

University of Mumbai



M.Sc in Information Technology

Revised Syllabus 2019-2010

PSIT101 & PSIT1P1 - Research in Computing

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Unit I

Introduction

Role of Business Research, Information Systems and Knowledge Management, Theory Building, Organization ethics and Issues

Role of Business Research

- Introduction of need for business research
- Nature of Business research
- Basic and Applied Business research
- Scientific method of conducting research
- Problems and opportunities
- How technology helps in business research

[R1 Chapter 1]

Role of Business Research

Introduction

- Jelly Belly
 - Jelly Belly provides consumers with the incentive of free samples of jelly beans in return for ideas about desirable new bean flavors.
- Starbucks
 - The statistics about coffee demonstrate how research can track trends that may lead to new business opportunities. Starbucks's research also illustrates how research can be used to examine new concepts in progressively more complex stages, setting the stage for a more successful product introduction.
- DuPont
 - DuPont's ability to track employee attitudes allows them to adjust employee benefit packages to maximize satisfaction and reduce employee turnover.

The Nature of Business Research

- The purpose of research is to provide knowledge regarding the organization, the market, the economy, or another area of uncertainty.
- Business research is the application of the scientific method in searching for the truth about business phenomena.

The Nature of Business Research

- Activities of research include
 - defining business opportunities and problems
 - generating and evaluating alternative courses of action
 - monitoring employee and organizational performance.

Basic
Research



Applied
Research



conducted without a specific decision in mind, and it usually does not address the needs of a specific organization



specific business decision for a specific firm or organization



For instance,
a great deal of basic research addresses employee motivation. How can managers best encourage workers to dedicate themselves toward the organization's goals?
From such research, we can learn the factors that are most important to workers and how to create an environment where employees are most highly motivated

Characteristics of Basic Research

1. It is based on the belief 'knowledge for knowledge's sake.'
2. It involves collection and analysis of data to develop or enhance theory.
3. It leads to advancement of knowledge.
4. It takes place in a sterile environment.
5. It is carried out for understanding theoretical relationship between variables.
6. It is explanatory in nature.
7. Its application may or may not have any bearing on any application in the immediate future or even after a long time.
8. Basic research lays down the foundation for the applied science that follows.

Examples of Basic Research

- How did the universe begin?
- What are protons, neutrons, and electrons composed of?
- How do slime moulds reproduce?
- What is the specific genetic code of the fruit fly?

Characteristics of Applied Research

1. Applied research is solution-specific and addresses practical questions.
2. It involves collection and analysis of data to examine the usefulness of theory in solving practical educational problems.
3. It can be explanatory but usually descriptive.
4. It involves precise measurement of the characteristics and describes relationships between variables of a studies phenomenon.

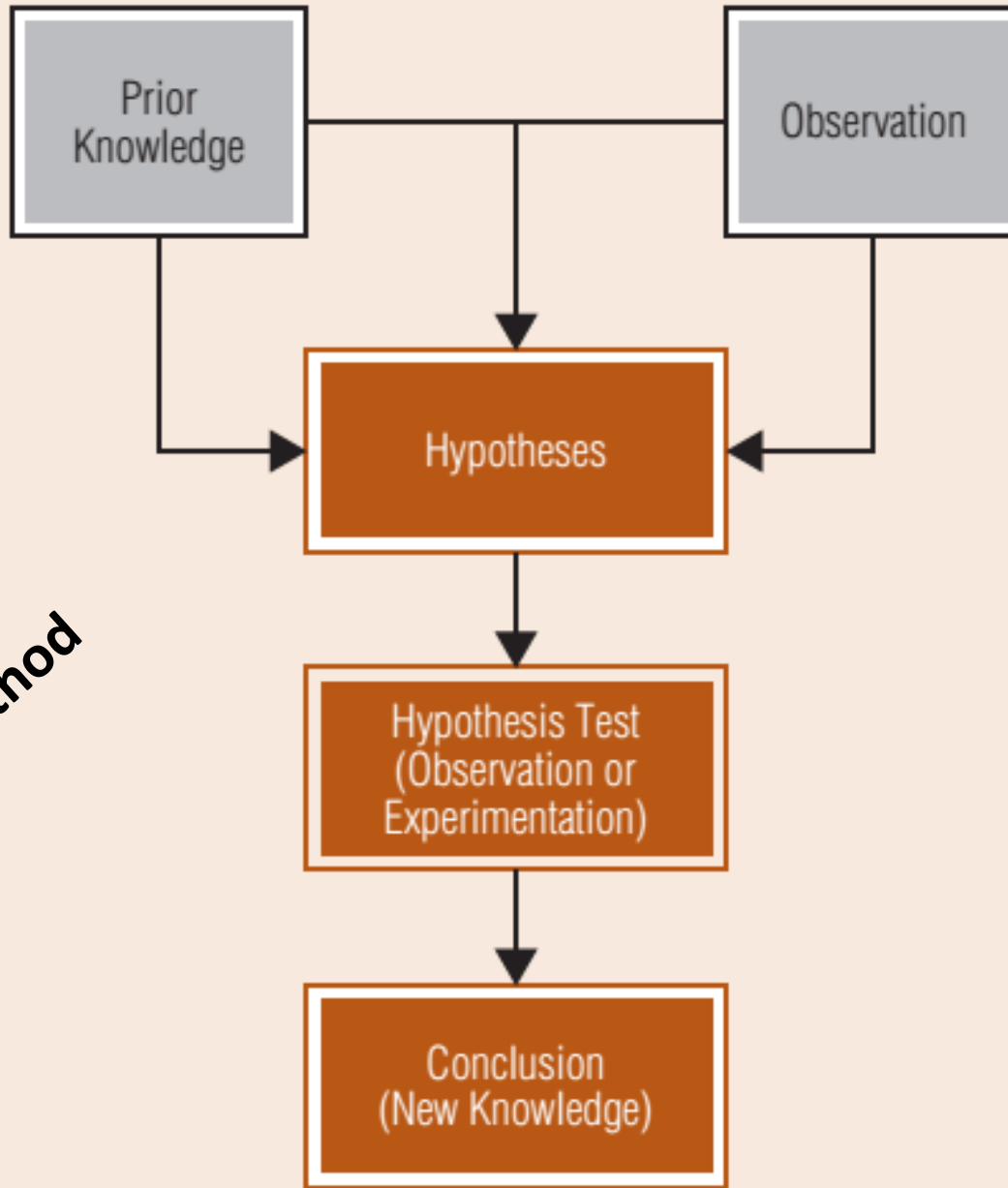
Examples of Applied Research

- Improve agricultural crop production.
- Treat or cure a specific disease.
- Improve the energy efficiency of homes, offices, or modes of transportation.
- To diagnose the very low use of a certain collection in a library.

The Scientific Method

- The scientific method is the way researchers go about using knowledge and evidence to reach objective conclusions about the real world.

The Scientific Method



Managerial Value of Business Research

Product-Oriented Firm

Prioritizes decision making that emphasizes the physical product design, trendiness or technical superiority

Research focuses on technicians and experts in the field.

Example

The fashion industry makes clothes in styles and sizes that few can adopt.

Production-Oriented Firm

Prioritizes efficiency and effectiveness of the production processes in making decisions

Research focuses on line employees, engineers, accountants, and other efficiency experts.

Example

U.S. auto industry's assembly-line process is intent on reducing costs of production as low as possible.

Marketing-Oriented Firm

Focuses on how the firm provides value to customers

Research focuses on customers.

Example

Well-known hotel chains are designed to address the needs of travelers, particularly business travelers.

Managerial Value of Business Research

- Research facilitates effective management
- Benefit of business research – Yogurt
- Research provides information that improves the decision-making process
- development and implementation of a business strategy involves four interrelated stages:
 1. Identifying problems or opportunities
 2. Diagnosing and assessing problems or opportunities
 3. Selecting and implementing a course of action
 4. Evaluating the course of action

1. Identifying Problems or Opportunities

- An organization must determine where it wants to go and how it will get there.
- Business research can help managers plan strategies by determining the nature of situations or by identifying the existence of problems or opportunities present in the organization.

- *The description of the dividend history of stocks in an industry may point to an attractive investment opportunity. Information supplied by business research may also indicate problems.*
- *Employee interviews undertaken to characterize the dimensions of an airline reservation clerk's job may reveal that reservation clerks emphasize competence in issuing tickets over courtesy and friendliness in customer contact.*

2. Diagnosing and Assessing Problems or Opportunities

- Managers need to gain insight about the underlying factors causing the situation.
- If there is a problem, they need to specify what happened and why.
- If an opportunity exists, they may need to explore, refine, and quantify the opportunity.
- If multiple opportunities exist, research may be conducted to set priorities.

3. Selecting and Implementing a Course of Action

- Opportunities may be evaluated through the use of various performance criteria
- A good forecast supplied by business researchers is among the most useful pieces of planning information a manager can have.
- Complete accuracy in forecasting the future is not possible, because change is constantly occurring in the business environment.
- Objective information generated by business research to forecast environmental occurrences may be the foundation for selecting a particular course of action.

4. Evaluating the Course of Action

- Evaluation research is the formal, objective measurement and appraisal of the extent a given activity, project, or program has achieved its objectives.
- Performance-monitoring research refers to research that regularly, sometimes routinely, provides feedback for evaluation and control of business activity.

When Is Business Research Needed?

Time Constraints

Is sufficient time available before a decision will be made?

Yes
→

No ↓

Availability of Data

Is it feasible to obtain the data?

Yes
→

No ↓

Nature of the Decision

Is the decision of considerable strategic or tactical importance?

Yes
→

No ↓

Benefits versus Costs

Does the value of the research information exceed the cost of conducting research?

Yes
→

No ↓

Conduct Business Research

Do Not Conduct Business Research

Business Research in the Twenty-First Century

- Communications Technologies
- Global Business Research