

# DIFFERENT RESEARCH DESIGNS

Research designs may be categorized as **research design in case of**

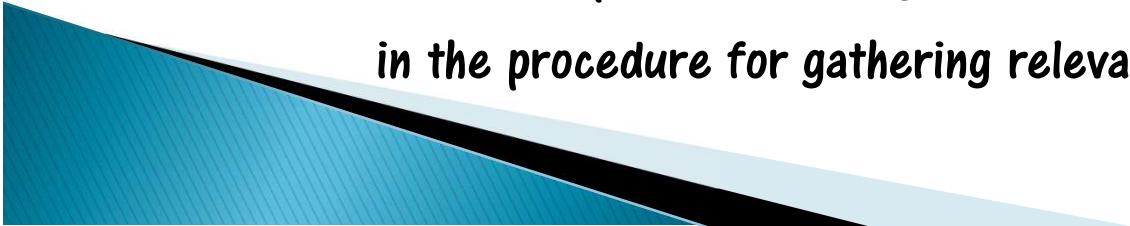
- **Exploratory research studies**
- **Descriptive and diagnostic research studies**
- **Hypothesis testing research studies**

# Research Design for Exploratory Research

Also called as Formulative research studies. Main purpose of such studies is that of formulating a problem for more precise investigation or of developing a working hypotheses from an operational point of view.

*The major emphasis in such studies is on the discovery of ideas and insights.*

Research design appropriate for such studies must have *inbuilt flexibility* so that

- many different facets of a problem may be considered as and when they arise and come to the notice of the researcher.
  - The research problem, broadly defined initially, is transformed into one with more precise meaning in such studies which may necessitate changes in the procedure for gathering relevant data.
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# Research Design for Exploratory Research

*Three methods* are common in exploratory research:

## *1. The survey of concerning literature*

Researcher may review and build upon the work done by others by

- Review of hypotheses stated by earlier workers
- Evaluation of such hypotheses as basis for further research
- Consideration of whether the already stated hypothesis suggest new hypothesis

In cases where hypotheses has not yet been formulated, researcher's task is to review the available material for deriving relevant hypotheses from it.

Attempt may be made to apply concepts and theories developed in different research contexts to researcher's area of interest.

Bibliographical survey of studies may be made for formulating the problem precisely.

# Research Design for Exploratory Research

**Three methods** are common in exploratory research:

## 2. Experience survey

**Survey of people** who have had practical experience with the problem to be studied.

Objective is to obtain insight into the relationships between variables and new ideas relating to the research problem.

**Careful selection of respondents** is essential to ensure a representation of different types of experience.

Respondents should be systematically **interviewed using an interview schedule**.

**Interview must ensure flexibility** – respondents must be allowed to raise issues and questions previously not considered by the investigator.

Often considered desirable to send a copy of the questions to be discussed to the respondents in advance – advance thinking facilitates more effective contribution from respondents.

# Research Design for Exploratory Research

Three methods are common in exploratory research:

## 3. *Analysis of insight -stimulating examples- Case Studies*

Particularly suitable in areas where there is little experience to serve as guide.

Consists of intensive study of selected instances of the phenomenon in which one is interested.

For the purpose method may be examination of the existing records or unstructured interviewing

Attitude of the investigator, the intensity of the study and the ability of the researcher to draw together diverse information into a unified interpretation enables effective insight.

Cases that provide sharp contrasts or have striking features are considered more useful for study.



# Research Design for Descriptive and Diagnostic Research

**Descriptive research studies** are those which are concerned with describing the characteristics of a particular individual, group or situation whereas **Diagnostic research studies** determine the frequency with which something occurs or its association with something else. Aim is to determine the cause of certain situation and phenomenon. Problem solving approach

- From the point of view of research design, both type of studies share common requirements.
- Aim is to obtain complete and accurate information, hence procedure has to be carefully planned.
- What is to be measured, methods to be adopted for measurement and clearcut definition of 'population' to be studied is necessary.
- Research design should have enough provision for protection against bias and must maximise reliability
- Due concern for economical completion of the research study has to be incorporated.

# Research Design for Descriptive and Diagnostic Research

**DESIGN SHOULD BE RIGID AND NOT FLEXIBLE**

The research design should focus on:

1. **Formulating the objective of the study** (What the study is about and why is it being made?)

This ensures relevance of collected data.

2. **Designing the methods of data collection** –structured instruments used

Which of the methods of gathering data – observation, questionnaires, interviewing, examination of records – will be adopted

While designing data collection procedure adequate **safeguards against bias** and unreliability must be ensured.



# Research Design for Descriptive and Diagnostic Research

**DESIGN SHOULD BE RIGID AND NOT FLEXIBLE**

Questions must be **well examined and made unambiguous**, interviewers must be instructed not to express their own opinion, and observers must be trained so that they uniformly record a given item of behaviour

**IT IS ALWAYS DESIRABLE TO PRETEST THE DATA COLLECTION INSTRUMENTS  
BEFORE FINALLY USING THEM**



# Research Design for Descriptive and Diagnostic Research

The research design should focus on:

## 3. *Selecting the sample*

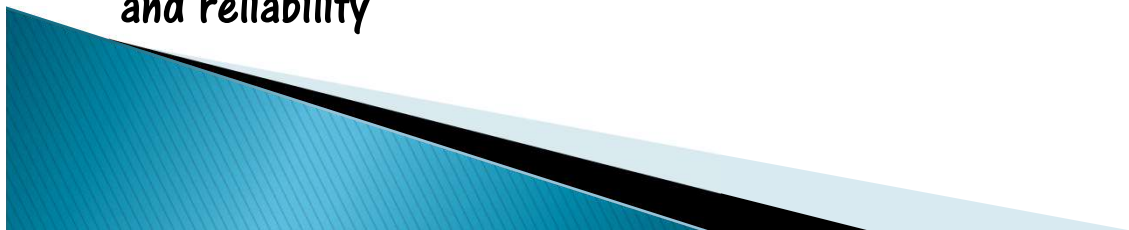
*In most of such studies, statements about the population are made on basis of sample analysis*

*Sample has to be designed*

*Problem of designing sample should be tackled in such a fashion that the samples may yield accurate information with minimum amount of research effort*

## 4. *Collecting the data* (Where can the required data be found and with what time period should the data be related?)

*As data are collected, they should be examined for completeness, comprehensibility, consistency and reliability*



# Research Design for Descriptive and Diagnostic Research

*The research design should focus on:*

## **5. Processing and analysing the data**

*Includes coding the interview replies, observations etc., tabulation of data, and performing several statistical computations*

*Processing and analysing procedure should be planned in detail before actual data collection is started*

## **6. Reporting the findings**

*Layout of the report needs to be well planned*

*All things related to the study may be well presented in simple and effective style.*



# Research Design for Explanatory – Hypothesis Testing Research

*These studies are those where the researcher tests the hypotheses of causal relationships between variables*

- Further to seeking answers to questions '**what**', '**when**', '**where**', '**how many**' with regard to a situation/ event/ person or community as in descriptive research, Explanatory research design attempts to seek answer to questions like '**why**', '**how**' and '**what will be**'.
- Often refers to experimental designs in natural sciences
- In social sciences – non-experimental
- Requires procedures which
  - reduce bias
  - increase reliability, and
  - Permit drawing inferences about causality

Research design	Descriptive Research	Explanatory Research
Research questions	What, where, when, how many/much	Why, how, what will be
Strategy	Case Study and Survey method	Survey and Experimental Method
Nature of Analysis	Explores correlation/ association among variables	Test of validity of observed relationship hence c/a hypothesis testing research
Interpretation and analysis	Univariate analysis	Bi-variate or multivariate analysis
Tools of data collection	Interview, observation and questionnaire	Interview, observation, questionnaire and experiment

**Aim is to**

- **Explain**
- **Generalize**
- **Predict**

