

**ACCOUNTING & FINANCE LAB
DEPARTMENT OF COMMERCE
RAMANUJAN COLLEGE
UNIVERSITY OF DELHI**

**A 20 HOURS CERTIFICATE COURSE
ON
'BASICS OF RESEARCH'**

**DR. ANSHIKA AGARWAL
ASSISTANT PROFESSOR
RAMANUJAN COLLEGE
UNIVERSITY OF DELHI**

INDEX

- Concept of Research Design
- Importance of Research Design
- Various Types of Research Design
- Choosing an Appropriate Research Design
- Data: Meaning, Types & Sources



RESEARCH DESIGN

- *Arrangement* of conditions for collection and analysis of data.
- It *Aim* to combine relevance to the research purpose with economy in procedure.
- *Conceptual Structure* within which research is conducted.
- It is the *blueprint* for the collection, measurement and analysis of data.



QUESTIONS IT TARGET???

- What is the **study about**?
- Why is the study **being made**?
- Where will the study be **carried out**?
- What **type of data** is required?
- Where can the required **data be found**?
- What **periods of time** will the study include?
- What will be the **Sample Design**?
- What **techniques of data collection** will be used?
- How will the data be **analyzed**?
- In what **style the report** be prepared?



SUM UP!!!

- ***The Sampling Design:*** Methods of selecting items to be observed for the given study.
- ***The Observational Design:*** The conditions under which the observations are to be made.
- ***The Statistical Design:*** Items to be observed and ways to analyze it.
- ***The Operational Design:*** The techniques of sampling, statistics and others to be carried out.



RESEARCH DESIGN DEPENDS UPON

- The means of obtaining information.
- The *availability and skills* of the researcher and his/her staff, if any.
- The *objective* of the problem to be studied.
- The *nature* of the problem to be studied.
- The availability of *time and money* for the research work



NEED FOR RESEARCH DESIGN

- It helps in *smooth sailing* of the various research operations.
- It helps in *yielding maximal information with minimal expenditure* of effort, time and money.
- Advance planning for the methods to be adopted for collecting the relevant data and techniques to be applied.



NEED FOR RESEARCH DESIGN

- Cost Saving
- Maximum Information
- Avoid Errors
- Brings Reliability
- Avoids Misleading Conclusions
- Gives Efficiency
- Removes Flaws
- Reduce inadequacies
- Scope for critical evaluation




FEATURES OF A GOOD RESEARCH DESIGN

- Flexible
- Appropriate
- Efficient
- Economical
- Minimizes Bias
- Maximizes the Reliability
- Maximal Information
- Accuracy



SOME CONCEPTS

- **Concept:** Abstract ideas generalised from particular facts associated with certain events, objects, conditions, stimulations or phenomenon.
 - **Construct:** Concept invented or constructed by researchers for special scientific purposes.
 - **Attribute:** It is a characteristic or feature of an object (Person, thing, etc). Eg: Profitability of a firm.
 - **Variable:** It is a logical set of attributes. Eg: Profit After Tax
- 

SOME CONCEPTS

- ***Dependent and Independent Variables:*** Eg. Height depends upon Age.
- ***Extraneous Variable:*** Independent Variable not related to purposed study but impact dependent variable.
- ***Control Variable:*** To minimize the influence of extraneous variables.



RESEARCH DESIGN

```
graph TD; RD[RESEARCH DESIGN] --> ERD[EXPLORATORY RESEARCH DESIGN]; RD --> CRD[CONCLUSIVE RESEARCH DESIGN]; CRD --> DR[DESCRIPTIVE RESEARCH]; CRD --> CR[CAUSAL RESEARCH]; DR --> CSD[CROSS-SECTIONAL DESIGN]; DR --> LD[LONGITUDINAL DESIGN];
```

**EXPLORATORY
RESEARCH
DESIGN**

**CONCLUSIVE
RESEARCH DESIGN**

**DESCRIPTIVE
RESEARCH**

**CAUSAL
RESEARCH**

**CROSS-SECTIONAL
DESIGN**

**LONGITUDINAL
DESIGN**

EXPLORATORY RESEARCH STUDIES

- Main purpose is to formulate a Research Problem for more Precise Investigation, or;
- Developing the working hypothesis from an operational point of view.
- Preferably the Research Design need to be Flexible.



STEPS

- *Define and conceptualize* the research problem to be investigated.
- *Explore and evaluate* the diverse and multiple research opportunities.
- Assist in the *development and formulation* of the research hypothesis.
- *Operationalize and define* the variables and constructs under study.
- Identify the *possible nature of relationship* that might exist between the variables under study.
- Explore the external factors and variables that might impact the research.



- Simple and Less Expensive.
- Previous Published work is evaluated.
- Usefulness of Previous studies is evaluated.

- People who have practical experience.
- New ideas related to the research problem.
- Questions to be mailed
- Time must be given
- Loosely structured and flexibility

- Individuals under study.
- Generally, a group of 6 to 10 individuals.
- Informal discussions.
- Verbal and Non-Verbal content of the discussion



CONCLUSIVE RESEARCH DESIGN

- More Structured Design.
- A Comprehensive and Focused Research Questions.
- General and Specific Hypotheses.
- More clarity on the framework and methodology to be adopted.



DESCRIPTIVE RESEARCH DESIGN

- **Formulating** the objective of the study (what the study is about and why it is being made?)
- **Designing** the methods of data collection (what techniques of gathering data will be adopted?): Observation, Questionnaires, interviewing, examination of records, etc
- Selecting the **sample** (how much material will be needed?): To Yield Accurate Information.
- **Collecting** the data (where can the required data be found and with what time period should the data be related?): Coding, Tabulating, Economical Aspects to be considered.
- **Processing** and **Analyzing** the data: Statistical Computations
- **Reporting** the findings: Communicating the findings.



CAUSAL RESEARCH DESIGN

- To check Causal Relationships.
- Cause-&-Effect Relationships.
- Reduce Bias and Increase Reliability.



CROSS-SECTIONAL STUDIES

- Single moment in time.
- On a section of respondents.
- Eg: A US based ice cream company wanted to find out how to target the Indian consumer to indulge in high-end ice-creams.



LONGITUDINAL STUDIES

- Population is studied over a stretched period of time.
- Repeated measurement of the group over fixed intervals of time.
- Eg.: Investment pattern of government employees in stock market.



POINTS TO BE CONSIDERED:

- Completeness
- Comprehensibility
- Consistency
- Reliability



DATA

- Raw facts and figures.
- Primary or Secondary Data
- Qualitative or Quantitative Data
- Discrete or Continuous Data
- Cross-Sectional, Longitudinal or Panel Data



COLLECTION OF PRIMARY DATA

Popular Techniques:

- Observation Method
- Interview Method
- Questionnaires Method
- Etc



COLLECTION OF SECONDARY DATA

- Internal Sources of Data

- > Company Records
- > Employee Records
- > Sales Data
- > Financial Statements
- > Etc



COLLECTION OF SECONDARY DATA

- External Sources of Data

- > Published Data: Government Sources or Non-Government Sources

- > Unpublished Data



GOVERNMENT SOURCES

- Census Data
- Statistical Abstract India-Annually
- White paper on National Income
- Annual Survey of Industries
- Handbooks of RBI
- Foreign Trade of India Monthly statistics
- WPI
- Economic Survey
- National Sample Survey
- Etc



NON-GOVERNMENT SOURCES

- Books and Periodicals
- Directories
- Company's Financial Statements
- Survey's of Private Organisations
- Databases: Ace Equity, Prowess, Capitaline, to mention few
- Etc



CROSS-SECTIONAL DATA

- Data of any subject at the one point or period of time.
- Generally, concerned with what happened at particular times, or
- To make comparisons
- Unsuitable to measure changes from period to period.
- Eg: Perspective of employees towards their new Boss.



LONGITUDINAL STUDY

- A study that involves repeated observations over an extended fixed period.
- A fixed sample of population elements measured repeatedly.
- The time period ranges from weeks to months to quarters to years
- Example: Market trends, product feedback, employee engagement.



PANEL DATA

- It is defined as a study that collects repeated information on the same subjects at different points in time.
- Example: The process of demographic change, companies financial structure.



BOOKS

- Research Methodology: Concepts and Cases by Deepak Chawla and Neena Sondhi
- Research Methodology: Methods and Techniques by C R Kothari and Gaurav Garg
- Research Methodology by CA Ruchi Kansil and Dr. Karishma Gulati Trehan
- Marketing Research; An Applied Approach by Naresh K. Malhotra and David F. Birks
- Business Research Methods by Donald R. Cooper and Pamela S. Schindler



THANKYOU

