

Introduction**MEANING OF RESEARCH**

- search for knowledge
- a scientific and systematic search for pertinent information on a specific topic
- creative work undertaken on a systematic basis in order to increase the stock of [knowledge](#)

OBJECTIVES OF RESEARCH

1. To gain familiarity with a phenomenon or to achieve new insights into it (studies with this object in view are termed as exploratory or formulative research studies);
2. To portray accurately the characteristics of a particular individual, situation or a group (studies with this object in view are known as descriptive research studies);
3. To determine the frequency with which something occurs or with which it is associated with something else (studies with this object in view are known as diagnostic research studies);
4. To test a hypothesis of a causal relationship between variables (such studies are known as hypothesis-testing research studies).

MOTIVATION IN RESEARCH

What makes people to undertake research?

1. Desire to get a research degree along with its consequential benefits;
2. Desire to face the challenge in solving the unsolved problems, i.e., concern over practical problems initiates research;
3. Desire to get intellectual joy of doing some creative work;
4. Desire to be of service to society;
5. Desire to get respectability.

TYPES OF RESEARCH

- Descriptive vs. Analytical
- Applied vs. Fundamental
- Quantitative vs. Qualitative
- Conceptual vs. Empirical

Descriptive vs. Analytical:

- Descriptive research includes surveys and fact-finding enquiries of different kinds.
- The major purpose of descriptive research is description of the state of affairs as it exists at present.
- Analytical research, the researcher has to use facts or information already available, and analyze these to make a critical evaluation of the material

Applied vs. Fundamental:

- Applied research aims at finding a solution for an immediate problem facing a society or an industrial/business organization,
- Fundamental research is mainly concerned with generalizations and with the formulation of a theory.
- “Gathering knowledge for knowledge’s sake is termed ‘pure’ or ‘basic’ research. concerning some natural phenomenon or relating to pure mathematics are examples of fundamental research.

Quantitative vs. Qualitative

- Quantitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity
- Qualitative research, on the other hand, is concerned with qualitative phenomenon, i.e.,
- phenomena relating to or involving quality or kind. For instance, when we are interested in investigating the reasons for human behaviour

Conceptual vs. Empirical:

- Conceptual research is that related to some abstract ideas or theory. It is generally used by philosophers and thinkers to develop new concepts or to reinterpret existing ones.
- Empirical research relies on experience or observation alone, often without due regard for system and theory. It is data-based research, coming up with conclusions which are capable of being verified by observation or experiment.

Other Types of Research

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.

Longitudinal research. In the former case the research is confined to a single time-period, whereas in the latter case the research is carried on over several time-periods.

Field-setting research or laboratory research or simulation research, depending upon the environment in which it is to be carried out.

Clinical or diagnostic research. Such research follow case-study methods or in depth approaches to reach the basic causal relations.

Such studies usually go deep into the causes of things or events that interest us, using very small samples and very deep probing data gathering devices.

Exploratory research is the development of hypotheses rather than their testing

Formalized research studies are those with substantial structure and with specific hypotheses to be tested.

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.

Significance of research

- a) To those students who are to write a master's or Ph.D. thesis, research may mean a careerism or a way to attain a high position in the social structure;
- b) To professionals in research methodology, research may mean a source of livelihood;

- c) To philosophers and thinkers, research may mean the outlet for new ideas and insights;
- d) To literary men and women, research may mean the development of new styles and creative work;
- e) To analysts and intellectuals, research may mean the generalizations of new theories.

Research Methods versus Methodology

Research methods: all those methods / techniques that are used for conduction of research. thus, refer to the methods the researchers

Research techniques refer to the behavior and instruments we use in performing research operations such as making observations, recording data, techniques of processing data and the like.

- Research methods refer to the behavior and instruments used in selecting and constructing research technique.

The difference between methods and techniques of data collection

Type	Methods	Techniques
1. Library Research	(i) Analysis of historical records (ii) Analysis of documents	Recording of notes, Content analysis, Tape and Film listening and analysis. Statistical compilations and manipulations, reference and abstract guides, contents analysis.
2. Field Research	(i) Non-participant direct observation (ii) Participant observation (iii) Mass observation (iv) Mail questionnaire (v) Opinionnaire (vi) Personal interview (vii) Focused interview (viii) Group interview (ix) Telephone survey (x) Case study and life history	Observational behavioural scales, use of score cards, etc. Interactional recording, possible use of tape recorders, photo graphic techniques. Recording mass behaviour, interview using independent observers in public places. Identification of social and economic background of respondents. Use of attitude scales, projective techniques, use of sociometric scales. Interviewer uses a detailed schedule with open and closed questions. Interviewer focuses attention upon a given experience and its effects. Small groups of respondents are interviewed simultaneously. Used as a survey technique for information and for discerning opinion; may also be used as a follow up of questionnaire. Cross sectional collection of data for intensive analysis, longitudinal collection of data of intensive character.
3. Laboratory Research	Small group study of random behaviour, play and role analysis	Use of audio-visual recording devices, use of observers, etc.

Research methods can be put into the following three groups:

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

- Research methodology is a way to systematically solve the research problem.
- It may be understood as a science of studying how research is done scientifically.
- know which of these methods or techniques, are relevant and which are not, and what would they mean and indicate and why.
- understand the assumptions underlying various techniques and they need to know the criteria by which they can decide that certain techniques and procedures will be applicable to certain problems and others will not.
- it is necessary for the researcher to design his methodology for his problem as the same may differ from problem to problem

The scientific method is, thus, based on certain basic postulates which can be stated as under:

1. It relies on empirical evidence;
2. It utilizes relevant concepts;
3. It is committed to only objective considerations;
4. It presupposes ethical neutrality, i.e., it aims at nothing but making only adequate and correct statements about population objects;
5. It results into probabilistic predictions;
6. Its methodology is made known to all concerned for critical scrutiny and for use in testing the conclusions through replication;

Criteria of Good Research

1. The purpose of the research should be clearly defined and common concepts be used.
2. The research procedure used should be described in sufficient detail to permit another
 - researcher to repeat the research for further advancement, keeping the continuity of what
 - has already been attained.
3. The procedural design of the research should be carefully planned to yield results that are as objective as possible.
4. The researcher should report with complete frankness, flaws in procedural design and estimate their effects upon the findings.
5. The analysis of data should be sufficiently adequate to reveal its significance and the methods of analysis used should be appropriate. The validity and reliability of the data should be checked carefully.
6. Conclusions should be confined to those justified by the data of the research and limited to those for which the data provide an adequate basis.
7. Greater confidence in research is warranted if the researcher is experienced, has a good reputation in research and is a person of integrity

In other words, we can state the qualities of a good research as under:

1. Good research is systematic: It means that research is structured with specified steps to be taken in a specified sequence in accordance with the well defined set of rules. Systematic characteristic of the research does not rule out creative thinking but it certainly does reject the use of guessing and intuition in arriving at conclusions.
2. Good research is logical: This implies that research is guided by the rules of logical reasoning and the logical process of induction and deduction are of great value in carrying out research. Induction is the process of reasoning from a part to

the whole whereas deduction is the process of reasoning from some premise to a conclusion which follows from that very premise.

- In fact, logical reasoning makes research more meaningful in the context of decision making.
3. Good research is empirical: It implies that research is related basically to one or more aspects of a real situation and deals with concrete data that provides a basis for external validity to research results.
 4. Good research is replicable: This characteristic allows research results to be verified by replicating the study and thereby building a sound basis for decisions.