

Research Methods

14MBA23

Module 1

Objectives of Course

- To provide an understanding on the concepts of research methods.
- To expose the students to the role that research plays in business decisions.

Meaning

- Research in common man's language
“ Search for knowledge”
- Research is an art of scientific invest
- It is also a systematic design, collect
and the reporting the findings ad sol
problems of business

Definition

- Systematic approach towards problem investigation.

Definition

- According to Robert Ross, “research is an investigation, a recording and a presentation of evidence for the purpose of gaining knowledge.”

Features of Good research

- **Objectivity** : must answer research question
- **Control** : all variables – data, sample
- **Generalisability** : same result with identical method
- **Free from personal bias** :
- **Systematic** :

Features of Research

- ✓ Is essentially an investigation
- ✓ Is related with the solution of a problem
- ✓ It is based on observation or experimental
- ✓ It demands accurate observation or exper
- ✓ In research, the researchers try to find out
unsolved questions
- ✓ It should be carefully recorded and report

Types of Research

- Grouped under two categories
- 1 **Fundamental research**
 - The science of psychology
- 2 **Applied research**
 - Apply the psychology

Types of Research

- **Exploratory research**

- At beginning when the problem is not clearly defined

Eg: sales decline in a company may be due to
inefficient service

price

promotion

quality

Types of Research

- Exploratory research
 - Expert surveys, focus groups, case studies, and observation methods.

Types of Research

- **Descriptive Research**

- It is fact finding investigation.
- Describes the state of view as it is present
- It does not establish cause and effect

Eg: consumption of soft drinks with
socioeconomic character – age, family income

Types of Research

- **Applied research**
 - Deals with real life situation
 - Aims at finding immediate solution to problems.
 - Eg: why the sales decreased during
 - Use of fibre body for cars instead of

Types of Research

- **Pure/ Fundamental or basic**
 - Gathering knowledge

Eg: theory of relativity by Einstein

Types of Research

- **Conceptual Research**

- It is generally used by philosophers
- It is related to some abstract ideas

Eg: ideology of 'isms'

Gandhism

Types of Research

- **Casual Research**

- To determine the cause and effect relationship between the two variables

Eg: effect of advertisement on sales

Types of Research

- **Historical Research**
 - Study of past records and data's

Eg: value of shares of company is the historical research

Types of Research

- **Ex-post facto Research/ Empirical Research**
 - Examination of relationship that exists between independent and dependent variable

Eg: what has happened because of this
what is happening because of this

Types of Research

- **Action research**

- Research is done directly by action
- Geographical location is identified
- Samples are selected
- Response is collected

Eg: test marketing

Types of Research

- **Evaluation Research**

- It is an applied research.
- It is conducted to find out how well programmes are implemented

Eg: “Success of Midday Meal Program”
“Swachh Bharat Abhiyan”

Types of Research

- **Library Research**

- It is done to gather secondary data

Eg: consumption of soft drinks with
socioeconomic character – age, far

Process of Research

1. Defining the research problem and reviewing literature
2. Formulation of hypothesis
3. Research Design
4. Collecting data
5. Analysing data and testing hypothesis
6. Preparation of report and preliminary findings
7. Interpreting and reporting the findings

Research Pro

1. **Problem formulation**
2. **Method of inquiry**
3. **Research method**
4. **Research design**
5. **Select data collection techniques(s**
6. **Sample design**
7. **Data collection**
8. **Analysis and Interpretation**
9. **Findings, conclusions and recomm**
10. **Research report**

1. Defining Research Problem

- Converting Management problem into Research Problem
- M P : want to increase sales of product A
- R P : what is the current the sale of product A

1. Defining Research Problem

- Followings to be considered
 - 1 Determine the objective of the study
 - 2 Consider various Environmental Factors
Purchasing habits, competitors, brand image, market and target customers
 - 3 Nature of the problem
Brand image, not buying, why to competitors product audience?
 - 4 Stating the alternatives
Developing hypothesis

1. Defining Research Problem

- Reviewing the literature

2. Formulation of Hypoth

- A hypothesis is a proposition – a tentative assumption which a researcher wants to test its logical or empirical consequences
- Eg.
- To increase the sales whether to introduce
- Hypothesis: The acceptance of Sachet by c
increase the sales by 20%

Formulating Hypothesis

- Hypothesis are generally concerned with the phenomenon or a relationship between two or more variables.
- We make certain assumptions to about the population being tested- these assumptions are known as Hypothesis.

Formulating Hypothesis

- Null Hypothesis H_0 : introducing sachet w sales by 20%
- *This is tested against*
- Alternative Hypothesis H_1 : introducing sa increase sales
- Decisions to be taken whether Null Hypoth **Accept** or **Reject**

- Error 1
 - Rejecting the null hypothesis when the fa
- Error 2
 - Accepting the null hypothesis when the f

2. Method of In

- **Qualitative – subjectivity:** This is used for those data which cannot be quantified. It is used in exploratory research. Response is subjective and small compare to quantitative research.
- **Quantitative – objectivity :** major of data.

3. Research Methods

- **Experimental :**

extraneous variables are controlled

Eg: Which print advertisement is more effective?
Is it the front page, Middle page

- **Non Experimental:**

cannot control extraneous variables

4. Research Design

*“Specific methods and procedures for gathering
Information needed”*

Based on research method, research design can be classified into three types:

Exploratory – identification of problem

Descriptive – describes characteristics

Causal- predictive, reasons why, relationship

5. Data collection Techniques

- What data to collect?
- How to collect the data?

Secondary:

Primary:

- Communication – questionnaire
- Observation

6. Sample De

- Where the sample is to be selected? - the **population**
- Process of selection – **Probability/Non p**
- Size of the sample – **n?**

7. Analysis and Inte

- Descriptive statistical measures – **c**
percentage, proportion, mean, varia
- Univariate Analysis:
 - Z-test ($n > 30$), t-test ($n \leq 30$), (for con
 - Chi-square goodness of fit test (for

- Bivariate Analysis:
 - Cross tabulation with chi-square (for categorical)
 - Z-test, t-test, ANOVA (for continuous)
 - Chi-square test (for categorical)
 - correlation, regression

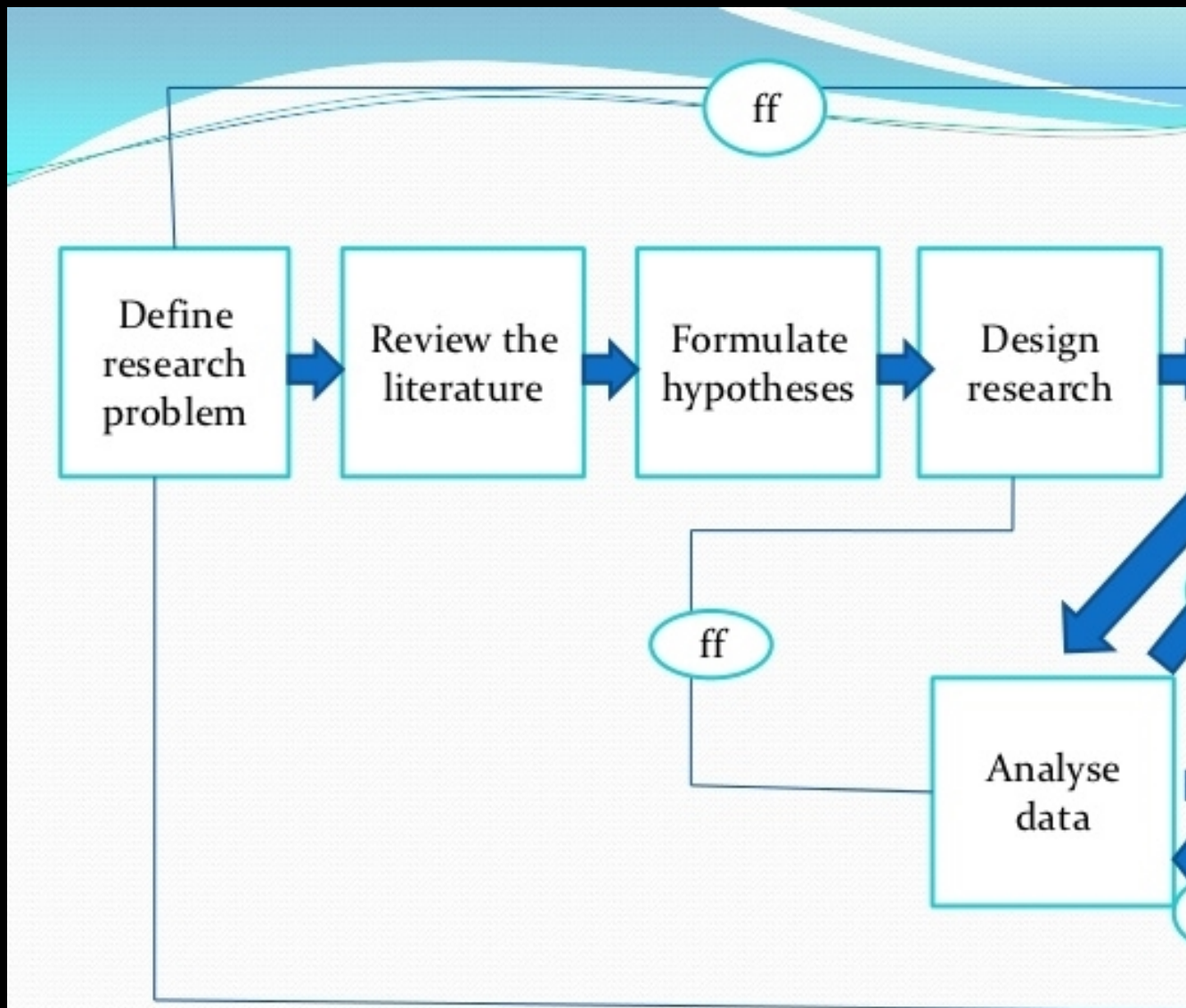
Data Can be analyzed through charts, Graphical representation

8. Research Re

- Written Report

7 STEPS OF RESEARCH PROCESS

- Step One: Define research problem
- Step Two: Review of literature
- Step Three: Formulate hypotheses
- Step Four: Preparing the research design
- Step Five: Data collection
- Step Six: Data analysis
- Step Seven: Interpretation and report writing



Where f = feed back(helps in controlling the sub system

ff = feed forward(serves the vital function of providing criterion

Step One: Define Research

There are two types of research problem, viz.,

- relate to states of nature
- relationship between variables.

Essentially two steps are involved in defining a research problem, viz.,

- understanding the problem thoroughly and
- rephrasing the same into meaningful terms from a different point of view.

Step Two: Review of Literature

- Once the problem is defined, a brief statement should be written down. It is common for a research worker writing a thesis for a PhD to write a synopsis of topic and submit it to a committee or the research board for approval.

Step Three: Formulate Hypothesis

- Formulate hypothesis is tentative assumption in order to draw out and test its logical consequences. Hypothesis should be very limited to the piece of research in hand and to be tested.

The role of the hypothesis is to guide the research, delimiting the area of research and to keep it on the right track.

Step Four: Preparing the Research Design

- The function of research design is to provide a systematic plan for the **collection of relevant evidence** with minimum expenditure of effort, time and money.
- Research purpose may be grouped into four categories, viz., (1) Exploration, (2) Description, (3) Diagnosis, and (4) Experimentation.

Step Five: Data Collection

- Primary data can be collected through:
 - By Observation
 - Through personal interview
 - Through telephone interview
 - By mailing of questionnaires
 - Through Schedules

Step Six: Data Analysis

The analysis of data requires a number of c
operations such as establishment of categ

This stage mainly include :

1. Coding
2. Editing
3. Tabulation

Step Seven: Interpretation Report Writing

Researcher has to prepare the report of work done by him.

Writing of report includes:

1. the preliminary pages;
2. the main text, and
3. the end matter.

Explain various Research A
Business Decision m

- <https://www.youtube.com/watch?v=7AMyRwMC0eo>