**Introduction to Social Research**

**I: WHAT IS RESEARCH, PURPOSE OF RESEARCH, SCIENTIFIC RESEARCH, RESEARCH AND THEORY?**

**I. 1: What is research?**

The unique characteristic of human mind is the curiosity to know about the universe. Innumerable questions arise in our mind about our environment, planet and the universe. Most of these questions starting with what, why, how and soon. For example, what are stars? , why day and night alternate? How is rain formed and why the mode of life and activities of human beings vary from place to place? Whenever such questions arise we seek answer to them or we try to find out solutions to them. Seeking answers to questions and finding solutions to the problems have been the basis of human progress. A systematic search for an answer to a question or a solution to a problem is called research.

Actually research is simply the process of arriving as dependable solution to a problem through the planned and systematic collection, analysis and interpretation of a data. Research is the most important process for advancing knowledge for promoting progress and to enable man to relate more effectively to his environment to accomplish his purpose and to solve his conflicts. Although it is not the only way, it is one of the most effective ways of solving problems.

The term research consist of two words,’ Re’+’Search’. “Re” means again and again and “Search” means to find out something. The following is the process ;



Therefore, the research is a process of which a person observes the phenomena again and again and collects the data and on the basis of data he draws some conclusions.

Research seeks to find out explanations to unexplained phenomena to clarify the doubtful propositions and to correct the misconceived facts. It simply means a search for facts, answer to questions and solutions to problems. The search for facts may be made through either (a) arbitrary (unscientific) method or (b) scientific method.

Arbitrary method of seeking answer to questions is based on imagination, blind belief or impression. It is vague and inaccurate.

Scientific method is a systematic rational approach to seeking fact. It is objective, precise and arrives at conclusions on the basis of verifiable evidences. Hence research is systematic and logical study of an issue problem or phenomenon through scientific method. Following definitions may reveal the proper meaning of the concept of research.

**Definition of Research:**

a) According to Black and Champion, “scientific research consist of obtaining information through empirical observation that can be used for systematic development of logically related propositions attempting to establish casual relations among variable”.

b) Emory defines research as “any organized inquiry designed and carried out to provide information for solving a problem”.

c) Kerlinger defines research as a” systematic, controlled, empirical and critical investigation of hypothetical relations among natural phenomena”.

d) L.V. Redman and A.V.H. Morry have defined “systematic effort to gain new knowledge we call research”.

**Characteristic of Research**

The above definitions reveal the following characteristics of research.

a) Research is a systematic and critical investigation to a phenomenon.

b) It aims at interpreting and explaining a phenomenon.

c) It adopts scientific method.

d) It is based on empirical evidences and observable experience.

e) It develops generalizations, principles or theories.

f) It directed towards finding answer to the questions and solutions to the problems.

**I. 2: Purpose of Research**

* The purposes or objectives of research are varied. They are,
* Research extends knowledge of human beings social life and environment.
* Research reveals the mysteries of nature.
* Research establishes generalizations and general laws and contributes to theory building in various fields of knowledge.
* Research verifies and tests existing facts and theory.
* Research helps us to improve our knowledge and ability to handle situation.
* General laws developed through research may enable us to make reliable predictions of events.
* Research aims to analyze inter-relationship between variables and to derive causal explanations, which help us to better understanding of the world in which we live.
* Research aims to finding solutions to the problem, e.g.:- socio-economic problems, health problems, organizational and human relational problems and so on…
* Research also aims at developing new tools, concepts and theories for better understanding to unknown phenomena.
* Research helps national planning board to focus our national development. It enables the planners to evaluate alternative strategies, on-going programs and evaluation etc.,
* Research provides functional data for rational decision making and formulation of strategies and policies.

**I. 3: Scientific Method**

All scientists use common methods for their enquiry. All sciences whether natural or social agree up on methods of studying phenomena. But their materials differ. A biologist studying the structure of some flowers, a chemist studying radio active properties of an element and a sociologist studying crime situation in an urban slum. All follows similar scientific methods of inquiry. But their subjects of study are different. Therefore, they use different techniques of investigation for their study. As their materials are different, their purposes also differ. All of them will observe the phenomenon and analyze them to find out their sequences this is called scientific method. Thus scientific method is a systematic step-by-step procedure (three steps-observation, hypothesis and verification) following logical process of reasoning.

According to prof. Morgan *“scientific method being highly elastic, can be applicable to all domain of human activity where the discovery of truth is the objective”*. So the scientific method is means for gaining knowledge of the universe. As Karl Person observed “there is no short-cut to truth, no way to gain a knowledge of the universe expect through the gate way of scientific method”. Two elements of scientific method are: Procedural components & Personal Components.

**a) Procedural Components.**

Observation, hypothesis and verification are the three procedural components. Observation helps to collect data and help to build hypothesis. The second step is formation of one or more hypotheses. A hypothesis is tentative conclusion. It guides collection of data. The third stage is verification of hypothesis. It is done by analytical tools.

**b) Personal Components.**

The researcher needs imagination, analytical ability resourcefulness, skill, capacity to find out the hearts of the problem. Researcher’s ability and attitude are more important than the method of approach. Ambitions interest and perseverance are very much required to go on successfully with research. Researcher should have an objective scientific and professional qualification and personal quality and interest.

**Meaning and essentials of scientific method**

Scientific method is a way in which one can test opinion, impressions or guess by examining available evidences fore and against them. So it is controlling lot of things and establishing stable belief.

Essentials of scientific method are:

* Scientific method aims at discovering facts.
* It is itself corrective in nature.
* It is itself based on systematic doubts.
* Scientific theories are abstract in nature.

**Basis of scientific method**

Following are the major basis of scientific method,

**(a) Reliance on empirical evidence:**

Scientific method involves a systematic process. The answer to a question is not decided by intuition or imagination.

Relevant data are collected through observation and experimentation. The validity and the reliability of data are checked carefully and the data are analyzed thoroughly using appropriate methods of analyses.

**(b) Use of concepts:**

We use concepts to deal with real facts. Concepts are logical constructs or abstractions created from sense impressions. They are the symbols representing the meaning that we hold.

**(c) Commitment to objectivity:**

Objectivity is the hallmark of the scientific method. It means forming a judgment upon facts unbiased by personal impressions. The conclusion should not vary from person to person. It should be same for all persons.

**(d) Ethical neutrality.**

Science does not pass normative judgment on facts. It does not say they are good or bad. Science aims nothing but making true and adequate statements about its object.

**(e) Generalization.**

Scientist tries to find out the commonality of a series of event. They aim at discovering the uniformity. Assumed a discovered uniformity a logical class and it’s observed pattern, a descriptive generalization is formulated.

**(f) Verifiability.**

The findings of a research should be verifiable. Scientist must make know to others, how he arrived at his conclusion. He should thus expose his own methods and conclusions to critical scrutiny. When others test his conclusion under the same conditions, then it is accepted as correct.

**(g) Logical reasoning process.**

The scientist method involves the logical process of reasoning. This reasoning process is used for drawing inference from the finding of a study or for arriving at conclusion. This logical reasoning process consists of induction and deduction.

**Induction:** One of the methods of logical reasoning process. The inductive method consists of studying several individual cases drawing a generalization. It involves two processes-observation and generalization. Conclusion from induction method is subjected to further conformation based on more evidence

**Deduction:** deduction is 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 generalization or assumption. A minor premise is a particular case related to the major premise. The logical relationship of these premise lead to conclusion.

E.g. major premise: - All men are mortal

Minor premise: - A is a man

Conclusion: - A is mortal.

The logical process of both induction and deduction are useful in research studies. Both are inseparable parts of a system of reasoning. Both processes are often used simultaneously.

***Difficulties in the use of scientific methods in social science research***

Some theorists argue that scientific method is more applicable to physical or natural sciences: and it can not applicable to social sciences. The following are the major difficulties.

a) Human behavior is different. It s very difficult to categories.

b) When human behavior is studied and analyses by another human, there may be personal problems.

c) Psychological nature of human behavior cannot be measurable.

d) Human behavior is not uniformed and predictable. Uncertainty is existing.

e) Difference in choice and decision.

**I. 4: Research and Theory**

***Meaning of theory:***

Research is closely related to theory. Theory provides a conceptual model for research. Research in turn contributes to theory. It is important to distinguish the modern scientific usage of the word theory from other meanings the word may have. In common parlance, theory is frequently identified with speculations, what is theoretical is unrealistic, visionary. This is a wrong notion; theory is the accumulated stored facts. It may define as a set of systematically interrelated concepts, definitions and propositions that are advanced to explain and predict phenomena (facts*). Arnold Rose defines theory as “an integrated body of definitions, assumptions and general propositions covering a given subject matter from which a comprehensive and consistent set of specific and testable principles can be deducted logically”*.

**Criteria of Theory:**

Theories start out as ideas. How much these ideas conform to the basic demands of proposition formulation that determines whether or not they will assume the status of theory. The criteria to be met by the set of ideas are,

a) They must be logically consistent.

b) They must be interrelated.

c) The propositions should be mutually exclusive.

d) They must be capable of being tested through research.

***Theory and Facts:***

Theory and facts are interrelated. Facts are empirically verifiable observation and theories establish relationship between facts and order them in meaningful way. Theory summaries facts in to empirical generalizations; and it predict facts. Facts in turn, help to initiate theories; facts lead to the reformulation of an existing theory and modify them.

***Role of Theory in Research***

Theory helps research in several useful ways. Following are the major contributions of theory to research.

**a) Theory delimits the study.**

Theory narrows the range of facts to be studied. It helps to select a few relevant aspects of a phenomenon. Any phenomenon may be studied from different angles. Theory helps the researcher to work with in framework is science.

**b) Theory provides conceptual model.**

Theory provides a conceptual framework for a study. It helps a researcher to develop conceptual structure for the proper formulation of the selected problems.

**c) Theory summarizes.**

Theory summarizes what is already known about the object of study. From time to time in any science there will be changes in the structure of relationship between propositions. In each area, scientist move from older systems of theory towards a more acceptable new system.

**d) Theory states universal law.**

Theory states a general uniformity beyond the immediate observation. E.g. A person sitting under mango tree, observe mangoes falling on ground. But beyond this observation there is a general law of gravitation.

**e) Prediction.**

Theory helps to predict further facts. For example we may observe low birth rate in modern societies. From this, we can predict that if modern way of life is introduced into a traditional rural or tribal community, its birth rate would decline.

**f) Theory fills gap in knowledge.**

Theory also points to areas which have not been explored. The gaps in knowledge are brought to light through the questions arising out of theory.

***Contribution of research to theory***

The relationship between theory and research is contributory. Research contributes to the development of theory. Let us discuss major contributions of research to theory.

1. **Research initiate theory.**

The findings of research may lead to the formulation of theories. Scientific experiment have led to the development of various theories in physics, chemistry etc,.

Similarly research in social sciences has contributed to the development of several theories.

**b) Research tests an existing theory.**

One major function of empirical research is to test hypotheses deduced from existing theories. If a hypothesis is not confirmed by research, the theory from which the hypothesis is deduced in re-examined and tested.

**c) Reformulation of an existing theory.**

When a theory does not fit in to new findings of research, it is rejected and reformulated to encompass the new findings.

**d) Research refocuses theory.**

Empirical research may give a new focus to the existing theory.

**e) Research clarifies theory.**

Concepts are drawn from theory. But researcher cannot proceed on the basis of their theoretical meaning. For research purpose the concepts must be operationalized and defined especially with concrete empirical indications. Such clarifications and redefinitions lead to the discovery of new hypotheses.

In short, theory and research are inseparable complementary components of scientific endeavor.