

Paper-1 Research Methodology.

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Types of Research.

There are different approaches to research as defined or discussed by various authors. Some classifications are

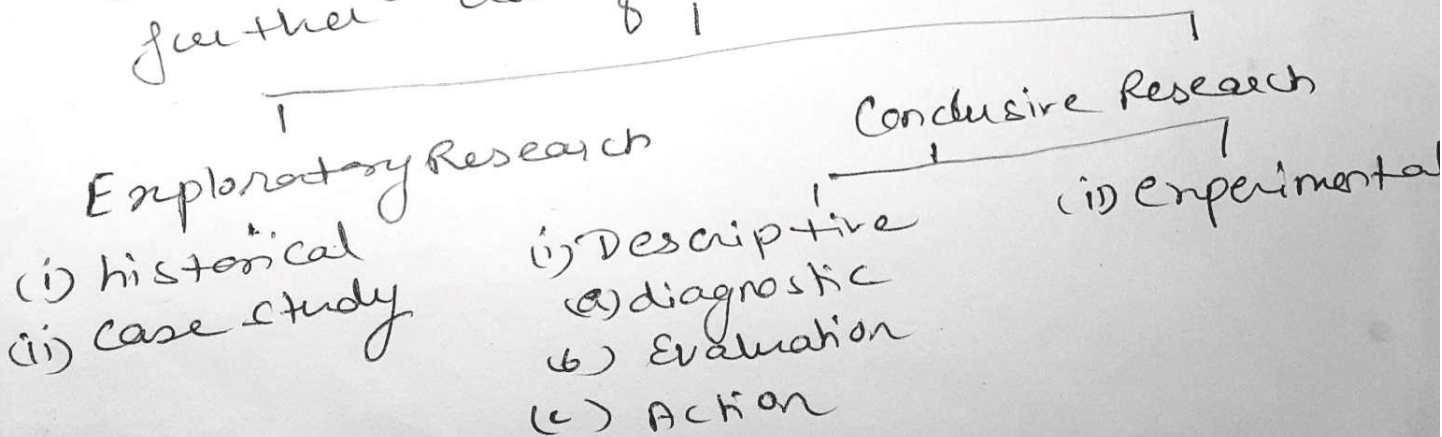
1) on Basis of approach/Purpose or nature of research work.

- a) Pure / Fundamental or Theoretical Research
 - basic or original nature of research.
 - discovery of new things or developing or refinement of existing theory.

b) Applied Research →

- Findings of pure research leads to many scientific and technological inventions.
- It is conducted to test the empirical content or assumption or validity of a theory under certain conditions.

2) On basis of fact that main purpose of research is to make advancement in existing knowledge, research may be further classified as



~~Exploratory Research~~ Exploratory Research - This means, just (to explore) a general subject. The study is of a problem which is new or little known. It often happens that a decision-maker is grappling with a broad and poorly defined problem e.g. the doctor makes initial investigations of a patient suffering from an unknown disease for getting some clues for identifying it. Attempt to secure better definition by analytical thinking may prove to be a wrong approach as it may lead to substantive answer to a wrong question. Exploratory research follows a formal approach as it pursues several possibilities simultaneously. Its approach is of curiosity type. This can be sub-classified as

- a) Historical approach
- b) Case-study approach

Purpose of Exploratory Research is

- to generate new ideas
- to gather information for clarifying concepts
- to determine if it is feasible to attempt a study
- to increase the researcher's familiarity with the problems and
- to formulate a given problem precisely

It is to be noted that exploratory research does not aim at testing a hypothesis. Daniel Katz says, "It is to see what is there rather than to predict the relationship that will be founded". But it should be so designed that definite information is provided to the set of research objectives.

Need for Exploratory Research

Social science is a relatively recent field. Research workers are few and a lot of research work needs to be done. Most existing theories in social sciences are either too general or too specific to provide real guidance for any empirical research. Hence, exploratory research is necessary to get initial insight into the problems for the purpose of formulating them for more precise investigations. Hence, it is also known as 'Formative Research'.

- a) Historical Approach

Seltiz and others have suggested three steps approach for exploratory study, namely

- i) a review of pertinent literature
- ii) an experience survey and

iii) an analysis of insight stimulating 'cases'

Some authors have combined all these three under two approaches of study i.e.

- (a) Historical Approach and (b) Case Study Approach

1 (a) Historical approach is followed when a research is based on historical data. Historical research depends upon observations, which are generally not repetitive. It involves intensive use of library material, historical records and patience of the researchers. This leads to a number of clues for further investigation that will advance research. Usually no pre-hypothesis is formulated. The interpretation of research data depends on the researcher himself in line with his own objective formed. It is, rather, difficult to disprove this hypothesis.

Such an approach is made by Historians, Psychiatrists, Literary men and Social Scientists. This approach has its own advantages and disadvantages.

Advantages

- Historical approach makes it possible to fill the gap of making research possible and meaningful on problems that would have, otherwise, remained unexplored.
- Since historical data is non-repetitive, this approach serves as a better way to researcher whose problems are concerned with historical records.

Disadvantages

- Past situations cannot be matched to existing situations as the socio-economic, political etc. factors are no longer the same.
- This approach tends, on the part of a researcher, to generalise the results beyond reasonable limits thereby misleading to understand the historical process.

b) **Case Study Approach**

Case Study Approach has been a recent development in research. In an unexplored area of study, an intensive study of some selected cases can yield stimulating insights. It involves a deeper investigation of a single unit - a family an individual, an institute, a firm, a district or a community or a single event for an investigation. For example, the Govt. of India's Public Account Committee decides periodically one manufacturing firm out of many in one of the fields of production and carries out extensive study in it from various angles. Anthropologists have brought profound relationship between the individual and the society in the study of primitive cultures. Such a case study approach has been developed essentially as a problem solving technique and also suggests a device for improvement in various dimensions. It aims at studying everything about something rather than something about everything.

The end of an exploratory research comes

- a) either when the researcher finds that further research is not presently possible on the problem,
- b) or, he succeeds in identifying the major dimensions of the problems. In the later case, the researcher has to plan the Research Design.

c) **Conclusive Research**

Exploratory research gives rise to several hypotheses which will have to be tested for drawing definite conclusions. These conclusions, when tested for validity, lay the structure for decision making. Conclusive research is used for the purpose of testing the hypothesis generated by exploratory research. Conclusive research can be either of

- a) Descriptive approach
- b) Experimental approach

(e) **Descriptive Approach**

It is the simplest type of research which is more specific than exploratory research. It focuses on particular aspects or dimensions of the problem studied. It is a fact finding investigation with adequate interpretation and has been recently developed in the field of investigation. As the name suggests, it is designed to describe something. It seeks to describe a field or a problem by use of one or more methods of observation i.e. by interviewing or with the help of questionnaires. The approach is mostly directed

towards identifying various characteristics of a research problem and to create observations conclusive to further research. Some applications are - characteristics of users of a given product, the number and type of people who saw a particular T.V. serial.

Application of Descriptive Approach

All problems do not lend themselves to descriptive study. The method can be applied if,

- i) the problem is describable and not arguable
- ii) the data may be amenable to an accurate, objective, reliable and significant study
- iii) valid standards can be developed for standards
- iv) it can itself subject to variable procedure of collection and analysis of data.

Objective of Descriptive Approach

The study aims at identifying the various characteristics of a problem, institution or a community under study; but it does not deal with the testing of a hypothesis. The domain of investigation is properly specified and the research questionnaire etc. is conversed within this domain. In this, the skill of the researcher and also his intelligence are at stake to frame the questionnaire and also to have elicit information of accurate nature from various responses. The information collected should be useful for explanation, prediction and awareness. Some of the advantages and disadvantages are as follows :

Advantages

- Researchers and respondents come close enough to make research study effective.
- Existing theories and laboratory findings can easily be put to test through empirical observations.
- It also helps in identifying factors that may explore fresh opportunities of experimental research.
- It provides valuable guidance in providing facts needed for planning social action programmes.

- In the hands of an inexperienced researcher, implausible interpretations are put forward.
- It is a time consuming effort.
- Since it is a mutual effort, ignorant, illicit respondents pose problem of indifference, inhibitions and lack of awareness.
- The researcher may make description and end itself. It must lead to discovery of facts.

Diagnostic Study

It is similar to descriptive study and is directed towards discovering what is happening, why it is happening and what can be done about it. It identifies the causes, of the problems and the possible solutions for the same. For example, do more villagers vote for a particular party than city dwellers? Are persons from rural area better suited for manning rural bank branches? The features for such diagnostic approach are as follows :

- It is directly connected with causal relationships and with implications of actions than a descriptive approach.
- It is a step further than descriptive approach as it discovers and exploits reasons for occurrence and actions hereafter.
- Unlike descriptive approach, it is directed by hypothesis.
- It is not possible in areas where knowledge is not advanced enough to make possible adequate diagnosis. The researcher has not limited his studies to descriptive studies.

Evaluation Study

It is a type of applied research. It is used to assess the effectiveness of social or economical programmes or to assess the impact of development project. The illustrations include family planning schemes or irrigation project. Such man defines evaluation as "determination of the results attained by some activity (a programme, a drug or a therapy or an approach) designed to accomplish some valued goal or

objective." It, therefore, assesses the quality and quantity of an activity and its performance, and so specifies its attributes and conditions required for its success. It is also concerned with a kind of change the programme views as desirable.

Action Research

It is also a type of evaluation study. It is a concurrent evaluation study of an action programme for solving a problem or improving an existing situation. Examples consist of land reform programming, agricultural extension programmes, social and welfare, HRD programme, managerial improvement programmes, rural development programme for improving quality of life in factories, offices, etc.

b) Experimental Approach

It is based on scientific methods for studying causal relations studied under controlled conditions. It means the experiments will create situations to obtain particular data needed and can measure it accurately. It is designed to assess the effects of particular variable on a phenomenon by keeping other variables constant or under controlled conditions. It is possible, in this case, to explain variations in an explained variable through the changes made in explanatory variables. Experimental approach resembles scientific methods as far as model building approach is concerned to explain variations in dependent variable as a result of change that occurs in the set of independent variables. It gives an idea about how much variation can be explained by this model and hence provides an opportunity to researchers to look for plausible explanation for that part of variation which the model does not explain. For example, Agricultural Productivity (Crop yield per hectare) and influencing factors like soil fertility, quality of seed, type and level of manure etc.