



Research Methodology: An Introduction




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What is research?

Research is a careful and detailed study into a specific problem, concern, or issue using the scientific method. Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic. In fact, research is an art of scientific investigation. Some people consider research as a movement from the known to the unknown. It is the pursuit of truth with the help of **study, observation, comparison and experiment**. In short, the search for knowledge through objectives systematic method of finding solution to a problem is research.



“Research comprises defining and redefining problems, formulating hypothesis or suggested solutions, collecting, organising and evaluating data, making deductions and reaching conclusions; and at last carefully testing the conclusions to determine whether they fit the formulating hypothesis”

-Clifford Woody



Objectives of research

- To gain familiarity with a phenomenon or to achieve new insights into it (studies with this object in view are termed as *exploratory or formative research studies*)
- **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*)
- 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*)
- To test a hypothesis of a casual relationship between variables (such studies are
- known as *hypothesis-testing research studies*)

Criteria of Good Research

- The purpose of the research should be clearly defined and common concepts be used.
- The research procedure used should be described in sufficient detail to permit another researcher to repeat the researcher for further advancement, keeping the continuity of what has already been attained.
- The procedural design of the research should carefully planned to yield results that are as objective as possible. The researcher should report with complete frankness, flaws in procedural design and estimate their effects upon the findings.
- 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 .
- 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.
- Greater confidence in research is warranted if the researcher is experienced, has a good reputation in research and is a person of integrity.



Qualities of good Research:

- **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.
- **Good research is logical:** This implies that research is guided by the rules of logical reasoning and the logical process of induction are of great value us carrying out research.
- **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.
- **Go o d r e s e a r c h i s r e p l i c a b l e:** T h i s characteristics allows research results to be verified by replicating the study and thereby building a sound basis fir decisions.

TYPES OF RESEARCH

- **Descriptive Research**
- **Analytical Research**
- **Applied Research**
- **Fundamental Research**
- **Quantitative Research**
- **Qualitative Research**
- **Conceptual Research**
- **Empirical Research**
- **Some other Types of Research**



Descriptive Research

- It includes survey fact-finding enquires of different kinds. The major purpose of descriptive research is description of the state of affairs as it exists at present. In social science we quite often use the term *Ex post facto* research for descriptive research studies. The main characteristic of this method is that researcher has no control over the variables; he can only report what has happened or what is happening.
- Most *ex post facto* research projects are used for descriptive studies in which the researcher seeks to measure such items as, **for example**, frequency of shopping, preferences of people, or similar data. *Ex post facto* studies also include attempts by researchers to discover cause even when they cannot control the variables.
- The methods of research utilised in descriptive research are survey methods of all kinds, including comparative and correlational methods.

Analytical Research

- In analytical research, the researcher has to use facts or information already available, and analyse these to make a critical evaluation of the material.



Applied Research

- It aims at finding a solution for an immediate problem facing a society or an industrial/business organisation.
- Research aimed at a certain conclusions facing concrete social or business problem.
- Research to identify social, economic or political trends that may affect a particular institution, marketing research, evaluation research are examples.
- The central aim of applied research is to discover a solution for some pressing practical problems, whereas basic research is directed towards finding information that has a broad base of applications and thus, adds to the already existing organised body of scientific knowledge.

Fundamental Research

- It is mainly concerned with generalisations and with the formulation of a theory.
- Gathering knowledge for knowledge's sake.
- Research concerning some natural phenomenon or relating to pure mathematics.
- Research concerning some natural phenomenon or relating to pure mathematics.
- Similarly, research concerning human behaviour carried on with a view to make generalisations about human behaviour.



Quantitative Research

- It is based on the quantitative measurements of some characteristics.
- It is applicable to phenomena that can be expressed in terms of quantities.

Qualitative Research

- It 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(i.e., why people think or do certain things)
- This type of research aims at discovering the underlying motives, desires, using in depth interviews of the purpose.
- It is specially important in the behavioural sciences where the aim is to discover the underlying motives of human behaviour.
- Through such research we can analyse the various factor motivate people to behave in a particular manner
- While doing such research, one should seek guidance from experimental psychologist.

Conceptual Research

- It is related to some abstract idea's or theory. It is generally used by philosophers and thinkers to develop new concepts or to reinterpret existing ones.

Empirical Research

- It 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.
- We can also call it as experimental type of research.
- In such a research it is necessary to get facts at firsthand, at their source, and actively to go about doing a certain things to stimulate the production of desired information.
- The researcher must first provide himself with a working hypothesis or guess as the probable results.
- This research is appropriate when proof is sought that certain variables affect other variables in a one way.
- Evidence gathered through experiments are considered to be the most powerful support possible for testing given hypothesis.

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 factors.
- **Historical research** is that which utilises 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 she proceeds. And I prepared to conceptualise 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 since it is a scientific method of providing executive departments with a quantitative basis for decisions regarding operations under their control.

References

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