positivism is that it ignores the subjective experiences of individuals. Positivists assume that objective reality exists independently of human perception and that it can be studied using empirical methods. However, critics argue that human perception and interpretation are crucial to understanding social phenomena, and that these cannot be reduced to simple, objective measures. In particular, subjective experiences such as emotions, beliefs, and values are seen as important factors in shaping human behavior, and these cannot be captured by positivist methods.

h. Positivism is Value-Neutral: A further critique of positivism is that it is value-neutral. Positivists aim to study phenomena objectively, without allowing their own values or beliefs to influence their research. However, critics argue that this is

impossible, since all research is inevitably shaped by the values and beliefs of the researcher. In particular, positivism tends to prioritize certain types of knowledge (such as empirical data) over others (such as experiential knowledge), and this can lead to a narrow and limited understanding of social phenomena.

i. Positivism is Mechanistic: Finally, a common critique of positivism is that it is mechanistic. Positivists tend to view social phenomena as deterministic, governed by natural laws and predictable patterns. However, critics argue that human behavior is much more complex and unpredictable than this, and that social phenomena are shaped by a multitude of factors that cannot be reduced to simple laws or equations. In particular, social phenomena are often shaped by power dynamics, cultural norms, and historical processes, which cannot be captured by positivist methods.

Scientific method and objective reality

Positivism has faced a number of critiques over the years, which challenge its fundamental assumptions and question its usefulness as a research approach. Critics argue that positivism is reductionist, ignores subjectivity, is value-neutral, and is mechanistic. While positivism has made significant contributions to the social sciences, these critiques highlight the need for a more nuanced and multidimensional approach to studying social phenomena.

Summarised Overview

Positivism exerted an important influence on scientific practice in the social sciences for decades in the early 20th century. This was especially true in the natural sciences where laboratory experiments can closely approximate the real-world environment, thus allowing for accurate predictions. The main tenets of positivism include the use of the scientific method, the belief in objective truth, and the importance of empirical data. Proponents of positivism argue that it has led to significant advancements in various fields of study, such as medicine, engineering, and social sciences. Positivism emphasizes the importance of replication and

universality as epistemic sources of power. In the social sciences, however, human volition and uncertainty make the laboratory experiment less reliable. However, positivism has also been criticized for its narrow focus on empirical data and its neglect of the subjective experiences of individuals. Critics argue that positivism fails to consider the social, cultural, and historical contexts in which knowledge is produced and that it often overlooks the value of qualitative research methods.

Despite these criticisms, positivism continues to be an influential approach in many fields of study. From the discussion above, it becomes clear that the positivistic paradigm has a significant place in generating scientific knowledge in both natural and social sciences. In conclusion, positivism has had a significant impact on the development of scientific thought and practice. While it has contributed too many advancements in various fields of study, its narrow focus on empirical data and objectivity has also been criticized. Today, there is a growing recognition of the need to incorporate diverse perspectives and methodologies, including qualitative research methods, in order to gain a more comprehensive understanding of the world around us.

Self Assessment

1. Differentiate between Empiricism and Positivism.
2. Explain the concept of Positivism as a method in Social Science Research.
3. Illustrate the major principles of Positivism.
4. Discuss the characteristics of Positivist paradigm.
5. Write an essay about the types of research strategies used in social re search.
6. Discuss the critiques of inductive strategy.

Assignments

1. Discuss the emergence of Positivism in social science research.
2. Evaluate the concept of Positivism as a significant method for examining social phenomena.
3. The critique of positivism leading to a significant shift in the contempo rary philosophy of science. Evaluate the statement with different schools of thought.

Suggested Readings

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Space for Learner Engagement for Objective Questions

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UNIT 3

Paradigms of Research: Positivist, Constructivist/Interpretive, Critical and Feminist

Learning Outcomes

On completion, the learner will be able to:

- Understand the significance of paradigms in social science research
- Familiarise the different types of paradigms in research methodology
- Explore the feminist paradigm and its scope in feminist research

Background

Research is a methodical and structured approach to exploring or investigating a social phenomenon or issue with the aim of gathering, analysing, interpreting and utilising data to enhance comprehension, depict it, anticipate future outcomes, or establish ways to manage it for the benefit of the people involved. Researchers typically follow a systematic set of steps, although the number and crucial aspects of these steps may vary based on the researcher's view point. Nevertheless, there are similarities among all general research processes. In the field of social sciences, researchers utilize a research paradigm, which is a frame work or model that outline the research topic, queries, goals, process and interpretation.

Keywords

Knowledge, Methodology, Objectivity, Subjectivity, Intersectionality.

Discussion

1.3.1. Paradigms of Research

Meaning

According to Webster's dictionary, paradigm is "an example or pattern, small, self-contained, simplified examples that we use to illustrate procedures, process and theoretical points". The concept of a paradigm is an old one in social research, but it received new emphasis through the publication of Thomas Kuhn's work "The structure of Scientific Revolution" as paradigm as the underlying assumptions and intellectual structure upon which research and development in a field of inquiry is based. A research paradigm is "the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed in the monograph of *The Structure of Scientific Revolution* by Kuhn.

Role of research paradigm

The main functions of social research paradigms are to find out the ways to define works, knowledge and how one is to think, write and talk about this knowledge. It also helps to find out which types of questions are to be asked and the methodologies to be used in answering the research questions. Paradigms help decide what is published and not published. It is also helpful to elucidate the structure of the world of the academic worker, provides its meaning and its significance.

Components of a Research Paradigm

A Paradigm is a basic belief system and theoretical framework with assumptions about

1. Ontology
2. Epistemology
3. Methodology
4. Methods.

In other words, it is our way of understanding the reality of the world and studying it. A Research Paradigm is "the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed". According to Guba, Research paradigms can be characterised through their:

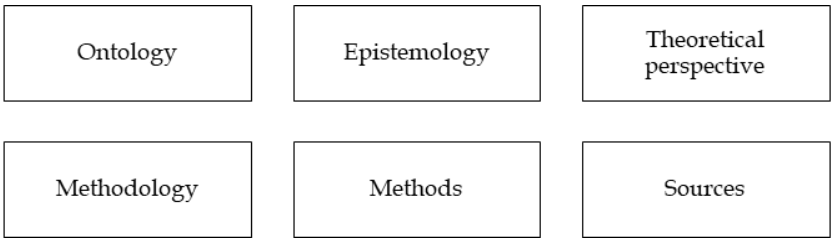
Ontology – What is reality?

Epistemology – How do you know something?

Methodology – How do you go about finding it out?

The diagram below explains the above terms and the relationship between them:

Let us look at the four components of research.



What is reality? What and how can I knowa bout reality/ knowledge? What approach can we use to acquire knowledge? What tools can we use to acquire knowledge? —what data can we collect?

Let us closely look at the four components of a research paradigm:

Functioning of Research Paradigm

Ontology refers to "the nature of our beliefs about reality". Researchers have assumptions (sometimes implicit) about reality, how it exists and what can be known about it. It is the ontological question that leads a researcher to inquire what kind of reality exists: "A singular, verifiable reality and truth or socially constructed multiple realities. Ontology is the starting point of all research, after which ones epistemological and methodological positions logically follow. In short, ontological assumptions are concerned with what we believe constitutes social reality". Epistemology refers to "the branch of philosophy that studies the nature of knowledge and the process by which knowledge is acquired and validated. It is concerned with "the nature and forms [of knowledge], how it can be acquired and how it can be communicated to other human beings". It is the epistemological question that leads a researcher to debate "the possibility and desirability of objectivity, subjectivity, causality, validity, generalizability". Conversely, belief in socially constructed multiple realities leads researchers to reject the notion that people should be studied like objects of natural sciences; they get involved with the subjects and try and understand phenomena in their

contexts. Research Methodology refers to general principles which underline how we investigate the social world and how we demonstrate that the knowledge generated is valid. Research methods refers to the more practical issues of choosing an appropriate research design – perhaps an experiment or a survey – to answer a research question, and then designing instruments to generate data.

1.3.2. Types of paradigms

Contextualisation

Paradigms may be defined as the frameworks that function as maps or guides for scientific communities, determining important problems or issues for its members to address and defining acceptable theories or explanations, methods and techniques to solve defined problems. Different disciplines use different terms and categorization schemes for paradigms such as positivist, post positivist, interpretive, critical and post-modern. The term positivism refers to a branch of philosophy that rose to prominence during the early nineteenth century. It was introduced based on the rationalistic, empiricist philosophical ideas of the French philosopher August Comte. Comte points out that, true knowledge is based on experience of senses and can be attained by observation or examination and experiment.

a) Positivist Paradigm

Meaning of the concept

The positivist paradigm was originally proposed by Auguste Comte, a French philosopher who lived from 1798-1857. This paradigm provides a framework for conducting research and is based on the scientific method of investigation. According to Comte, understanding human behavior and expanding knowledge should be based on experimentation, observation and reason derived from experience. The scientific method involves a process of experimentation that explore observations and provides answer to questions as depicted in figure 1.3.1. This approach seeks to identify cause and effect relationship in nature and is commonly used in research that interprets observations in terms of measurable entities or facts.

In the positivist paradigm, research relies on deductive logic, which involves formulating hypotheses, testing them, and using mathematical equations, calculations and expressions to derive conclusions. The aim is to provide explanations and predictions based on measurable

Different assumptions

outcomes. This paradigm is based on four assumptions: determinism, empiricism, parsimony and generalisability, which are explained by Cohen, Manion and Morrison (2000). The assumption of determinism means that observed events are caused by other factors, and in order to understand causal relationships, researchers need to make predictions and control for potential explanatory factors that could impact dependent factors. The assumption of empiricism means that in order to investigate a research problem, researchers need to collect empirical data that can be verified and support the chosen theoretical framework for the research, enabling the testing of formulated hypothesis.

Process of generalising

The positivist paradigm assumes parsimony, meaning that researchers attempt to explain the phenomenon they study in the most efficient way possible. The generalisability assumption suggests that results obtained from a research project conducted within the positivist paradigm in one context should be applicable to other situations through inductive inferences. This means that researcher should be able to observe occurrences in a particular phenomenon and generalise about what can be expected in other parts of the world. Due to these assumptions, the positivist paradigm promotes the use of a quantitative research methods, as they allow researcher to be in precise in describing parameters and coefficients in the data that is gathered, analysed and interpreted to understand the relationships within it.

Different elements

The positivist paradigm is characterised by four foundational elements or assumptions: epistemology, ontology, methodology, and axiology. Its epistemology is considered objectivist, its ontology is naïve realism, its methodology is experimental and its axiology is beneficence. Understanding each of these elements can help researchers better comprehend this paradigm. The objectivist epistemology asserts that human understanding is acquired through the application of reason, which means that through research, we can gain knowledge that increasingly approximates the true nature of the phenomenon being investigated. Essentially research help us become more objective in our understanding of the world around us.

The *naïve realist ontology* assumes the acceptance of the following five beliefs.

There exists a world of material objects.

Features

1. Some statements about these objects can be known to be true through sense-experience.
2. These objects exist whether they are actually perceived or even when they are not perceived. These objects of perception are assumed to be largely perception-independent.
3. These objects are also able to retain properties of the types we perceive them as having, even when they are not being perceived. Their properties are perception-independent.
4. By means of our senses, we perceive the world directly, and pretty much as it is. In the main, our claims to have knowledge of it are justified.

Characteristics of the Positivist Paradigm

a. The following summary should help you to understand the basic characteristics of research that is normally located within the Positivist paradigm.
b. A belief that theory is universal and law-like generalisations can be made across contexts.
c. The assumption that context is not important.
d. The belief that truth or knowledge is 'out there to be discovered' by research.
e. The belief that cause and effect are distinguishable and analytically separable.
f. The belief that results of inquiry can be quantified.
g. The belief that theory can be used to predict and to control outcomes.
h. The belief that research should follow the scientific method of investigation.
i. Rests on formulation and testing of hypotheses.
j. Employs empirical or analytical approaches.
k. Pursues an objective search for facts.
l. Believes in ability to observe knowledge.
m. The researcher's ultimate aim is to establish a comprehensive universal theory, to account for

human and social behaviour.

n. Application of the scientific method (Illustrated in Figure 1.3.1)

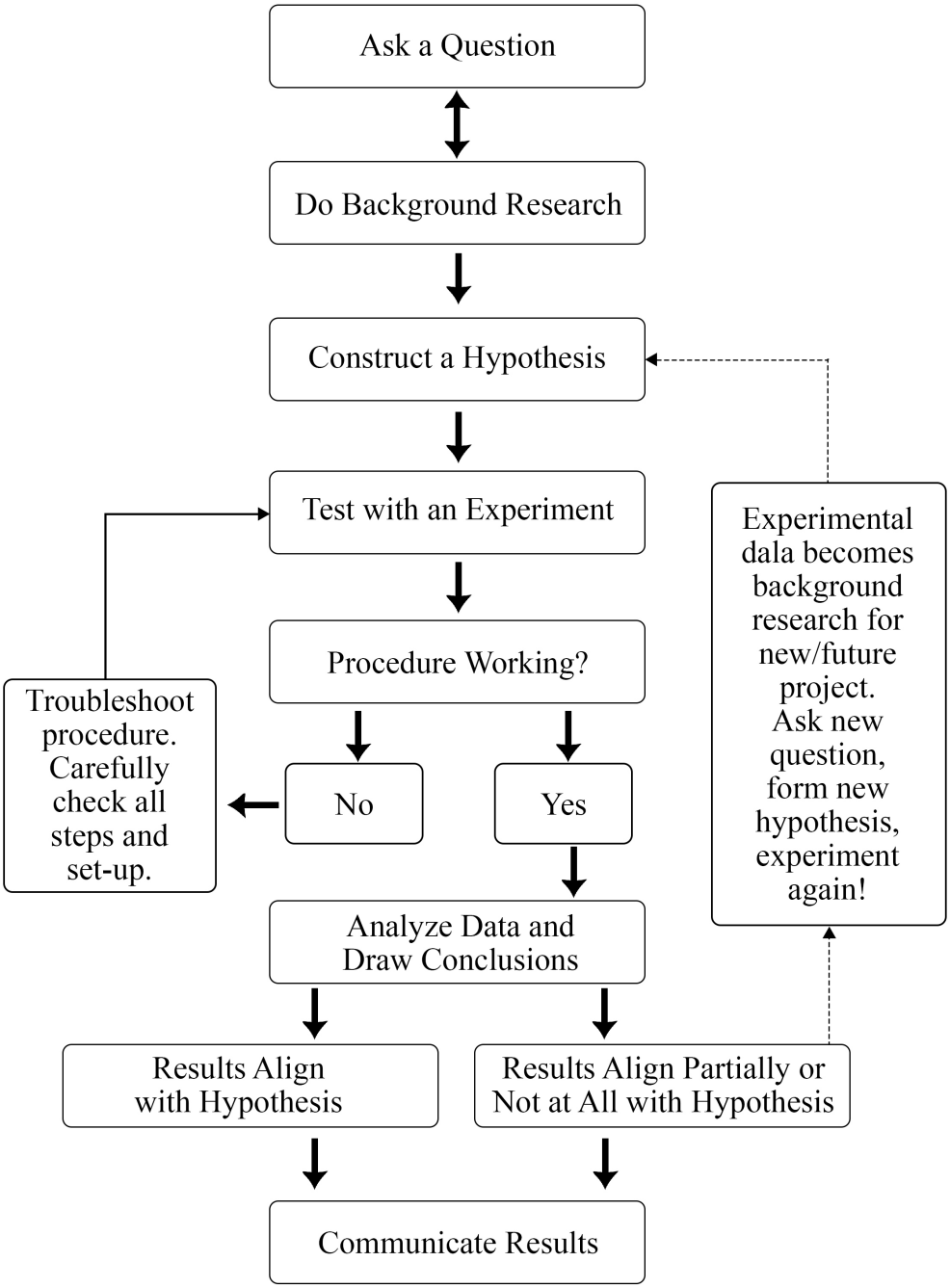


Figure 1.3.1

b) Interpretive paradigm

Subjectivity of interpretivism

Interpretivism is a response to the excessive influence of positivism, and it has its roots in various disciplines such as sociology and anthropology. Interpretive researchers contend that reality is based on people's subjective experience of the world and reject the notion that there is a single, objective reality that exists independently of our senses. Interpretive ontology is anti -foundationalist and posits that truth and reality are created, not discovered. Interpretive epistemology is subjective because external reality cannot be accessed without being influenced by our world views and backgrounds. Researchers are part of the social reality being studied and cannot detached from it. If there are different interpretations of a phenomenon, interpretivists do not choose a preferred one, but rather accept the existence of multiple perspectives and acknowledge that different researchers bring different viewpoints to the same issue.

Multiple social reality

The goal of interpretive research is not to discover universal, context and value free knowledge and truth but to try to understand the interpretations of individuals about the social phenomena they interact with. This concept of knowledge is an inevitable corollary of interpretive ontology. If one believes in multiple socially constructed realities, it follows that these realities are approached from different angles by different people.

Interpretive methodology requires that social phenomena be understood "through the eyes of the participants rather than the researcher". The goal of interpretive methodology is to understand social phenomena in their context. Interpretivists collect mostly qualitative data from participants over an extended period of time, as in ethnography and case studies.

Process of Inductive and deductive

The approach to analyzing data thus generated is inductive, i.e., the researcher tries to discover patterns in the data which are collapsed under broad themes to understand a phenomenon and generate theory. This is the polar opposite of the deductive approach, in which researchers start off by identifying patterns and themes before starting the data collection process; once data is collected, researchers would search through the data for words, statements and events which are instances of the pre-identified patterns and themes.

Interpretive researchers prefer to use the inductive

Data in inductive approach

approach because they view theory as emerging from data collection rather than being the primary focus of research. Data collected through interpretive research is predominantly verbal and often recorded using audio and video to accurately capture events for subsequent analysis. Interpretive researchers use methods that generate qualitative data, although numerical data may also be used; it is not the main focus of the research.

Interpretive perspectives to view society

Interpretive paradigm holds the following views:

1. Human beings are not mechanistic and embrace multiple realities which needs to be understood in context.
2. The social world cannot be described without investigating how people use language, symbols and meaning to construct social practice.
3. No social explanation is complete unless it adequately describes the role of meaning in human actions.

Main characteristics of interpretive paradigm

- The world is socially constructed and subjective and the observer is part of what is observed.
- Science is driven by the human interests and the focus is on meaning.
- Try to understand what is happening and an assumption that reality is complex and uncontrollable.
- Look at the totality of the situation
- Using multiple methods to understand different views of the phenomena and small samples looked at in depth or overtime.
- Social phenomenon is socially constructed, context influenced and reveal multiple interpretations.
- The researcher cannot maintain a distant or neutral stance rather they have values which influence their worldview and research. The interpretive paradigm has been criticized for, among other things, being "soft", incapable of yielding theories that could be generalised to larger populations and the involvement of the researcher with participants which leads to lack of objectivity

Examples of data collection methods that yield qualitative data include: open ended interviews with varying degrees of structure (standardized open-ended interviews, semi

standardized open-ended interviews, and informal conversational interview), observations, field notes, personal notes, documents etc. Interpretive research is considered to be of good quality if it has credibility (internal validity), transferability (external validity), dependability (reliability) and confirmability (objectivity). If researchers are honest and conscientious in their efforts for approximation to truth, the results hold resonance for people in other contexts and the steps and methods of the study are described in detail, then study has elements of the quality criteria.

c) The Critical Paradigm

Critical inquiry

The Critical paradigm situates its research in social justice issues and seeks to address the political, social and economic issues, which lead to social oppression, conflict, struggle, and power structures at whatever levels these might occur. Because it seeks to change the politics so as to confront social oppression and improve the social justice in the situation, it is sometimes called the *Transformative paradigm.* This paradigm assumes a *transactional epistemology,* (in which the researcher interacts with the participants), an *ontology of historical realism,* especially as it relates to oppression; a *methodology that is dialogic*, and an *axiology* that respects *cultural norms.*

Characteristics of Research Located within the Critical Paradigm

Following Guba and Lincoln (1988), as well as Martens (2015) attribute the following characteristics to research conducted within the Critical paradigm.

The concern with power relationships set up within social structures

a. The conscious recognition of the consequences of privileging versions of reality
b. The respect for cultural norms.
c. An examination of conditions and individuals in a situation, based on social positioning.
d. The treatment of research as an act of construction rather than discovery.
e. A central focus of the research effort on uncovering agency, which is hidden by social practices, leading to liberation and emancipation.

Features

f. And endeavor to expose conjunctions of politics, morality, and ethics.
g. The deliberate efforts of the researcher to promote human rights, and increase social justice, and reciprocity.
h. The deliberate efforts of the researcher to address issues of power, oppression and trust among research participants.
i. A high reliance on praxis.
j. The use of ethnomethodology, situating knowledge socially and historically.
k. An application of action research.
l. The utilisation of participatory research

The critical paradigm goes beyond the narrowness of both positivist and interpretive paradigms. The critical paradigm seeks to generate theory from action or practice in order to help people change things they would like to change. The critical paradigm unambiguously integrates theory and practice totally. This paradigm involves a transaction between theory and practice and therefore joins together. The focus is on 'theory in action theory.

d) Feminist paradigm

Meaning

The feminist paradigm is a theoretical framework that seeks to understand and challenge the social structures and power imbalances that perpetuate gender inequality and discrimination against women. This perspective emerged from the feminist movement and is characterised by a commitment to social justice, equality and the empowerment of women. Feminist researchers argue that traditional research has often ignored or marginalized women's experiences, perspective and contributions, and have sought to develop alternative research methods and theories that give voice to women and address gender-based oppression. Feminist research often involves an intersectional approach, meaning that it recognises the ways in which gender intersects with other social identities such as race, class and sexuality to shape women's experience of inequality and oppression. Over all the feminist paradigm seeks to challenge and transform traditional power dynamics in society to create a more equitable and just world for all.

Key principles of Feminist research theory

1. Ethics of Care – It is a perspective that has been developed as a response to concerns that traditional principle – based ethics may not adequately address the complexities of human relationships and social contexts, such as caring for a child with a disability in a rural area, domestic violence or child abuse. This perspective was first raised by Gilligan and has been further developed through feminist questioning of abstract ethical principles. The ethic of care prioritises human relationships, sensitivity to others, caring responsibility, attentiveness to contexts and situations, and responsiveness to the needs of research participants. However, feminists argue that the oppressive conditions under which many women provide care need to be addressed. For example, if a mother who is a research participant is living in unsafe housing, the researcher should refer her to a government housing board. To achieve better outcomes and effectively address ethical issues, the ethic of care should be integrated with the principle-based ethics of justice and duty of care. Justice entails providing equal service regardless of a client's social status, while duty of care involves following legal obligations to offer competent and safe service without causing harm to others. Researchers should consult with supervisors if there are ethical conflicts.

Care and responsibility

2. Reflexivity: Reflexivity should take place at every stage of the feminist research process. Reflexivity has a core ethical component in feminist research because researchers attempt to make considered and appropriate responses to the unfolding contexts. Fook, White and Gardner, define reflexivity as the way of being able to pinpoint oneself in the situation of the research and recognizing how one influences the research process through their own beliefs, experiences and social, economic and political situation. Significantly, these constituents of reflexivity are related to understanding the employment of power through knowledge and discourse. D'Cruz, argued that reflexivity requires practitioners to have at least critical awareness of the ethics and politics of the origins of knowledge.

Respond to oneself

There are a variety of ways that data can be collected in feminist research;

a. Interviewing and focus groups are the most popular method of data collection in feminist research. Harding, argues that the focus of feminist research is on listening

carefully to how women think about theirs and men's lives, critiquing how traditional social scientists see women's and men's lives, and focusing upon activities and knowledge that were previously subjugated.

Interviewing is used to collect data and take into account everyday experiences, for example, paying particular attention to and finding and analyzing the gaps that occur when women try to fit their lives into the dominant culture's way of conceptualizing their situation.

Interview method

DeVault and Gross maintain that interviews give voice to neglected groups in society and link to social justice, areas that Feminist Research theory is concerned about. It is a way to address power-bases. Semi-structured interviews are an intensive approach that can result in large amount of rich data.

Method of interview

b. Semi-structured interviews are interviews where the researcher uses a set of general questions on a topic that is of interest to him/her. There is ample scope to ask more in-depth questions in response to the interviewees' replies. Social scientists argue that the topic of the research is not the interview itself but rather the issues that became apparent in the discussion. The collection of in-depth narrative data as the result of semi-structured interviews is a feminist intervention because it is a way to overcome the maintenance of silence that surrounds oppressed people's experiences and perspectives. The research participants' thoughts are brought to the fore by giving them the opportunity to speak in their own words about their situation allowing the researcher to gain insight into their visions, hopes and expectations for the future as well as critiques of the past and present. No part of the interview remains untouched by the researcher and the researcher needs to be reflexive examining how his/her own values and social position influence the interview and the data analysis.

c. Focus Groups – The term 'focus groups' refers to group discussions or interviews that are commonly used in Feminist standpoint research. These groups are valuable for exploring situated knowledge and uncovering subjugated knowledge. In the context of feminist research, focus groups provide a safe space for women to share their stories of anger, frustration and struggle, and to develop strategies for addressing

Group discussion

social justice issues. Group discussions can foster trusting relationships among participants, and can also lead to self-reflection on the part of the researcher. However, Madriz's research with Latina women in the United States found that attendance at focus groups can be unreliable due to cultural factors such as the prioritisation of family responsibilities and challenges related to housing, income, employment and transportation.

Summarised Overview

Epistemological issues refer to questions about what can be considered valid knowledge in a particular discipline. A key issue in this regard is whether the social world can and should be studied using the same methods and principles as the natural sciences. The perspective that advocates for this approach is called positivism, which holds that scientific inquiry should follow a rigorous, objective and empirical approach to study the social world. Feminist theory is often used in social research because it is sensitive to how gender and power permeate all domains of society. Social research is a collection of methodologies and methods from a variety of research disciplines including social work, anthropology and education that are used to obtain knowledge about society. Surveys, censuses and reports are often used in social research. Feminist theory in social research can be used to explore underlying causes of women's oppression, how women experience problems and to unearth previously subjugated knowledge and solutions.

Self Assessment

1. What is positivism?
2. What is research paradigm?
3. Discuss the components of research paradigm.
4. What are the different characteristics of positive paradigm.
5. Define interpretive paradigm.
6. Discuss critical paradigm
7. What are the major characteristics of interpretive paradigm?
8. Write an essay on various paradigms of research.
9. What is feminist paradigm?

Assignments

1. Discuss t the significance of research paradigm in addressing social problems.
2. Evaluate the process of analysing cause and effect relationship in positive paradigm.
3. Critically evaluate the characteristics of research within the critical paradigm.
4. Discuss the subjective experience of interpretive researcher.
5. Compare various research paradigm used in social research
6. Discuss the various methods of data collection used in feminist research.

Suggested Readings

1. Moser, P. (1993). *Philosophy After Objectivity.* New York: Oxford University Press.
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4. Chen, S. (2006). Simultaneous Promotion of Indigenisation and Internationalisation: New language in-education policy in Taiwan. *Language and Education.* 20 (4). 322-337.
5. Chilisa, B. (2005). Educational research within postcolonial Africa: A critique of HIV/AIDS research in Botswana. *International Journal of Qualitative studies in Education*, Vol. 18, No. 6, 675.
6. Cohen, L.; Manion, L & Morrison K. (2000). *Research Methods in Education*. London: Routledge.
7. Crotty, M. (2003). *The Foundations of Social Research: Meaning and Perspectives in the Research Process,* London: Sage.
8. Lewis, C.I. (1929). *Mind and the World-Order.* New York: Scribner.
9. Lewis, C.I. (1946). *An Analysis of Knowledge and Valuation.* LaSalle: Open Court.
10. Moser, P. K. (1985). *Empirical Justification*. Boston: Riedel: Dordrecht.
11. Moser, P. (1989). *Knowledge and Evidence*. USA: Cambridge University Press.

Space for Learner Engagement for Objective Questions

Learners are encouraged to develop objective questions based on the content in the paragraph as a sign of their comprehension of the content. The Learners may reflect on the recap bullets and relate their understanding with the narrative in order to frame objective questions from the given text. The University expects that 1 - 2 questions are developed for each paragraph. The space given below can be used for listing the questions.

UNDERSTANDING SOCIAL REALITY

BLOCK-02

UNIT 1

Nature of Social Reality: Binaries, Reflexivity, Theory - Research Duality, Sociological Imagination

Learning Outcomes

On completion, the learner will be able to:

- Introduce the importance and nature of social reality.
- Narrate the multidimensional existence of social reality.
- Explain the binaries, reflexivity and theory-research duality in relation to social research methods.
- Expose the relevance and dynamics of sociological imagination while addressing social issues.

Background

Over the past 1500 years and more, understanding and investigating social reality had been the central problem of philosophy and social sciences. Immense confusions exist, on what should be the systematic and principled way of taking a social situation as subject matter for research.

Understanding reality is a complex, problematic and tricky business. You probably by this time are uncertain that some of the things you "know" may not be true, but how can you really know what is real? People have struggled with this question for thousands of years.

There is a viewpoint in philosophy which insists that nature of objects studied by a discipline has consequences for the questions and aspects on how objects/realities should be investigated, conceptualised and theorised. Nature of studies in social science is significant as it deals with human beings and social life. There are many implications on the appropriation of social reality as subject matter. The nature of subjects researched by social scientists leave behind questions like: (a) nature of social explanation and interpretation (b) role of causality in human affairs (c) differences between natural and social sciences. Hence a deep understanding on the nature of social realities is inevitable while studying the fundamentals of social research.

Keywords

Social reality, Binaries, Reflex, Sociology of imagination

Discussion

Inquest of social reality

Think about the subject matter of social sciences. It consists of social structure and related functions of society. For example, historical events, types of government, socio-economic classes, historical eras, market economy, technology, political movements and kinship, family structures etc. While pursuing the strategies of observing social reality, it is important to take the nature of objects for consideration. If social reality exists, then all social phenomena and all objects of social inquest will be aspects or parts of it. Suppose a person has an account or experience of social reality. That particular social reality specifies the collective existence of social phenomena. To be simple, an account of social reality specifies assurance of social phenomena. This is a systematic way of addressing issues in social theory. Accountability of social reality makes a comprehensive account of the nature and constitution of all objects of social science. Most of the issues in social theory and in the philosophy of social science need an analysis of the social reality.

2.1.1. Basic Nature of Social Reality

Basic question

The question, "What is the basic nature of social reality?" is an abstract ontological (Ontology is a branch in Philosophy which deals with kinds and structures of entities) question. It sounds like a type of question tried and tested by both philosophers and social scientists. This is an ambiguous question as philosophers and social researchers are not in a better position to answer this. Unlike physical sciences, social science is more complex. As human beings and related consequential realities are to be studied by social scientists, processing of large empirical data is massive undertaking. Hence social science has to yet discover a common law applicable to social realities. In all categories of social sciences, fundamental divisions among theoretical schools often reflect different conceptions of social reality.

Consequently, if we ask to social scientists the question,

Philosophical problems

"What is the nature of social reality?" we would get variety of answers as we would if philosophers answered it. The task of analysing the nature of social reality is, closely tied up with a swing of continuing philosophical problems. Thus, the foundations of social investigation are a philosophical as well as a social theoretical issue. Social ontology belongs to the theoretical side of social science. While responding the nature of social reality, it is significant to say the fact that there is no hard and fast line between philosophy and social theory. There is a point or one place where philosophy and social science merge in the analysis of social reality, there is no question of handing over this analysis to social scientists. Hence philosophy has better answers and interpretations about the nature of social reality.

Dilthey's social reality

By the end of 19th century German philosopher William Dilthey studies about the nature of comprehension attained by the human sciences. He analysed a few aspects of it namely, (a) the everyday understanding of the society with scientific comprehension (b) the constitution of the social phenomena studied. He used the term 'social-historical' or 'human-social reality' while explaining social reality. But he did not explain what this phenomena is nor did he proposed the analysis of the nature of objects studied by the social scientists.

Historical perspective on social reality

German philosopher Martin Heidegger appropriated the idea of social reality from Dilthey. He believed that analysis of social reality furnishes the basis for an account of historical sciences. So, he gave a detailed analysis of the basic structure of social reality from a historical perspective. The possibility of analysing the account of the objects and nature of social sciences was recognised by Dilthey in an implicit way and explicitly by Heidegger.

a) Basic Structure of Social Existence

Components of social reality.

There are a few relevant points while discussing the aspects of social reality. There is a debatable question: Isn't ontology a scientific question? Isn't it better to leave it to social science to tell us; about the basic nature of social reality? That is what we do today in the case of physical reality and physical science. Already philosophers have made declarations on the fundamental nature of physical reality. Therefore, we expect social scientists, sociologists, anthropologists and economists to explain about the basic components of social reality.

What is the meaning of 'social'? The Latin word 'socialis'

Being social

denotes companionship. In the modern period, 'social' is used to qualify any mode of human coexistence. To be simple 'social' is 'constitutive of human coexistence'. Social reality is that part of the world where experience gives us access to the realm of human existence. Therefore, social reality consists of interrelated ongoing social life. Social reality includes the interrelatedness of the continuous passage of social life. Interconnected social lives, in other words, is the real, empirical reality in which actual social existence consists. Hence experiences related to social existence can be defined as social reality.

Exhibiting social reality

According to Heidegger, in everyday life, or moment-to-moment existence, the series of actions are governed by practical intelligibility and performed in consistent, local settings. Practical intelligibility is what makes sense to the actions of an actor. To be in a world means to be a continuous performer in interconnected social settings. In Heidegger's language social reality is the interrelatedness of different people's being.

Heideggerian phenomenology (Phenomenology: the science of phenomena as distinct from that of the nature of being.) has a different aspect to social reality. For Heidegger, doing phenomenology means simply that whatever one says about an object under analysis must be directly exhibited and demonstrated in the object itself.

b) Dimensions of Social Reality

Spencer's dimensions of social reality

Analysis of social reality is the product of thinking which is influenced by experience and a tradition of philosophy and social theory. A person's experience of life provides a test to social reality. Every interpretation of social life provides a description of what is going in human life.

Auguste Comte believed that social phenomena/reality could be reduced to laws in the same way that the revolutions of the heavenly bodies had been made explainable by gravitational theory. According to Spencer, social reality is related to and grows through economic and other acts of social spontaneous cooperation by sociable human individuals, who possess "social self- consciousness."

Social interactions

In general, social reality is distinct from biological reality or individual cognitive reality. It has a representation of phenomenological level. This level is created through social interaction and thereby exceeding individual motives and

actions. In the post-modern notions, Sociologists generally accept that reality is different for each individual. The term social construction of reality points to this aspect. It refers to the theory that the way we exist and the way we conceive is shaped partly by our interactions with others, as well as by our life experiences.

1.1.2. Binaries

Need for the binaries

The terms *Gemeinschaft* and *Gesellschaft* are generally translated as "community and society". They are the categories which were used by the German sociologist Ferdinand Tönnies in order to categorise social relationships into two dichotomous *(dichotomy: a difference between two completely opposite ideas or things)* sociological types which define each other. Max Weber, also wrote expansively about the relationship between *Gemeinschaft and Gesellschaft.*

A binary perspective establishes the existence of a binary variable in studying social sciences. It measures a quantity that has only two categories. Social scientists often engage in binary thinking in classifying social phenomena, such as the public and the private, the micro and the macro, and so on.

Binary types

There are instances which use binary perceptions as a perfect tool in studying a social issue. The subject matter of sociology and other social sciences are categorised according to the characteristics. The *Gemeinschaft–Gesellschaft* dichotomy which was proposed by Tönnies was a purely conceptual tool and was used by Max Weber to emphasise the key elements of a historic/social change. For example: *Gemeinschaft* or community is related to personal aspects of social reality. Roles, values, beliefs and interactions fall in the realm of personal experience. At the same time, indirect interactions, impersonal relations, formalities and beliefs are related to wider aspect of social reality. Social experiences in association, corporation, including company, modern state and academia could be related to *Gesellschaft.*

Universality of the opposites

Claude Levi-Strauss discussed the binary oppositions while dealing with structuralism. It is a never-ending conflict between opposite qualities or terms. Social reality could be understood and studied only when their existence is well explained. The very same idea gets reflected and repeated even in the current, postmodern society. The existence of conflicting opposites accelerates social events and change.

1.2.3. Reflexivity

Meaning

We are aware that the term reflexivity is mirrored by a number of meanings in everyday usage. What is the reflex expected from a researcher while dealing with social events and human beings? Reflexivity is a multi-meaningful and multi-dimensional. It possesses meaning in different contexts. In general context, it means 'reflecting'. On the other hand, and specifically, as part of the social research, reflexivity is the process by which the researcher reflects upon the data collection and interpretation process.

In the sociological sense, reflexivity refers to the process of *reflecting on*. That means, to continue the process of reflecting for a long while; rather than just reflecting. The former is an active process, the latter passive. Research methods like ethnography (*Ethnography is a qualitative method for collecting data often used in the social and behavioural sciences.)* is reflexive as it is inclusive of the data collected through fieldwork. Ethnographic reflexivity is the type of reflexivity which is regarded as the central variant in ethnographic research.

Reflexivity in research involves the following aspects:

i. There is a requirement that researchers should reflect upon the research process to get an access of the research process along with the nature and extent of data collected. Every qualitative research has a bunch of interviewees or respondents. The respondents' consent, format of the data collection, quality of data collected etc. could be reflected upon.

ii. Researchers reflect upon theoretical structures that they have drawn out of the ethnographic analysis. They are expected to recheck the evidence using the existing models.

iii. Reflexivity which helps in placing schema to different contexts to check different meanings is also a possibility. This is called dual reflexive process.

iv. Reflexivity which is applied to first-hand research suits well on quantitative research, where collected data takes on an objectivist existence.

v. There is a deeper level of reflexivity which operates in simple philosophical level which find the acts of good and bad (binaries).

vi. The most complex level of reflexivity has the deep philosophical aspect, that is, self- awareness. Self-awareness is defined as the process of reflecting back on oneself. The aspect of self-awareness is one of the oldest concerns in philosophy. Hope you remember the philosophical dilemmas in defining the nature of social reality.

vii. On a fifth level reflexivity is used as a means of critique. Here theory presented in a text reflexively rejects the possibility of the theory. For example, Hegel uses a reflexive critique with theory of Immanuel Kant

viii. On a sixth level reflexivity is taken positively as an alternative to knowledge. This is a rather complex and contentious notion. For example, approach adopted by Neitzsche, Heidegger and Derrida who endorse reflexivity and address the problem of writing a text in the light of the implications of its own reflexivity.

Sociological Perspective

In the recent debates reflexivity has taken a different place. The modern denial of the possibility of knowledge (as in structuralism, semiotics, cultural relativism, the theory dependence of observation, etc.) raises a reflexive problem, viz. how may one know that knowledge is not possible? How many are aware that knowledge is constructed by power?

2.1.4. Theory-Research Duality

Why do the elite behave in a hostile way towards others? You may get multiple answers from all sides of society. Some answers may appear true and trustful to you, while others may even be faulty and anti-human. Just then you get to read the following passage as an example with a theoretical backing:

Elitism happens when people learn negative stereotypes

about another group from their families, friends and others in their immediate surroundings. People who belong to a certain financial status with privileges lack sufficient friendly social contact with members of other groups. They often reveal their casteism or racism as they assume that they are superior and they believe that others who contradict those stereotypes, remain prejudiced.

Theoretical explanation

This passage makes more sense because it is consistent with what you already know and you get to know about how the social world works. This is a perfect example of a small- scale social theory, a type that researchers use when conducting a study. In an academic sphere, theory is something well understood and explored as an essential tool of the researcher.

In simple terms, researchers link a story about the operation of the social world (the theory) with what they witness when they examine it systematically (the data). But theories may not be perfect answers for one-time events or exceptional cases, specific individuals, events etc.

Theoretical understanding

For example, a theory may not be effective in explaining why terrorists decided to attack New York's World Trade Center on September 11, 2001 *(example of one-time event)*. On the other hand, but they can explain patterns of other social contexts and conditions that generally lead to amplified levels of fear and feelings of patriotism in people. In the same way, social theories cannot explain why X *(example of a single individual)* decided to join a teacher training course rather than taking up a business course. But a social theory can explain why females in Kerala prefer the role of educators rather than other professional courses.

By definition, social theory is defined as a system of interconnected abstractions or ideas that abbreviates and organizes knowledge about the social world. It is a compact way to think of the social world. People are constantly developing new theories about how the world works.

Not all social thoughts said by great thinkers are social theories. Classical sociologists like Durkheim, Weber, Karl Marx etc. played intense role in generating innovative ideas about the social world. Their ideas were innovative and relatable to social events. They were able to change the perspective of social understanding. People study the classical theorists because they provided many creative and interrelated ideas at once. They radically changed the way

people understood and saw the social world. We study them as geniuses who could generate many original, intuitive ideas and basically shift how people saw the social world.

Theory and generalisation

At times people complicate theory with a hunch or speculative guessing. This negligent use of the term theory causes utter confusion. We sociologists, should critically examine newspaper articles or television reports on social issues which usually have unspoken social theories inserted within them. For example, a news report on the difficulty of applying a school reunion plan will contain a hidden theory about race relations. Likewise, political leaders often express social theories when they discuss public issues. Politicians who claim that inadequate education causes poverty or that a weakening in traditional moral values causes higher crime rates are literally conveying theories. These are layperson's way of expressing theories. They have no systematic investigation. They are generated from common sense notions, which are not reliable. Compared to the theories of social scientists, they are less systematic, less well formulated, and has no empirical evidence. These instances show the necessity of well-established social theories in social development.

a) The Dynamic Duo of Theory and Research

Duo relationship

Theory and research are interrelated. In a way both of them help in completing each other. Theories are used in designing a research question, guiding the selection of relevant data, interpreting the data, and explaining the underlying causes or influences of observed phenomena. Only an unexperienced, new researcher mistakenly believes that theory is irrelevant to research or that a researcher just gathers the data. It is wasteful to proceed in research, without the foundation of a theory. Without theory the researcher develops a vague thoughts, uncritical paradigms, faulty logic and imprecise concepts. Our perspective on looking out at a topic provides us with (a) concepts (b) assumptions (c) valid hypotheses (d) important questions etc. Theory permits us to link a single study to the enormous base of knowledge to which other researchers contribute. For instance, theory enables a researcher to get the vision of a forest instead of a single branch or single tree. In addition, theory increases a researcher's awareness on the collected data.

2.1.5. Sociological Imagination

General notion

Think about a young individual facing unemployment, carrying the introversions of defeat, agony and existential thoughts about life. Most probably every mirror image of the individuals reminds of about the 'unsuccessful' life. This is the general notion of an individual going through similar life instances. They may feel as 'I am defeated or I am useless. But Sociologist C. Wright Mills would reply to this "Not you. The world around you." Mills assumed things only worked when you saw "the vivid awareness of the relationship between experience and the wider society." He asked people to stop concentrating on themselves alone and to look at the wider landscape of society. It is a better way of understanding society, rather every social problem.

Sociological imagination is a term used in the field of sociology to describe a framework for understanding social reality that places personal experiences within a broader social and historical context. In a much simpler level, sociological imagination is an ability to connect personal challenges to larger social issues.

Sociological understanding

Taking Mill's thoughts into consideration, every problem faced by an individual has its roots in the wider social system. It is not an individual issue; most of the issues has larger roots beneath. There are hundreds or thousands, if not millions of others who are going through the same fight. Therefore, the scope of research and theory are much better in this scenario. When applicable to a wider social context, theory attains better accountability and integrity. But, Mills never thought sociology alone was the ultimate science. He felt sociologists, psychologists, economists, and political scientists should all work together for the improvement of the social system. This makes sense, given the broad lens through which he observed the world.

Let us analyse a contemporary example. You click your Instagram icon in your phone very frequently; millions of others (or more!) could be doing the exact same thing. Your sleep patterns are designed according to the time spent on your mobile phone. There are wider lenses to consider when contemplating current life. Indeed, almost everything people experience today is an addition or extension of some prior period in life. Therefore, chances of research are immense to such social topics or events. A few questions like these may arise from the sociological imagination of the issue of social

media:

a. How does social media impact you every day?
b. How does social media influence your study habits?
c. How does social media help in the peer- connection with classmates and collaborate online?
d. How about work opportunities?
e. How does social media shape your relationships or impact your identity or self- perception?
f. Do you feel that social media inversely influences real life interactions?
g. Do you evaluate your life based on what others post on social media?

Social reality

The relevance of sociological imagination in research lies in the fact that a connection between your experiences or point of view and society as a whole is vital. The sociological imagination examples of unemployment, education, deviance, and marriage are not singular situations. They're not individual problems. Thus, whenever someone thinks their existing station in life is unique, just imagine Mills asking, "Is that so?" Do you consider every outcome has a social cause? Thus, using these wider lenses to consider the relationship between your personal experience and society as a whole; in helpful in applied sociology and societal development. This may change the overall perspectives on one's social story and your connections to society, to social institutions, to history.

Summarised Overview

Human beings, as they take up the role of social beings hold within themselves the nature that is independent of what people think about them. In a sense, social reality requires social acts. Social interactions are inevitable in creating social reality. The nature of social reality has acquired transition according to various paradigms. The existence of binaries has contributed to it. The reflexive element imbibed by every social being while interacting boosts more interconnections between people which eventually make a social structure and its reality.

Self Assessment

1. Discuss the strategies for observing social reality.
2. What is the basic nature of social reality?
3. Evaluate the William Dilthey's analysis of social reality.
4. Define 'Social'.
5. Evaluate Heidegger's perception on social reality.
6. Discuss about spencer's dimensions of social reality.
7. Discuss about the major aspects of reflexivity in social research.
8. What is theory - research duality?

Assignments

1. Describe the relevance of studying social reality in social science research.
2. Binary is universal. Validate the statement.
3. Do you think sociological imagination is important in social science research? elaborate.
4. A social researcher should have high sense of reflexivity. Evaluate the statement.

Suggested Readings

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Space for Learner Engagement for Objective Questions

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UNIT 2

Objectivity, Subjectivity and Value Debate. Quantitative and Qualitative Methods as Research Strategies

Learning Outcomes

On completion, the learner will be able to:

- Introduce the facets of objectivity and subjectivity in social research.
- Narrate the functioning levels of qualitative and quantitative methods in social research.
- Explain the objectivity-subjectivity value debate in social science research.

Background

Suppose you come across the following sentence in a research paper, "In my personal opinion, I believe that age and social deviance are inversely proportional." What is the inference that you receive from this? The sentence has no validity as it is a single person's opinion. It has no systematic back up of research process. The instinct of the researcher is expressed as research result.

Now look into a real-life situation, in a working sector; if an employee has a grievance about sexual harassment from another employee, what would the company do? It is expected that the company should use objective methods to prove this complaint. No individual opinions take up importance in this context. Recognizing the biases and separating facts from private feelings are essential for generating objectivity in investigations, according to experts.

In the above-mentioned cases, there lies the crucial point which focuses on the necessity of objectivity. Objectivity facilitates systematic investigation of a social context. It also enables accountable investigation of social events. When it comes to academic or research writing, objective writing is best used when the writer has the requirement to present impartial information to the spectators and then let them determine their own opinion. News reports and school textbooks are supposed to use objective writing. Academic writing presents and assesses issues and arrives at an unprejudiced position; a point that emphasizes on and is well- versed by research and reasoning rather than personal feelings and opinions.

Keywords

Noumena, Objectivity-subjectivity duo, Qualitative-quantitative debate

Discussion

2.2.1. Objectivity, Subjectivity and Value Debate

Meaning of Objectivity

The objectivity-subjectivity in social research has always been a source of debate in the social research context. Gayle Letherby and Malcolm Williams (2013), had set out an account of objectivity and truth in relation to the necessarily subjective basis of social knowledge. Social phenomena which have an existence independent from other social factors is considered as objective. It is a valid ontological position which implies that social position and the related categories that we use in everyday social life has a separate existential element independent from actors.

Powell et al., (2014) says that "If the knowledge or thing in question is true for all rational thinkers, then it has attained objectivity. Something becomes subjective when there is disagreement on the conclusion despite being presented with the same evidence."

Criticism of objective knowledge

You are aware that our understanding of the social world is so evidently subjective and partial. Each individual is different, and so are the thought processes. Then why are sociologists concerned about objectivity and the truth of social knowledge? The conventional answer to this question is that, true knowledge about society will be guaranteed only with scientific base and objective processes. This appears as a widely accepted justification of the objective aspects of social research. But some critics argue that this aspect is completely unrealistic as objectivity is a myth in social science research and is seen impossible. True knowledge related to social science is always relative and influenced by subjectivity.

Social fact as objectivity

To explain this point, let us widen the canvas. Every individual has his/her viewpoint on society. This outlook is rooted in our values. These values do not have any objective base and therefore the values differ from individual to individual; social group to another social group; from communities to communities. Therefore, our knowledge is regarded as a value- bound cultural construction. As there

are no facts about the social world and social beings, so there can be no objective knowledge or truth.

a) Objectivity-Subjectivity Debate

The situation or context which accepts or recognises the subjectivity of human knowledge doesn't necessarily reject objectivity and truth. But there is a need to abandon the idea of 'absolute' or 'ultimate truth'. There are many more options to acquire knowledge:

a. The knowledge which is true to the objects of our knowledge
b. The knowledge which is true to the standpoints from which we observe those objects.

Method to acquire knowledge

Hence social science can generate fractional or partial truth. It may have no objective validity but that is also genuinely true to its various observers. The interesting and effective point is that social science rests on a balance of objectivity and subjectivity, each equally indispensable to the other.

Subjectivity- objectivity debate could be traced back to the notions of philosopher Immanuel Kant, who illustrated a sharp distinction between the subjectivity of observed 'phenomena'. He explained that social phenomena are confined within the minds of human observers and the unobservable 'noumena'.

The noumenal world consists of things we seem compelled to believe in, but which we can never know, because we lack sense-evidence of it.

Real world

The unobservable noumena make up the world of objects that exist independently of the mind of the observer. Kant argued that 'an unbridgeable anchorage exists between the world as it is perceived in human experience and the world as it actually is. A noumenal reality is a condition for any human experience, but the phenomena that we experience are mere subjective constructions of this reality'. Human observers, social researchers therefore, cannot grasp the true nature of the things that they notice. Therefore, there is nothing called ultimate truth.

Kant has two interesting assumptions about human mind which gives more light on the objective-subjective truth.

i. What human beings perceive is dependent on the nature of our perceptual and sensory apparatus. For example, objects we see is completely based on the visual apparatus. It produces a three-dimensional, colour image in our mind. Think of the animals who with differently created eyes and visual receptors see the world differently with variant colours, two-dimensional, or sometimes colourless world. Similar thoughts apply to human beings' senses of touch, smell, and hearing. Hence, there is no way in which we can claim to know the world as it 'really' is. That world remains unknown, self-regulating and free of our senses.

ii. Human mind doesn't unresponsively receive sense impressions. For each thought or impression about a social event, there is a combination of the innate cognitive ideas of time, space and causation. These perceptions underpin the collections of our perceptions and this allows us to relate them to general concepts which are pure and unbiased products of the mind. For example, man, tree, earth etc. The conceptual knowledge produced by science is relative to human mind. This knowledge cannot be judged in terms of reality. Thus human experience is completely a mental construct and rejects any idea of objective truth.

Other sociologists and thinkers like Max Weber and Heinrich Rickert have similar views on the objectivity-subjectivity debate and applied it to the historical and social sciences. Their observations added an important element to Kant's position. They argued that:

a. When a social scientist relates sense impressions to inborn categories and concepts, he/she relates his or her impressions of the social world to values.

b. A value stance towards the social world and our concepts are seen as value-relevant, as relative to our values.

c. The real social world that exists independently of the social scientist is itself a by- product of the value-relevant activities of its human participants.

d. In our everyday lives, we construct impressions of the others that we encounter and interact. These impressions are relative to our sensory apparatus, mental ideas, cultural values etc

e. Social scientists are engaged in a second-order activity of 'understanding' to know the truth. The social world that Weber aimed to hold through his idea of Verstehen enabled a better understanding of social world. A natural scientist can describe and explain the natural world, the social scientist must interpret and understand it.

f. Weber didn't conclude with any extreme relativist conclusions on subjective or objective truth. Whatever our value position is, we are able to follow technical procedures that can guarantee objectivity. For Weber, objectivity lies in the methods through which we handle our experiences rather than in our experiences themselves.

g. Weber says that "Objectivity is a purely technical matter that can guarantee the truth of an argument relative to a particular value starting point". Thus, there can be a plurality of truths, reflecting a plurality of values. At the same time, it is possible to reject some inferences and explanations as false or untrue because the methodology used is defective.

Knowledge is radical

The roots of more radical arguments of objectivity and subjectivity are to be found in the work of Friedrich Nietzsche. According to Nietzsche values are embedded in specific social circumstances and bodily characteristics. All knowledge is based on the historical standpoint of power relations. We see and interpret the world from our particular historical and bodily standpoint of power relations. Therefore, there is no objectivity. For Nietzsche, the idea of truth, is a mystery. Knowledge is linked to power. The aspect which is counted as truth is merely the knowledge of the powerful.

More information on the power relations of knowledge will be given in the coming chapters.

2.2.2. Quantitative and Qualitative Methods as Research Strategies

Nature of research methods

Let us become familiar with the basic characteristics of qualitative and quantitative research. Qualitative research often appears as subjective and impressionistic. It relies more on the researchers' views, reflection and reflexivity on the social world. The research findings are often linked to the close personal relationships that the researcher frequently makes with the people studied. Indeed, qualitative researche often begins in an open- ended way and involves a steady narrowing-down of research questions or problems. In contrast, quantitative researchers point to the tendency for the problem formulation stage in their work to be more clearly stated in terms of matters like the existing literature on that topic and key theoretical ideas. Quantitative researchers also often claim that these tendencies are even more of a problem because of the difficulty of replicating a qualitative study. Clearly stating, it is understood that as qualitative researches are unstructured and reliant upon the individual researcher's ingenuity, it is impossible to make a true replication of the study.

Even though well-advanced research tools are used in qualitative research there are hardly any standard procedures to be followed. The researcher/ investigator alone is the main instrument of data collection. What the researcher observed and heard decides the products of his/her predilections. Several components of the criticisms to qualitative research are:

a. The focus of qualitative research are those factors that strike the researcher or what he reflects.
b. Researchers are likely to empathize with the respondents' issues
c. Responses of participants (people being observed or interviewed) are likely to be affected by the characteristics of the researcher (personality, age, gender, and so on)
d. Unstructured nature of qualitative data
e. Interpretation will be profoundly influenced by the subjective leanings of a researcher

Perspective of respondent

The difficulties ethnographers experience in replicating (restudy) already conducted research also affects the credibility of qualitative research. Bryman, says that when they revisit grounds previously trodden by another researcher (often referred to as a 'restudy') do not inspire the confidence in the replicability of qualitative research.

In qualitative research, the set of concerns that the researcher brings to an exploration, constructs the investigation. In quantitative research, the investigator is in the driving seat. In qualitative research, the perspective of those being studied (respondent) and what they see as important and significant provide the point of orientation for the whole research.

Researcher -participant duo

This dimensions of the relationship between researchers and their research participants also plays an important place of discussion in the qualitative- quantitative discussions. In quantitative research, researchers are uninvolved with their subjects or respondents. In some cases, when research is based on postal questionnaires or on hired interviewers, the researcher may have no contact with them at all. Sometimes, this lack of a relationship with the subjects of an investigation is regarded as necessary by quantitative researchers to achieve perfection.

They feel that their objectivity might be negotiated if they become too involved with the people they study. The qualitative researcher seeks close involvement with the people being investigated, so that he or she can genuinely understand the world through their eyes.

Quantitative researchers characteristically bring a set

of concepts to bear on the research instruments being employed, so that theoretical work precedes the collection of data, whereas in qualitative research concepts and theoretical elaboration emerge out of data collection. Quantitative research is frequently represented as presenting a static image of social reality. It emphasises relationships between variables. Change and connections between events over time tend not to surface, other than in a mechanical/ automatic manner. Qualitative research is often depicted as attuned to the unfolding of events over time and to the interconnections between the actions of participants of social settings.

Quantitative and qualitative duo

Both qualitative and Quantitative research have different aspects in its structure. Quantitative researches are typically highly structured, so that the investigator is able to examine the precise concepts and issues that are the focus of the study. In qualitative research the approach is consistently unstructured, so that the possibility of getting at actors' meanings and of concepts emerging out of data collection is enhanced.

Structure of the research

Quantitative researchers want their findings to be generalizable to the relevant/specific population. A qualitative study seeks a consideration of behaviour, values, beliefs, and so on in terms of the context which the research is directed.

Generalization vs Contextual understanding

Quantitative data are depicted as 'hard', explicit and clear. They are robust and unambiguous because of the precision offered by measurement. Qualitative researchers claim, by contrast, that their contextual approach and their often-lengthy involvement in a setting engender rich data.

reliable data vs deep data

Quantitative researchers are often portrayed as involved in exposing large-scale social trends and connections between variables, whereas qualitative researchers are seen as being apprehensive with small-scale aspects of social reality, such as interaction.

Macro vs

Micro Qualitative researcher is concerned with the meaning of action whereas quantitative researcher is concerned with people's behavior. Quantitative researchers conduct research in a forced/artificial context, qualitative researchers inspect people in natural environments. They prefer participant observation for collecting valid information. There is an interesting observation by Hardy and Bryman (2004) which points out that, 'although there clearly are differences between quantitative and qualitative research, it should also

be recognized that there are similarities too'.

They draw attention to the following points:

a. Both the qualitative and quantitative research methods are concerned with data reduction. This deduction helps in reducing the enormous amount of data and gives sense of the data. Quantitative research uses data reduction in the form of statistical analysis. Eg: finding an arithmetic mean or tabulating a frequency table. This helps in reducing the amount of large data.

Similarities

b. Both answers research questions. Even though qualitative and quantitative questions are different their aim is to answer questions related to social reality

c. Both relate data analysis to the research literature. It helps in re-examination and cross verification of research findings

d. Transparency is an important element of transparency. This allows others to criticise the quality and importance of their work.

a) The Relevance of Qualitative Research

Scope of qualitative research

Advanced capitalist societies witnessed increased methodological pluralism and rebirth of the usage of quantitative methods. This progress shows the importance of placing qualitative research in the forefront which has gained popularity especially during the last two or three decades. Pluralist attitudes concerning quantitative methods encourage qualitative approaches in social science research. As per a recent study shows that only about one in 20 of published papers in the mainstream British journals uses quantitative analysis. The figures are almost similar in Finland. It can be confirmed that there has been a forward march of qualitative research particularly from 1990s onwards.

There has been an increase in the popularity of qualitative methods and hence coinciding of research methods with theoretical trends came out as a new approach. The

Development

scope of interpretive social science through qualitative methods opened up humanitarian ways of social research. Constructionist approach has gained momentum around scientific realism and structural sociology. This clearly marked a paradigm shift in dealing with the aspects of society. Personal experience, subjectivity and identity became the primary concern of studies. Carl May. finds that, in different ways, subjectivity seems to have been one of the central concerns of British sociology since the 1980s, which according to him also explains the popularity of qualitative investigation. Indeed, a study shows that only about one in 20 of published papers in the mainstream British journals uses quantitative analysis.

Summarised Overview

It is more important to highlight that methods of social research cannot be seen as isolated from each other. No matter what the method is it should be elevated from the 'entire scientific quest' and should include the motivation of theory. It is meant to be an aid to researchers in their attempt to execute original research. As researchers have always known, one of the solutions to good research is to challenge one's own assumptions, expectations and prejudices; and to carry out the study in such a way that the data have the probability of startling the researcher.

Self Assessment

1. Why do qualitative researches find more scope in contemporary research sphere?
2. What are the major contrasts and similarities between qualitative and quantitative research?
3. Define objectivity and subjectivity.
4. What is noumenal reality?
5. Discuss Immanuel Kant's assumptions on objective – subjective reality.
6. Difference between quantitative and qualitative research methods

Assignments

1. Researchers are likely to empathize with the respondents' issues. Explain the statement.
2. Critically evaluate the different observations by social scientists on objectivity subjectivity debate.
3. Critically evaluate the major criticisms on qualitative research.
4. Briefly discuss the relevance of qualitative research in the cotemporary social research.

Suggested Readings

1. Babbie, E. (2004). *The Practice of Social Research*. United States: Thomson and Wadsworth.
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Politics of Knowledge Production: Corporatization of Knowledge, Eurocentrism. De-Colonization of Research Methodologies

Learning Outcomes

On completion, the learner will be able to:

- Introduce the power play in the production of knowledge
- Narrate the corporatization of knowledge
- Explain the process and harmfulness of eurocentrism
- Expose the necessity of decolonising research methodologies

Background

Do you know what is the term used by social scientists to refer to contemporary advanced societies? They name it as 'knowledge societies. The term implies that knowledge has become the fundamental and basic phenomena in societies. The expressions like 'science', 'knowledge', and 'knowledge production have gained momentum. There is a political dimension in the production of knowledge and its validation.

'Knowledge societies' do not just happen. It is made. Knowledge societies are built on four pillars namely education equality, universal access to information and knowledge, acceptance of cultural and linguistic diversity. There are other significant factors contributing to the development of knowledge society. Technological progress, globalisation of the world economy, increased prominence of specialised knowledge, increased attentiveness of the importance of knowledge for country´s economic development and creation of new jobs. In this context the growing demand of social science research and abundant methodologies take an important place in the social system.

Keywords

Knowledge, Power, Education, Cultural Relativism

Discussion

2.3.1. Knowledge and Power

Research in the fields of sociology, political science, cultural studies, technology etc. highlights the relationship between knowledge and politics. The main of those are:

a. The interconnection between the nature of knowledge produced and the nature of political activity affects each other
b. The production of knowledge is controlled, governed and managed
c. New technologies of knowledge create new forms of political action
d. Political aspects are connected to power and it produces knowledge
e. Production of knowledge results in the recognition of fundamental political categories.

Thus, the political circles which produce knowledge, stays appropriate in the contemporary social world.

a) The Concept of Knowledge Societies

Relevance of knowledge

Knowledge society is a recent term used to describe societies which are economically and culturally characterised a higher degree of potential to make scientific as well as technological knowledge. In the contemporary data-processing technological world, knowledge is used as an element for development and inventions. Knowledge often becomes cause for economic competition. Hence research and development (R&D) are strongly connected. Knowledge has become an important and special good in the market and a product of merchandise.

When seen in an economic perspective, knowledge societies invest in education and training of people for the betterment of human capital. Developments should be aimed at fulfilling expectations which helps in perpetuating traditions. Knowledge could be used in innovations.

b) The Politics of Knowledge Production

When knowledge is seen as a commodity which enables in the overall social development it holds within an element of 'politics' which signifies the position/place taken up by the knowledge producers. Knowledge produces should address each and every section of society. Knowledge production should be unbiased. It should never highlight the voice of the privileged.

Privileges and class influence in knowledge

There is vibrant networking among knowledge producers which facilitates effectiveness in applying, controlling, evaluating and learning the aspects of knowledge. There are high differences in the quality of knowledge dispersed in educational institutions. Economic status of people also decide the knowledge received, processed and passed through. Knowledge institutions show a tendency to rank educational efforts.

Power in knowledge production

Modernity has influenced societies in various ways. Knowledge societies are featured by reflexive conscience about the constructional and methodological processes. Social status of people influences educational achievement. Implications on the pedagogical consequences reveal that everyone is in the process of lifelong learning. The upcoming amount of new knowledge should be replaced with old outdated knowledge. Power politics plays an important role here.

Role of constitution and teachers

The extraordinary increase of complexity in knowledge affects not one country, but the whole world. The high-speed communication by internet facilities has caused the generation of massive amount of knowledge which is unmanageable. It cannot be copied by individuals. The strategies of educational curriculums and strategies as per the literal political interest also make up the complex knowledge scenario. Constitutional interests remodify knowledge production; and history of knowledge is rewritten. Individualisation of learning and globalisation in the aspect of distribution of knowledge implies the importance of teachers and mentors in intermediating true, unbiased knowledge.

2.3.2. Corporatisation of Knowledge

Corporatization is the word frequently used in the post-modern context, to denote the change of a government-owned entity into a legal entity with the corporate structure.

It shows the shift of proprietorship to corporate ownership or control. As you all are aware a corporate is a form of business. A corporate is a big company owned by shareholders. The word corporate means relating to large companies, or to a particular large company. Commercialisation is an inevitable aspect of it. When transaction of knowledge (created within a university or research organisation) happens, that particular organisation will translate the knowledge into a new product or service. In a corporate world interest rates are higher for corporate clients than for private clients. In the case of research, when knowledge is corporatised and kept for sale and transfer; the whole process of production takes up the position of an industrial firm. Knowledge is generated and transferred for the benefit of the shareholders. The following points show the distinct aspects of corporatisation of knowledge:

a. In translating the idea of shifting knowledge as a product into the market is related to the goal of the exercise link technology as closely as possible to a market need.
b. Every aspect of research will spin around the application level of it, which could be commercialised.
c. University-investors-shareholders form a trio in the whole process. This affects the liberating aspect of research.
d. A research idea is considered as an intellectual property (IP); an incorporeal (unreal) asset that can have real world value.
e. A Commercialisation Plan, Agreement with co-founders, Agreement on spinout terms, Initial Funding/Investment etc take prominent role in the whole research process rather than its aim and scope.

2.3.3. Eurocentrism

Have you ever thought of why and how English became a universal language. Why do we appreciate people who speak English? The answer is, it is because of the colonisation

of the British Empire. Britain made colonies all around the globe and propagated their language, customs, religion, culture and ethics. They ruled other countries and looted their resources. They even controlled the intellectual and cognitive abilities of the native people.

Colonialism in language

As a part of colonialism, the missionaries of the Catholic Society of Jesus (Jesuits) worked in many parts of Asia and Africa. They talked, propagated, and spread the message of Christianity; a religion that was the strongest in Europe. Their approach was Eurocentric. It denotes the supremacy or centering of Europe and related cultural aspects like learning, customs, ethics and practices. Eurocentrism has equipped various definitions as an attitude, conceptual apparatus, or set of empirical beliefs that mount or create Europe as the primary engine and architect of world history. It also gives Europe the status of the bearer of universal values and reason, and the summit and therefore model of progress and development.

a) Eurocentrism as a Problem

European supremacy

The aspect of placing Europe as a model for world progress is rather very disturbing for a sociologist. It is because it is unethical and biased to consider that the whole world should follow same patterns of cultural interests and practices. Every country, every community, every social system etc. possess their own characteristics and importance. The concept of 'cultural relativism' which is considered as vital by sociologists and anthropologists focuses on the importance of culture in their respective society.

The sweeping claims of European superiority in all spheres of civilization of the whole world has inversely impacted the culture and knowledge industry. The belief and centering that only Europeans have created history over the past 3,000 years is alarming. This superiority affects knowledge production and research interests and later ascribed/ achieved status, race, culture, religion and geography.

Major notions of eurocentrism are:

I. Non-European societies are autocratic and against the West's individualism, liberalism and freedom
II. Non-European countries follow strange religion and those beliefs are inferior to Christianity; lacking true spirit

III. Practices like Sati (in India), foot binding (in China) and female genital mutilation (in Africa) are barbarian and lacked concern for human life. Hence the solution to maintain cultural equilibrium is to follow western culture.

IV. Non-European societies are inflexible and unchanging.

V. All non-European societies are poor, backward, and underdeveloped, with very few chances to compete with industrialized, progressive, and the rich West.

VI. Non-European societies lack rational modes of thinking and scientific or logical approaches.

By asserting these notions European societies overpower research and academic sectors

2.3.4. De-Colonisation of Research Methodologies

Before understanding decolonisation of research methodologies, it is necessary to know the colonization of research methodologies. Canvassing indigenous or native people as a part of colonisation has affected the social practices in undesirable aspects. Social science, which is meant to be helpful in social development, should investigate native culture and social settings by exploring the respective society. Thus sustainable, durable and culturally relevant research methods and tools must be used for studying each social system. For example, an illiterate community needs participant observation as a tool of study. A colonial methodology or research tool is insignificant in the context of identifying a social problem. Colonisation has led the world knowledge system to follow the pre-set of a standard of a common methodology, which turns out to be ineffective while studying original/ indigenous societies. Barclay, 2006 and Whitt, 2009 say that "Science is also central in bio colonialism, the extractive process by which genetic material and associated knowledge of indigenous peoples are being turned into commodities and sold". This is because of the colonisation of research methodology.

Knowledge on social setting

a) Necessity of Decolonising Research

Decolonization of research methods will help regain the control over indigenous ways of knowing and being. Decolonising methods necessitates action on a number of fronts, including on-going debates and discovering world views, the necessity to document concrete examples, and experiments to the funding organisations and wider systems within which researchers function.

b) The Process of Decolonising Research

Decolonization of research is a complicated process because of the intertwined existence of power, knowledge and owning. The indigenous and knowledge systems, identify people as knowledgeable entities of the cultural experience. People weave together the knowledge from various sources including native and local knowledge systems.

Decolonization process benefits society in many ways:

i. Decolonization of research helps researchers to critically reflect on approaches that can have a positive impact on the cultural and social outcomes of indigenous people.
ii. Issues in the global level, and to the under developed countries context could be given research importance.
iii. New research methodologies and fieldwork contribute to current knowledge and conversations on decolonising research process; which later leads to better research product.
iv. Native research tools act as a lens to critically reflect upon some issues raised from individual interviews and focus group discussions with local participants
v. Respectful and appropriate research practice and recognition of individual and communities and study on important structures such as power, trust, cultural competence.
vi. The notion of a 'power with' rather than 'power over' approach is important while conducting re-

search.

vi. Research among marginalised and vulnerable population groups is decisive because the approach puts emphasis on equal power sharing between researchers and the researched.

Summarised Overview

This unit argues and reflects on the alternative approaches which are culturally appropriate for research and for improved social outcomes of marginalised groups. In addition, we understand that participatory and decolonised research methods recognise individual and communities' assets. Sociological perspective of topics is much valid when we find that simple notions like knowledge, research process etc. are much beyond usual definitions. The awareness that the knowledge we consume is a mere product of power, puts light on to the intense responsibilities in conducting research. Unbiased contributions towards a respectful and good research practice will benefit the marginalised population groups which is rather an important element of social consciousness.

Self Assessment

1. Why is the decolonization process of research methodologies important?
2. Define Knowledge Society
3. Write an essay about the politics of knowledge production.
4. Discuss the different aspects of corporatisation of knowledge.
5. Elaborate on the topic Eurocentrism.
6. Define Cultural Relativism

Assignments

1. Eurocentrism is the matter of threat to democratic functioning of social science study. Validate the statement.
2. Discuss the politics underlying knowledge production.
3. Knowledge institutions shows tendency to rank educational efforts. Validate the statement.
4. Critically evaluate the concept of Eurocentrism and its impact upon society.
5. Discuss the significance of decolonising research methodology in the contemporary society.

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Space for Learner Engagement for Objective Questions

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UNIT 4

Research Ethics: The Concept, Need and Significance. Policy Making and Methods

Learning Outcomes

On completion, the learner will be able to:

- Understand the significance of research ethics in social science.
- Explore the major guidelines for research ethics.
- Be aware about the policy making and methods in social science research ethics.

Background

Studying ethics involves investigating what is morally right or good in the eyes of the community and how individuals ought to govern this. According to this interpretation, social research ethics refers to the investigation of what researchers should or should not do and how this should be taken into account. Ethics refers to a system of principles that represent or illustrate what is good or right to allow individuals to categorise what is bad or wrong. Only after the 1940s, as a result of numerous instances of human exploitation, did society begin to take social scientists ethical perspectives seriously. Since then, regulations and professional codes have been put in place to prevent abuses of human life, and social research has always relied on them to obtain accurate data and produce high quality research reports. As a result, it is crucial for researchers to uphold ethical standards in order to have the public support and confidence in their work.

Keywords

Anonymity, Confidentiality, Transparency, Human subject.

Discussion

2.4.1. Research Ethics: The Concept

Features of Social Research Ethics.

A collective, methodical search for knowledge utilising various scientific methodologies is called research. Research is valuable on its own terms as a source of fresh perspectives that can benefit society in a variety of ways. A fundamental set of scientific standards that have been institutionalised in the global research community and have been evolved over time make up research ethics. The goal of research ethics is to support independent, trustworthy and ethical research. For the entire scientific community, the truth norm is essential. The pursuit of truth, a dedication to truth, integrity and honesty are prerequisites for high standards of research quality and dependability. Research ethics helps to promote ethical behaviour in the scientific community. Methodological standards like factuality, accuracy, transparency and accountability are also the foundation of research. These standards demand that scientific approaches be applied ethically. Institutional standards also govern research, ensuring that it is transparent, collaborative, independent and critical.

Morality in Social Research

Ethics include the concerns, dilemmas, and conflicts that arise over the proper way to conduct research. What is or is not morally acceptable to perform or what constitutes a 'moral' research process are both defined by ethics. The quest of knowledge and the rights of research participants and other members of society are two ideals that are often asked to balance in ethical dilemmas. In social research, ethical problems can occur at many different phases. As they directly affect the integrity of a piece of research and of the disciplines concerned, ethical considerations cannot be disregarded.

Values in Social Research

Common norms resulting from society's demands and expectations for research in a wide sense make up the second component of research ethics. Research is a dependable source of reliable knowledge and is essential to a well-functioning, knowledge based, and democratic society. Every human being has a right to profit from and participate in scientific advancement. Research ethics consequently includes the dissemination of research as a key component. Researchers must avoid harming people, society, nature and the environment through their research and they must be

honest about risks and scientific unpredictability.

Research institutes should guarantee honesty and accountability in the field. They should also protect the freedom of expression of researchers so that they can freely impart trustworthy knowledge to the rest of the society. This is especially crucial when the research's values and standards are under attack. Individual and institutional research independence depends on responsible self-regulation and sound scientific methodology.

The confidentiality of the study process and the anonymization of subjects in reporting are key tenets of ethical social science practice. A method to provide some privacy and confidentiality protection is anonymization. It is important to maintain the privacy and identity of research participants. In addition to allowing people to speak in confidence, the principle of confidentiality also enables them to refuse to let the publication of any information they believe could in any way harm them. Participants in study should have their personal information kept confidential. Sometimes it may be essential to make a judgement call regarding whether it is appropriate or proper to record particular types of sensitive data. In the complex social and political settings in which we do research, ethical decisions are the consequence of a wide range of considerations. Those being observed or interviewed should consent after being fully informed of the study's goals and the implications of participating.

a) Need for Research Ethics

The term 'social research ethics refers to the set of moral principles that should be upheld when conducting social research or the collection of moral beliefs that all social researchers share. Welman asserts that ethical conduct and ethical considerations are rigorously applied when conducting research in the area of human undertakings. Research ethics are focused with minimising harm to all participants while increasing research benefits. It is crucial to take their wellbeing into account in the research process because respondents who are typically not involved in the inquiry process provide data to researchers. There are three different sorts of ethics:

- Meta ethics which examines the language and reasoning of proper intellectual thought.
- Normative ethics which investigates what is hon-

orably or morally permissible and explains why it is permissible and unacceptable

- Descriptive ethics describe or clarify the moral behaviour of specific groups.
- It is crucial for researchers to keep ethical and data protection concerns in mind when doing research. It is unethical for a researcher to purposefully employ a method or procedure that the researcher knows to be ineffective in order to support or refute a desired hypothesis, for as by using faulty data or drawing incorrect conclusions.

Types of Research Ethics

The social researchers need to apply the following principles at the time of conducting research.

a. Participants in studies must voluntarily agree to participate
b. The aim of research ought to work for the good of the society
c. Research must be grounded on comprehensive theory and before used upon human beings it must be tested on animals in case of experimental research
d. Unnecessary mental and physical suffering must be avoided in research
e. The extent of danger or hazard considered with research participants should not surpass expected benefits of results
f. It is important to conduct research in a setting that protects participants
g. Only scientifically qualified personnel should conduct experiments upon human subjects
h. Human beings must have the right to revoke their consent whenever they choose.
i. In research there is voluntary participation which denotes that participants are free to exercise their will in determining whether to participate or not to participate in a research action
j. Fabrication of data is when the researcher makes up either data or results ten records or reports

Types of Research Ethics

them, whereas falsification is when the researcher manipulates materials, process, equipment or changes or omits data such that the research is not represented accurately.

The social science research focuses on the social structure of individuals, families, kinship, marriage, communities and societies as well as the economic and political circumstances that influence people's way of life. The habits, beliefs and value system of the people as they are born, raised and die are also discussed. Various procedures and methods have been used in social science research to gather accurate and reliable data. The following ethical concerns should be prioritised throughout data collection in order to protect the respondents from any type of harm.

Ethical Responsibility of Researcher

I. Respect for the dignity of research participants should be prioritised
II. Full consent should be obtained from the participants prior to the study
III. The protection of the privacy of research respondents has to be ensured
IV. Adequate level of confidentiality of the research data should be ensured
V. Anonymity of individuals and organisations participating in the research has to be ensured
VI. Any deception or exaggeration about the aims and objectives of the research must be avoided
VII. Affiliation in any forms, sources of funding, as well as any possible conflicts of interests have to be declared.
VIII. Any type of communication in relation to the research should be done with honesty and transparency.
IX. Any type of misleading information as well as representation of primary data findings in a biased way must be avoided.

b) Significance of Research Ethics

Research is a systematic, socially organised quest for new and better insight. Science itself is valuable in and of itself. Numerous study findings have applications for enhancing social conditions. The pursuit of truth is the primary duty of research. Consequently, a fundamental component of research ethics is scientific integrity.

Rational Perspective of Researcher

Cultural and social studies deal with human choices, actions and relations, standards and institutions, beliefs and historical developments, works and traditions, language thought and communication. Empathy and interpretation are prerequisites for the research process. This may allow for various logical interpretations of the same factors. However, the fragility and ambiguity inherent in research do not exempt researchers of the duty to reject irrational viewpoints and to work toward coherence and clarity in their reasoning.

Technical Knowledge

There is dispute regarding important aspects of scientific theory across many disciplines. Regardless of the scholar's position with regard to theory, truthful documentation and logical consistency are absolute criteria. Research in the humanities and social sciences is characterised by the researchers' perspectives on mankind and society, a characteristic that is typically enlightening. However, this necessitates that researchers take into account how their personal attitudes may affect the themes, data sources and distribution of possible interpretations. Overall, all fields must adhere to the same standards for research ethics, including those for intriguing and pertinent study questions, verifiable documentation, objective debate of divergent viewpoints and awareness of one's own fallibility. The need for professional autonomy, requirement for professional independence and peer review are also universal. The basic research ethics standards are based on the general moral standards of society.

2.4.2. Policy making and Methods

Research ethics is a method for ensuring that research is conducted and organised properly. Researchers and research institutions are both responsible for ensuring compliance with research ethics, and other research actors too ought to behave in accordance with ethical norms and guidelines. The Research Ethics Act assumes that all research, whether

it be done by public or private actors, complies with accepted standards of research ethics. The institution should support training in research ethics, provide oversight in this area, and have procedures in place for dealing with ethical dilemmas and instances. The institutions are obligated to have committees for the investigation of research misconduct and to handle cases of possible breaches of recognised norms of research ethics.

a) NESH Guidelines

The creation of national research ethics standards is the responsibility of the National Committee for Research Ethics in the Social Sciences and the Humanities (NESH) an independent advisory group. These guidelines are advisory and are intended to contribute to developing ethical judgement and reflection, clarifying ethical dilemmas, promoting responsible research and preventing misconduct. The responsibility of researchers, research institutions and other research actors is specified, and they go into detail about numerous considerations and obligations. In research projects, the guidelines should be considered throughout the entire process – from planning and execution to publication and dissemination. The guidelines which concern different ethical obligations are

i. The research community – within the research community, researchers have a shared responsibility to one another. They ought to act honestly, show respect to one another, and acknowledge one another's contributions to tasks and works of art. In their teaching, supervising, disseminating and publishing, researchers have an obligation to advance the principles and standards of research ethics.

ii. Research participants – Researchers have obligations to everyone who is a part of or impacted by their research. Respecting the participants human dignity', researchers should take their personal integrity, safety and wellbeing into account. In general, information and consent should be the basis for participation in each.

iii. Groups and institutions – Disadvantages and vulnerable groups have a particular need for protection. When conducting cross cultural or cultural heritage research, special consideration may be necessary. Both public and private organisations are jointly responsible for making sure that their involvement in research complies with accepted standards of research ethics.

iv. Commissioners, funds and collaborators: Researchers and research institutions have obligations towards commissioners, funders and collaborators. Similarly, other research actors have obligations towards researchers and research institutions. Research ethics balance the norms of openness and independence against demands for social utility and relevance.

v. Dissemination of research: Researchers and research institutions have a responsibility to disseminate scientific results, methods and attitudes from their own and other's research to society at large. Dissemination of research includes dialogue across disciplines, interaction with different actors in society and participation in public debates.

The responsibility for research ethics is divided between researchers, research institutions and other research actors as presented in the NESH guidelines. Furthermore, within the national system of research ethics, the administration of research ethics is distributed between ranges of different institutions.

The Norwegian National Research Ethics committee: was founded in 2013 and functions as an administrative entity inside the Ministry of Education and Research. It is the leading academic organisation for research ethics, and one of its key goals is to make sure that both public and private research abides by accepted standards of research ethics.

The National committee for medical and health research Ethics (NEM): It was founded in 1990 and offers guidance and oversight for research ethics as well as develops standards

of pertinent research domains. NEM responds to complaints on decision made by regional committees for medical and health research ethics under the Health Research Act.

The National Committee for Research ethics in Science and Technology (NENT): was established in 1990 and provides advice and supervision on research ethics within natural sciences and technology, industry, agriculture and fishery as well as the parts of life sciences not covered by medicine.

The National commission for the investigation of Research misconduct (GRU): was introduced in the former research ethics act 2007. According to the revised act from 2017, the commission is responsible for considering and addressing allegations of suspected breaches of good scientific practice.

National Research Ethics Committees

The National commission for Research ethics on Human Remains: was established in 2008 as a national commission for considering research on human remains. The commission is advisory and contributes to promoting ethically good and responsible research in human remains, for instance, in archaeological excavations or museum collections.

Summarised Overview

By preventing research from being repetitive, ethics make guarantee that it yields information. Every study must add to our knowledge, advance truth, and reduce error. A few actions are forbidden by research ethics including data falsification, inaccurate reporting and data distortion. Since it fosters a culture of mutual respect, accountability and trust among researchers, ethical behaviour is crucial for collaborative research. This is crucial to remember, especially when thinking about issues like data collection, shared authorship, exclusive rights, guiding principle, confidentiality, privacy, damage reduction, benefits and rewards, vulnerable populations and so on.

Self Assessment

1. Explain the concept of research ethics.
2. Discuss the significance of ethics in social science research.
3. Discuss the ethical dilemmas in social research.
4. What are the different types of research ethics.
5. Discuss the principle of research ethics.

Assignments

1. Discuss the need for research ethics in the current social scenario.
2. Bring out the major guidelines proposed by national committee for Research ethics in the social sciences and the Humanities (NESH).
3. Evaluate the functioning of National agencies to validate research ethics.

Suggested Readings

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4. Jennings, B. & Callahan, D.(1983). Social science and the policy-making process. Hastings Center Report, 3-8.
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APPROACHES TO SOCIAL RESEARCH

BLOCK-03

UNIT 1

Deduction and Induction

Learning Outcomes

On completion, the learner will be able to:

- Comprehend the different approaches of enquiry in social research
- Explore the need for inductive reasoning in social research
- Familiarise the application of logical analysis using deductive method in social research

Background

In academia, the term 'research' refers to the pursuit of knowledge. Research can be defined as a methodical and scientific search for relevant data regarding a certain subject. In reality, research is an investigational art. Social research is structured and performed by theoretical support. It is a two way process where social research shapes theories and reciprocally theories operates as bases of research activities. For each method, there is a different reciprocal link between theory and research. Research questions are attempts to find out answers from examining the developments of arguments. The process of formulating hypotheses, making predictions, drawing conclusions, or developing explanations involves employing knowledge that has already been obtained or that has recently been learned. In the history of science, Induction and Deduction are considered as major methods of reasoning. Prior to the scientific research these two were used as popular methods in the production of knowledge.

Keywords

Reasoning, Logic, Observation, Approach, Techniques.

Discussion

3.1.1. Deduction and Induction

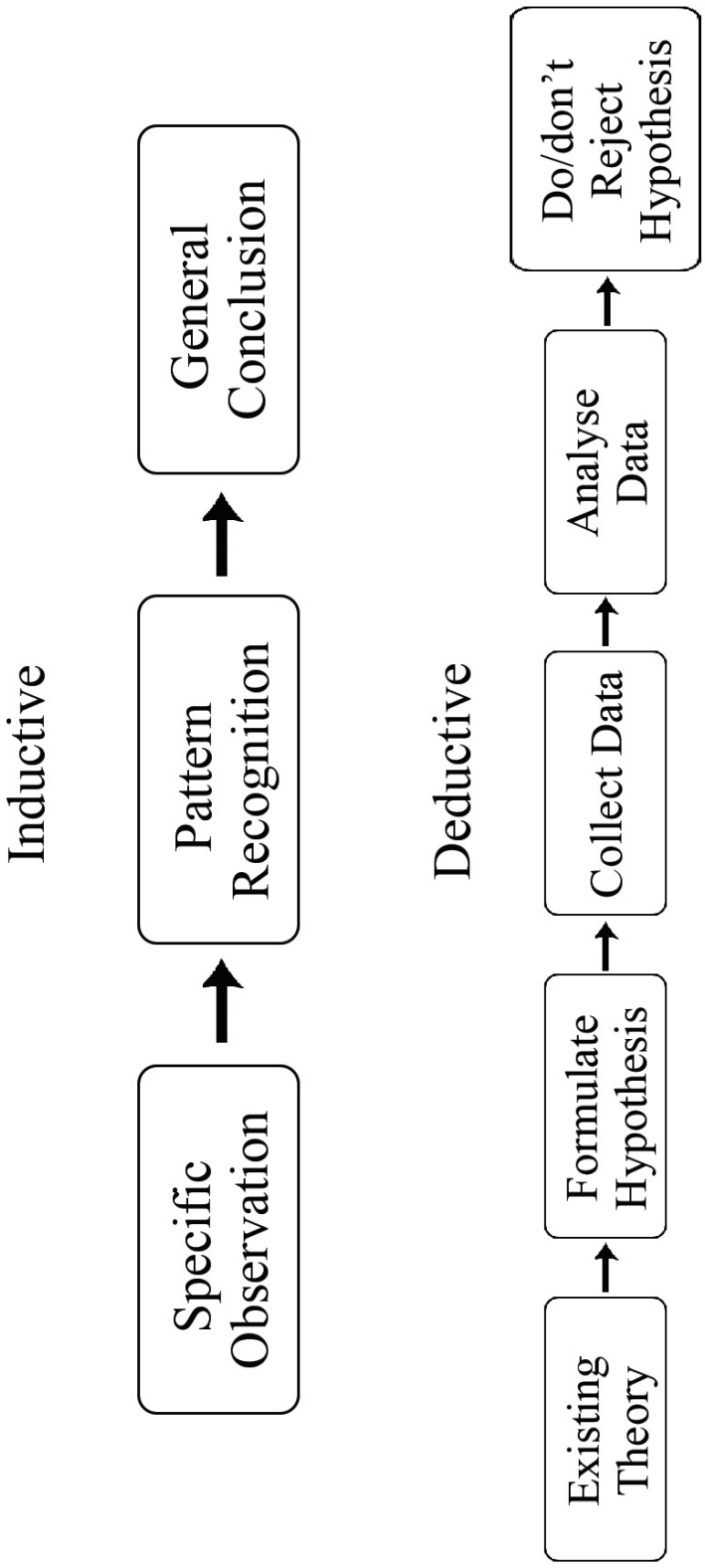
Induction or inductive reasoning, moves from the particular to the general, from a set of specific observations to the discovery of a pattern that represents some degree of order among all the given events. The logical model in which general principles are developed from specific observations.

Induction is a discovery of pattern

Induction is the procedure of identifying a single case, observing a relationship, then observing same relationship in multiple further cases, and eventually developing a general theory to account for all the cases. It is the fundamental method for developing a theory from a body of facts, and it forms the basis of sociological theory development.

Deduction is about developing hypothesis.

Deduction or deductive reasoning moves from the general to the specific. It moves from, a pattern that might be logically or theoretically expected to, observations that test whether these expected pattern actually occurs. The deduction begins with 'why' and moves to 'whether' whereas induction moves in the opposite direction. Deduction is the method of starting with a hypothesis and utilising it to explain specific findings. Deduction uses the information about a specific situation to apply the general theory to derive an explanation for the information. Deduction is the method for putting theories into practice, and induction is the method for developing hypotheses. Inductive reasoning attempts to develop a theory, whereas deductive reasoning aims to test an existing theory. This is the basic distinction between inductive and deductive reasoning. Both strategies are employed in numerous research fields, and it is customary to combine them in one sizable study.


Inductive
Specific Observation
Pattern Recognition
General Conclusion
Deductive
Existing Theory
Formulate Hypothesis
Collect Data
Analyse Data
Do/don't Reject Hypothesis

3.1.2 Inductive Research Approach

When there is little to no existing literature on a topic, it is common to perform inductive research because there is no theory to test. The inductive approach consists of three categories.

1. Observation
2. Observe a pattern
3. Develop a theory or general conclusion

There are many different types of inductive reasoning that people use formally or informally.

Types of Induction

a. **Inductive Generalisation**: use observations about a sample to come to a conclusion about the population it belonged to.
b. **Statistical Generalisation:** use specific numbers to make statement about populations while non-statistical generalisations aren't as specific.
c. **Causal Reasoning:** making cause and effect links between different things.
d. **Sign Reasoning:** making correlational connections between different things.
e. **Analogical Reasoning:** drawing conclusions about something based on its similarities to another thing.

This method is followed when new facts are studied, new truths are uncovered and new generalisations are formulated from a research project. For satisfactory inductive reasoning four conditions are essential. They are:

1. Observation must be correctly performed and recorded, data collected should be accurate: Mistakes in conducting experiments or interviews and faulty recordings of the information can vitiate the value of any conclusions reached.
2. Observations must cover representative cases drawn from a specific universe: for instance, in a

survey of job satisfaction of bank executives, the universe from which a sample has to be drawn should be defined exactly, say officers or public sector banks in a specific geographical area and all cadres of officers should be included in the sample and an appropriate sampling method like stratified random sampling has to be adopted.

3. Observation must cover an adequate number of cases: The size of the sample must be large enough to make it representative and to get reliable result.
4. Conclusions must be confined to inferences drawn from the findings: conclusions reached after an analysis of data collected on a given study must be confined to the inferences drawn from the findings only. They should not be generalised to apply to types of cases not covered in the sample.

Four Conditions of Inductive Reasoning

a) Types of Induction

To Theodorson and Theordorson, there are two basic types of induction.

1. Enumerative Induction
2. Analytic Induction

Enumerative Induction is the most common form of induction used in social science research. In general, this type of induction involves generalisation from samples and the generalisations are usually derived through the analysis of data.

A case by case analysis of specific features is involved in the **Analytic Induction**. Cressy outlined the step-by-step procedure of analytic induction as:

1. Define the phenomenon to be explained.
2. Formulate hypothesis to explain phenomenon.
3. Study a case to determine whether hypothesis fits in the case.
4. If the hypothesis does not fit the facts, either reformulate the hypothesis or redefine the phenomenon so that the

case is excluded.

5. Examine a small number of cases to attain practical certainty; but whenever a negative case disproving the explanation is discovered, reformulate the hypothesis.
6. Continue this procedure of examining cases, redefining the phenomenon and reformulating the hypothesis, until a universal relationship is established.
7. For purposes of proof, examine cases outside the area circumscribed by the definition to determine whether or not the final hypothesis applies to them.

Procedure of Analytic Induction

3.1.3. Deductive Research Approach

When conducting deductive research, it starts with a theory. Reasoning deductively means testing these theories. If there is no theory, you cannot conduct deductive research. The deductive research approach consists of five stages:

1. Start with an existing theory
2. Formulate a falsifiable hypothesis based on existing theory
3. Collect data to test hypothesis
4. Analyse and test the data
5. Decide whether you can reject null hypothesis

Deduction is reasoning process of applying a general accepted principle to a specific individual case falling under the general principle. It is regarded 'as reasoning from the general to the particular'. This reasoning establishes a 'logical relationship between a major premise, a minor premise and a conclusion. A major premise is a previously established generalisation or assumption; a minor premise is a particular case related to the major premise. The logical relationship of these premises lead to conclusion.

Deduction is from general to the particular

Researchers taking a deductive approach will start with a compelling social theory and then test its implications with data. In other words, they utilise the same steps as inductive research, but they will reverse the order, moving from general to more specific levels. Deductive research approach is most associated with scientific investigation. The researchers' studies, what others have done, reads existing theories of

whatever phenomenon they are studying, and then tests hypotheses that emerge from those theories.

Summarised Overview

Induction is the procedure of identifying a single case, observing a relationship, then observing same relationship in multiple further cases, and eventually developing a general theory to account for all the cases. Deduction or deductive reasoning moves from the general to the specific. Deduction is the method for putting theories into practice, and induction is the method for developing hypotheses. Inductive reasoning attempts to develop a theory, whereas deductive reasoning aims to test an existing theory. Enumerative Induction is the most common form of induction used in social science research. A case by case analysis of specific features is involved in the Analytic Induction. The deductive research approach consists of four stages.

Self Assessment

1. Deductive research approach consists of five stages. Write down your answers.
2. Who identified the basic type of induction?
3. What are the different types of inductive reasoning?
4. List out the five stages included in the deductive reasonging

Assignments

1. Describe how you might examine the relationship through inductive and deductive approach with a research article.
2. Explain inductive reasoning in social research
3. Discuss the scope of deductive approach in social research
4. Differentiate between inductive and deductive reasoning.

Suggested Readings

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UNIT 2

Scientific Method, Method and Methodology

Learning Outcomes

On completion, the learner will be able to:

- Understand the features of scientific research methods.
- Explore the concept 'method' in social science research.
- Differentiate between methods and methodology in social research

Background

Research is a process of collecting, analysing and interpreting information to answer questions. In order to find answers to questions, information needs to be gathered, analysed, and interpreted. But to be considered as research process, it must be, to a great extent, feasible, regulated, rigorous, systematic, valid, verifiable, empirical, and critical. It examines how objective, methodical analysis might be used to identify solutions to scientific and societal challenges. The data may come from a variety of sources, including experience, people, books, journals, nature, etc. Research basically is an investigation on fundamental principles and reasons for occurrence of a particular event or process or phenomenon. It is also called theoretical research. Study or investigations of some natural phenomenon or relating to pure science are termed as basic research. Basic research sometimes may not lead to immediate use or application. It is not concerned with solving any practical problems of immediate interest. But it is original or basic in character, it provides a systematic and deep insight into a problem and facilitates extraction of scientific and logical explanation and conclusion on it. It helps build new frontiers of knowledge. Traditional search for knowledge underwent a paradigm shift with the advent of scientific temper since 17th century. Inductive and deductive approach was replaced with scientific method characterized with empiricism.

Keywords

Empirical, Objectivity, Imagination, Subjectivity, Paradigm.

Discussion

3.2.1. Scientific Method

Nature of scientific method

Research is a scientific endeavour. It involves scientific method. The scientific method is a systematic step by step procedure following the logical process of reasoning. Scientific method is a means for gaining knowledge about the universe. As Karl Pearson emphasises, "the scientific method is one and same in all branches and that method of all logically trained minds... the unity of all sciences consists alone in their method not in their materials; the man classifies facts of any kind whatever, who sees their mutual relation describes their sequence is a man of science". The facts may be related to any field. 'It is not the facts themselves which make science', but the method by which they are dealt with. 'Science is not wrapped up with any particular body of facts'. 'Science is independent of any particular subject matter. It deals with knowable universe for its subject. It deals with physical as well as psychological processes with man as much as with nature. It has to do with everything to which its method can be applied. What makes a science is not of course the nature of things with which it is concerned, but the method by which it deals with these things. Thus, the scientific method does not refer to a field or specific subject of matter, but rather to a procedure or mode f investigation.

The scientific method is based on:

1. Reliance on Empirical Evidences: Evidence is used to establish the truth. Only when a conclusion is supported by evidence it is accepted. The scientific method uses a methodical approach. No amount of intuition or creative thinking can determine the solution to a question. Observation or experimentation are used to get pertinent facts. The accuracy and dependability of the data are carefully examined, and they are then completely analysed using the right analytical techniques. Based on the findings of the analysis, a conclusion is reached.

2. Use of Concepts: We learn a great deal of information through our senses. Things that genuinely exist are facts. We employ ideas with clear definitions to deal with them. Concepts are logical abstractions or creations derived from sensory impressions, precepts, and experiences. They serve as symbols for the significance we ascribe to things. We employ them when we are thinking and speaking. Otherwise,

it would be impossible to communicate clearly and correctly.

3. **Commitment to Objectivity:** The characteristic of the scientific approach is objectivity. It refers to making a decision based on facts that is free from bias. "Objectivity is the willingness and ability to assess evidence dispassionately," asserts Green. The conclusion shouldn't change depending on whom you are communicating. It ought to be the same for everyone.

4. **Ethical Neutrality:** Science does not assign facts a normative value. They are neither characterised as good nor bad. Science never imposes what science states, according to Erwin Schrodinger. Making accurate and appropriate claims about its subjects is the only goal of science.

5. **Generalisation:** Scientists are more interested in the similarities among a number of events than they are in singular events. They seek to find the thread of uniformity beneath the superficial layer of variation. A descriptive generalisation is developed around a logical class's observed pattern and a newly discovered uniformity. When making generalisations, we should be careful to avoid the particularistic fallacy, which is a tendency to draw conclusions from sparse, incomplete, or unconnected evidence. This can be prevented by gathering a significant amount of data, using comparisons, and using control groups.

6. **Verifiability:** Scientists should reach conclusions that can be independently verified. The researcher is required to explain to others how they reached to the findings. Therefore, their research is subject to further research and its conclusions to careful examination. Its conclusions are acknowledged as true once it has been put to the same tests by others. Such replication-based verification may either support existing findings or modify or even refute them.

7. **Logical reasoning process:** The scientific method involves logical process of reasoning. This reasoning process is used for drawing inference from the finding of a study or for arriving at conclusion. For example, in a survey of the expenditure pattern on basic necessaries forms a very high proportion of the total expenditure. It is concluded that lower the household income, the higher is the proportion spent on basic necessaries. The logical reasoning process consists of induction and deduction.

a) Requisites of a Good Scientific Method

The essentials of a good scientific method as summed up by the Advisory committee on Economic and Social Research of the Council of Social Science Research are:

1. Careful logical analysis of the problem, separating its elements and whenever possible, formulating hypothesis;
2. Unequivocal definition of terms and concepts and statistical units and measures, so that others will understand exactly and be able to repeat the analysis and test the generalisations;
3. Collection of data pertinent to the problem under study;
4. Classification of data;
5. Expression of variables in quantitative terms whenever possible;
6. Rigorous and exacting experimental or statistical procedure in summarising the data and in isolating the attributes or variables and measuring their relationship and inter effects;
7. Sound logical reasoning as to the testing of hypothesis and drawing generalisations;
8. Statement in unassailable terms of the exact conclusion arrived at from the findings;
9. Specific and clear statement of generalisations to facilitate checking and testing by others;
10. Complete elimination of personal equation; and
11. Complete and careful reporting of the research process, definitions and the methods of analysis so that others can check the analysis or test the generalisations with new sets of data.

3.2.2. Method

The different processes, plans, algorithms, etc. employed in research are known as research methods. Research methods are techniques a researcher uses when conducting

Definition of method

a study. In essence, they are planned, scientific, and value-free. They consist of theoretical techniques, experimental research, numerical models, statistical methods, etc. Research techniques assist us in gathering data and samples as well as in solving problems. In particular, scientific procedures require explanations that are grounded in facts, measurements, and observations, rather than just in logic. Only explanations that can be supported by experiments are accepted by them.

Difference between method and methodology

All procedures and methods used to conduct research can be referred to as research methodologies. Thus, research techniques or methods relate to the procedures that researchers employ when carrying out researches. In other words, research methods are whatever techniques the researcher employs when analysing the subject of their study. Since the goal of research, especially applied research, is to find a solution for a particular problem, a solution can only be found by connecting the known and unknown parts of the problem. Hence, research methods can put it into the following three groups.

1. The first group includes methods which are concerned with the collection of data. These methods will be used where the data already available but are not sufficient to arrive at the required solutions.
2. The second group consists of those statistical techniques which are used for establishing relationships between the data and the unknown.
3. The third group consists of those methods which are used to evaluate the accuracy of the results obtained.

Research methods falling in the last two groups are generally taken as the analytical tools of research.

3.2.3. Research Methodology

Research methodology is a systematic way to solve a problem. It is a science of studying how research is to be carried out and its procedures which researchers employ during their research on the social problem. It is necessary for the researcher to know not only the research methods/ techniques but also the methodology.

The systematic approach of conducting research is referred to as research methodology. In many fields of research,

Definition of Methodology

methods are used, and the word is typically thought to comprise study design, data collection, and data analysis. Research methodology aims to explain the following: why a study was conducted, how the research topic was defined, how and why the hypothesis was developed, what data was collected, what specific method was utilised, and why a particular technique for data analysis was used.

Qualitative and quantitative methodology

Research methodologies can be quantitative or qualitative. Quantitative research is based on the measurement of quantity or numerical data. Qualitative research is concerned with qualitative phenomenon involving quality. It is non numerical, descriptive, applies reasoning and uses words. Its aim is to get the meaning, feeling and describe the situation. The word qualitative implies an emphasis on processes and meanings that are not rigorously examined or measured, in terms of quantity, amount, intensity or frequency. The social construction of reality, the close bond between the researcher and the subject under study, and the limitations imposed by the context are all points of emphasis for qualitative researchers. Comparative studies, on the other hand, place more focus on measuring and analysing the causal connections between variables than on processes. Inquiries were said to be conducted in a context devoid of values. Data from quantitative research are typically presented as numerical data, whereas data from qualitative research are typically presented as prose or text. Qualitative and quantitative research typically use distinct methodologies to generate different types of data.

Research design

In simple terms, research methodology is used to give a clear-cut idea on how the researcher should carry out their research. The system of collecting data for research projects is known as research methodology. It is necessary for a researcher to design a research methodology for the problem chosen. The study of research methodology provides necessary training in choosing research methods, materials, scientific tools and training in techniques relevant for the problem chosen.

Research methodology includes a philosophically coherent collection of theories, concepts of ideas as they relate to a particular discipline or field enquiry. Methodology refers to more than a simple set of methods; rather it refers to the rationale and the philosophical assumptions that underlie a particular study relative to the scientific method.

3.2.4. Method and Methodology

Difference between research method and research methodology

The phrases 'research methods' and 'research methodology' are sometimes used interchangeably. Research methods are the means through which you do research on a subject or problem, making this one of their main distinctions. Research methodology, on the other hand, describes the procedures you use to carry out your research. Learning about different ways for conducting research, as well as tests, experiments, surveys, and critical studies, is a part of research methodologies.

Processes in Research Methodology

Research methodology has many dimensions and research methods constitute a part of the research methodology. The scope of research methodology is wider than that of research methods. Thus, when we talk of research methodology, we not only talk of the research methods but also consider the logic behind the methods we use in the context of our research study and explain why we are using a particular method or technique and why we are not using others so that research results are capable of being evaluated either by the researcher himself or by others. Why a particular research has been undertaken for study, how the research problem has been defined, in what way and why the hypothesis has been formulated, what data have been collected and what particular method has been adopted, why particular technique of analysing data has been used and host of similar other questions are usually answered when we talk of research methodology concerning a research problem or study.

In short, it can be said that research methods aim at finding solutions to research problems. On the other hand, research methodology aims at the employment of the correct procedures to find out solutions. It is thus interesting to note that research methodology paves the way for research methods to be conducted properly.

Summarised Overview

The scientific method is a systematic step by step procedure following the logical process of reasoning. The different processes, plans, algorithms, etc. employed in research are known as research methods. All procedures and methods used to conduct research can be referred to as research methodologies The systematic approach of conducting research is referred to as research methodology. Research methodologies can be quantitative or qualitative. Quantitative research is based on the measurement of quantity or numerical data. Qualitative research is concerned with qualitative phenomenon involving quality. Comparative studies place more focus on measuring and analysing the causal connections between variables than on processes. The phrases 'research methods' and 'research methodology' are sometimes used interchangeably.

Self Assessment

1. What are the requisites of a good scientific method? Discuss your answers
2. How do you see quantitative and qualitative methods?
3. Define scientific method
4. What do you mean by research methodology?
5. What is comparative method? What is ethical neutrality?

Assignments

1. Discuss the scope of methods and methodology in social science research. Illustrate with an example.
2. Explain the different research methods in social research.
3. Discuss different research methodologies used in social science research.
4. Examine the basic features for scientific research.

Suggested Readings

1. Clover, V.T. & Howard, L.B. (2002). *Business Research Methods.*
2. Thomson, J. A. (2007). I*ntroduction to Science*. Oxford University Press.
3. Cressy, R. D. (1953). *Other People's Money.* New York: Free Press.
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5. Theodorson, T. & A. Theodorson. (eds.). (1969). *A Modern Dictionary of Sociology*, New York: T.Y. Crowell.
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7. Bailey, K.D. (1982). *Methods in Social Research*. Macmillan.
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10. Hammersley, M. (2011). *Methodology: Who Needs It?* Sage.
11. Punch, K.F. (2003). *Survey Research* - The Basics. Sage.

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UNIT 3

Criteria of Data: Validity, Reliability and Representativeness

Learning Outcomes

On completion, the learner will be able to:

- Understand the significance of reliability in social research.
- Familiarise the need for explaining validity in social research.
- Comprehend data representation and its scope in social research.

Background

The issue of validity and dependability has historically been one of the most significant issues in social science research. It has been difficult for social science researchers to assert that the results of their research are scientific as those from the natural sciences. Any attempt to comprehend social processes is difficult due to their complexity. Understanding the underlying causes of social patterns is just as difficult for natural scientists as it is for them to comprehend natural occurrences. It is vital to highlight that the natural sciences saw substantial instrumentation breakthroughs that enabled them to solve their validity and reliability issues. However, social sciences, because of its very nature of object of study, ie social phenomena, which is dynamic, fluid and difficult to predict, suffers from the inability of developing instruments to help researchers to make precise, accurate claims of knowledge. Hence, a social science researcher faces the challenges of arriving at reliable and valid data and conclusions. Social scientists can measure anything that exists. Measurement can be made with varying degree of precision. Precision concerns the fineness of distinctions made between the attributes that compose a variable. The description of woman as '43 years old' is more precise than 'in her forties'. Exact precision is not always necessary or desirable. Precision and accuracy are obviously important qualities in research measurement. When social scientist construct and evaluate measurements, they pay special attention to two technical considerations: reliability and validity.

Keywords

Precision, Accuracy, Information, Survey, Social facts, Reliability, Validity

Discussion

3.3.1. Criteria of Data

Meaning of Data

Research data is a set of values on one or more observational units. An observational unit is the source which gives information or observation. The information, often in the forms of facts and figures, obtained from experience or surveys, used a basis for making calculations or drawing conclusions is said to be data. Data can take many forms; it may be a set of numbers, alphanumeric or strings. They may be needed to understand every phenomenon numerically, and present the information specifically and make analysis easy. They are also needed to make comparison of different phenomenon attractive by figures and charts, establish the mathematical relationship between the variable and observational units, and draw inferences for observing procedure of system.

Types of Data

Research data means data in the form of facts, observations, images, computer program results, recordings, measurements or experiences on which an argument, theory, test or hypothesis, or another research output is based. They may be numerical, descriptive, visual or tactile. They may be raw, cleaned or processed and may be held in any format or media. They are distinct pieces of information, usually formatted in a special way. Research data is the data which are collected, observed or created, for purposes of analysis to produce original research results. Research data can be generated for different purposes and through different processes and can be divided into different categories.

3.3.2. Reliability and Validity

Meaning of Reliability

Reliability and validity are concepts used to evaluate the quality of research. They indicate how well a method, technique or test measure something. Reliability is about the consistency of a measure and validity is about the accuracy of a measure. Reliability refers to how consistently a method measures something. If the same result can be consistently

achieved by using the same methods under the same circumstances, the measurement is considered reliable.

Example for reliability

Reliability is a matter of whether a particular technique, applied repeatedly to the same object, yields the same results each time. The quality of a measurement method suggests that the same data would have been collected each time in repeated observations of the same phenomenon. In the context of a survey, the question 'did you attend religious services last week? Will have higher reliability than the question 'how many times have you attended religious services in your life? If you ask two different people to estimate the weight of third party, the first person estimates 60kg and the second estimates 56kg, then the conclusion is that the technology used to estimate weight is not reliable.

Essentials of reliability

Reliability issues in social research can take many different shapes, as there is no certain safeguard against the impact of the observer's subjectivity. Reliability is a major concern whenever a single observer is the source of data. Subjectivity is a difficulty for multiple observers as well. Researchers who conduct surveys have long observed that various interviewers tend to elicit varied responses from respondents due to their own attitudes and demeanours. The same mistake can occur each time we ask respondents about themselves. People will respond differently at various points in time to inquiries to which they don't know the answers or questions that are irrelevant. If your research design calls for asking people for information, you can be careful to ask only about the things the respondents are likely to know the answer. Ask about things relevant to them, and be clear in what you are asking. Of course, these techniques don't solve every possible reliability problem.

The social researchers have developed several techniques for cross checking the reliability of the measures they devise. They are:

Test- Retest Method: To make the same measurement more than once, a technique called test -retest method is used.

Split Half Method: This is to make more than one measurement of any subtle or complex social concept such as prejudice, alienation or social class. This procedure lays the groundwork for another check on reliability. In a questionnaire you have created ten items to measure prejudice against a gender. Using the split half technique, randomly assign those ten items to two sets of five. Each set should provide a good

measure of prejudice against a gender. If the two sets of items classify the people differently then there is likely to have a problem of reliability in the measurement of that variable.

Comparison between reliability and validity

How well a method measures what it is supposed to measure is known as its validity. When a study's findings are highly valid, it means that they accurately reflect the genuine features, traits, and variations in the physical or social reality. A social class indicator should reflect social status, not political stance. It is inappropriate to quantify sexual permissiveness when measuring political orientations. High dependability is one sign of a valid measurement. A method is probably invalid if it is not trustworthy. Reliability is easier to evaluate than validity. The procedures used to gather the data must be reliable in order to produce valuable results.

Reliability can be estimated by comparing different versions of the same measurement. Validity is harder to assess, but it can be estimated by comparing the results to other relevant data or theory. Methods of estimating reliability and validity are usually split up into different types. Different types of reliability can be estimated through various statistical methods. They are:

a. **Test –Retest Method:** Consistency of a measure across time.
b. **Inter-Rater Reliability:** Consistency of a measure across rates or observers.
c. **Internal Consistency Method:** Consistency of the measurement itself.

The validity of a measurement can be estimated based on three main types. Each type can be evaluated through expert judgement or statistical methods. They are:

1. **Construct:** The adherence of a measure to existing theory and knowledge of the concept being measured.
2. **Content:** The extent to which the measurement covers all aspects of the concept being measured.
3. **Criterion**: The extent to which the result of a measure corresponds to other valid measures of the same concept.

3.3.3. Data Representativeness

Meaning of representativeness

If a sample's overall features closely resemble the overall characteristics of the population from where it was drawn, it is said to be representative of that population. If a population contains 50 percent of women, then the sample must contain 'close to 50 percent women to be representative'. The sample does not need to be representative in every way; rather, representativeness is restricted to those qualities that are pertinent to the study's main objectives.

Advantages of probability sampling

Representativeness is that quality of a sample having the same distribution of characteristics as the population from which it was selected. By implication, descriptions and explanations derived from an analysis of the sample may be assumed to represent similar ones in the population. Representativeness is enhanced by probability sampling and provides for generalisation and the use of inferential statistics. A basic principle of probability sampling is that a sample will be representative of the population from which it is selected if all members of the population have an equal chance of being selected in the sample. Probability samples never perfectly representative, but are typically more representative than other types of samples.

Summarised Overview

Research data mean data in the form of facts, observations, images, computer program results, recordings, measurements or experiences on which an argument, theory, test or hypothesis, or another research output is based. Reliability is about the consistency of a measure and validity is about the accuracy of a measure. Reliability refers to how consistently a method measures something. Test- Retest Method: To make the same measurement more than once, a technique called test -retest method. Split Half Method: To make more than one measurement of any subtle or complex social concept such as prejudice, alienation or social class. Representativeness is that quality of a sample having the same distribution of characteristics as the population from which it was selected.

Self Assessment

1. Different types of reliability can be estimated through various statistical methods. Describe your answers.
2. Discuss essentials of reliability
3. What is meant by validity in research?
4. How do you understand reliability in the social research?
5. List out statistical methods for measuring reliability in the research
6. Define data representativeness.

Assignments

1. Discuss the need for measuring reliability and validity in social research. Illustrate with an example.
2. Define research data and its application in quantitative research.
3. Explain the difference between validity and reliability in social research.
4. Discuss the scope data representativeness in social research.

Suggested Readings

1. Best, J.W. (1982). *Research in Education***.** New Delhi: Prentice Hall of India (P) Ltd.
2. Clover, V.T. & Howard, L.B. (2002). *Business Research Methods.*
3. Cressy, R. D. (1953). *Other People's Money.* New York: Free Press.
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UNIT 4

Community based Research

Learning Outcomes

On completion, the learner will be able to:

- Understand the concept community-based research
- Explore the major features of Community based Research.
- Comprehend the scope of community based participatory research.

Background

Community based research (CBR) is a participatory approach where research projects are driven by community priorities and the community is involved throughout the entire research process. This is a research framework that aims to address the practical concerns of people in a community and fundamentally changes the roles of researcher and who is being researched. The community based participatory research begins with a community's issue, proposed action, or strategy and then supports or enhances this action with research that is community based and engaged. CBR method developed as part of participatory action research prompted by Kurt Lewin and Orlando Fals Borda. CBR aims to extend body of knowledge and public's awareness of a given social problem and apply that knowledge to create social and political interventions which will benefit community.

Keywords

Action research, Inclusive, Social change, Participatory

Discussion

3.4.1. Community based Research

Community based research is research that is conducted with and for, not on, members of a community. Community

based research (CBR) is a methodological practice that places community partnerships at the forefront. The major principles are:

a. Collaborative: The communities in which the research is taking place are full partners in all stages of the process. Community partners and academic experts work together to develop questions that are responsive to community needs, determine appropriate data collection methods, and develop effective knowledge dissemination strategies.
b. Change Oriented: Although community-based research can make important contributions to knowledge, its ultimate objective is to promote positive social change. Community based research seeks to empower communities and effect policy changes.
c. Inclusive**:** Community based research seeks to democratise knowledge by recognising and valuing the unique strengths and perspectives of all members involved in the research process. Community based research projects often use multiple and innovative data collection strategies and analysis methods that reflect the diverse expertise and experiences of the research team.
d. The research process strives for consensus and enable participation for all people.
e. The relationship between researchers and community members is built on respect, trust, and learning with and from each other.
f. The research project lays the ground work for the exchange of knowledge, skills, resources and ownership between stakeholders and within a mutual agreement.
g. Those involved in the research project have the responsibility to provide reciprocity.
h. The research process builds the capacity of community people to participate in and use the knowledge produced by the research.

i. There is a continuous discussion/verification of data between all partners in order to generate meaningful, useful and accessible results to inform community actions.

j. The research benefits and serves the community directly and addresses their interests and needs.

k. Research builds on and contributes to the strength and resources of the community.

Scope of CBR

CBR is a collaborative approach to research that equitably involves all partners in the research process and recognises the unique strength of everyone's contributions. One of the important differences between CBR and traditional academic research is that the research question is provided by the community. The other is that research is undertaken with and for, instead of on, the community.

3.4.2. Scope and Key Features of CBR

Process of creating knowledge

A fundamental characteristic of community-based research is the emphasis on the participation and influence of non-academic researchers in the process of creating knowledge. Community based research equitably involves all partners, who contribute unique strengths and shared responsibilities to enhance understanding of a given phenomenon and the social and cultural dynamics of the community, and integrate the knowledge gained with action to improve the health and well-being of community members. The key features are:

1. Recognise community as a unit of identity and emotional connection to other members, shared values and norms, mutual influence, common interests and commitment to meeting shared needs.

2. Seeks to identify and build on skills of individuals, networks of trustful relationships and mediating structures within the community.

3. Facilitates collaborative partnerships in all phases of research – Defining the problem, data collection, interpretation of results, and application of the results to address community concerns.

4. Information is gathered to inform action, and new

understandings emerge as participants reflect on actions taken.

5. Promotes a co-learning and empower process that attends to social inequalities.

6. Involves a cyclical and iterative process.

CBR is an action-oriented research method that involves a team approach inclusive of all participants. 'All participants refer to the researchers and the 'researched' as equal members of the research team, all with an important voice in the research. Rather than referring to the process of doing research 'on people', this approach refers to doing research 'with people'. The 'people' are those members of a community of interest, those who are most directly affected by the phenomenon being studied. The members of a community also work in tandem with the researchers, leading to a collegial research effort within an environment of collaboration rather than the traditional hierarchical environment. One important goal of CBR is to empower those who have not been empowered by helping to eliminate oppressive situations and/or conditions contributing to marginalisation and vulnerability.

Advantages of CBR

Community people are actively involved in the research through community-based participatory research. Understanding the viewpoints and requirements of the community members is a key goal of this research in order to provide solutions that cater to their needs. Since taking positive action is the overt purpose of this research, the concept of action is essential to community-based participatory research. Because it invites the direct and active involvement of the individuals of such populations, community-based participatory research is best suited for addressing the needs of vulnerable populations. Such a strategy aims to lessen injustice and inequality among weaker communities.

Summarised Overview

Community based research (CBR) is a participatory approach where research projects are driven by community priorities. Community is involved throughout the entire research process. CBR is an action-oriented research method that involves a team approach inclusive of all participants. All participants refer to the researchers and the 'researched' as equal members of the research team, all with an important voice in doing research with people than on people. One important goal of CBR is to empower those who have not been empowered by helping to eliminate oppressive situations and/or conditions contributing to marginalisation and vulnerability.

Self Assessment

1. List out major principles of Community based Research.
2. Compare CBR with traditional research and write down your findings.
3. What is meant by CBR?
4. Who introduced CBR in the academics for the first time?
5. What are the key features of CBR?

Assignments

1. Illustrate the application of a community-based research of vulnerable people and its impacts in the society.
2. Discuss the scope of Community based Research
3. Explain the positive impacts of community-based Research.
4. Examine the salient features for conducting community-based Research.

Suggested Readings

1. Greer, S. (1989). *The Logic of Social Inquiry.* Aldine Publishing Company.
2. Hammersley, M. (2011). *Methodology:* Who Needs It? Sage.
3. Smith, L. T. (1999). *De-colonising Methodologies: Research and Indigenous Peoples.* Zed Books.
4. Ward, S. C. (2012). *Neoliberalism and the Global Restructuring of Knowledge and Education.* Routledge.
5. Theodorson, T. & A. Theodorson. (eds.). (1969). *A Modern Dictionary of Sociology*, New York: T.Y. Crowell.
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PROCESS OF SOCIAL RESEARCH

BLOCK-04

UNIT 1

Formulation of Research Problem and Steps of Research Process

Learning Outcomes

On completion, the learner will be able to:

- Explain what is social research and its types.
- Attain how to formulate problem and review of related literature.
- Analyse different processes of research
- Familiarize with different types of research and their use at the level of techniques.

Background

Research is a method for gathering accurate and trustworthy knowledge about a topic. It may be loosely described as "a methodological investigation aimed at comprehending a social phenomenon." It uses a scientific method to learn new things. Objectivity is considered as the most significant feature. How can we gather trustworthy information about the numerous facets of the human experience? How, specifically, may the scientific method be useful in comprehending social phenomena? What prerequisites should be taken when we endeavor for research on social issues? This unit will cover all these parts. Our strategy would be to first comprehend what is meant by the term "social research," and then to examine the formulation of the research problem, its application in Sociology, its underlying presuppositions, and finally to closely examine the approach to research literature and how it can assist sociologists in resolving issues they encounter when working with society.

Keywords

Social research, Research design, hypothesis, Universe, Sampling, Bibliography

Discussion

4.1.1. What is Research?

A methodical investigation of a topic in order to get original and reliable results is referred as research. We claim to do scientific study on social issues in sociology. How a study is made scientific? You might say that your research was scientific if you used a technique of logical investigation to explore the phenomenon. In order to add new findings about a subject to the corpus of information already known, scientific study needs investigation about that subject. The research process which intended to produce new knowledge has to undergo an investigative procedure that results in reliable conclusions. The validity of results would primarily depend on the research methodologies used. People who are reviewing the study will also take into account how the conclusions have advanced the fields of theoretical knowledge. Then what is meant by research? Research is a thorough investigation or inquiry for everyone who looks for novel information in any field of study. For this, understanding of what is research and how research might become scientific is important. In the aforementioned sentences, we have employed a number of phrases including "one's chosen subject," "theoretical knowledge," and "validity". Definition of these words will make clear the meaning of research and its process. So let's have a look at these concepts. For example, one's "selected subject" has already been brought up. This implies that there is a definite sign of choice in selecting the topic of study. How does one choose a study topic or issue? The decision is influenced by several circumstances.

Meaning of research

a) What does Social Research Mean?

The goal of social research is to identify the causes behind human behaviour. It is widely accepted that a significant amount of quantifiable and predictable sets of linkages occur in both natural occurrences and human behaviour. The goal of social research, like that of the physical and scientific sciences, is to identify, quantify, and analyze these correlations in all of their complexity and intensity. However, when applying the scientific method to social phenomena as in the natural sciences, social research significantly takes on a distinct character of its own. In contrast to the physical and natural sciences, social research uses aware, engaged

Scope of social research

humans as its subjects.

Nature of social research

The individual behaviour of the objects, whether it be determined or free, makes the work of doing sociological research extremely challenging. Furthermore, the scope of an objective method in social research is severely constrained by the similarity between the researcher and the target. Unlike physical data, which is significantly simpler, social data is the focus of social research. Expectations of conduct, which are the outcome of several circumstances, form the foundation of all social interactions, whether they take place in a huge complicated group or a small cohesive one. The potential of precise prediction in social research is diminished by the complexity of social data. The majority of social research's subject matter is qualitative and does not allow for quantitative assessment.

You can check the following four definitions of social research and then look at its components for the best analysis of what social research stands for.

a. According to C.A. Moser, "Social research is a systematic inquiry to learn new information about social phenomena and issues."
b. According to P.V. Young, social research is the systematic method of discovering new facts verifying old ones their sequences, interrelationships, casual explanations and natural laws which govern them."
c. Wallace ad Wallace: Social research refers to the structural observation of social behaviour.
d. Redman and Mory has described research as "a systematic endeavor to gather new knowledge."

Therefore, social research concentrates on the following areas:

- Social Research is concentrated on resolving problems.
- The ultimate goal is to identify a cause-and-effect relationship between societal challenges.
- It puts a lot of emphasis on developing generalizations, principles, or hypotheses that may be used to make future forecasts.

- Social research is backed up by verifiable information or palpable experience.
- It is necessary to make accurate observations and descriptions
- Researchers may present their findings in a variety of non-qualitative ways.
- It requires either gathering new data from dependable sources or reusing already collected data.

Even while social research operations can occasionally be disorganized, they frequently stand out for their carefully thought out processes and thorough analyses. It necessitates knowledge. Some research may be largely theoretical, while others may be carried out, especially with the practical intention of gathering data so that decisions can be made. It attempts to be reasonable and objective, running every test imaginable to support the methods employed, the information acquired, and the conclusions formed. The researcher is aware of what is previously known about the subject and how it has been looked at by others. It is characterized by slow, deliberate movement and requests visitors to offer answers to problems that have not yet been handled. A researcher should be ready for rejection and discouragement if they are attempting to solve a difficult problem.

Objectives of social research

Activity: 4.1.1

Discuss social research and learn the five key components of social research

Nature of social research

As we discussed earlier, some research may be primarily theoretical, while others may be undertaken particularly for the practical goal of gathering information so that judgments may be made. You already know that a research project must be systematic and employed research techniques regardless of whether it is scientific, theoretical, or pragmatic. In fact, reading this course is one of the reasons you are doing so. However, just using research methodologies would not qualify as scientific study but it depends on your dealing with ideas, theories, or theoretical discourses in the context of your subject would be scientific. For further clarity, we will discuss several study types here.

Multiple forms of study can be combined advantageously in your personal investigation. As particular kinds may create the idea that each type is a separate entity that is incompatible with another type, please be aware that

many of them perform better in combination through their location. Long discussions on the benefits or drawbacks of various kinds have frequently led inexperienced researchers to assume that they must take a position when choosing a specific research method.

4.1.2. Research Categories

Now let us examine the list of potential research categories. They can be listed as follows:

1. Basic and Applied
2. Descriptive and Analytical
3. Empirical and Exploratory
4. Quantitative and Qualitative
5. Explanatory (causal) and Longitudinal
6. Experimental and Evaluative
7. Participatory Action Research

1) Basic (or Pure or Fundamental) and Applied Research.

Difference between Basic and Applied research

Because it focuses on underlying ideas, laws, or norms with the goal of advancing knowledge for its own sake, basic research can be thought of as either pure or fundamental research. It relates to the study of a phenomena without considering how it may be used in the real world. Pure research can be used to confirm claims and dispel scepticism. If the doubt is confirmed, you can change the relevant principles and legislation in accordance with the finding and outcomes of rigorous study. Nothing is more useful, you could say, than a solid hypothesis. For instance, creating a theory on how the group minded (collective behaviour) works or group dynamics might be highly beneficial. Pure research can also be used to disprove or confirm preexisting findings concerning social issues.

To identify the rules regulating social phenomena, sociologists often engage in pure research. Pure research frequently serves as the foundation for the development of crucial concepts and technical jargon. While fundamental research uncovers laws and principles, applied research identifies how to use these findings to address social issues. The goal of applied research is to identify and address social issues. We do practical research in the areas of social, semi-social, and socio psychological issues in sociology. When

attempting to understand why crime is done or how a person becomes a criminal, sociologists' use pure study.

Example for basic and applied research

You might claim that certain sociologists are conducting applied research if they look for ways to treat criminals and rein in their anti-social behaviour. For instance, sociologists engaging in pure research may be investigating the kind and degree of drug misuse among truck and auto-rickshaw drivers or among industrial employees. It will be applicable research if this is followed by a study on how to lower drug misuse among truck and auto-rickshaw drivers. A social problem will be addressed through applied research, which may be used for social planning, social law, social hygiene, religion, etc. For instance, family planning research seeks to put certain ideals into practise. One may contend that by putting more emphasis on practical research, sociology can increase its significance.

2) Descriptive and Analytical Research.

Ex Post Facto Research

A social setting, social occurrence, social system, social structure, etc. are all described in descriptive research. Its major objective is to describe the current situation. For instance, a research on drug abuse might include issues like the level of drug usage among college students, the kind of drugs used, the reasons people use drugs, from where they get their drugs, what happens when people use drugs, etc. Ex post facto research is a word frequently used in the social sciences to describe descriptive investigations.

Example for descriptive research

The key feature of this kind of study is that the researchers have no influence over the variables; they can only describe what has already occurred or is now occurring. For example, why people of the tribal area are suffering from lung cancer as compared to non tribes and the research study revealed that tribal persons have wood burning stoves and fire places and hypothesizes the reason that the wood smoke is a factor of lung cancer. The survey is used in descriptive research. It describes a wide range of traits common to both the population as a whole and the populations of various areas and communities with accuracy and precision.

In analytical research, the researcher must take already-known facts or information and analyse it in order to provide a critical assessment of the subject matter. A social analyst thinks that something more significant and illuminating than the facts and numbers is hidden beneath the amassed

Difference between descriptive and analytical research

data by looking beyond the concepts, facts, and figures that have previously been gathered. The underlying premise is that meticulously gathered facts and figures, when correlated with other factors found across the complete body of data, disclose a substantial general meaning, from which you may derive a reliable generalization. The next presumption is that social analysis will be ongoing throughout the course of the research. The goal of systematic analysis is to construct an intellectual structure that arranges correctly sorted and filtered facts and figures in suitable contexts and consistent relationships, allowing you to deduce general conclusions from them. In a nutshell, we can state that in analytical research, the researcher may use existing facts, information, and data and analyse them in order to develop a hypothesis and evaluate the material.

Core characteristics of descriptive research

Now that you have verified that you can distinguish between descriptive and analytical research, it is time to do a fast reflection and action task. Of course, one must understand that even a study that is predominantly descriptive will have some sort of analysis, and vice versa, a study that is highly analytical will contain some straightforward description. In this regard, you shouldn't seek for studies that are only descriptive or analytical. To categorize a piece of research as descriptive or analytical, you must consider its core characteristics and whether they lean substantially in one direction or the other.

3) Empirical and Exploratory Research

Meaning of empirical research

Empirical research frequently ignores systems and theory in favour of relying solely on experiences or observations. It is data-based study, drawing findings that may be supported by more observation or testing. In such a study, it is important to gather first hand information in order to form a working hypothesis and build up an experimental plan. Such studies are suitable when it is desired to provide evidence that some factors influence other variables in some way. Experimentation and empirical research provide strong evidence to support a certain idea.

Exploratory Research is often qualitative

Exploratory Research is often qualitative and is effective for developing and testing ideas and theories. In this study, it is assumed that the researcher knows very little to nothing about the issue or circumstance being investigated, or is unfamiliar with the organizational structure of the group being investigated. It is a way of gaining knowledge by means of direct and indirect observation.

Example of an Exploratory Research

Demonstrations, strikes, protests, etc. organized under a leader of a political party. In this study, the types of party members who become active, the support they seek and receive from outside agencies, how widespread the unrest becomes, how it is suppressed by police, how leaders are arrested, and how authorities are pressured to do something such like all things are included subject to the interest of the researcher in understanding the causes of political parties' unrest.

4) Quantitative and Qualitative Research.

Study about statistical problems

The measurement of quantity or amount is the foundation of quantitative inquiry. It is applied to phenomena that have a quantitative form. The researcher makes decisions on what to do and what not to do, and then uses statistical, logical, and mathematical procedures to produce numerical data. Deductive reasoning begins with a theory, develops a hypothesis, and then confirms the hypothesis. In other words you can say that it is a top down research. The outcomes of quantitative research are more broadly applicable. Positive and post-positivist paradigms are mostly linked to quantitative research.

Examples for qualitative and quantitative

Inductive methods are typically used in qualitative research. The researcher begins with a general hypothesis or inquiry, and as the study proceeds, these queries get increasingly focused. The strategy is bottom up. It investigates how, when, and less generally applicable discoveries. The outcomes are highly illustrative. In-depth interviews, focus groups, phenomenology, and other essential techniques and methodologies were employed in this study. It is more naturalistic or anthropological. For example you will now examine a study that combines both qualitative and quantitative methods. In a research around disaster victims, gathering a spectrum of emotional responses through interviews with disaster victims is part of qualitative research and requesting that victims of a natural disaster use a pee-determined scale to assess their level of worry is termed as quantitative research.

5) Explanatory (or Causal) and Longitudinal Research

Research that provides an explanation for social phenomena and seeks to create a connection between variables, i.e., how one causes the other or how one variable will result in the occurrence of the other is called explanatory. For instance, elucidating the connection

between dysfunctional households and juvenile criminality, or between drug usage and a lack of parental supervision, or between a college students' strike and the lack of interest in resolving the concerns of the students. The primary focus of explanation (or causal) study is on causes, or the "why" behind a phenomenon. It excludes comparison and the drivers of change. For instance, research on violence against women aims to provide an explanation for why men harm others. This makes it an illustration of explanatory research.

Example for explanatory research

The research design for an explanatory study focuses on determining the "why" behind the correlation between two (or more) variables, whereas the hypothesis expresses the relationship between those variables. Since they are not the same thing, correlation studies and causal studies should not be confounded. Two variables in a hypothesis may be positively or negatively correlated with one another, but they may not necessarily be causally connected. The study of a topic or the same set of events through time is known as longitudinal research; an example would be the incidence of AIDS among men and women in India in 1989, 1999 and 2009. These findings point to the tendency. Cross-sectional research is another option. This research examines a variety of occurrences at one certain period among various sections of an entity.

Explanatory study focuses on answers to 'why'

6) Experimental and Evaluative Research

The experiments are, in theory, the most straightforward method of addressing the cause-and-effect relations. Experiment is therefore the most advanced approach to solve the issues of explanation. In this kind of research, the researcher would ideally aim to demonstrate that "X" causes "Y." The researcher must prove that "X" was both a necessary and a sufficient cause of "Y" in order to establish causation. In other words, the researcher must demonstrate that "X" must happen before "Y" may happen, and that "Y" is the outcome of "X," and nothing else.

Role of experiment in the research

Controlled experiments require changing the environment. In order to examine a factor's influence, the researcher must first isolate any important elements and either bring them into the circumstance or eliminate them entirely. The researcher can determine the elements that actually lead to the observed outcome by identifying causative factors and introducing or excluding components from the circumstance. They also include paying particular attention to how what

is observed is measured. Laboratory or outdoor settings may be used for controlled experiment research. Laboratory studies are frequently conducted for a brief period of time with strict variable control in an effort to identify the causes. Such a technique entails a standardized process that enables the researcher to gauge a certain quality. However, the researcher cannot investigate objects in natural situations using laboratory experiments. They may be costly and only be used in certain situations. It might be challenging to determine how much the test results actually represent the respondent's perception of the test circumstances rather than the particular talent or aptitude being examined. The artificial environment created by a lab setting may have an impact on the test findings, and the data produced in that environment may appear manipulated.

Controlled experiment

As the name implies, evaluative research focuses on the evaluation of events like social and organizational programmes or interventions. Such studies often focus on whether the response -such as a new legislative initiative or organizational change - achieved its intended objectives. One group that is exposed to the treatment (i.e., the new initiative) and a control group that is not may make up a common evaluation design. Family welfare initiatives are frequently carried out for years without ever being evaluated. In these situations, evaluative research can be a useful method for analyzing the impact of the programmes in the past or over time. These studies make an effort to determine the impact of a programme and measure the effectiveness of the intervention by evaluating the executed activities and their immediate impacts.

Meaning of empirical research

In 1988, the World Health Assembly adopted a resolution calling for the eradication of polio worldwide. In India, National Immunization Day (NID), also known as the Pulse Polio Immunization Program, was established in 1995 and is held twice in the first few months of each year. Authorities can assess the results of the implementation, including whether it was successful or not, people's attitudes toward inoculation, and whether there are any misconceptions regarding the polio vaccine. Consequently, the researcher can evaluate it in detail.

- Research about individuals' income levels, the problem of poverty, the prevalence of smoking in workplaces, etc., the researcher is unable to control the environment. Therefore, they should be examined in their own natural context for

imposing controls on such investigations is not practical nor ethical. These investigations are also time-consuming and costly.

- Some social scientists have used a quasi-experimental strategy to address the issue. Researchers are searching for naturally occurring experiments in this context, which would allow them to observe and gauge the effects of single variables over the course of events without imposing artificial control.
- A "naturally occurring experiment" may be, for instance, the relocation of people as a result of a hydroelectric project. The involvement of social workers in evaluative research has grown.

In evaluative research three questions are fundamental which sum up the core of the research. They are how efficient is the programme? (Organization, process, or organizational structure) How productive is the plan? This raises the issue of the program's cost-benefit or cost-effectiveness and the program's efficacy and efficiency. Is it appropriate to carry on with the programme or not? Additionally, the researcher should not neglect issues like whether the software is ethically and legally sound. The value issues raised may not be disregarded by an expert evaluator.

fundamental questions of evaluative research

7) Participatory Action Research

Action research has always been concerned with practical issues, the kinds of problems, demands, and concerns that often occur in the actual world. Focus on application remains an essential element in the action research.

The following are identified as the four key elements of action research.

Key elements of action research

a. It is intended to help people deal with challenges and worries in everyday life, most frequently at work and in organizational settings.
b. Change is considered to be a crucial part of research, both as a way to address practical problems and as a way to understand how social phenomena change over time.
c. Research involves a feedback loop in which preliminary conclusions lead to potential directions for change, which are then put into practise and

assessed as a preamble to more research.

d. Participation: Practitioners are the most crucial participants in the research process.

Action research includes two stages. Research is conducted in the first step, and practitioners use the information discovered via research in the second stage. Research and action are two interrelated activities. However, the ability to exert control over the elements relevant to research is constrained by this integration of research and practise.

Since you are already aware of the various research areas, we will now highlight some key words to help you remember some of the most significant components mentioned above. The following points have a direct bearing on the goals of social research.

Goals of action research

- Studies with goal to get more knowledge about a phenomena or to discover fresh insights into it are referred to as exploratory research studies.
- Studies with goal to precisely represent the traits of a certain person, circumstance, or group are referred to as descriptive research studies.
- Studies with goal to ascertain how frequently something occurs or how it is connected to another phenomenon are referred to as diagnostic research studies.
- Studies with goal to test a hypothesis of a causal link between variables are referred to as experimental or hypothesis-testing studies.

4.1.3. Steps in Research Process

There are several scientific activities that a researcher engages in throughout a research endeavor in order to create knowledge. Despite the fact that each research project is distinct in some respects, all projects - regardless of the phenomena being investigated - involve a number of universal, interconnected tasks. Thus, the system of these associated tasks that makes up the research is an ongoing process consisting of a series of steps, beginning with your identifying various concepts related to your research theme. Once begun, it continues through a set of regulated steps to its conclusion. Here, we shall discuss the steps in the research process, the nine broad steps that generally constitute the basic elements of sociological researches. A structure for

Components of research process

the research process is necessary in social science. But that doesn't mean they have to be done that way all the time. In actuality, the many research procedures overlap. Sometimes the character of the last step is determined by the previous one. The steps involved are neither independent nor different from one another.

1. Formulating a research problem.
2. Reviewing the literature
3. Formulating hypothesis
4. Identifying the universe and unit of study
5. Selection of research techniques and methods
6. Standardization of research
7. Pilot study and use of statistical methods
8. Collecting data and analyzing data
9. Interpretation and report writing.

1) Formulating a research problem

Definition of a research problem

The selection and defining of the research problem is the first phase in the research process. You must identify the issue and frame it so that it may be studied through research. In general, a research problem refers to an investigation that a researcher has carried out in the context of a theoretical or real-world scenario or for which they are seeking an explanation. The initial stage in a scientific investigation is the formulation of a broad topic into distinct research. Formulating research problems, also known as identifying them, essentially includes two steps:

1. Having a thorough understanding of the problem at hand
2. Rephrasing it in terms that make sense from an analytical perspective.

Importance of research problem

In order to have access to research materials or sources, you must choose a topic that is both known and manageable. Prior to doing a preliminary review of the current literature, it is preferable to choose research questions. A well-defined research problem is equal to half done research, hence developing or defining problem is a crucial phase in the

research process. The research questions must be stated precisely in the context of the study's subject matter and theoretical underpinnings.

The next step is to clearly state your goals and objectives in accordance with the demands of your research questions. This provides a direction and a clear focus for the study process. The progress of the study will not be smooth and the data will not have the appropriate consistency without a clear understanding of the objectives. Examples of research problems in the sociology of development include the role of women in development, the social status of transgender community, the influence of industrialization and urbanization on development, and the social effects of development on people's families and communities.

Example for research problems

For instance, it is impossible to conduct a study of community interactions in a tribal hamlet. In such a research, you would need to examine how various tribal communities interacted, thus you would pick a location where a variety of religious communities were assembling within the broad region, it is preferable to have two or three sub-areas in mind. For instance, you could occasionally run across some unanticipated and insurmountable issues at the district or village levels, in which case you would need to establish a backup plan. You should first specify the field site(s) of your choice before beginning to gather data on it. This would aid in your understanding of the region's geography, socio, political and cultural environment, which would have an impact on the data collection taking time and resources into account.

The success of your study is partially determined by the topic you choose. The usefulness of a study topic to the challenges in the field, whether in terms of a practical goal or gaining a theoretical knowledge of the epistemological concerns, determines its relevance. While planning your study, you must be completely aware of the limitations of your resources and provide a clear definition of the time period. You must realistically assess the amount of time needed and adjust your strategy. Utilizing your resources wisely and finishing the study on time will be made possible with careful preparation and adherence to a timetable. Additionally, you should be conscious of the resources available with you and organize your strategy in a way that is both practical and economical. The research would suffer greatly if the resources ran out in the middle of the process. Your reputation is on the line if a government organization is supporting the study. Therefore, you must explicitly declare in your research design how much time

Area or Domain of research problem

and money you need for research. You would create ways to mitigate the consequences when you identify them. So, careful understanding of the social problems is inevitable to tackle a research topic. In a nutshell, this means that there are a lot of factors to take into account when choosing a social research challenge, including the interest of the researchers, their degree of competence, the availability of data, their knowledge, and ethical considerations.

A research problem is similar to a building's foundation. The foundation determines the kind and style of the building. If the foundation is solid and well-designed, you may anticipate that the building will be solid and well-designed as well. The research challenge in this instance acts as the basis for the research study. If it is well-written, you can anticipate a good research ahead.

a) Sources of Research Problems

Constituents of research problem

In framing research problems, four Ps are significant; People, Problems, Programmers and Phenomena. A combination of two Ps can be found in most of the research problems. In a research, we might be choosing people (may be a group or a community etc.) to know about their attitudes towards a 'problem' or its existence, to assert the existence of a 'phenomenon' or analyse the impact of a certain 'programs' implemented by the public or private stake holders.

b) Requisites of a Research Problem

Considerations of research problem

For selecting any research problem/topic, following requisites are important. They will help the researcher to carry out the work successfully without lasting the motivation. Firstly, Interest. Only the researcher can work out upon the interested topics otherwise the time and energy will be exhausted without result. Absence of interest will create hurdles the entire research process. Secondly, Magnitude. The researcher should accomplish sufficient knowledge about the interested topic to complete in the proposed framework. Thirdly, Concepts. If the research is consisted of any particular concept or theoretical nuances, the researcher should have clarity in terms of their indicators and measurement. Remaining requisites are relevance or significance of the study, level of expertise, availability of data and ethical issues. It has to be ensured that the study is relevant in terms of adding knowledge to the existing body of resources and bridging gap in the literature.

c) Steps in Formulating a Research Problem

Formulation of a research problem consists of various steps which are considered as the crucial part of the research journey. The quality and relevance of the research depends on how the problem is constituted.

Step 1: Selection of a broad domain or branch of subject which is interested to you

Step 2: Deduct the broad domain into specific areas

Step 3: Rearrange them according your interest

Step 4: Formulate research questions or objectives

Step 5: Assessment and Cross-check

Steps of research problem

The process of formulating research problem begins with selecting broad domain or subject areas which you are interested. Areas such as unemployment, poverty or drug abuse may come into your mind. The next step is reducing or splitting this vast subject into specific areas which make you confident to carry out the research process. For example if you are interested in rural problems, the problems of farmers such as cultivation methods, pesticides, support price etc. are on the roll. In the third stage, known as elimination stage where the researcher is expected to prioritize the interested subareas. While a single area is found as research worthy, the remaining subareas will have to be discarded. Here, your curiosity, passion and resources are significantly adhered to the finalization.

Application of steps into research problem

Once, the specific area is identified and the problem is raised, the main task is framing the research questions. Research questions are the spine of the research problem in which the nature and direction of inquiry is determined. According to Robert K Merton, research questions are of three types: Originating questions, the question of rationale and the specifying questions. Originating questions are of the type in which knowledge is expected to produce. Factual assertion and explanation to empirical extractions are also come part of this. Questions of rationale examines the validity of originating questions and assess the impact of answering process on the remaining parts of the knowledge. The third type of the questions are concerned with the areas which indicate possible answers to the originating questions. Finally, you can assess research questions or study objectives according to the concerns of time, expense, resources and

technological skills. A cross check into all previous steps especially whether or not you are earnestly interested in the study and confident with the adequacy of resources will enhance efficacy of your study.

2) Review of Related Literature.

Reviewing the related literature of your research topic can not only help you develop a strong design but also assess the project's viability. Books, archives, academic journals, conference proceedings, government reports, novels, etc. all need to be consulted.

Using a Library to Find Literature:

To use a catalogue to look up related books, search a variety of sites for the pertinent page. If your research topic is well-defined, it is simple and the search can be rapid. It can be made successful with the aid of the internet or digital platform to identify relevant references in a variety of bibliographic tools.

For a comprehensive literature review, you can examine two different sorts of literature:

a. The literature related to concepts and theories
b. The empirical literature made up of past investigations.

Even such studies may contain both theoretical and substantive elements of your research. You will find out new data and other resources that are currently accessible on the topic of your study as a result of the review process. An introduction or background information part, the review's body, which discusses the sources and a conclusion or recommendations section to wrap up the document, are the minimum requirements for a literature review. Following the literature evaluation, a more complex and precise articulation of the specific research questions is likely to appear. The literature review can be beneficial to your own study in different ways.

Importance of literature review

I. Review of literature will sharpen your research problem's focus;
II. It will enhance your research approach;
III. It will increase your knowledge about the subject matter of your study and contextualization your findings.

3) Hypothesis

After doing a thorough review of the literature, you must clearly describe the working hypothesis or hypotheses. The hypothesis is a speculative claim that is produced to test the implications of its logic or empirical findings. The words "hypothesis" and "hypo" are etymologically related and signify "less than a thesis," respectively. It is the assumed assertion of a claim that the researcher strives to prove through his or her study, based on the available data. A hypothesis may be defined as a claim or a collection of claims made as an explanation for the occurrence of a certain phenomenon. It is a tentative solution generalizing the problem facing the researcher. These claims may be made just as a preliminary conjecture to direct a research. A hypothesis could seem to be incorrect to the given facts. It could turn out to be accurate or inaccurate. It ultimately results in an empirical test. Your theory must be exact, unambiguous, and able to withstand scrutiny. It must be constrained in scope, compatible with existing knowledge, and testable within the allotted time. It should have empirical support and need to explain what it purports to explain. Empirical characteristics that can have two or more values make up the variables. You must distinguish between dependent and independent variables in order to do research. Dependent variables are those ones you employ in explaining the variables. An independent variable is the additional factor that is anticipated to explain the change in the dependent variable. We will discuss variables specifically in the next units.

Meaning of Hypothesis

The hypothesis instructs the researcher on what to do and why during the research. For instance, the researcher is keen to investigate the issue of why transgender people find it difficult to succeed in society. The researcher next turns their attention to determine the reasons for transgender people's under-performance. It is possible to have speculations that the third gender may experience some stigma while dealing with regular people. It is important to note that developing a hypothesis is not a necessary step in the research process. When you are unable to formulate a hypothesis due to a lack of situational knowledge, you may do exploratory research.

Example for a hypothetical research

A good hypothesis will have the following fundamental qualities:

a. It must be testable. It is difficult for a researcher to validate or refute the relationship between the variables or

the inferred implications if a hypothesis cannot be tested. For instance, it is challenging to evaluate the claim that "poverty eradication generates all-around development among tribal people" since it is challenging to operationally isolate the other elements that may contribute to all-around development. A hypothesis must relate factors that can be measured since it predicts how a study will turn out. The variables in the hypothesis are operationally defined, allowing for the testing of the hypothesis that "there is a positive association between the tribal sub plan and economic growth of the tribal people."

fundamental qualities of a hypothesis

b. The relationship between the variables must be stated. The expected relationship between frustration and achievement, which can be quantified, is stated, for instance, by the statement: "there is a considerable influence of dissatisfaction on the academic achievement among the plus two students." The statement "Students who participate in co-curricular activities show a higher degree of moral growth than those who do not" is untrue since moral growth is not a variable that can be measured until it is operationally defined and an instrument is developed to measure it.

c. It must suggest a tentative solution to the problem under study.

For instance, academic success differs depending on intellect level. According to this theory, intelligence affects academic success.

Other qualities of hypothesis

Other crucial qualities of a hypothesis are conceptual clarity, specificity, and simplicity. It need to be able to be verified. It must be relevant to the already existing body of information. A hypothesis has an equal possibility of being accepted or rejected. In a nutshell, a hypothesis is an unreliable answer to the question. It seems sensible to assume that. It is often based on prior research. It is placed through the process of verification or denial. The hypothesis is a series of verifiable assertions that conjectures a relationship between two or more variables.

4) Universe and Unit of Study

You must choose the universe and the unit of study before you begin data collection. The delineation of the physical region and social unit of study is implied by the identification of the universe. The population of the clearly specified area

Meaning of universe and unit

where the investigation will be conducted makes up the universe. However, a group of this size is typically too big and cannot be studied by a single researcher. As a result, a sampling technique may be used to choose a smaller, more manageable population. By conducting a census and selecting the group(s) to focus on, it may be possible to more precisely define the boundaries of the universe and its characteristics. The actual or effective universe is a more detailed characterization of the potential study units inside the larger universe. The unit of study is the group (or groups) chosen as the subject of research.

5) Pilot Study

Rehearsal to research work

The premier investigation in your field of study is the pilot study. Depending on the size of the population and the amount of time, the pilot study directs the researcher to the in-depth examination. In other terms, a pilot study is an investigation conducted before fieldwork really begins. A pilot study will confirm that the questionnaires include the appropriate items to enable successful fieldwork. The pilot research is the most important inquiry in your field of study. The pilot study points the researcher toward the in-depth analysis, depending on the size of the population and the quantity of time. In other words, a pilot study is an inquiry carried out before to the start of actual fieldwork. Simply, the pilot study serves as the final study's "dress rehearsal."

6) Sampling

Procedure of sampling

A sample is a discrete segment of the population that was chosen for the study. It refers to the methods by which we can select a smaller group from a bigger one and then judge the larger group based on the smaller group. A universe is frequently too big for one person to work on. A sample is often referred to as the universe, population, or any group of people that share one or more features that are intriguing to the researcher for a certain research project. A population may consist of all people of a specific type or a smaller subset of that type, such as all university lecturers in Kerala or all distance learners enrolled in Sree Narayana Guru Open University etc. A sample is a more compact version of a bigger whole. For instance, when cooking rice, we test a spoonful to see if the whole grain is cooked. In a similar way, a small group's performance is used to appraise the entire population. Sampling saves time and enables the researcher to work scientifically. The universe, as previously said,

relates to a certain population size. Depending on the requirements, such a universe may be further subdivided. This is referred as a sub population or stature. A stature is a segmental category that may be divided according on the type of issue that interests the individual. Every component of the population from which the sample is taken is included in the sampling frame. Sampling error is the identification of a statistically or qualitatively significant mistake during sampling. The sample must accurately reflect the universe and be of a sufficient size.

7) Data Collection

The data can be collected in a variety of methods. Data are of two types, primary and secondary. Primary data includes data which are collected for the first time and such as reports of governments, international organizations and archival documents. This also known as Direct Data Collection. Secondary data includes resources like books, journals, publications, e-resources, etc. that are used as references. The popular methods for gathering primary data are experimentation and survey.

Primary and Secondary Data

8) Techniques for Gathering Data

In-depth fieldwork methods and survey methods are the two major approaches used to acquire data. Methods used in intensive fieldwork include interviews, case studies, observation, and others. You may employ one or more techniques to gather the data, depending on the nature of the inquiry, the goals and parameters of the inquiry, the available time and financial resources, and the level of precision. It would be necessary for the data to be gathered to be sufficient and reliable.

Field work and survey methods

9) Report Writing and Analysis

Data collection would be followed by their analysis. In order to do analysis, a variety of closely linked tasks are needed, such as creating categories and applying them to raw data through coding and tabulating the results in order to make statistical judgments. You must precisely define the type of analysis you intend to use in the end. The type of analysis you conduct is determined by the nature of the data you gather. Before choosing a certain technique for data collection, you would already have a general notion of the analytical tools you want to use. Intention to utilize certain

Essentials for report writing

computer software would be there in your mind before you embark on data collection. While the nature of the data may influence analysis, you must take care to prevent the opposite scenario from occurring, in which the predetermined mode of analysis simply influences the techniques of data gathering. Your theoretical viewpoint should be reflected in your study design. You cannot interfere with the privacy of those who are more than simply study subjects while attempting to understand social realities. You have a duty to treat the people and the research with respect. A frequent strategy is to present data using pseudonyms and to alter events, names, and locations.

Activity 4.1.2

Action and Introspection: Choose a topic according to your interest and prepare a research procedure for your planned study. All of the aforementioned steps must be incorporated into the study design.

Summarised Overview

A methodical investigation of a topic in order to get original and reliable results is referred as research. According to C.A. Moser, "Social research is a systematic inquiry to learn new information about social phenomena and issues." While fundamental research uncovers laws and principles, applied research identifies how to use these findings to address social issues. The goal of applied research is to identify and address social issues. A social setting, social occurrence, social system, social structure, etc. are all described in descriptive research. In analytical research, the researcher must take already-known facts or information and analyse it in order to provide a critical assessment of the subject matter

Empirical research frequently ignores systems and theory in favour of relying solely on experiences or observations. Exploratory research is often qualitative and is effective for developing and testing ideas and theories. Research that provides an explanation for social phenomena and seeks to create a connection between variables, i.e., how one causes the other or how one variable will result in the occurrence of the other is called explanatory. Studies with goal to get more knowledge about a phenomena or to discover fresh insights into it are referred to as exploratory research studies. Studies with goal to precisely represent the traits of a certain person, circumstance, or group are referred to as descriptive research studies. Studies with goal to ascertain how frequently something occurs or how it is connected to another phenomenon are referred to as diagnostic research studies.

The hypothesis is a speculative claim that is produced to test the implications of its logic or empirical findings. The population of the clearly specified area where the investigation will be conducted makes up the universe. A sample is a discrete segment of the population that was chosen for the study. Primary data includes data which are collected for the first time and such as reports of governments, international organizations and archival documents. This also known as Direct Data Collection. Secondary data includes resources like books, journals, publications, e-resources, etc. that are used as references. The popular methods for gathering primary data are experimentation and survey.

Self Assessment

1. Examine the list of potential research categories. Write down your answers
2. How will participatory action research work? Describe
3. Define social research
4. What is pure or fundamental research?
5. Define exploratory research with an example
6. What are the four key elements of action research?
7. What are the fundamental qualities of a hypothesis?
8. Differentiate between universe and unit of study

Assignments

1. Explain impact of social research in sociology.
2. Explain uses of coding-decoding in social research.
3. What is the use of pilot study in social research?
4. What are the steps in social research?
5. Define hypothesis and list out types of hypothesis.
6. What are the major research categories?

Suggested Readings

1. Baumgartner, A. T., Strong, H. C. & Hensley, D. L. (2002). *Conducting and reading research in health and human performance.* Third edition. San Francisco.
2. McGraw, H. & Bell, J. (1999). *Doing your research project - A guide for first-time researchers in Education and Social Science.* Third edition. New Delhi: Viva Books Private
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Space for Learner Engagement for Objective Questions

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UNIT 2

Review of Related Literature: Sources, Types, Methods and Significance

Learning Outcomes

On completion, the learner will be able to:

- Comprehend the purposes of review of literature
- Explain the sources of review of literature in sociology
- Become familiar with various types of literature, report writing etc.

Background

The term 'review of literature' refers to a collection of works produced by earlier researchers and published as books, articles in journals, monographs, etc. A review of the literature is the first step in every scientific research. In reality, working with the literature is a crucial component of the research process that fosters idea generation, aids in the development of important questions, and is recognized as crucial to the research design process. Review of literature is understood as the comprehensive analysis of the related literature which are available on a topic offline or online. The review will enhance the quality of the research as it will assist to formulate better research questions, to find out research gap and provide sufficient references. This section will cover how to do a literature review, why it is important, how to construct a review, and how to connect the review to the current research report.

Keywords

Variable, Grey literature, Abstract, Index, E-resources.

Discussion

4.2.1. Review of Literature and its Purposes

Definition of review of literature

Review of literature offers a great deal of details on the subject under investigation and the numerous works that have been done in the area over time. The researcher gathers these materials from a variety of sources, including journals, books, records, etc. A review of literature might be a straightforward presentation of the material or it could be a synthesis of a lot of data that is organized thematically for understanding. It might be as straightforward as a summary of the sources, but more often than not, it involves both summary and synthesis. In conclusion, all the data has been compiled and is available in capsule form. It synthesizes and arranges the complete body of knowledge according to how pertinent and relevant it is to the research problem. It might provide a fresh interpretation of dated information or blend fresh and outdated perspectives or it might outline the field's intellectual history, including significant arguments. The literature review may also assess the sources and advise the reader on the most important and essential information, depending on the circumstances.

a) Distinction between an Academic Research Report and a Literature Review

Scope of review of literature

Creating a fresh argument is the primary objective of an academic research article. The literature review will be one of the chapters in a research report. In a research report, the literature is used as a starting point and source of evidence for fresher perspectives on the research problem. A literature review presents arguments in support of or opposition to the specific issue and its conclusions by summarizing and synthesizing the numerous arguments and literature and research findings gleaned from such a review.

How many and how much materials should be included in a literature review? There is no absolute law about this. The elements from influential and ground-breaking works in the field must unquestionably be included by the researcher. The researcher should also incorporate any recently published, preferably within the previous five to fifteen years, relevant research papers. When it comes to the kinds of sources that should be used for a literature review, this includes: Books, journal articles, monographs, documents,

and grey literature, which includes unpublished documents and research papers that have been presented at conferences. Additionally, downloading publications and abstracts for this purpose from the internet is a crucial source. After gathering all the materials from the aforementioned sources, the researcher should arrange them according to the year of publication and the subject matter must be organized to give meaning to the entire body of literature gathered while keeping in mind the current research topic of interest to the researcher. The researcher might assess these resources based on the study approach employed, the conclusions reached, etc. The researcher might also incorporate a brief historical description that is closely related to the study issue in such a review.

Essentials of review of literature

b) Specific Purposes of Review of Literature

Following characters are considered as the specific purposes of review of literature.

1. Determining the Variables.

The researcher can identify crucial and peripheral factors in the subject of his research by carefully reviewing the literature. Variables are anything that can take on different values. A thorough review also aids the researcher in the selection of variables that fall within the purview of his research, in their definition and operationalization, and in the identification of variables that are significant from both a conceptual and practical standpoint. Thus, an overall review of the literature equips the researcher to develop research objectives that choose conceptually and practically significant factors.

Definition of a variable

2. Avoidance of Repetition:

A review of the literature assists the researcher in preventing any repetition of previously completed work. A thorough review will always seek to understand earlier research and explain how it will be helpful for the next investigation. Therefore, the foundation for the current research is provided by earlier investigations. This is particularly relevant when a researcher seeks to examine the reliability of prior findings. Even in this case, a thorough review aids the researcher in becoming familiar with the quantity and kind of studies connected to the current research whose validity is now being evaluated.

Reliability of a research

3. Comparison of Earlier Works:

Research gap and scope a new study

The researcher can gather and synthesize earlier findings that are relevant to the current topic through a review of the literature. The researcher is then able to develop a better perspective for ongoing research as a result. A researcher might find important gaps and overlaps between earlier studies by examining a synthesized compilation of those studies. In your research work you must identify significance and relationships between variables. A thorough review of the literature helps the researcher identify key factors that are pertinent to the topic of the current study. When relevant factors are found, their relationship may be determined. Once this link is determined, it is included into various hypotheses. Therefore, in order to perform a scientific study, it is necessary to analyse the literature in order to explore the link between the various factors and create a solid framework for further research. Along with these particular goals, there are also more.

c) General Purposes of Literature Review

- To provide a case for the significance and relevance of the research problem.
- To set the scene for one's own methodological strategy.
- To build one's reputation as an accomplished and competent researcher.
- To defend the relevance and suitability of one's own strategy.
- To find fresh angles for interpreting earlier work.
- To identify research gaps in the available research.

4.2.2. Sources of Literature Review

The review of literature comes from a variety of sources. The following list includes a few of them. The key sources for the review of literature are various research publications and books pertinent to the areas of interest.

a) Journals

A research journal often publishes reports of original research, including its methodology and findings, in detailed. These publications provide substantial of knowledge in your

Journals are sources of original contents

research area. Publications serve a crucial function and have a number of advantageous, including chronological record, it is possible to obtain comprehensive day-to-day information, narration and reducing the probability of errors. A refereed journal only publishes works that have undergone thorough expert evaluation before being published.

b) Books

Books are primary and authentic sources

Books are one of the review of literature's primary sources. Books are considered primary sources in the social sciences because they concentrate on authentic records from the time of an event or person's life. These sources are also frequently referred to as "firsthand" resources. Journals, yearbooks, handbooks, and encyclopedias frequently publish reviews. Reviewers choose research papers that are interested to them, arrange them according to their substance, critique the results, and then provide their own recommendations and conclusions.

c) Abstracts

NSA is a significant source of abstracts

Abstracts offer a synopsis of research papers from any field of study. How are abstracts helpful in the review of literature? Prerequisites for studies, participant categories, key findings, including the biggest impact sizes and conclusions etc. are included in an abstract. New York: Sociological Abstracts is one of the most significant sociological abstracts. For researchers, these abstracts are helpful sources of the most recent information. In addition to a synopsis, an abstract provides researchers with all the necessary details, including the name of the author, the title of the research report, and journal pagination information. The sole drawback of abstracts is that they don't satisfy academics who want in-depth explanations of the research publications' methodologies and findings.

d) Indexes

Indexing a process of summarizing the data

Without an abstract, indexes simply list the study reports' titles. What does indexing mean in a literature review? Indexing is the process of grouping values in order to discover them more quickly. Indexing is the process of summarizing a data set by characteristics and elements arising out of a particular item data in order to be able to identify it and bring closer to comparable data. To make it simple for the researcher to find any relevant article, the titles are grouped and placed alphabetically within each category.

e) Internet

Websites are dynamic sources of data

The internet is a quick and simple way to find reviews on literature. Websites are a great resource for making it simple to obtain original papers by significant scholars. How is research made simpler by the internet? You can quickly become overwhelmed by the amount of information available on the internet. Consider what you are looking for before you begin your search, and if possible, create some very specific questions to guide and limit your search. Additionally, they offer current knowledge on the subject that is typically unavailable at the library. Websites offer helpful bibliographies pertaining to a certain researcher.

f) Dissertations/Theses

Importance of dissertation in the research

Dissertations have been an excellent source for the review of literature. Dissertations of PhD and MPhil scholars are available in university libraries. The researcher can select the dissertations according to their interest and locate relevant and valuable material in those dissertations. What does dissertation accomplish in terms of review of literature? A dissertation literature review, in summary, offers a critical evaluation of the sources (literature) you have acquired and read on your topic area and then identifies a "gap" in that literature that your study will try to fill. A doctoral thesis does not have any predetermined formats for producing the research report, although the majority of them include chapters like Introduction, Review of the Literature, Purpose of the Study, Method of the Study, Results or Findings, Discussion, Summary, and Conclusion. Some authors choose to include Review of Literature in the Introduction part rather than in a separate chapter.

g) Research Supervisors

Role of supervisors in the research

Research supervisors are well-versed in the literature and able to point researchers in the proper way. They are the acknowledged expert on the subject or research problems. What does a research supervisor do in literature review part? They help the student to choose and organize a pertinent and manageable study topic and suggest its relevant literature. The educator, guide, supporter, counselor, and director positions are the top five managerial positions of a supervisor.

4.2.3. Types of Literature

The researcher must be able to recognize and locate acceptable literature in order to work with it. They have to be familiar with a variety of literary genres in order to do this. Following are some examples of popular literary genres:

Various forms of literature

1. **Books on Specific Subjects:** Textbooks with specialized contents and reference books are included in this category. For example Robert. K. Merton's book Social Theory and Social Structure.
2. **Grey Literature:** Materials that are both published and unpublished but do not have an International Standard Book Number (ISBN) or an International Standard Serial Number are referred to as grey literature (ISSN). Unpublished research newspaper articles, conference papers, pamphlets, and other types of unpublished writings fall under the genre of grey literature.
3. **Official Publications**: Document analysis and secondary data analysis are falling in this category. These works primary for two goals; Firstly, such literature may be a useful source of background and contextual information. Secondly, they can be utilized as a source of secondary data. For example, Census Data.
4. **Writing Aids:** Writing aids are pieces of literature that provide substantial assistance while writing and may be quickly consulted to enhance the work's linguistic style. Dictionaries, bibliographic works, encyclopedias, yearbooks, quotation collections, etc. are examples of this type of literature.
5. **Journal Articles:** Journal articles are quite reputable sources and frequently cater to scholarly audiences. They are known for its specialized contents in the related fields.
6. **E-Sources:** Internet has turned as largest resources of data and related information of any topic. E-books, E-journals, Data bases, Digital libraries and knowledge highways like Shodhganga, Shodhgangotri and ShodhSindhu are important in this line.

Summarised Overview

The term 'review of literature' refers to a collection of works produced by earlier researchers and published as books, articles in journals, monographs, etc. A review of the literature assists the researcher in preventing any repetition of previously completed work. A researcher might find important gaps and overlaps between earlier studies by examining a synthesized compilation of those studies. A research journal often publishes reports of original research, including its methodology and findings, in detailed. Books are considered primary sources in the social sciences because for they concentrate on authentic records from the time of an event or person's life. New York Sociological Abstracts is one of the most significant sociological abstracts. Indexing is the process of grouping values in order to discover them more quickly. E-books, E-journals, Data bases, Digital libraries and knowledge highways like Shodhganga, Shodhgangotri and ShodhSindhu are important in this line.

Self Assessment

1. List out important literature genres you know. Write down your answers.
2. Find out general purposes of literature review and comment on their significance.
3. Define review of literature.
4. What is meant by indexes? Describe its role in review of literature
5. How abstracts can be utilized in reviewing literature?
6. What is grey literature?
7. What is the role of research supervisors in preparing review of literature?

Assignments

1. What are the purposes of the different kinds of literature reviews in sociology?
2. What requirements must a literature review meet? Give instances.
3. List the well known sources for literature reviews
4. What are the different approaches to producing a literature review?
5. What procedures do we use when we examine the review source?
6. Explain specific purposes of review of literature.

Suggested Readings

1. Baumgartner, A. T., Strong, H. C. & Hensley, D. L. (2002). *Conducting and reading research in health and human performance*. Third edition. San Francisco.
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UNIT 3

Research Questions, Research Objectives and Hypothesis: Scope and Significance-Research Designs: Case Study, Experimental, Longitudinal, Cross Sectional and Comparative

Learning Outcomes

On completion, the learner will be able to:

- Conceptualize research questions and objectives.
- Comprehend meaning and types of hypothesis.
- Analyse significance and various forms of theoretical framework and research designs.

Background

In a research process, research questions, hypothesis and research design take significant role and fix the direction of the study. Research questions are formulated after identifying research problem and the gap of the study in the existing review of literature. Research objectives are similar to the questions written in the form of 'to infinitive' while the research questions are written using interrogative terms. A hypothesis is defined as a tentative proposition suggested as a solution to a problem or as an explanation of some phenomenon. It is used to test and find out the relations among the variables in a research problem. Research designs are the blue prints of a study where a researcher depend to know every steps included in the process. Research designs vary according to the nature and aims of the research whereas it differs from comparative to experimental looking at the object of the study and its questions.

Keywords

Research question, Null hypothesis, Cross-sectional, Longitudinal, Case study

4.3.1 Introduction

Qualities of research problem

One of the most challenging jobs for a researcher, especially a novice, is the selection and development of a relevant research problem. There are a variety of places where a researcher might look for a good study problem or get an awareness of problems. An excellent research problem should have the following qualities: importance, originality, and practicality.

Phases of research

In your capacity as a researcher, you should assess a suggested topic in light of your expertise and professional experience, potential challenges with data availability, budgetary and field limits, and time constraints. Careful review of literature will help you reduce a large research challenge to a much focused research problem. Research problem needs to be defined precisely and research questions to be formulated keeping data collection and analysis techniques in the mind. The next and the most crucial phase in the research process comes after choosing and formulating a research problem: formulating a hypothesis or set of hypotheses. For this, they should become familiar with the idea of hypothesis, its various types, the characteristics of a useable hypothesis, and its significance.

4.3.2 Resources for Determining a Research Question

Essentials of research questions

The research questions must be created before any study is conducted. It examines a contemporary area of uncertainty and makes the case for the necessity of concentrated investigation. Therefore, it is crucial to develop a compelling research question. The current study's aim is to describe the methodological steps involved in selecting research subjects. A good study subject should be feasible, innovative, ethical, applicable, manageable and appropriate, have potential value, be publishable, and be systematic. A research question can take on a variety of forms, depending on the problem that needs to be solved. This opens the door to a range of research questions, such as those based on the phenomenon's existence, description, classification, and composition, connection to other phenomena, comparison, and causality. After narrowing the focus and scope of the research problem, the researcher develops and evaluates a research question. The process from conception to the formulation of research

questions must be very systematic and meticulously carried out because research sparked by such questions can have a greater impact on the field of social and health research and result in the formulation of policies for the benefit of a larger population.

The abbreviation FINERMAPS stands for good research where each letter stands for specific characteristics to be involved in the research process.

1. Feasible
2. Interesting
3. Novel
4. Ethical
5. Relevant
6. Manageable
7. Appropriate
8. Potential value
9. Publishability
10. Systematic

Essentials of research process

If the investigator has the means to make the research happen, it is **feasible** and to make it successful it should be backed by a sufficient number of techniques, resources, and time. To proceed with a research work, one has a genuine *interest* in their research problem. Self-motivation will be helpful in investigating, and supporting the academic and intellectual argument. The question must be unambiguous and straight forward i.e. **Novelty**. A question's intricacy can frequently conceal murky ideas and cause a disorganized research process. The research topic should be **ethica**l in that it reduces the possibility that research participants may suffer damage, upholds their right to privacy and confidentiality, and gives them the option to withdraw from the study. It ought to serve as a guidance for staying away from dishonest research methods.

Requirements of research process

The research question should be one that academically and intellectually excites professionals in the field you have chosen to study. The investigation should ideally be based on issues that have been raised in the literature, in practice, or in the current context. It must explicitly define the research's aims in relation to the field of study and make **relevance** to how they relate to those objectives. **Manageable**

has a similar meaning to feasibility but mainly indicates that the researcher can control the next research. The research question should be acceptable and **appropriate** for society and institution in terms of logic and science.

Potential value of research

Potential value and publishable: The research has the potential to have a big social influence on community. Systematic: Research is organized into predetermined phases that must be completed in a predetermined order and in accordance with a clearly defined set of norms, yet it does not preclude the use of original thought.

4.3.3 Research Objectives

Meaning of research objective

Research objectives are the central part of the social science research. Research objectives are goal-oriented statements to expose intention, direction and purpose of the study. They are clearly mentioned in the research problem and help the researcher to execute the research process in a systematic way. A well narrated objectives interconnect with all stages included in the research process such as methodology, data collection tools, data analysis, variables etc.

Essentials in framing research objectives

Research objectives are significant for they help the researcher to focus on the research topic, to find out variables to be measured, to get into the limitations in the research and to keep away from collecting unnecessary data. While formulating research objective, it should be written in the format of action verb, for example, to expose, to examine, to describe, to assess, to analyse etc. ambiguous or non-active verbs should not be used. Objectives can be arranged according to their priority and importance in the research. A carefully and systematically framed research objectives will ease subsequent steps; methodology, data collection and analysis and interpretation.

a) Features of Objectives

Characteristics of objectives

Looking at the nature of objectives, Ranjit Kumar has classified research into four categories; descriptive, correlational, explanatory and exploratory. Explanatory or exploratory research deal with the questions of 'how and why' situations or phenomenon occur in the society and the researcher needs to correlate between the variables in the objectives by conducting tests. In correlational research, the researcher try to assess the relationship between two or more variables. In descriptive research, the researcher systematically analyse and describe the phenomenon or the

social problems. According to Ranjit Kumar, the wording of objectives should be a) clear b) complete c) specific d) highlight the main variables to be correlated e) specify the direction of the relationship.

Objectives in basic and applied researches

Norman Blaikie analyses the essential features of research objectives. He points out that objectives include characteristics of basic research and applied research. Basics research include exploration, description, explanation and understanding. Applied research extends to change, evaluation and impact assessment.

Peculiarities of explorative research

Discussing explorative research (To explore), Anol Bhattacherjee observed that the primary goal is to assess the magnitude and extend of a particular phenomenon or social problem. Secondly, to generate initial ideas about that phenomenon and finally to expose the possibilities of extensive studies regarding the current phenomenon. Explorative researches are concerned with studies or investigations on social phenomenon which never been researched before. Exploratory research also known as formulative research studies. Explorative research helps to reach detailed or accurate understanding of the social problem or will add better insights to the current picture.

Application of descriptive and explanatory research

In descriptive research (To Describe), the researcher attempts to reach a systematic analysis of the social problem or phenomenon. Using scientific observation, the researcher examines the relationship or attributes of selected samples in a particular time and situations and thus the result is produced in the words or numerical terms in the form of research report. In explanatory research (To explain), the researcher try to establish factors or elements which are binding the social phenomenon. Here, as argued by Norman Blaikie, the researcher embarks on detailed analysis of the phenomenon including attitudes, behaviour, social relationships, social process and social structures. There are three explanatory strategies to understand the social phenomenon. Inductive, deductive and reproductive. In reproductive strategy, the researcher looks to explain the cause-effect of a pattern produced in the society.

In 'To understand', the researcher investigate reasons for social problem or phenomenon and in 'To predict' (Prediction), the future conditions or human actions of a social phenomenon are inquired. In 'To change' (change), objective 'change' looks for changes in the existing social

Various type of objectives and usages

system as part of the analysis or outcome of the research. In 'To evaluate' (Evaluation), the impact or consequences of outcome of social programs or governmental policies are examined. In impact assessment (To assess impacts), positive and negative consequences of a present or proposed actions or programs or policies are examined.

b) Formation of Research Objectives

SMART is the popular criteria discovered by Kultar Sing for the formation of research objectives. He points out that the objective should be created on the basis of SMART.

- Specific-Objective should be specific to attain the target of the study
- Measurable- Objective should be measurable
- Attainable- Researcher has to focus on attainable objective
- Realistic- Objective should belong to realistic world preferably related with human eco-system
- Time-bound- Objectives should be attainable in a particular time and situation.

c) Types of Research Objectives

Main and sub-objectives

Research objectives are divided into two types; main objectives and sub-objectives. Main objectives are related with your entire study in a broad manner. It seeks the overall picture or overall view of the study. Expected outcome of your study is known as main objective. The main objective is divided into sub-divisions which are formed as sub-objectives. Various factors/aspects in your research problems are systematically break down into sub-objectives. Looking at the objectives, a reader can understand what type of the research is embarked and what kind of the methodologies are employed.

Example for main and sub-objectives

Research objectives have been divided into primary and secondary objectives by Newell and Burnard. They assert that objectives should be "related to research question, cover all aspects of the problem, specifically ordered in a logical sequences, take into consideration the available resources, including time". Main and sub-objectives can be illustrated as below: To assess the impact of MGNREGA program on the rural life (Main objective). Sub-Objectives can be: a) To examine the employment status of rural people after MGNREGA, b) To identify the relationship between

MGNREGA and life improvement c) To assess the role of MGNREGA in rural education, health sectors.

In formulating research objectives, one should be careful about various errors to be committed during the process. Ambiguous and doubtful wordings and sentences should be avoided. General aim and objectives of the research should not be overlapped. Combining research questions and objectives may produce difficult to the researchers as well as to the readers. Listing them out in separate series will enhance clarity to the research process.

Possible errors in research objectives

4.3.4 Hypothesis

A hypothesis is defined as "a tentative proposition suggested as a solution to a problem or as an explanation of some phenomenon. In other words hypothesis is tentative solution for a generalizing the problem faced by a scientist. Kerlinger defined "a hypothesis is conjectural statement of the relation between two or more variables". Hypothetical assumptions are based on the past experiences or informal observation or information gained from others.

Meaning of hypothesis

Characteristics of a hypothesis include:

- It is an unproven assertion and testable.
- It is unclear whether the hypothesis is true.
- The logical link between two variables is described by a hypothesis.
- Hypothesis must be transferable.
- Hypothesis should be conceptually clear.

The purposes of hypothesis formulation include the creation of the sample design. It helps the investigation to become more objective, precise and enables the development of a theory.

a) Importance of Hypothesis

It is generally acknowledged that research should always start with a hypothesis. In research that aim to identify cause-and-effect correlations, hypotheses are very important. However, in research projects where the goal is to establish the status of a certain historical, social, or educational event, they might not be as crucial. It should be noted that not every research requires hypotheses, especially in the preliminary phases of a problem's investigation.

Hypothesis is a cause-effect correlation

Furthermore, it shouldn't be believed that the inability to formulate a hypothesis indicates a lack of a scientific perspective. However, a hypothesis may also be thought of as an assertion that should be taken into account and compared to the current empirical data. A strong hypothesis possesses a number of fundamental traits. We will examine some of them below.

i. **Giving Direction:** Hypotheses provide correct direction and stop it from reviewing irrelevant material or gathering unnecessary or excessive amounts of data. They provide you the ability to group the material according to its "relevance" and "organization." As a result, hypotheses guarantee the gathering of pertinent information required to respond to queries originating from the problem statement. For instance, the researcher may formulate the following hypothesis in a study on the social rejection of transgender individuals and anxiety among Kerala Society. "There is a substantial association between social rejection and anxiety among transgender people in Kerala."

Guarantees relevant information

ii. **Hypothesis should be testable:** Hypotheses should be expressed in a way that indicates an expected distinction or a predicted connection between the research's various metrics. Any hypothesis that the researcher does not have good reason to believe can be tested or evaluated objectively should not be stated. Propositions concerning the connections between variables are known as hypotheses. These can be empirically tested. These claims may be put to the test using actual evidence

Empirically testable

iii. **The Hypothesis should be brief and clear:** The hypothesis should be short in length and clear. The expectation of the partnership should be clearly stated in the hypothesis. According to Good and Hatt, without hypothesis formulation the research is unfocused, a random empirical wandering. The creation of hypotheses establishes a connection between theory and research that results in the discovery of new information. To assess a hypothesis' value in research, there are a few key factors to be considered. A good hypothesis must be: consistent with known

Hypothesis is based on probability

facts and theories, and might even be expected to predict or anticipate previously unknown data; able to explain the data in simpler terms; stated in a way that it can be tested for its being probably true or probably false.

b) Formulation of Hypothesis

To provide direction for the research process and to explain observable facts, situations, or behaviors, hypothesis are developed. The assertions or speculative generalizations that make up hypotheses are based on a combination of conceptual ideas and factual information. As a result, there are a few prerequisites for the development of a hypothesis. These are:

1. Deducing a hypothesis inductively

After observing behaviour, identifying trends, or speculating on correlations, you can infer a hypothesis. Suppose you are a teacher, you may, for instance, observe how your pupils act in class. Based on your experience in the educational environment, you may attempt to relate your behaviour to that of the learner, to different teaching-learning techniques, to bring about change in the institution itself. Based on these results, you might be able to create a hypothesis that seeks to explain these behavioral connections in a classroom.

Various steps of hypothesis formulation

2. Restricting the issue

Given that the body of information currently existing on the specific subject is too extensive to be absorbed in the process of hypothesis construction, it is important that a basic comprehension of the literature relevant to the problem under inquiry also becomes crucial. In order to formulate the hypothesis while staying within the parameters of the problem, the researcher must be able to interpret the existing data for or against the predicted correlations.

3. Deriving a hypothesis deductively.

Deductive reasoning is used to draw hypotheses from the theory. These kinds of hypothesis, known as "deductive hypotheses," are created by researching a specific theory

in the field of interest and drawing a hypothesis by logical deduction.

4. **Using dialogues and analogies**

Analogies point a researcher in the direction of hints that can help with problem-solving and the creation of hypotheses. For instance, in terms of a certain set of elements, a new social situation is similar to an old one. The researcher may make predictions about trends in the connection that may be anticipated in the new social environment if they are aware of how the components correlate in the previous scenario. Sometimes it is discovered that the development of hypotheses can benefit from expert consultations and talks. For example, while developing hypotheses for the study of the relationship between declining traffic problems in the metropolitan area and the changing pattern of urban growth, it is required to consult with experts in engineering, education, town planners, etc.

Usage of analogies in the hypothesis

c) Types of Hypotheses

A hypothesis is often expressed in testable form for its appropriate testing in order to get certain findings on a specific research topic. It can be expressed in the question form, the null form, or the declarative form. Let's discuss in detail.

1. **Declarative Hypothesis:** A declarative hypothesis arises when a researcher states that the results of the investigation were favourable. The statement "the performance of the creatives on problem solving tasks is significantly greater than the non-creatives" is an example of a declarative hypothesis. Here, the researcher tries to forecast what will happen in the future. This prediction is grounded in the theoretical formulation of what ought to occur in a certain circumstance if the behavioral explanations provided by the researcher in their theory are accurate.
2. **Null Hypothesis:** A non-directional hypothesis called a null hypothesis states that there is no difference or connection. Such an assertion typically takes the following form: "There is no discernible difference in the academic achievement of two

Example for a declarative hypothesis

groups of students, one following the conventional system of education and the other following a distance-learning programme. A null hypothesis is frequently referred to as a "statistical hypothesis" or a "testing hypothesis" since it may be statistically examined. The researcher must maintain objectivity during the course of the inquiry, according to the advocates of the null hypothesis. A declarative hypothesis is both refuted and its statement is called a null hypothesis. It is the responsibility of the researcher to disprove the null hypothesis by demonstrating that the outcome indicated in the declarative hypothesis occurs and that its quantum is so important that it is difficult to attribute to chance. Different factors might be used to reject the null hypothesis.

Null hypothesis is known as statistical hypothesis

3. **Hypothesis in Question Form:** The question-form hypothesis asks what the result will be rather than expressing what is anticipated to happen. For instance, if you're curious about whether Master of Arts students who participate in online courses receive education that is beneficial to their learning (Sociology). The question will be posed in the declarative form: "Will teaching delivered through online programmes have an influence on the learning of distant education students?" This claim demonstrates how education provided through online programmes has little bearing on learning. It is simpler to present a hypothesis in the form of a question for it is beneficial to write down all the questions that one wants to answer in a certain research study. On the other hand, a researcher finds it challenging to foresee the study's results and formulate the hypothesis in declarative form.

Example for question form hypothesis

Let's evaluate and contrast the three hypotheses on the "effect of online programmes on students' learning in distance education."

Declarative Hypothesis: Instruction through online programmes will increase the learning of the students

enrolled in Masters in distance education scheme in comparison with those who do not have such provision.

Null Hypothesis: There will be no difference in learning outcomes of the two groups of students, one following instructions through online programmes and the other having no such facility.

Hypothesis in Question Form: Will instructions through online programmes affect the learning of student of Distance Education?

d) Hypothesis in Different Kinds of Research

Hypothesis and various research

The selection of the form of the hypothesis is not subject to any strict rules. You can select any format that your research problems require. There are, however, a number of rules that must be observed when choosing the kind of hypothesis for various forms of research, including historical, experimental, and descriptive research. This section will cover the typical formulation of hypotheses in historical, experimental, and descriptive research.

Usage of hypothesis in historical studies

I. **Hypothesis in Historical Research:** In historical study, hypotheses are helpful in interpreting historical occurrences, situations, and events. For example, Aristotle (384 BC – 322 BC) allegedly stated that an object's velocity was directly proportional to its weight when falling. Galileo (1564–1642) allegedly set out to disprove Aristotle's theory by assuming that things of varying masses would fall at the same pace. They are expressed as "explicit" assertions that just offer a speculative justification for the occurrence of events and situations, not as formal hypotheses to be tested. The link between the investigator's theories and the facts is clarified by the hypothesis utilized to determine which facts were noteworthy. Why does historical research exist in the first place? The goal of historical study is to get a thorough understanding of how the past has affected current events and events in the future that are related to the course of life. It entails a thorough examination of what has been said or done in order to characterize, justify, or interpret these occurrences.

II. **Hypothesis in Experimental Research:** A hypothesis in experimental research says that the occurrence of another condition, phenomena, event, or consequence (dependent variable) in a certain environment is causally connected to the antecedent condition or phenomenon (independent variable). The researcher tries to control all the variables, with the exception of the independent variable, which the researcher modifies, in order to test a hypothesis. For instance, a researcher interested to investigate the impact of supplemental materials utilized in a certain class that uses closed-circuit television. The purpose of the experiment is to contrast using additional learning resources with a few different approaches. As a result, the following statements can be made about the effectiveness of programmed supplementary materials: "The achievement of learners who use programmed supplementary materials will be superior to the achievement of learners who follow non-programmed supplementary materials" or in null form-"The achievement of learners who use programmed supplementary materials will not differ from the achievement of learners who use non-programmed supplementary materials. Take another example, Students who eat breakfast will perform better on an entrance exam than students who do not eat breakfast, it should be noted that only through the process of experimentation do the hypotheses or evolved from existing theories contribute to the formation of new theories and knowledge.

Example for hypothesis in experimental research

III. **Hypothesis in Descriptive Research:** Descriptive research in education and distant learning has used a variety of assumptions. For example, it may be assumed that "The educational television programmes are favoured more by the urban pupils than the rural learners" in order to analyse the popularity of educational television in the nation. To gain a deeper understanding of the phenomena, several educational research call for not just assessment but also the tracing of relationships between important information. For instance, a researcher might want to look at how

Example for descriptive hypothesis

rural students' enrolment in correspondence higher education is influenced by their financial condition and sense of ambition. This calls for the claim that there is a significant difference in socio-economic status between rural students enrolled in higher education via correspondence and their urban counterparts. In brief, you might argue that a hypothesis is a preliminary answer that generalizes the problem which the researcher is confronting.

4.3.5. Conceptual and Theoretical Framework

Both 'conceptual' and 'theoretical' frameworks are part of epistemological paradigm a researcher integrates in investigating a given social phenomenon. According to Liehr and Smith, each of these terms refers to a structure which guides the researcher. Similarly, Evans, opines that both theoretical and conceptual frames help the reader understand the reasons why a given researcher decides to study a particular topic, the assumptions s/he makes, how s/he conceptually grounds his/her approach, who s/he agrees and disagrees with. Hence, Evans observes that these two constructs employ the same purpose, indicating that it is very important for every researcher to identify or develop and explain a suitable conceptual or theoretical framework. In the absence of conceptual and theoretical frames, a study lacks proper direction, as well as interpreting and explaining the findings accruing from the investigation.

Significance of conceptual framework

a) Theoretical Framework

A theory that a researcher selects to guide him/her in his/her research is referred as theoretical framework. Hence, a theoretical framework is the application of a theory, or a set of concepts drawn from one and the same theory, to offer an explanation of an event, or enlighten on a particular phenomenon or research problem. For instance, the conflict theory, evolution, or similar pre-existing generalisation – such as Newton's laws of motion, evolution laws, that could be applied to a given research problem, deductively.

Constituents of theoretical frame

b) Conceptual Framework

Sometimes, a researcher may realize that his/her research problem cannot earnestly be investigated in reference to only

Scope of conceptual framework

one theory, or concepts envisaged within one theory. In such cases, looking at the given situation, the researcher may have to synthesize the existing views in the literature both theoretical and from empirical results. The synthesis may be called a model or conceptual framework, which essentially represents an integrated way of looking at the problem. Such a model could then be used in place of a theoretical framework. Thus, the attempt to reach to an end result through bringing together a number of related concept to explain or predict a given phenomenon, or give a broader understanding of the event or of a research problem. The procedure of arriving at a conceptual framework is related to an inductive process whereby small parts/abstracts are joined together to tell a larger map of possible relationships.

4.3.6 Research Design

Meaning of Research Design

Research design is crucial for any scientific social study. It is the plan structure and strategy of a research work. The activities or actions required to conduct research successfully and the preferred order of these steps make up the research design. The initial stage in each scientific investigation is to define the specific research problem. The difficult effort of moving on with the research activity, also known as "Research Design," comes after the task of identifying the research topic. Any study is legitimate if its findings can be independently verified as accurate. When the results can be verified again, it is trustworthy. The preparation of the inquiry, or the precise blueprint of how the research will be carried out, is necessary for the reliability and validity of the study. A research design consists of decisions made on the what, where, when, how much, and by what means of an inquiry or research project.

Classic research design

A classic research design, according to Thyer (1993), is a road map or thorough plan for how to undertake and conclude a research investigation. Such research design planning entails operationalizing variables, choosing a study sample, gathering data to serve as a foundation for hypothesis testing, and assessing the findings.

a) Characteristics of Research Design

- A research design is an arrangement of parameters for collecting and analysing data that seeks to balance procedural economy with relevance to the study goal.

- A research design is an organized, logical blueprint created to guide a research investigation.
- It outlines the goals of the research as well as the strategies and methodology that will be used to accomplish those goals.
- It serves as the guide for gathering, measuring, and analysing data and gives the researcher a methodical plan of action to adhere to.
- It is an outline that identifies the sources and categories of information pertinent to the research questions, as well as a plan that outlines the goals of the study and the hypotheses to be tested.
- Research design helps the various research operations run smoothly, yielding the most information with the least amount of effort, time, and money spent.
- Research design has a significant impact on the validity of the conclusions reached, and as such, forms the solid framework of the entire research work.

b) Advantages of Research Design

The creation of a research strategy for a study assists in giving it direction and in understanding precisely what has to be done, how, and when, at each step. Let's examine a few additional benefits of study design.

a. Using a study plan eliminates a blind search and the careless collection of data and directs the researcher to go in the intended path.

b. A research plan outlines the parameters of the study activities and helps the researcher to focus their efforts on the appropriate tasks. With specific study goals in mind, the researcher may move methodically towards achieving them.

c. A design also enables the researcher to anticipate potential problems of, operationalization of concepts, data collection measurement etc.

d. Research can be conducted in a scientific way as precise guidelines are provided that reduces inaccuracies.

e. Wastage of time and money is minimized

f. Optimum reliability is achieved.

g. Designing helps in giving useful conclusions and theories.

c) Types of Research Design

Karl Manheim has pointed out differences in designing three types of research, viz, descriptive, explanatory and exploratory.

I. Design for Descriptive Research:

A descriptive study's primary objective is to characterize phenomena, settings, and happenings. The description is anticipated to be more accurate and commendable than causal since it is based on scientific observation. Generally in a descriptive research, the data are collected in a single situation (S) pertaining to single period (t). This is called 'One-Cell Design, which can be symbolically shown as below:

Example for descriptive research

T1	S1

E.g. studying drug abuse among truck drivers in Cochin. Here the information is sought to determine the degree to which certain conditions can be found among these subjects. Again look at another example, a researcher would seek to know the credentials of professionals who are employed in Techno Park, Trivandrum. Sometimes, a research on a single circumstance or problem can likewise be conducted over two time periods as shown below:

T1	S1	T2	S2

For instance, research on drug use among truck drivers in 2018 and 2020. This method is called "ex-post facto design."

II. Design for Explanatory Research:

Example for explanatory design

Explanatory or causal research is primarily concerned with the causes of a phenomenon or the "why" component. Comparison and change-related aspects are not included. The goal of an explanatory study's research design is to determine the "why" behind the co-relationship. For instance, studies of voting patterns in the legislative elections of 2014 and 2019 were explanatory studies that demonstrated how

caste, language, political ideology, candidate image, and other factors influenced people's voting decisions.

III. Design for Exploratory Research:

Exploratory research is carried out to formulate a problem for a more focused examination or to create hypotheses. However, an exploratory research may also serve another purpose, such as enhancing the investigator's acquaintance with the phenomena they aim to investigate in a later period, more organized inquiry or with the environment in which they intend to conduct it. To gain knowledge that will be useful in developing pertinent hypothesis thorough inquiry, exploratory research is required. An exploratory investigation is better suitable for a general area of problems about which little information is currently accessible. Therefore, exploratory research is typically conducted when enough information is not accessible regarding the topic of study or when the researcher either has no knowledge or just has a limited amount of knowledge. For instance, a research on how TV shows affect young people.

Purpose of exploratory research

According to Babbie, exploratory investigations are carried out for the following reasons:

- To satisfy the researchers' curiosity and quest for deeper knowledge.
- To determine whether a larger research might be conducted.
- To create the techniques that will be used in any upcoming research.

d) Classification of Bryman

Bryman has classified research designs into five different categories including experimental, cross-sectional, case study, longitudinal, and comparative research designs. We will explore each of them in detail.

1. Experimental Research Design

Experiment research is uncommon in the social sciences, but it is done in specialized domains like social psychology or in the context of social policy when it is necessary to evaluate the effects of new reforms or regulations. It's crucial to distinguish between a laboratory experiment and a field experiment in this situation. Both a laboratory and a fabricated environment are used for laboratory experiments.

Meaning of experimental research design

Field studies, on the other hand, take place in actual environments. For instance, consider evaluating the effects of a reform or new policy intervention in a community or school. Field studies are more often than laboratory studies in gender studies research. Three characteristics of experimental design are manipulation, control and random assignment.

- **Manipulation** of an independent variable must involve the active intervention of the researcher.
- **Control of Variables**. Variables other than independent and dependent variables are extraneous to the study. They should be randomized across the participants so that groups are equal. This effort helps in preventing outside factors to impact the outcome.
- **Random Assignment** ensures group similarity. It means each participant has an equal chance of being selected in a group.

Types of experimental designs and their purposes

Various types of experimental designs include randomized experiments. Classified experimental designs are also known as randomized controlled trials. Two groups are created in this sort of study design: an experimental or treatment group and a control group. While the controlled group is kept out of the therapy, this group is given the type of care that needs to be examined. The purpose of the controlled group is to eliminate any arbitrary treatment group findings. This form of study design has become more important in health-related field experiments because it makes it easier to compare the effects of different types of interventions.

Example for experimental research

Laboratory Experiments: In these, the researcher has more control over the set-up of the experiment. In a lab setting as opposed to in actual life scenarios, it is simpler to submit the controlled group to various experimental conditions. As a result, laboratory tests have a higher chance of being repeated than field one. We shall take one example of experimental research design. Two student groups can be given each teacher to compare their teaching styles. A post-test can be used to identify which group performed better and which teacher is more effective after each group has received instruction on the same topic. This approach may have limitations because some human factors, such student attitudes and how well they understand a subject, may have a detrimental impact on the outcomes. Studies that contain some aspects of experimental designs but fall

short of meeting all the criteria for validity are referred to as **quasi-experiments.** The word "quasi," means "similar to."

2. Cross-Sectional Research Design

In order to gather a body of quantitative data related to two or more variables, a cross-sectional design is required for gathering of data about 'more than one case' at 'a single moment of time'. These data are then evaluated to look for 'patterns of association'. Let's dig deeper into this term by talking about numerous cross-sectional design-related topics. The initial emphasis, **"more than one case,"** indicates the necessity of more than one case because variance is significant. The difference may be due to factors like family structure, caste, religion, money, rural versus urban setting, etc. The researcher will be able to distinguish between situations more precisely. The phrase "**a single moment of time"** indicates to the data gathering for various relevant variables is essentially done at a single point in time. In other words, data collection is finished at once in a time, rather than in phases over a period of time.

Scope and purpose of cross-sectional design

Quantifiable data, which is required to have a logical and consistent technique for assessing variances leading to a valid point of reference. Finally, the term **"pattern of association"** is stressed. Any two examined variables can be connected to one another in order to establish patterns of relationship using a cross sectional design. In the subsequent modules, we will discuss in detail "survey research," which is another name for cross-sectional design.

3. Longitudinal Research Design

In a longitudinal research design, a study is conducted at one point in a time and is then repeated at least once more in a later period. Sociology, social policy, and human geography are a few of the social sciences disciplines and fields where it is frequently practiced. A longitudinal design enables insight into the temporal ordering of variables and hence permits arbitrary inferences. For example, a study analyses the memory test results of the same group of individuals through time and at various ages.

Meaning of longitudinal design

Two types of longitudinal studies are available:1**) Panel study** : when a sample is chosen at random at least twice from various situations inside the panel framework, such as individuals, families, groups, organizations, schools, etc. **2) Cohort study** in which the subject of data collection is either

Types of longitudinal studies

the complete cohort or a randomly chosen subset of them. A cohort is made up of respondents who share traits, such as being female, a single parent, or the head of the home. Both panel and cohort studies have several features in common, such as the collection of data on the same variables from the same respondents at least twice. Both give light on social change and unintentional effect over time, which is another similarity. Similar issues, such as sample attrition due to death, relocation, or address changes, affect both panel and cohort research.

4. Case Study Design

Purpose of case study design

This style of research design necessitates a thorough and in-depth examination of one particular case. "Case study deepens vision and gives a clear insight into life," claims C.H. Cooley. Case studies and qualitative research are commonly connected. The research design, case study includes a research question that addresses, who, what, where, how, and why of the particular situation. Steps involved in the case study are: determining the present status, collecting background information, testing suggested hypothesis and instituting remedial action. For proper understanding you can read an example of case study; How can educators use active learning techniques in classes with different grade levels? A local school's example of how it encourages active learning.

The major characteristics of the case study are:

a. Case studies, however, can be connected to both quantitative and qualitative research.
b. It is a comprehensive, in-depth examination of a social group.
c. All factors and characteristics are connected in this design.
d. Case studies are useful in developing a theory.
e. It aids in the discovery of intensive and aberrant units.
f. It is used as an analytical tool in identifying a wide range of characteristics, traits, and behaviours unique to a certain situation.

5. Comparative Research Design

Usage of comparative design

In comparative design, two or more contrasting or diverse cases are examined using largely the same methodologies. It is known that social phenomena can be observed and compared in connection to two or more significantly different cases or circumstances in order to be studied more effectively. This method is frequently used while researching cross-national or cross-cultural research. In a comparative research design, study subjects from two or more samples are contrasted and compared across one or more variables. For instance, a comparison of health issues among men and women in Kerala.

Summarised Overview

The abbreviation FINERMAPS stands for good research where each letter stands for specific characteristics to be involved in the research process. A hypothesis is defined as "a tentative proposition suggested as a solution to a problem or as an explanation of some phenomenon. The assertions or speculative generalizations that make up hypotheses are based on a combination of conceptual ideas and factual information. Analogies point a researcher in the direction of hints that can help with problem-solving and the creation of hypotheses. A declarative hypothesis arises when a researcher states that the results of the investigation were favourable.

A non-directional hypothesis called a null hypothesis states that there is no difference or connection. A research design consists of decisions made on the what, where, when, how much, and by what means of an inquiry or research project. A classic research design, according to Thyer (1993), is a road map or thorough plan for how to undertake and conclude a research investigation. Karl Manheim has pointed out differences in designing three types of research, viz, descriptive, explanatory and exploratory. Explanatory or causal research is primarily concerned with the causes of a phenomenon or the "why" component. Exploratory research is carried out to formulate a problem for a more focused examination or to create hypotheses. Three characteristics of experimental design are manipulation, control and random assignment. In a longitudinal research design, a study is conducted at one point in a time and is then repeated at least once more in a later period.

Self Assessment

1. What is explanatory research? Describe your answer with example.
2. Null-hypothesis. Illustrate with an example.
3. What are the two types of longitudinal studies?
4. What are the three characteristics of experimental research design?
5. What are the deductive hypotheses?
6. What is meant by FINERMAPS?
7. What do you mean by 'novelty' in research?
8. List out the characteristics of a hypothesis
9. What are the fundamental traits of a hypothesis?

Assignments

1. Examine the characteristics of a research design.
2. Discuss advantages of research design.
3. What you mean by research design and explain its various types?
4. Write an essay on hypothesis and its importance in social Research.
5. Explain research question and its significance.
6. Differentiate between declarative and null hypothesis.
7. Discuss case study research design and examine its major characteristics.

Suggested Readings

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5. Epstein, I & Tripodi, T. (1973). *Research Techniques for Program Planning, Monitoring and Evaluation,* New York: Columbia University Program.
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7. Monette, D. R. et. al. (1986). A*pplied Social Research: Tool For the Human Services,* Chicago: Holt.
8. Rubin, A. & Babbie E. (1989), *Research Methodology for Social Work*, Belmont, Wadsworth, California
9. Thomas, P.T. (1968). "Social Research " in M.S. Gore (ed.) *Encyclopedia of Social Work in India,* New Delhi : Government of India.
10. Young, P. V. (1992). *Scientific Social Survey and Research,* New Delhi: Prentice hall of India.
11. American Psychological Association (2001). *Publication Manual of the American Psychological Association.* (5th ed.). Washington, DC: American Psychological Association (REF BF 76.7.083.2001).

Space for Learner Engagement for Objective Questions

Learners are encouraged to develop objective questions based on the content in the paragraph as a sign of their comprehension of the content. The Learners may reflect on the recap bullets and relate their understanding with the narrative in order to frame objective questions from the given text. The University expects that 1 - 2 questions are developed for each paragraph. The space given below can be used for listing the questions.

UNIT 4

Research Report and Importance of Bibliography

Learning Outcomes

On completion, the learner will be able to:

- Understand research report writing procedure and its steps
- Comprehend the usage of bibliography, index, footnotes and citations
- Assess the importance of bibliography and references in the research process.
- Describe the structure, style, and information needed for each section of a research report. and writing the final report of any research study you have conducted.

Background

The result of the research process is a research report. It is a thorough description of a researcher's work as well as the investigation's findings. A research report could be a report on a single project, such as a master's dissertation or a doctoral thesis. How do you write a report on research? The ability to write an effective report would be advantageous for you as a researcher at the Master's degree level and above. For example, a study on the "Effect of family size on the mental health and well-being of children," A report may be the outcome of group or collaborative study activity. For instance, consider the "Nutrition and Health Status of Women and Children in Family: An Impact Study" report from WHO-supported study. In this unit, we will discuss the essentials of a report writing including indexing, citation and reference styles. Basic components of a research report such as chapters, introductory part and conclusion or major findings are also illustrated.

Keywords

Cover page, Glossary, Main body, Footnotes, References

Discussion

4.4.1 Introduction

Scope of research report

The findings of a research in a written format is a research report. Research report will tell you the structure research process. Introduction, research methodology, background chapters or data, discussion and conclusion will be listed. Researchers use these reports as a means of disseminating the findings of their work across time and geography. The goal of all academic writing, including research journal articles, master's dissertations, doctoral theses, and project reports, is to spread knowledge about research findings, ideas, and information. In other words, a research report is the result of a project's effort. It includes a narrative of the events, relevant information gleaned from the inquiry, conclusions, and suggestions.

Of course, there are alternative methods of sharing research findings, such as oral presentations at seminars or conferences or online publications on websites. In all fields of study, reporting research findings and conclusions is crucial. Writing a research report is done in order to share facts and thoughts with others.

a) Important Aspects of a Research Report

- People get new knowledge about the field of research
- New discoveries enrich the field of study.
- Additional research can be done using the findings, which can be used as references by other researchers.
- It advances the body of knowledge in the field.
- Findings can be used and put into practice by decision-makers or those who supported the research.

4.4.2. The Beginning

A report's opening is extremely important to the entire document. The following items are found in the opening or preliminary section of the research report, roughly in the sequence listed below:

Structure of a research report

Title Page or Cover Page, Preface with Acknowledgements, Table of Contents, Table of Figures and Illustrations, List of Tables, and Glossary. Let's quickly go over each of the aforementioned six topics from the report's preliminary portion.

a) Cover Page or Title Page

The report's opening pages are the cover page and the second cover page, also known as the title page. Although various colleges, universities, and organizations that serve as sponsors have their own formats for project reports and thesis. The title page includes the following information in the following downward vertical order:

Ingredients of cover page

- The topic's title; the report's relevance to a programme, course, or organizational requirement;

Names of the author, supervisor, and guides are included as per requirement.

- The date of submission;
- The name of the institution to whom the report is to be submitted.

Examples for research titles

A clear and properly descriptive title for the research project should be on the title page. It should ideally have no more than 20–25 words. The study's topic should be briefly covered in the title. When providing the title, researchers frequently make mistakes by including too many unnecessary and redundant words. Here is a list of a few research reports and doctoral thesis titles: a) Influence of stress level and anxiety among Doctors during Covid-19 pandemic situation in relation to their mental health. b) The effects of social welfare programmes on the society's most vulnerable groups. c) A case study of Kerala's transgender population in relation to policies and programmes.

b) Preface with Acknowledgement

Importance of acknowledgement

The terms acknowledgement and foreword are not synonymous with preface. The rationale behind the researcher's choice of subject should be stated in the introduction. Your chance to convey to the reader that why you are interested in the particular subject is stated in the preface. It is customary to include an acknowledgement on a separate page to sincerely acknowledge the assistance and support that was provided throughout the research study. The acknowledgments and preamble may also follow. The

title page is followed by this page. The acknowledgement ought to be straightforward and unemotional.

c) Table of Contents

The report's logical arrangement into sections and subsections is shown in the table of contents. In other words, the table of contents lists the introduction, the body of the report, and the conclusion. The right side of the table should also include page references for each chapter, section, and subsection.

A Sample for tables of contents

Chapter 1 Introduction
Chapter 2 Review of Related Literature
Chapter 3 Design and Methodology of the Study
Chapter 4 Results
Chapter 5 Interpretation of Results
Chapter 6 Summary & Conclusion.

d) List of Tables

Scope of tables in the research report

After the table of contents, there is a page with a list of tables. Each table's exact title, table number, and the page on which it first appeared are listed in the list. It is applicable to the researches where the tables are used for description.

e) List of Illustrations and Abstracts

A list of illustrations are included in the next page. Here, pictures, maps and other illustrations given with their title, picture number and the page on which they are appearing.

f) Glossary

Glossary is a dictionary of technical terms

A glossary is a condensed dictionary that defines technical terms and expressions that the author uses to convey a particular meaning. Technical term entries are done in alphabetical order. Although it normally follows the bibliography, a glossary may be included in the introduction pages. A sample glossary is -Empirical: Relating to visible and observable occurrences. Family life cycle: Must be able to comprehend the many stages of family life cycles.

4.4.3 Main Body and Its Sections

There are six sections/chapters in the report's main body, as indicated by the table of contents. The following are

listed in alphabetical order: Introduction; Review of Related Literature; Study Design; Analysis and Interpretation of Data; Main Findings and Recommendations; Summary.

a) Introduction

A thesis or research report will often start with 'introduction' chapter. It presents the subject or problem under inquiry and emphasizes its significance. The introductory chapter: (i) provides theoretical background for the area of investigation; (ii) states the problem under investigation with specific reference to its placement in the larger area under study; (iii) describes the significance of the current problem; (iv) defines key terms used in the investigation and its reporting; (v) precisely states the objectives of the study; and (vi) specifies the hypothesis or hypotheses of the study that would be tested through the study.

Requisites of introduction

b) Review of Literature

Despite the fact that these sub-sections are typical, it is not required to adhere to the order exactly; there may be variations. Review is a common tool used by researchers to support their own study. The study's justification should be laid out in the introduction chapter, along with its significance and potentials for expanding our knowledge and comprehension of the topic. In most cases, a research report's second chapter is a review of the literature on the subject being investigated. Additionally, it aids in developing the whole study's theoretical framework. A strong literature review achieves a number of crucial goals. There are various categories that literature reviews might fall under. They can be divided into six categories, according to Cooper: f**ocus, goal, perspective, coverage, organisation, and audience.** While the literature review may concentrate on the research findings, research methods, theories, and application aspects of the study, generally speaking, the best research reviews tend to contain multiple points of emphasis.

Various categories of review of literature and their purposes

Another crucial question that new researchers frequently have is whether to write their reviews in the present tense or the past tense. Although both tenses can be used to communicate clearly, Webster and Watson advise using the present tense. The reader gets a stronger sense of immediacy when reviews are written in the present tense. They also advise using the past tense when attributing a speech or idea to a specific person.

Method of review of literature

To enhance the quality of your writing while writing a literature review, you might take the following into account:

- Identify what has been done in the field and what needs to be done.
- Place the topic in the context of the larger scholarly debate in the domain.
- Review the historical contexts of the field by going to the earliest work.
- Articulate important variables and phenomena.
- Use the subject vocabulary correctly and contextually.
- Demonstrate the emergence of a new perspective through a syllable.
- Use categories and a mind map to present your thoughts in your writing.
- Write in a clear, orderly, and coherent manner.

c) Research Design of the Study

The third chapter of a report often contains a description of the study's design. In general, this chapter gives a thorough explanation of "how" the study was carried out. There are several subsections, including: 1) Descriptive, experimental, etc. 2) Variables: dependent, independent, and intervening variables with their operational definitions; 3) Objectives of the study. 4) Sample procedure, such as whether it is simple random sample or purposive sample or cluster sampling etc. 5) Listing and describing different tools and techniques used in the study, such as questionnaires, attitude scales, etc., whether these have been adopted or developed by the investigator, their reliability, validity, item description, administration and scoring, etc. 6) Outlining statistical findings. It is important to properly explain the tool creation process. 7) Describe the statistical technique utilized in data analysis, including its purpose and procedure.

Research design is the blue print of the research

d) Data Analysis and Interpretation

Fourth chapter of the research report deals with data analysis and interpretation. Since it contains the research's findings, it serves as the report's central argument. The gathered data are tabulated and analyzed using both parametric and non-parametric statistical approaches. The results are explained using the tables, and if necessary, they are also shown graphically. The figures provide facts visually for simple comprehension and comparison, rather than necessarily

Analysis part is the central argument of a research

repeating the tables. Under the appropriate sections, data may be presented in segments. The actual computations and the outcomes of those calculations are included in the analysis the study's objective(s) and its coverage must be taken care of at every level of analysis. This chapter also includes information on how each hypothesis was tested and how the results were determined. This gives the reader a clear notion of how the analysis is progressing and how the objectives are being covered from point to points of the data. It is crucial that the study's objectives and its coverage are taken into consideration at each level of analysis.

4.4.4 Main Findings and Conclusion

Contents of key findings

The fifth chapter presents the major findings in a non-technical language so that even a non-specialist such as a planner or an administrator in the field can make sense of them. The fourth chapter contains presentations that, due to the complexity involved, only a specialist or trained researcher can understand. A discussion of the results/ findings is presented after the key findings. The key findings are compared to those of other similar research studies that have already been discussed in the report's second chapter.

Conclusion is generalization of the findings

As a result, the first chapter's hypotheses are either proven true or shown false. Alternative hypotheses are accepted if the null-hypotheses are rejected. It is necessary to provide explanations with the appropriate reason and justification if the findings differ in any way from those of other researchers, if they do not adequately explain the situation or problem under study, or if they are insufficient for generalization. The next goal in this chapter is to present the conclusions' generalizations and implications. The implications should suggest actions and give the field's practitioners some guidance. It becomes impossible for the researchers to implement them on the one hand unless these implications are expressed categorically and explicitly, and on the other.

Suggestions are part of the conclusion

Presentation or description of the study's limitations, recommendations are given to do additional research or to extend the study beyond its current scope in the last chapter. This chapter is typically divided into three sections: conclusions, suggestions, and areas that require more study. Summary some researchers include a summary to their research report as the final chapter or as a separate document. It accurately summarizes the entire research paper, including

the theoretical context and recommendations for additional research.

a) Writing Format

Prerequisites of a research report writing

A research report is written in a different manner from other types of writing. The report's presentation should be original, clear, and brief. Simple, direct, and concise language should be used in the presentation. It should be carefully crafted to avoid being uninteresting and demotivating. The statements presented should be as accurate, objective, and free of subjectivity, personal prejudice, and persuasion as feasible. Over generalization must also be avoided. The sentences should describe and explain the data rather than attempting to convince the reader. The report should be written in the past tense because it summarizes work that has already been performed.

Rules of research report writing

Only the author's last name is used in citations, and academic and related titles like Dr., Prof., Mr., Mrs., and Ms. should always be omitted. I, We, and other personal pronouns should be avoided, according to certain authors. To prevent repeating long names in the text, figures, tables, and footnotes, it is also recommended to shorten words and phrases with acronyms like SGOU, DDE, SCERT, NIRD, etc. An acronym should always be used in extended form when it appears for the first time in the report. When utilizing quantitative terminology in a report, such as few in number, less for quantity, etc., special care should be made. No sentence should start with a number, such as "50 students," but rather with "Fifty students."

Revision is essential part of the report

When numbers have more than three digits, such as 1,333 or 876,489, commas should be used. In a study report, proper language use, grammar, and usage are crucial. A good dictionary and the Roget's Thesaurus would be quite beneficial. Thesaurus, Auto Correct, Auto Summarize, Spelling, and Grammar are all well supported by word processing software. To ensure that the report is error-free, you are urged to make advantage of these word processing software features. Before the report is entirely typed, it is generally preferable to present it to literate friends or language experts for editing. Even seasoned researchers with numerous publications modify their reports numerous times before submitting them for final typing. Revision is a key component of excellent report writing.

4.4.5 References in the Text and Footnotes

Method of references

The author and the year of publication should always be included with any pertinent references, such as articles, papers, books, monographs, etc. for example, Mukherjee, 1988. The page number should also be provided if a few lines or words are truly quoted from a source, for example Mukherjee, 1988: 120-124. Additionally, the complete citation should be included in the report's reference section. The typical, but customary, method of citing sources is to do so in the relevant page's footnotes.

a) References

Importance of footnotes in the report

The footnotes are organised both serially inside the text and in the chapter-specific footnotes. Footnotes are generally avoided these days. But they serve a variety of purposes. To save the trouble of repeatedly reviewing the references at the end of the report, they provide quick references on the page of the text itself. In some circumstances, footnotes offer explanations, the full form of abbreviations, and further justifications with regard to a section of the text that a reader may read if necessary, i.e., if the text is not understood clearly. However, the primary criteria for using these kinds of footnotes should be accuracy and necessity.

Rules of footnotes in the report

As mentioned earlier, footnotes can be serialized within a chapter as 1, 2, 3, 4, etc., or they can be inserted at the end of the sentence in question in parentheses, such as (8:25), which denotes references to pages 8 and 25 with full references provided at the end of the chapter or in the reference section at the end of the report. Despite being typed in single spacing, footnotes are always double spaced apart. The same work and the citation before it are cited in the footnote of the ibid. Take the following references, for instance: Research in Education, by John W. Best, New Delhi: Prentice Hall of India, 1993, p. 146. 6. Ibid. p.146 (This indicates the same work and the same page as above) 7. Ibid. p.148 (This indicates the same work as above, but a different page). When another reference to the same book is made on the same page but not consecutively, the footnote format op. cit. (in Latin, the work referenced) is used. The proper arrangement of word and phrase abbreviations is another aspect to take into account while creating the footnote references.

b) Tables

Usage of tables in the report

Tables allow readers to quickly go through a large quantity of data and absorb it all at once. Tables, however, ought to only be shown when absolutely essential. Instead of making the reader's reading easier, too many tables may confuse the reader. As a result, you must choose carefully where to place tables in the report. If the data are too complex to be displayed in a single table, multiple tables may be utilized to present the data in a way that clearly illustrates their right sequential order. When tables are small, they can be included with the text; but, if they are huge, they should be placed on their own page, apart from the text. All tables in the text should be serially numbered so that they may easily be quoted or found using those numbers.

c) Figures

Usages of figures in the research report

When data is to be presented graphically, figures are required. They consist of graphs, info graphics, pictures, maps, charts, and more. A figure's crucial role is to visually depict facts so that it is understandable and clear. Unless absolutely necessary, text materials shouldn't be reproduced through figures. The titles of each figure should clearly explain the supplied facts, and the figures themselves should be as straightforward as feasible. Typically, a table of numerical data appears with a figure. Once more, textual discussion comes first, then the figures, not the other way around. The report should consistently adhere to the figure titles' design. Each word's first letter in the title should be capitalized, and numbers should be given in Indian numerals like 1, 2, and so on. And, unlike for tables, the title is displayed below the figure.

4.4.6 The End

Structure of the end part of a research report

The report's references and appendices are located at the end. The report's references are included at the end, after the final chapter. On a new sheet of paper, the last part, labeled references, is at the top. The works that have been cited in the report or thesis are listed in the reference section. The last name of each author is included after each reference that is cited in the text. According to the date of publication, the works by the same author should be listed in order of earliest to latest. It differs from a footnote in that the latter only refers specifically to one or more citations on a single page.

a) Bibliographies and References

Differences between bibliographies and references

Bibliographies and references are both included in research reports. Although many scholars swap these phrases, they actually have different and distinct meanings. A bibliography is a list of authors and titles of books, journals, research reports, and other works that may or may not have been cited in the research report's text. Only those studies, books, or articles that have been explicitly cited in the body of the research report are included in the references. While references should be included in research papers, books intended for wider distribution can be mentioned in bibliographies, which should also include all titles that have been cited.

Formats of references

The general format and style for research reports are described in primarily two style manuals. Which are: Association for Psychological Science (2009). Publication Guide, sixth edition. American Psychological Association, Washington, D.C. (First published in 1929). College of Chicago (2003). 15th edition of The Chicago Manual of Style, University of Chicago Press, Chicago. Format of Reference. The reference format required by the funding organisation, journal, or organisation that awards degrees must be rigorously adhered to. However, the author (date) or author (number) styles, where the author is the surname, date is the year of publication, and number is a numbered sequence, are typically used for in-text references. The references at the end of the latter case are organized according to sequence, whereas the references in the first case are arranged alphabetically.

Citation of internet based contents

Reviewing pertinent literature about the issue under investigation is practically the pinnacle of our profession as researchers. The internet is a valuable academic and professional resource today. The World Wide Web (WWW) is internet's most accessible and widely utilized browsing tool. Here, we'll provide you a very basic explanation of how to cite websites and other internet-based publications. The appendices offer readers and those interested in that particular area.

Summarised Overview

A research report contains three sections: the introduction, the body, and the conclusion. Included in the start are the cover or title page, acknowledgement, table of contents, a list of tables, and a list of references. An introduction, a review of the pertinent literature, objectives, hypotheses, a research design, an analysis and interpretation of the data, the key conclusions, and a summary are typically included in the main body. The report's opening pages are the cover page and the second cover page, also known as the title page. A glossary is a condensed dictionary that defines technical terms and expressions that the author uses to convey a particular meaning. The third chapter of a report often contains a description of the study's design. In general, this chapter gives a thorough explanation of "how" the study was carried out.

Fourth chapter of the research report deals with data analysis and interpretation. The fifth chapter presents the major findings in a non-technical language so that even a non-specialist such as a planner or an administrator in the field can make sense of them. The report's references and appendices are located at the end. The report's references are included at the end, after the final chapter.A bibliography is a list of authors and titles of books, journals, research reports, and other works that may or may not have been cited in the research report's text. Only those studies, books, or articles that have been explicitly cited in the body of the research report are included in the references.

Self Assessment

1. Track Your Development: Briefly discuss the functions of (a) a literature review and (b) a conclusion in a research report.
2. Comment on main body of the research report and expose its major sections.
3. What is cover page? Illustrate with an example
4. What are the six parts included in a table of contents?
5. What are the advantages of a glossary in research report?

Assignments

1. Explain importance of report writing in social research.
2. Elucidate the important aspects of a research report.
3. Discuss second chapter of research report and list out six categories included.
4. Describe writing format of the research report and comment on the prerequisites for a good report.
5. Briefly note the following concepts
   a) Foot notes b) review of related literature. c) methodology d) Bibliography. e) Research design.

Suggested Readings

1. Baumgartner, A. T., Strong, H. C. & Hensley, D. L. (2002). C*onducting and reading research in health and human performance.* Third edition. San Francisco.
2. McGraw, H. & Bell, J. (1999). Doing your research project - *A guide for first-time researchers in Education and Social Science*. Third edition. New Delhi: Viva Books Private
3. Bloom, M. (1978). Challenges to Helping Profession and the responses of Scientific Practice. *Social Service Review.*
4. Goode, WJ & Hatt, PK (1981). *Methods in Social Research*. Tokyo: McGraw Hill Book Company
5. Epstein, I & Tripodi, T. (1973). *Research Techniques for Program Planning, Monitoring and Evaluation,* New York: Columbia University Program.
6. Lal Das, D. K. (2000). *Practice of Social Research: Social Work Perspectives:* Jaipur: Rawat Publications.
7. Monette, D. R. et. al. (1986). *Applied Social Research: Tool For the Human Services,* Chicago: Holt.
8. Rubin, A. & Babbie E. (1989), *Research Methodology for Social Work*, Belmont, Wadsworth, California
9. Thomas, P.T. (1968). "Social Research " in M.S. Gore (ed.) *Encyclopedia of Social Work in India,* New Delhi : Government of India , , 1968
10. Young, P. V. (1992). *Scientific Social Survey and Research*, New Delhi: Pren-

tice hall of India.

11. American Psychological Association (2001). *Publication Manual of the American Psychological Association*. (5th ed.). Washington, DC: American Psychological Association (REF BF 76.7.083.2001).

Space for Learner Engagement for Objective Questions

Learners are encouraged to develop objective questions based on the content in the paragraph as a sign of their comprehension of the content. The Learners may reflect on the recap bullets and relate their understanding with the narrative in order to frame objective questions from the given text. The University expects that 1 - 2 questions are developed for each paragraph. The space given below can be used for listing the questions.

സർവ്വകലാശാലാഗീതം

വിദ്യയാൽ സ്വതന്ത്രരാകണം
വിശ്വപൗരരായി മാറണം
ഗ്രഹപ്രസാദമായ് വിളങ്ങണം
ഗുരുപ്രകാശമേ നയിക്കണേ

കൂരിരുട്ടിൽ നിന്നു ഞങ്ങളെ
സൂര്യവീഥിയിൽ തെളിക്കണം
സ്നേഹദീപ്തിയായ് വിളങ്ങണം
നീതിവൈജയന്തി പാറണം

ശാസ്ത്രവ്യാപ്തിയെന്നുമേകണം
ജാതിഭേദമാകെ മാറണം
ബോധരശ്മിയിൽ തിളങ്ങുവാൻ
ജ്ഞാനകേന്ദ്രമേ ജ്വലിക്കണേ

കുരീപ്പുഴ ശ്രീകുമാർ

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Regional Centres

Kozhikode
Govt. Arts and Science College
Meenchantha, Kozhikode,
Kerala, Pin: 673002
Ph: 04952920228
email: rckdirector@sgou.ac.in

Thalassery
Govt. Brennen College
Dharmadam, Thalassery,
Kannur, Pin: 670106
Ph: 04902990494
email: rctdirector@sgou.ac.in

Tripunithura
Govt. College
Tripunithura, Ernakulam,
Kerala, Pin: 682301
Ph: 04842927436
email: rcedirector@sgou.ac.in

Pattambi
Sree Neelakanta Govt. Sanskrit College
Pattambi, Palakkad,
Kerala, Pin: 679303
Ph: 04662912009
email: rcpdirector@sgou.ac.in

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Sreenarayanaguru Open University
Kollam, Kerala Pin- 691601, email: info@sgou.ac.in, www.sgou.ac.in Ph: +91 474 2966841