

Major Dimensions of Research - Methods and Analysis

Research Objective

- Exploratory Research
- Descriptive Research
- Predictive
- Explanatory Research

Unit of Analysis

- Individual
- Group
- Organization
- Artifact

Variables

- Independent
- Dependent
- Intervening
- Control

Measurement

- Nominal
- Ordinal
- Interval
- Ratio

Time Dimension

- Cross-sectional Research
- Longitudinal Research
 - Trend Studies
 - Cohort Studies
 - Panel Studies
 - Controlled Case Studies

Measurement Methods

- Direct (See Data Collection)
- Indirect Methods (See Data Collection)

Sampling

- Sample Size
- Random
- Non-Random

Designs

- Experiments
- Surveys
- Field Studies
- Evaluative Research

Data Collection

Direct Methods

- Observation
 - Unstructured
 - Structured
 - Participant as Observer
 - Observer as Participant
 - Non-participant Observer

Questioning

- Interviews
 - Semi-structured
 - Structured Interview Schedule

Questionnaire

- Administered Questionnaire
- Mail Questionnaire

Indirect Methods

- Unobtrusive Measures
- Secondary Data
- Trace Evidence
 - Accretion
 - Erosion

Data Analysis

Number of Variables

- Univariate
- Bivariate
- Multivariate

Analysis Presentation options

- Graphs
 - Pie-Chart
 - Histogram
 - Polygon

Statistics

Type of Statistic

- Non-parametric
- Parametric

Purpose of Analysis

Description

- Frequencies
- Central Tendency
 - Mode
 - Median
 - Mean

Dispersion

- Inter-quartile Deviation
- Range
- Coefficient of Variation
- Variance

Symmetry

- Skewness

Peakedness

- Kurtosis

Inference

Single Variable

- Goodness of Fit Chi Square

Bivariate

- Chi Square Test for Association
- Student's T
- Pearson's Product Moment
 - Correlation Coefficient

ANOVA One-Way

Regression

Multivariate

- Partial-Correlation
- ANOVA N-Way
- Multiple Regression