

# Meaning of Research Design

A detailed outline of how an investigation will take place. It typically includes how data is to be collected, what instruments will be employed and the intended means for analyzing the data collected.

- Purpose of research
- Desire to get a Doctrate degree
- To get respectability
- To get inteclectual joy of doing some creative work
- Help full in job promotions

- Significance of research
- Doubt is better than over confidence, it leads to enquiry and inquiry leads to inventions
- Research is the result of inquistive nature of human being.
- It provide base for all govt. policies

# Research process

- Formulating the research problem
- Extensive literature survey
- Development of working hypotheses
- Preparing the research design
- Determining sample design
  - Deliberate sampling (convenience sampling, purposive or non probability sampling)
  - Simple random sampling
  - Systematic sampling
  - Stratified sampling make homogeneous groups
  - Quota sampling (non probability)
  - Cluster sampling (sample size must be larger than the simple random sample so to ensure the same level of accuracy)
  - Multi stage sampling.

- Collecting the data
- Execution of the project
- Analysis of data
- Hypotheses testing
- Generalisation and interpretation
- Preparation of report or thesis

- Imp concepts relating to research design
- Dependent and independent variable
- Extraneous variable independent variable which are not related to the purpose of the study but may affect the dependent variable.
- For ex role of teacher(independent) and achivement of student(dependent) intelligence also affects but it extraneous

- 
- Exploratory or formulative research design

Overall design	flexible	rigid
Sampling design	Non probability	probability
Statistical design	No preplanned design for analysis	Preplanned design for analysis
Observational design	Unstructured instruments for collection of data	Structured or well thought out instruments for collection of data
Operational design	No fixed decisions about the operational procedures	Advanced decisions about operational procedures.