

Research Methodology- An Introduction To Literary Studies

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Abstract—Aim of research is to find the answers to the questions generated in a curious mind. The discovery, preservation and communication of the historical and present record of human society when combined with scientific deliberation, rewards the seekers and the readers. A lot of efforts can be seen to understand research and its process. Seldom do we find contents pertaining to research in the area of art or humanities. The paper entitled ‘Research Methodology’ seeks clarity towards an approach to research and is comprised into three parts to generate a bird eye view from general aspects of research to research in humanities stream. Wherein Part I contains basic as well as pertinent aspects related to importance of research, definitions, objectives, stimulus- its significance and types: where the classification is based on general, nature, purpose and design. Research is seldom neutral, but reflects a range Researcher’s personal interest, values, abilities, assumptions, aims and ambition. Everyone is a philosopher and has an own concept of the world. The alternative to having a philosophy is not having no philosophy but having a bad philosophy. Part II includes an introduction to Research Theories, Philosophies and Methods with inclination to humanities as the main stream. *Research* involves a systematic *process* that contains multiple steps sometimes inter linked as well. Part III probes into the concepts and layers of Research Process along with certain amount of light on aspects pertaining to literary studies.

Keywords— *research, humanities, philosophies, theories, methods, literary studies*

I. RESEARCH METHODOLOGY- AN INTRODUCTION

Research is to see what everybody else has seen, and to think what nobody else has thought

Albert Szent Gyorgyi

Part I

Research- An Introduction

Curiosity to know about ourselves, our institution, our environment and the universe is inherent in us. Innumerable questions go on arising in our mind. Whenever such questions arise we seek answers to them. Whenever we encounter the problems, we try to find solutions to them. In the well-known nursery rhyme:

*Twinkle Twinkle Little Star
How I Wonder What You Are*

The use of the words *how* and *what* essentially summarizes what research is. Research is a term used liberally for any kind of investigation that is intended to uncover interesting or new facts. It is a search for knowledge, that is, a discovery of

hidden truths. Here knowledge means information about matters. The information might be collected from different sources like experience, human beings, books, journals, nature, etc. Hence, research is a logical and systematic search for new and useful information on a particular topic. A research can lead to new contributions to the existing knowledge. Only through research is it possible to make progress in a field. Research is indeed civilization and determines the economic, social and political development of a nation. The results of scientific research very often force a change in the philosophical view of problems which extend far beyond the restricted domain of science itself. Hence, research is a logical and systematic search for new and useful information on a particular topic.

Research is not confined to science and technology only. There are vast areas of research in other disciplines such as languages, literature, history and sociology. Whatever might be the subject, research has to be an active, diligent and systematic process of inquiry in order to discover, interpret or revise facts, events, behaviours and theories. Applying the outcome of research for the refinement of knowledge in other subjects, or in enhancing the quality of human life also

becomes a kind of research and development.

Research is done with the help of study, experiment, observation, analysis, comparison and reasoning. Research is in fact ubiquitous (everywhere). For example, we know that cigarette smoking is injurious to health; cow dung is a useful source of biogas; malaria is due to the virus protozoan plasmodium; AIDS (Acquired Immuno Deficiency Syndrome) is due to the virus HIV (Human Immuno Deficiency Virus). How did we know all these? We became aware of all these information only through research. More precisely, it seeks predictions of events, explanations, relationships and theories for them.

1) **Importance of research:**

Research is important both in scientific and non-scientific fields. In our life new problems, events, phenomena and processes occur every day. Practically, implementable solutions and suggestions are required for tackling new problems that arise. Scientists have to undertake research on them and find their causes, solutions, explanations and applications. Precisely, research assists us to understand nature and natural phenomena.

Some important avenues of research are:

- (1) A research problem refers to a difficulty which a researcher or a scientific community or an industry or a government organization or a society experiences. It may be a theoretical or a practical situation. It calls for a thorough understanding and possible solution.
- (2) Research on existing theories and concepts help us identify the range and applications of them.
- (3) It is the fountain of knowledge and provides guidelines for solving problems.
- (4) Research provides basis for many government policies. For example, research on the needs and desires of the people and on the availability of revenues to meet the needs helps a government to prepare a budget.
- (5) It is important in industry and business for higher gain and productivity and to improve the quality of products.
- (6) Mathematical and logical research on business and industry optimizes the problems in them.
- (7) It leads to the identification and characterization of new materials, new living things, new stars, etc.
- (8) Only through research inventions can be made; for example, new and novel phenomena and processes such as superconductivity and cloning have been discovered only through research.
- (9) Social research helps find answers to social problems. They explain social phenomena and seek solution to social problems.
- (10) Research leads to a new style of life and makes it delightful and glorious.

2) **a. Definitions of research:**

There are several definitions of research, proposed by

famous authors and scholars of their time. The difference between these definitions lies only in the way the author has undertaken research in his discipline; basic meaning and context stays intact.

Research comprises “creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications.”

Scientific research is a systematic way of gathering data, a harnessing of curiosity. This research provides scientific information and theories for the explanation of the nature and the properties of the world. It makes practical applications possible. Scientific research is funded by public authorities, by charitable organizations and by private groups, including many companies. Scientific research can be subdivided into different classifications according to their academic and application disciplines.

A broad definition of research is given by Martyn Shuttleworth – “In the broadest sense of the word, the definition of research includes any gathering of data, information and facts for the advancement of knowledge.”

Another definition of research is given by Creswell who states that – “Research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue”. It consists of three steps: Pose a question, collect data to answer the question, and present an answer to the question.

2) **b. Basic Research in the Humanities (Definition):**

- (1) The discovery, preservation, and communication of the historical and present record of human society;
- (2) The invention of methods for studying and interpreting that record;
- (3) The investigation and preservation of the languages and linguistic skills increasingly needed in a global age;
- (4) Experimentation in the creative arts with a wide range of social and cultural experience;
- (5) The new exploration of combined scientific-humanistic/artistic approaches (e.g., neuro-cognitive approaches to literature).
- (6) The investigation of all the above within a serious and expansive horizon of ethical reflection.

3) **Objectives of Research:**

The prime objectives of research are-

- (1) To discover new facts;
- (2) To verify and test important facts;
- (3) To analyse an event or process or phenomenon to identify the cause and effect relationship;
- (4) To develop new scientific tools, concepts and theories to solve and understand scientific and non-scientific problems;
- (5) To find solutions to scientific, non-scientific and social problems and

- (6) To overcome or solve the problems occurring in our everyday life.

4) *Stimulus to Research and its significance*

No person would like to do research unless there are some motivating factors. Some of the motivations are the following:

- 1 To get a research degree (Doctor of Philosophy (Ph.D.)) along with its benefits like better employment, promotion, increment in salary, etc.
- 2 To get a research degree and then to get a teaching position in a college or university or become a scientist in a research institution;
- 3 To get a research position in countries like U.S.A., Canada, Germany, England, Japan, Australia, etc. and settle there;
- 4 To solve the unsolved and challenging problems;
- 5 To get joy of doing some creative work;
- 6 To acquire respectability and recognition;
- 7 Curiosity to find out the unknown facts of an event;
- 8 To serve the society by solving social problems.

Some undertake research without any aim possibly because of not been able to think of anything else to do. Such individual can also become good researchers by stimulating themselves toward a respectable goal.

5) *Types of Research*

Types of research methods can be classified into several categories according to the nature and purpose of the study and other attributes.

5.a.General Classification of Types of Research Methods

Types of research methods can be broadly divided into two quantitative and qualitative categories.

5.a.i Quantitative research “describes, infers, and resolves problems using numbers. Emphasis is placed on the collection of numerical data, the summary of those data and the drawing of inferences from the data”.

5.a.ii Qualitative research, on the other hand, is based on words, feelings, emotions, sounds and other non-numerical and unquantifiable elements. It has been noted that “information is considered qualitative in nature if it cannot be analysed by means of mathematical techniques. This characteristic may also mean that an incident does not take place often enough to allow reliable data to be collected”

5.b Types of Research Methods According to Nature of the Study

Types of the research methods according to the nature of research can be divided into two groups: descriptive and analytical.

5.b.i Descriptive research usually involves surveys and studies that aim to identify the facts. In other words,

descriptive research mainly deals with the “description of the state of affairs as it is at present”, and there is no control over variables in descriptive research.

5.b.ii Analytical research, on the other hand, is fundamentally different in a way that “the researcher has to use facts or information already available and analyse these in order to make a critical evaluation of the material”.

5.c Types of Research Methods According to the Purpose of the Study

According to the purpose of the study, types of research methods can be divided into two categories: applied research and fundamental research.

5.c.i Applied research is also referred to as an action research

5.c.ii fundamental research is sometimes called basic or pure research.

The table below summarizes the main differences between applied research and fundamental research. Similarities between applied and fundamental (basic) research relate to the adoption of a systematic and scientific procedure to conduct the study.

Applied Research (Action)	Fundamental Research (Pure)
Tries to eliminate the theory by adding to the basics of a discipline	Aims to solve a problem by adding to the fields of application of a discipline
Problems are analysed from the point of one discipline	Often several disciplines work together for solving the problem- expand knowledge
Generalisation are preferred	Often researches individual cases without the aim to generalise
Forecasting approach is implemented	Often researches individual cases without the aim to generalise
Assumes that other variables do not change	Acknowledges that other variables are constant by changing
Reports are compiled in a language of technical language of discipline	Reports are compiled in a common language

5.d Types of Research Methods according to Research Design

On the basis of research design the types of research methods can be divided into two groups – exploratory and conclusive.

5.d.i Exploratory studies only aim to explore the research area and they do not attempt to offer final and conclusive answers to research questions.

5.d.ii Conclusive studies, on the contrary, aim to provide final and conclusive answers to research questions.

The main differences between exploratory and conclusive research designs are given below:

	Exploratory research	Conclusive research
Structure	Loosely structured in design	Well structured and systematic in design
Methodology	Are flexible and investigative in methodology	Have a formal and definitive methodology that needs to be followed and tested
Hypotheses	Do not involve testing of hypotheses	Most conclusive researches are carried out to test the formulated hypotheses
Findings	Findings might be topic specific and might not have much relevance outside of researcher's domain	Findings are significant as they have a theoretical or applied implication

5.e. Some Other Types of Research:

All other types of research are variations of one or more of the above stated approaches, based on either the purpose of research, or the time required to accomplish research, on the environment in which research is done, or on the basis of some other similar factor. From the point of view of time, research either as **one-time research** or **longitudinal research**. Research can be **field-setting research** or **laboratory research** or **simulation research**, depending upon the environment in which it is to be carried out. Research can as well be understood as **clinical** or **diagnostic research**. Such research follows case-study methods or in-depth approaches to reach the basic causal relations. **Historical research** is that which utilizes historical sources like documents, remains, etc. to study events or ideas of the past, including the philosophy of persons and groups at any remote point of time. Research can also be classified as **conclusion-oriented** and **decision-oriented**. While doing conclusion oriented research, a researcher is free to pick up a problem, redesign the enquiry as he proceeds and is prepared to conceptualize as he wishes. Decision-oriented research is always for the need of a decision maker and the researcher in this case is not free to embark upon research according to his own inclination. **Operations research** is an example of decision oriented research since it is a scientific method of providing executive departments with a quantitative basis for decisions regarding operations under their control.

Research Methods versus Methodology

6.a Research methods are the various procedures, schemes and algorithms used in research. All the methods used by a

researcher during a research study are termed as research methods. They are essentially planned, scientific and value-neutral. They include theoretical procedures, experimental studies, numerical schemes, statistical approaches, etc. Research methods help us collect samples, data and find a solution to a problem. Particularly, scientific research methods call for explanations based on collected facts, measurements and observations and not on reasoning alone. They accept only those explanations which can be verified by experiments.

6.b Research methodology is a systematic way to solve a problem. It is a science of studying how research is to be carried out. Essentially, the procedures by which researchers go about their work of describing, explaining and predicting phenomena are called research methodology. It is also defined as the study of methods by which knowledge is gained. Its aim is to give the work plan of research.

Research Methods are the tools and techniques for doing research. As with all activities, the rigour with which this activity is carried out will be reflected in the quality of the results. An attempt is made to review the basic nature of research and the methods which are used to undertake a variety of investigations relevant to a wide range of subjects, such as the natural sciences, social science, social anthropology, psychology, politics, leisure studies and sport, hospitality, healthcare and nursing studies, the environment, business, education and the humanities.

To sum up, the term methodology refers to the overall approaches and perspectives to the research process as a whole and is concerned with why, what, where and how data is collected and analysed. And a research method refers only to the various specific tools or ways data can be collected and analysed, e.g. a questionnaire; interview checklist; data analysis software etc.

PART II

Research Theories: The practice of research is closely bound up with the theoretical developments that were promoted by philosophers and key thinkers and practitioners in the sciences, right back to the ancient Greeks.

1) Research Philosophies/ Theories: Research is not 'neutral', but reflects a range of researcher's personal interests, values, abilities, assumptions, aims and ambitions. Everyone is a philosopher – everyone has a concept of the world. In fact, the alternative to having a philosophy is not having no philosophy but having a bad philosophy. The 'unphilosophical' person has an unconscious philosophy, which they apply in their practice – whether of science or politics or daily life (Collier, 1994: 16). Thus research philosophy is an important part of research methodology. There are different ways of going about doing research depending on your assumptions about what actually exists in reality and what we can know (metaphysics) and how we can acquire knowledge (epistemology).

a) Metaphysics is concerned with questions such as what it is to be, who we are, what is knowledge, what are things, what is time and space. At one extreme there is:

Idealism, that advocates that reality is all in the mind, that everything that exists is in some way dependent on the activity of the mind. Hence, as phenomena are reliant on mental and social factors they are therefore in a state of constant change e.g. music is not just sound, it is an emotional experience and at the other extreme is: Materialism (or reductionism), that insists that only physical things and their interactions exist and that our minds and consciousness are wholly due to the active operation of materials. Hence, phenomena are independent of social factors and are therefore stable e.g. music is just vibrations in the air. As you can imagine, these are opposite ends of a spectrum, with many intermediate positions being held that balance the importance of the mind and material things in different degrees.

- b) **Epistemology** is understood about the acceptable knowledge of a particular area of study. It is concerned with the reliability of our senses and the power of the mind. As for the methods of acquiring knowledge, there are two basic approaches: 1 empiricism – knowledge gained by sensory experience (using inductive reasoning); 2 rationalism – knowledge gained by reasoning (using deductive reasoning). The relative merits of these approaches have been argued ever since the Ancient Greeks – Aristotle advocating the first and Plato the second.

Inductive and Deductive Reasoning

Inductive reasoning

Inductive reasoning starts from specific observations or sensory experiences and then develops a general conclusion from them. This simple example gives an indication of the line of reasoning:

All the giraffes that I have seen have very long necks.
(Repeated observations)

Therefore I conclude that all giraffes have long necks.
(Conclusion)

Induction was the earliest and, even now, the commonest popular form of scientific activity. We use it every day in our normal lives as we learn from our surroundings and experiences. We come to conclusions from what we have experienced and then generalize from them, that is, set them up as a rule or belief. The Elizabethan philosopher Francis Bacon stated that one should consult nature, and not rely on the writings of ancient philosophers such as Aristotle or on the Bible. The scientific revolution in the seventeenth century was based on this approach, led by such scientists as Galileo and Newton (remember the apple that fell on his head from the tree that led to his theory of gravity? Nice story anyway!). Mendel's discovery of genetics and Darwin's theory of evolution are perhaps the most famous generalizations in the form of theories that are, even by them, claimed to be developed through inductive reasoning. However there are problems with induction. The first is the question of how many observations must be made before we can reasonably draw a conclusion that is reliable enough to generalize from; and the

second is how many situations and under which conditions should the observations be made so that true conclusions can be reached? Therefore, in order to be able to rely on the conclusions we come to by using inductive reasoning, we should ensure that we make a large number of observations, we repeat them under a large range of circumstances and conditions and that no observations contradict the generalization we have made from the repeated observations.

Deductive reasoning

Deductive reasoning begins with general statements (premises) and, through logical argument, comes to a specific conclusion. Again, a simple example will provide a guide to how this works:

All living things will eventually die.

(General statement – first premise)

This animal is a living thing.

(Inference – second premise)

Therefore, this animal will eventually die.

(Conclusion)

This is the simplest form of deductive argument, and is called a syllogism. Deduction, as with many philosophical ideas, was first discussed as a way of reasoning by the Ancient Greeks, in particular, Plato. Enquiry is guided by the theory which precedes it. Theories are speculative answers to perceived problems, and are tested by observation and experiment. Whilst it is possible to confirm the possible truth of a theory through observations which support it, theory can be falsified and totally rejected by making observations which are inconsistent with its statement. In this way, science is seen to proceed by trial and error: when one theory is rejected, another is proposed and tested, and thus the fittest theory survives. In order for a theory to be tested, it must be expressed as a statement called a hypothesis. The essential nature of a hypothesis is that it must be falsifiable.

However, the process of falsification leads to a devastating result of total rejection of a theory, requiring a completely new start. Another problem with deductive reasoning is that the truth of the conclusions depends very much on the truth of the premise on which it is based. For example, in the past many conclusions about the movement of the planets were incorrect due to the premise that the earth was the centre of the universe.

Hypothetico-Deductive Reasoning Or Scientific Method

The hypothetico-deductive method combines inductive and deductive reasoning, resulting in the to-and-fro process of:

identification or clarification of a problem;

developing a hypothesis (testable theory) inductively from observations;

charting their implications by deduction;

practical or theoretical testing of the hypothesis;

rejecting or refining it in the light of the results.

It is this combination of experience with deductive and inductive reasoning which is the foundation of modern scientific research, and is commonly referred to as scientific method.

Positivism

There is an important issue that confronts the study of the social sciences that is not so pertinent in the natural sciences. This is the question of the position of the human subject and researcher, and the status of social phenomena. Is human society subjected to laws that exist independent of the human actors that make up society, or do individuals and groups create their own versions of social forces? As briefly mentioned above, the two extremes of approach are termed **positivism** and **interpretivism**. Again, as in the case of ways of reasoning, a middle way has also been formulated that draws on the useful characteristics of both approaches.

The positivist approach to scientific investigation is based on acceptance as fact that the world around us is real, and that we can find out about these realities. There is an order made up of atomistic, discrete and observable events. Knowledge is derived using scientific method and based on sensory experience gained through experiments or comparative analysis. It aims at developing a unique and elegant description of any chosen aspect of the world that is true regardless of what people think. Science builds on what is already known, for example, even Einstein's radical theories are a development from Newton's.

The approach to knowledge is reductionist in character, by maintaining that less measurable sciences are reducible to more measurable ones. Sociology is reducible to psychology, psychology to biology, biology to chemistry, and chemistry to physics. Social sciences can therefore be value free and objective.

Relativism

The alternative approach to research – **relativism** (also called Interpretivism, Idealism, Constructivism or even Constructionism)– is based on the philosophical doctrines of idealism and humanism. It maintains that the view of the world that we see around us is the creation of the mind. This does not mean that the world is not real, but rather that we can only experience it personally through our perceptions which are influenced by our preconceptions, beliefs and values; we are not neutral, disembodied observers but part of society. The researcher encounters a world already interpreted and his/ her job is to reveal this according to the meanings created by humans rather than to discover universal laws. Therefore there can be more than one perspective and interpretation of a phenomenon.

Feature	The observer is independent of what is being presented.	The observer becomes a part of the system
Causality	This is aimed to identify causal explanations of social entities existing in reality with/without being concerned of social	The aim of the researcher is to understand the social phenomenon from the perception of social actors and

	actors associated with the entities.	their consequent actions
Reductionism	Problems can be better understood if they are reduced into the simplest possible elements.	Problems are better understood if the process of social interaction is continued so that the social phenomenon is in constant state of revision.
Research Method	Quantitative	Qualitative
Research Paradigm	Objectivist	Subjectivist

Interpretivism

Application of Research Philosophy in research: thus implies that the qualitative research is based on **interpretivism** and quantitative research is based on positivism. Positivists prefer to collect data about an observable reality and search for regularities and causal relationships in your data to create law-like generalizations whereas interpretivists intend to grasp the subjective meaning of social action in order to conduct research methodology.

Postmodernism

Postmodernism challenges key issues such as meaning, knowledge and truth which have opened up new perspectives and ideas about the essence of research. It denounces the meta-narratives (all embracing theories) of the modern movement as a product of the Enlightenment, and insists on the inseparable links between knowledge and power. In fact, there is no universal knowledge or truth. Science is just a construct and only one of many types of knowledge that are all subjects of continual reinvention and change. It is a complex combination of ideas that emerged in a fragmented fashion at the end of the nineteenth century but became highly developed by French social theorists such as Saussure, Barthes, Derrida, Foucault, Baudrillard and Leotard in the latter part of the twentieth century.

One of the strands of postmodernism examines the structure of language and how it is used. It challenges the assumption that language can be precisely used to represent reality. Meanings of words are ambiguous, as words are only signs or labels given to concepts (what is signified) and therefore there is no necessary correspondence between the word and the meaning, the signifier and the signified. The use of signs (words) and their meanings can vary depending on the flow of the text in which they are used, leading to the possibility of 'deconstructing' text to reveal its underlying inconsistencies.

This approach can be applied to all forms representation – pictures, films etc. that gain added or alternative meanings by the overlaying of references to previous uses; particularly seen in the media where it is difficult to distinguish the real from the unreal – everything is representation, there is no reality. In another strand of postmodernism, Foucault maintained that representations of knowledge are developed through types of discourse – discussions that are framed by the current accepted norms of institutions that are in positions of power within the intellectual establishment; such as universities, government bodies and funding institutions. In this way, scientific enquiry and the application of the knowledge gained by it, rather than being freely conducted, are channelled towards supporting the interests of these institutions. Science is now a sort of game bound up with money, power and technology instead of being a simple search for truths. These attitudes imply that the grand, monolithic structure of science and knowledge built up over the centuries, the striving after facts and laws that represent universal truths, and the steady progress towards greater understanding of the world and control of it through technology, is an impossible mission. Enquiry must be broken down into much smaller, localized and limited explanations, stressing different influences, ideologies and identities and the overwhelming complexity of our existence. There can be no over-arching theories and no universal truths – all is relative.

j) Axiology

Axiology is a branch of philosophy which is concerned about judgments, aesthetics, and ethics. The process of social enquiry is involved in this approach. Researchers' axiological skill is executed in order to make judgments about the research content and its conduct. For example, Researchers' philosophical approach is reflected on his or her values as well as in their research work, especially in the area of data collection or data analysis procedures. However, this method creates impact in social sciences research.

PART III

Research Process

The basic step commence with identifying and developing the topic wherein the key words and concern that urged the research should be looked into. For the same background information plays a crucial part: avail details through books (use catalogues), media, encyclopaedias, articles in periodicals and journals (use indexes), internet resources (use search engines) and the like. Then prime task lays in evaluating through critical analysis of the data found. The research process can be satisfactorily completed when proper citation (use citation tools and styles) in standard format is made.

The subjective part has to be given justice by one's own devotion, understanding, and perceptions with excellent use of verbal intensity.

Research Problem and Literary Survey

It is necessary to first define some kind of **research problem** in order to provide a reason for doing the research. After defining a problem, the researcher has to do **literature survey**

connected with the problem. Literature survey is a collection of research publications, books and other documents related to the defined problem.

Literature materials are the crystallization of wisdom, are the ocean of knowledge, have important values for the development of human society, history, culture and research scholars. Education researches shall fully share information, conduct literature researches to grasp sources of relevant researches and scientific developments and to understand what our predecessors have achieved and the progress made by other researchers. However, in the ocean of knowledge of such a vast amount of information, to choose representative literatures we should bear in mind the following:

- (1) To master fundamental theory knowledge, including qualitative analysis, literature grade identifying, literature collection methods, literature sorting and contents analysis.
- (2) To identify representative literatures based on fundamental knowledge
- (3) The literatures written by experts or scholars from national key discipline research bases Comment literatures used by discipline annul report or discipline development status meeting Literatures written by discipline leading scholars
- (4) Literatures often cited
- (5) Literature of time effectiveness reflecting the current development of research fields
- (6) Comments by experts on relevant issues of literature and timely learn the authority of literatures.

Thus scrutinised Literary Survey is very essential to know the actual visible gap between the problem that is solved and in context: whether the defined problem has already been solved, status of the problem, techniques that are useful to investigate the problem and other related details.

The problem will **generate the subject** of the research, its **aims and objectives**, and will indicate what sort of **data** need to be collected in order to investigate the issues raised and what kind of **analysis** is suitable to enable you to come to **conclusions** that provide answers to the questions raised in the problem.

To be researchable the problem needs to have several crucial features. It must be: stated clearly and concisely; significant i.e. not trivial nor a repeat of previous work; delineated, in order to limit its scope to practical investigation; possible to obtain the information required to explore the problem; possible to draw conclusions related to the problem, as the point of research is to find some answers. Then a rationale for the research problem can be defined.

This can be done, for example, by raising a question, defining some research objectives or formulating a hypothesis.

Hypothesis:

Hypotheses are nothing unusual; we make them all the time. If something happens in our everyday life, we tend to suggest

a reason for its occurrence by making rational guesses. These reasonable guesses can be expressed in the form of statement. This is a hypothesis.

A good hypothesis is a very useful aid to organizing the research effort, but it must have certain qualities. It must be a statement that can be put to the test. It must specifically limit the enquiry to the interaction of certain factors (usually called variables) and suggest the methods appropriate for collecting, analysing and interpreting the data, and the resultant confirmation or rejection of the hypothesis through empirical or experimental testing must give a clear indication of the extent of knowledge gained.

However, one of the fundamental criteria of a hypothesis that it is testable but formulated on a conceptual level cannot be directly tested; it is too abstract. It is therefore necessary to convert it to an operational level. This is called **operationalization**.

Focusing a research study on a set of **propositions**, rather than on a hypothesis, allows the study to concentrate on particular relationships between events, without having to comply with the rigorous characteristics required of hypotheses.

In order to convince the reader that you have collected information relevant to the question or problem and that you have based your answers and conclusions on the correct analysis of this information you will need to use some logical **argument**. There are two basic stages to an argument: **the premises**, which are statements in the form of propositions or assertions which form the basis of the argument (this can be seen as the evidence) and **the conclusion**, which is a proposition that expresses the **inference** drawn by logical steps from the original premises. The two basic **types**: **inductive reasoning**, which entails moving from particular repeated observations to a general conclusion, and **deductive reasoning**, which entails going from a general principal (called a premise) to a conclusion about a particular case. The **hypothetico-deductive** method or **scientific method** is a further development of logical reasoning based on the principle that we can never be completely sure of any premises or conclusions that we make, but we can be more confident about some than others.

Research Ethics:

Research, however novel its discoveries, is only of any value if it is carried out honestly. It is a simple matter to follow the clear guidelines in citation that will prevent you being accused of passing off other people's work as your own – called plagiarism.

There are two aspects of ethical issues in research:

- (1) The individual values of the researcher relating to honesty and frankness and personal integrity.
- (2) The researcher's treatment of other people involved in the research, relating to informed consent, confidentiality, anonymity and courtesy.

Data and Interpretations

Although it is difficult, and some maintain that it is impossible, to be free from bias, distorting your data or results knowingly is a serious lapse of honesty. Scientific objectivity should be maintained as much as possible. If the study involves personal judgements and assessments, the basis for these should be given. Silently rejecting or ignoring evidence which happens to be contrary to one's beliefs, or being too selective in the data used and in presenting the results of the analysis constitutes a breach of integrity. Data is another word for bits of information. Data are not only elusive, but also ephemeral. They may be true for a time in a particular place as observed by a particular person, but might be quite different the next day. Data are not only ephemeral, but also corruptible. Hearsay, second hand reports and biased views are often paraded as facts.

4.a. Levels of Abstraction

To comprehend the level of abstraction of data it should be conceived that they are part of a hierarchy of information, going from the general to the particular, from abstract to concrete. Understanding the hierarchy makes it possible to break down research problems expressed in theoretical language to more practical components that can be measured in some way.

Theory – abstract statements that make claims about the world and how it works. Research problems are usually stated at a theoretical level.

Concepts – building blocks of the theory which are usually abstract and cannot be directly measured.

Indicators – phenomena which point to the existence of the concepts.

Variables – components of the indicators which can be measured.

Values – actual units of measurement of the variables. These are data in their most concrete form.

Each theory will contain several concepts, each concept several indicators, each indicator several variables, and each variable several values. For example:

Theory – poverty leads to poor health.

Concepts – poverty, poor health.

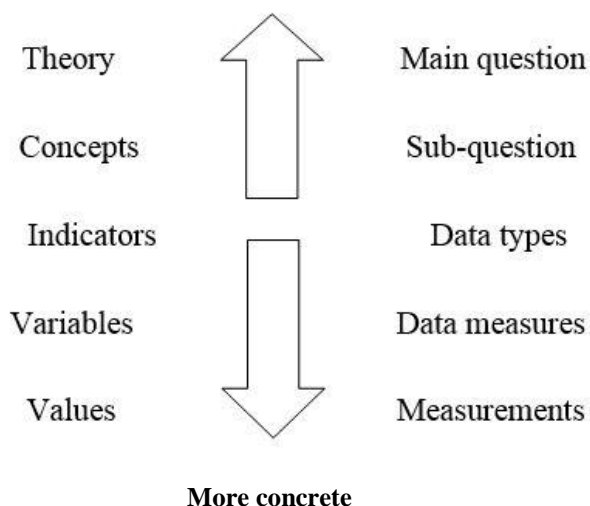
Indicators of poverty – low income, poor living conditions, restricted diet, etc.

Variables of poor living conditions – levels of overcrowding, provision of sanitary facilities, infestations of vermin, levels of litter, etc.

Values of levels of overcrowding – numbers of people per room, floor areas of dwellings, numbers of dwellings per hectare, etc.

The level of abstraction may evolve as stated below:

More abstract



4.b. Primary and Secondary Data

Data come in two main forms, depending on its closeness to the event recorded. Data that has been observed, experienced or recorded close to the event are the nearest one can get to the truth, and are called primary data. Written sources that interpret or record primary data are called secondary sources, which tend to be less reliable.

There are four basic types of primary data, distinguished by the way they are collected:

1. Measurement – collections of numbers indicating amounts, e.g. voting polls, exam results, car mileages, oven temperatures etc.
2. Observation – records of events, situations or things experienced with your own senses and perhaps with the help of an instrument, e.g. camera, tape recorder, microscope, etc.
3. Interrogation – data gained by asking and probing, e.g. information about people's convictions, likes and dislikes etc.
4. Participation – data gained by experiences of doing things e.g. the experience of learning to ride a bike tells you different things about balance, dealing with traffic etc., rather than just observing.

Just as we are bombarded with primary data, we are cascaded with secondary data in the form of news bulletins, magazines, newspapers, documentaries, advertising, the Internet etc. The data are wrapped, packed and spun into pithy articles or digestible sound bites. The quality of the data depends on the source and the methods of presentation. Refereed journals containing papers vetted by leading experts, serious journals, such as some professional and trade journals will have authoritative articles by leading figures. Magazines can contain useful and reliable information or be entirely flippant. The same goes for books – millions of them! They range from the most erudite and deeply researched volumes to ranting

polemics and commercial pap. Television and radio programmes vary likewise, as does information on the Internet. A major aspect of using secondary data is making an assessment of the quality of the information or opinions provided.

It is also good practice to compare the data from different sources. This will help to identify bias, inaccuracies and pure imagination. It will also show up different interpretations that have been made of the event or phenomenon.

4.c. Levels of Measurement and Quantitative and Qualitative Data

4.c.i. Measurement of Data

Data can be measured in different ways depending on their nature. These are commonly referred to as levels of measurement – nominal, ordinal, interval and ratio.

In descending order of precision, the four different levels of measurement are: Nominal–Latin for name only, Ordinal–Think ordered levels or ranks, Interval–Equal intervals among levels, ratio–Let the “o” in ratio remind you of a zero in the scale

The following simple test may determine which kind of data measurement that can be used on the values of a variable. If:

- (1) [One value is different from another, you have a nominal scale;
- (2) One value is bigger, better or more of anything than another, you have an ordinal scale;
- (3) One value is so many units (degrees, inches) more or less than another, you have an interval scale;
- (4) One value is so many times as big or bright or tall or heavy as another, you have a ratio scale.

Data are also divided into two other categories, referring not to their source but to their characteristics; basically whether they can be reduced to numbers or presented only in words. This affects the way that they are collected, recorded and analysed. Numbers are used to record much information about science and society, for example pressures, bending forces, population densities, cost indices etc. This type of data is called quantitative data. Numbers can be analysed using the techniques of statistics. However, a lot of useful information cannot be reduced to numbers. People's judgements, feelings of comfort, emotions, ideas, beliefs etc. can only be described in words. These record qualities rather than quantities hence they are called qualitative data.

Words cannot be manipulated mathematically, so require quite different analytical techniques. Concepts such as affluence, happiness, comradeship, loyalty etc. are real and detectable, even if they are difficult to record and measure. Observation notes, interview transcripts, literary texts, minutes of meetings, historical records, memos and recollections, documentary films, are all typical examples of qualitative data. Some are recorded very close to the events or phenomena, whilst others may be remote and highly edited interpretations, so assessments of the reliability must be made. Also qualitative data rely on human interpretation and evaluation and cannot be dispassionately measured in a standard way.

4.c.ii. Pertaining to literature; Qualitative analysis of texts and documents:

- (a) **RHETORICAL ANALYSIS:** Rhetoric is the use of language and argument to persuade the listener or reader to believe the author. Rhetoric is used to aim at a particular audience or readership. It may appeal to, and engender belief, in the target audience, but is likely to repel and undermine the confidence of others.
- (b) **NARRATIVE ANALYSIS:** This form of analysis is aimed at extracting themes, structures, interactions and performances from stories or accounts that people use to explain their past, their present situation or their interpretations of events. The data, which is primarily aural, is collected by semi- or unstructured interviews, participant observation or other undirected methods. Alternatively, the structure of the story is inspected. All this is done in order to reveal the undercurrents that may lie under the simple narrative of the story.
- (c) **SEMIOTICS:** This is the term for the 'science of signs' which is used to examine visual and other media as well as written texts. Semiotics attempts to gain a deep understanding of meanings by the interpretation of single elements of text or visual units. Words are only meaningful in their relationship with other words; a range of technical terms has been devised that indicate the different aspects of signs.

Checks on the reliability and completeness of qualitative data can be made by consulting a variety of sources of data relating to the same event – this is called triangulation. Research, particularly when about human beings, often combines the examination of both qualitative and quantitative data. In fact, there are many types of data that can be seen from both perspectives.

4.c.iii. Documentary Data - Cultural Texts- From Literary to Cultural Studies

From the late 1950s, language has been analysed from several basic viewpoints: the structural properties of language (notably Chomsky, Sacks, Schegloff), language as an action in its contextual environment (notably Wittgenstein, Austin and Searle) and sociolinguistics and the 'ethnography of speaking' (Hymes, Bernstein, Labov and many others). The first major challenges to the inherited assumptions and procedures of English literary Studies were expressed in the work of Raymond Williams, Richard Hoggart and Stuart Hall. In *Culture and Society* and *The Long Revolution*, Williams insisted that the understanding of 'culture' should be extended beyond its association with elite literary and artistic achievements to include its anthropological or social meaning: 'culture is a description of a particular way of life, which expresses certain meanings and values not only in art and leaning but also in institutions and ordinary behaviour'

However, the meaning of the term 'cultural texts' has been broadened from that of purely literary works to that of the many manifestations of cultural exchange, be they formal such

as opera, TV news programmes, cocktail parties etc., or informal such as how people dress or converse. The main criterion for cultural texts is that one should be able to 'read' some meanings into the phenomena. Texts can therefore include tactile, visual and aural aspects, even smells and tastes. They can be current or historical and may be descriptive or statistical in nature. Any of them can be quantitative or qualitative in nature. Here are some examples of documentary data that come from a wide range of sources: personal documents, oral histories, commentaries, diaries letters, autobiographies, official published documents, state documents and records, official statistics, commercial or organizational documents, mass media outputs, newspapers and journals, maps, drawings, comics and photographs, fiction, non-fiction, academic output, lecture notes, critiques, research reports, textbooks, journal articles and conference papers, artistic output, theatrical productions – plays, opera, musicals, artistic critiques, programmes, playbills, notes and other ephemera, virtual outputs, web pages, databases etc.

5. Authentication and Credibility

Government statistics and data provided by large, well known organizations are likely to be authoritative, as their continued existence relies on maintaining credibility. Records held by smaller organizations or commercial companies will be more difficult to check for reliability. To make an assessment of the methods of data collection and analysis used to produce the data. Internet-based data sets may provide this information through hyperlinks, and reports will normally have a section devoted to the research methods used.

Authentication of historical data can be a complex process, and is usually carried out by experts. A wide range of techniques are used, for example textual analysis, carbon dating, paper analysis, locational checks, cross referencing and many others. Credibility of data refers to their freedom from error or bias. '[Documents] should never be taken at face value. In other words, they must be regarded as information that is context specific and as data which must be contextualized with other forms of research. They should, therefore, only be used with caution (Forster, 1994: 149). Much important contextual data can be missing from such documents as reports of spoken events, where the pauses, hesitations and gestures are not recorded.

6. Frame work

The framework for thesis is most easily created by making a list of possible chapter or section headings. At the very simplest level the divisions may be like this:

- (1) Introduction
- (2) Background and previous research
- (3) The main issues and research problem
- (4) Research methods – how you will investigate the problem
- (5) A description of the research actions and their results
- (6) Conclusions in relation to the research problem

This is a conventional format and can be applied to a study in almost any subject.

CONCLUSION:

We do research by conceiving information and openings from important research papers published by other researchers in the topic of interest and continue in our own directions. The work of some other researchers might have formed the basis of our research. Similarly, our research outcomes should help other researchers. That is, the work should be such that it should invite others to read and more importantly use it and cite it in their research work. Our work should lead to recognition and respect. It should fetch joy and benefits others and as well as us. After all the base outcome of research is through the ladders of curiosity reach out to new arena of knowledge for everyone to aspire and make it another footstep towards the next.

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REFERENCES

- [1] BasicResearchin the Humanities. (2011, 11). Retrieved 08 08, 2018, from 4humanities.org: <http://4humanities.org/wp-content/uploads/2011/11/Basic-Research-in-the-Humanities.pdf>
- [2] Blaxter, L., Hughes, C. and Tight, M. (2006.) How to Research (third edition). Buckingham: Open University press.
- [3] Dudovskiy, J. (2018). Research methodology. Retrieved 08 2018, from research-methodology.net: <https://research-methodology.net/research-methodology/research-types/>
- [4] Eco, U. (2015). How to Write a Thesis. (C. M. Farina, & G. Farina, Trans.) Chapparral Pro, United States of America: MIT Press.
- [5] Griffin, Gabriele. (2013) Research Methods for English Studies (second edition). Rawat Publications.,
- [6] Hodges, W. (2001). Logic: An Introduction to Elementary Logic (second edition). London: Penguin.
- [7] Kothari, C. R. (1985). Research Methodology: Methods and Techniques. New Delhi: WileyEastern.
- [8] Kuhn, T. S. (1970). The Structure of Scientific Revolutions (second edition). Chicago: Chicago University Press.
- [9] Laine, M. de. (2000). Fieldwork, Participation and Practice: Ethics and Dilemmas in Qualitative Research. London: Sage.
- [10] Okasha, S. (2002). Philosophy of Science: A Very Short Introduction. Oxford: Oxford University Press.
- [11] Oliver, P. (2003). The Student's Guide to Research Ethics. Maidenhead: Open University Press.
- [12] ReadingCraze.com. (2014, december 17). readingcraze.com. Retrieved 08 08, 2018, from <http://readingcraze.com/index.php/definitions-research-famous-writers/>
- [13] Ridley, D. (2008). The Literature Review: A Step-by-Step Guide for Students. London: Sage.
- [14] Robson, C. (2010). Real World Research: A Resource for Social Scientists and Practitioner-Researchers (third edition). Oxford: Blackwell.
- [15] S, R., P, P., & V, C. (2013, Oct. 14). Research Methodology. Retrieved from <https://arxiv.org/pdf/physics/0601009.pdf>
- [16] Salmon, M. H. (2007). Introduction to Logic and Critical Thinking (fifth edition). Belmont, CA: Wadsworth.
- [17] Vithal, R. (2010). Designing Your First Research Proposal: A Manual for Researchers in Education and the Social Sciences (second edition). CapeTown: Juta.
- [18] Walliman, N. (2011). Research Methods:the basics. New York: Routledge.