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1. Business Research

Definition

The term research comprises of two words, namely, 're' and 'search'. Generally, re means again and search means to find out. According to Advanced Learner's Dictionary, 'Research is a careful investigation or inquiry specially to search for new facts in any branch of knowledge'.

According to Creswell, 'Research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue'.

From the many definitions, there is general agreement that research

- (i) is a process of enquiry and investigation,**
- (ii) is systematic and methodical**
- (iii) Increases the knowledge.**

These questions may come to your mind:

- I. What are the common conditions prevalent among business students?**
- II. What are the possible causes of such conditions?**
- III. What is the effectiveness of a teaching method?**
- IV. What is the degree of satisfaction of parents with the teaching at CBS?**
- v. The change in level of understanding of students with the change in method of teaching.**

2. Research Objectives

- I. To gain familiarity with a new phenomenon or develop new insight into a phenomenon**
- II. To review & synthesize the existing knowledge**
- III. To investigate existing situation/problem**
- IV. To offer solutions to a problem**
- v. To explore and analyze more general issues**
- VI. To construct or create a new procedure or system**
- VII. To generate new knowledge**

Important terms

Epistemology is a branch of philosophy that deals with the origin, nature, methods to acquire knowledge, validity, and limits of human knowledge.

There are two broadly divergent views about the nature and acquisition of knowledge, or what we call competing paradigms –one is positivist paradigm and other is interpretive paradigm.

Positivist paradigm is mostly associated with quantitative research strategies. There is one particular view of how research should be conducted, which suggests that we should carry out research in social sciences in ways that are similar to the methods within the natural sciences (physics, chemistry, and biology). This is often called the positivist or scientific approach.

According to the positivist approach, the research design should be highly structured, the methods should be reliable, and the research design should aim to generate large scale, statistically based studies.

Interpretive paradigm is usually associated with qualitative research strategies. It is specifically applicable in social sciences like sociology, political science, etc.

According to interpretive approach, the research design should be flexible and unstructured, the methods should be valid, and the research design should generate small-scale and intensive data, using insider accounts and based on descriptions of what is seen and what is heard. The understanding about positivist and interpretive paradigms is crucial to differentiate between quantitative, qualitative, and other types of approaches or methods that are basic types of research.

What is theory?

A theory is a set of systematically related statements, including some law-like generalizations that can be tested empirically. These generalizations provide hypotheses, and these hypotheses determine what must be measured.

What is a construct?

Construct is popularly terms as the concept. A construct is an abstract entity that is, it is not something physical. For example, employee satisfaction and customer satisfaction are constructs, as is short-term pressure on interest rates.

- A. How do I decide what customer satisfaction means?**
- B. How can it be measured?**
- c. What counts as an example of customer satisfaction?**

Indicator and Variable

If richness is a concept or construct, then assets and income are its indicators;

And annual income & asset value are the variables

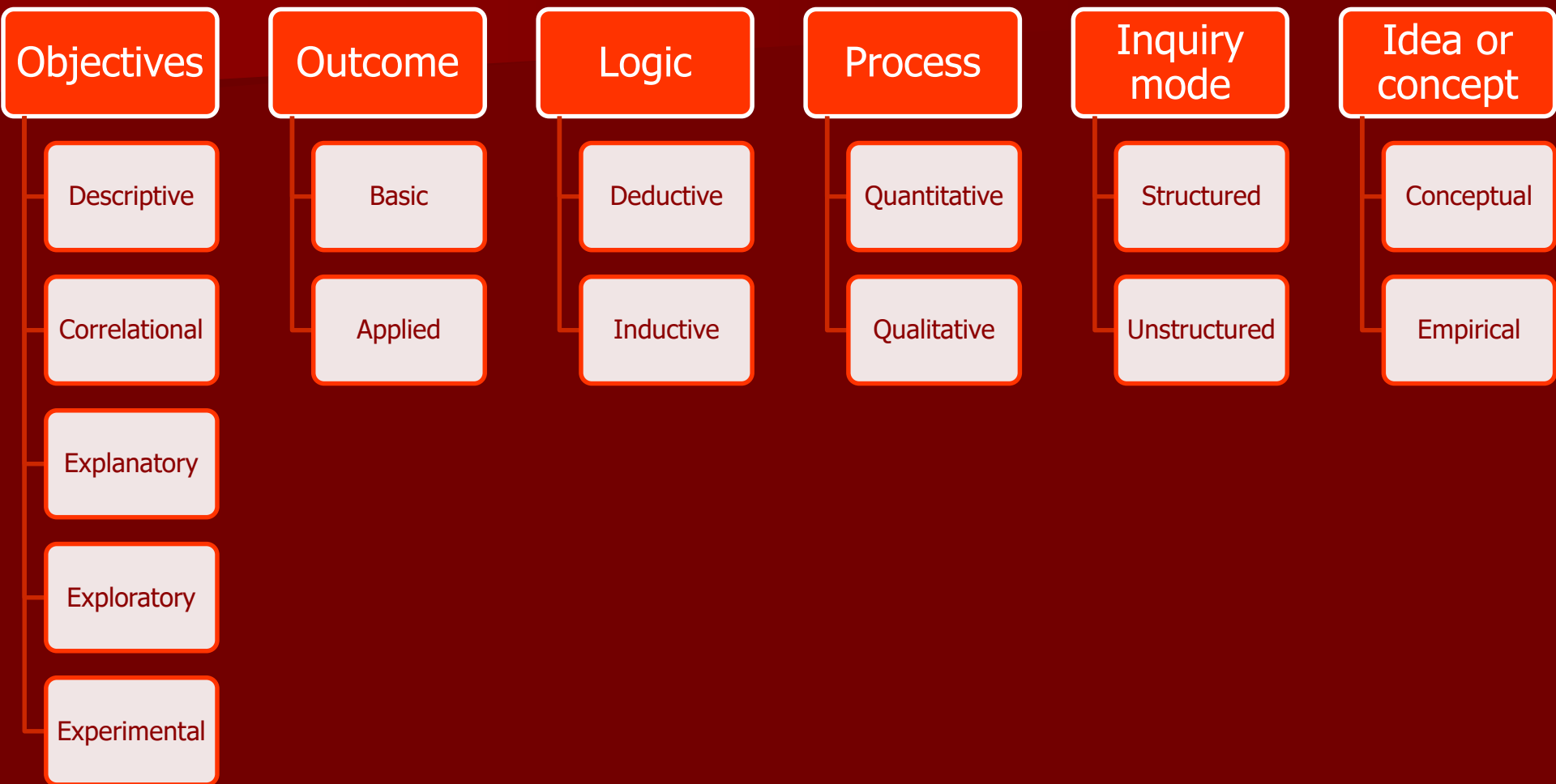
3. Motivation to Conduct Research

- I. Acquire a research degree along with its consequential benefits**
- II. Face the challenge in solving the unsolved problems**
- III. Intellectual satisfaction of doing some innovative work**
- IV. Service to the society**
- V. Desire to enhance the status**
- VI. Input for policy decision-making**

4. Research Characteristics

- I. Objectivity
- II. Reliability
- III. Validity
 - a) Internal validity
 - b) External validity
 - c) Face validity
 - d) Content validity
 - e) Criterion validity
 - f) Construct validity
- IV. Accuracy
- v. Credibility
- VI. Generalizability
- VII. Empirical research
- VIII. Systematic
- IX. Controlled factors
- X. Cyclical
- XI. Logical
- XII. Replicable

5. Types of Research



6. Purpose of Research

- I. Research extends knowledge of human beings, social life and environment**
- II. Research brings to light information that might never be discovered fully during the ordinary course of life**
- III. Research establishes generalizations and general laws and contributes to theory building in various fields of knowledge**
- IV. Research verifies and tests existing facts & theory; and these help improving our knowledge & ability to handle situations and events**
- v. Research may enable us to make reliable predictions of events yet to happen**
- VI. Research aims to analyze inter-relationships between variables and to derive causal explanations**

7. Research classification – Based on Objectives

I. Descriptive research

- It is description of a situation as it exists at present**
- It includes surveys and fact-finding enquiries with adequate interpretation**
- It just involves data gathering**
- A researcher has no control over the variables**
- It attempts to describe systematically a situation, problem, or phenomenon**

Descriptive research is closely linked with ex post facto, historical, exploratory & analytical research

II. Correlational Studies

- It is undertaken to discover or establish relationship or interdependence between two aspects of a situation. Two or more variables may occur together but that does not mean that one has caused the other to occur**
- It may identify factors leading to a certain situation**

III. Explanatory Research

- Explanatory research attempts to answer how and why between two aspects of a situation or a phenomenon.**

IV. Exploratory research

- A. It is generally on starting a research. It is undertaken to explore an area where little is known or to investigate the possibilities of undertaking a particular research study and to akin to feasibility study or pilot study. A small-scale study is undertaken to decide whether it is worth carrying out a detailed investigation.**
- A. It attempts to clarify why and how there is a relationship between two or more aspects of a situation or phenomenon.**

C. The purpose of exploratory research is to gain background information, to define terms, to clarify the problems, to develop hypotheses, to establish research priorities and objectives, and to develop questions to be answered.

D. It mostly makes use of secondary data (mainly literature review), experience surveys, case studies, interviews (mainly focus groups' interviews), projective techniques, and Delphi techniques.

V. Experimental Research or Causal Studies

- a. It is cause-and-effect finding research; it seeks. For instance, does an increase in advertising truly increase sales? And, if answer is yes, then by how much.**
- b. Casual research almost always requires hypotheses creation, test of hypotheses, and regression analysis to quantify the relationship. Experiments are used to test for causal relationship**

Research classification-Based on Application

Based on applications, research is of two types namely, pure (or basic research) and applied research.

Basic research	Applied research
Addition to knowledge	Solution to existing problems
Discovery or invention	Innovation or application
Mere academic	Practical use in solving a problem
Extensive in nature	Intensive in nature

Research classification – Based on Logic

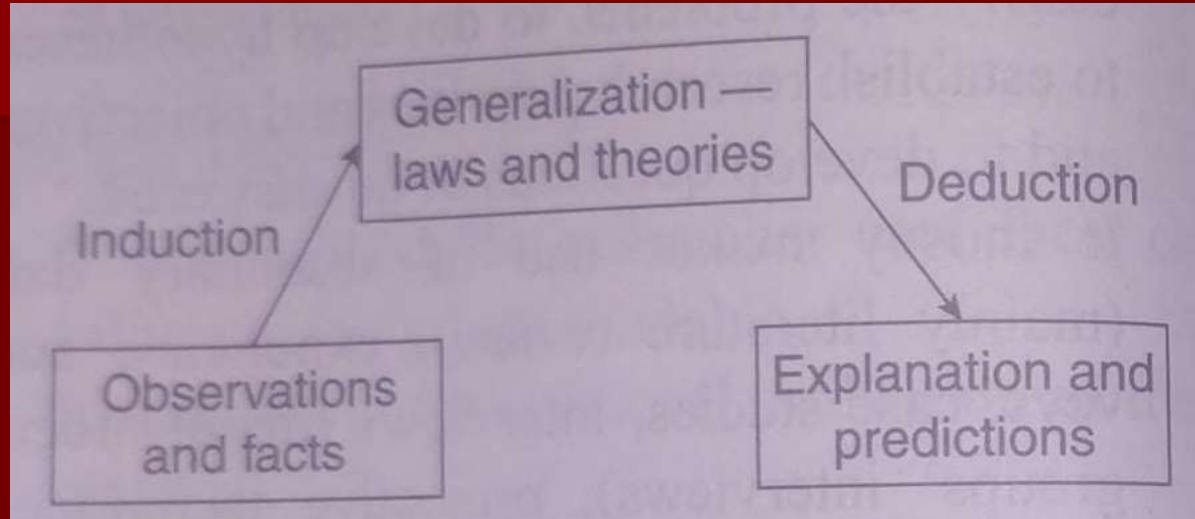
In research, conclusions are based on 2 methods - the deduction method & the induction method.

Deductive Approach

In deduction, we start from a theory and try to prove it right with the help of available information. The deductive method involves the following three steps:

- i. State the hypotheses (based on theory or research literature)**
- ii. Collect data to test the hypotheses**
- iii. Make decision to accept or reject the hypotheses**

Research classification-Based on Logic



Inductive Approach

In inductive research, we move from specific to general. This approach also involves three steps:

- i. Observe the different phenomenon in the world
- ii. **Make a search for a pattern in what is observed**
- iii. Make a generalization about what is occurring

Research classification-Based on Inquiry Mode

Structured Approach

- i. The structured approach to inquiry is usually classified as quantitative research
- ii. Everything that forms the research process, such as objectives, design, sample; and the questions that a researcher plans to ask of respondents, are pre-determined
- iii. It is more appropriate to determine the extent of a problem, issue, or phenomenon by quantifying the variation

Unstructured Approach

- i. The unstructured approach to inquiry is usually classified as qualitative research
- ii. It allows flexibility in all aspects of the research process
- iii. It is more appropriate to explore the nature of a problem, issue, or phenomenon without quantifying it

Research classification-Based on Process

Quantitative Research

It is similar to deductive research. It is also termed as linear research as it typically follows linear path:

- a) Stating with testable hypotheses
- b) **Collection of data**
- c) Analyzing the data
- d) **Accepting or rejecting the hypotheses**

Qualitative Research

- a. This is basically an approach and not just a method to conduct research. Different authors use different terms to define qualitative research.
- b. **Wright describes qualitative research to mean any research where number counting and statistical techniques are not the central issues, where an attempt is made to get close to the collection of data in its natural setting.**
- c. Qualitative research is basically inductive or spiral in nature and has a very different structure.

Research classification-Based on Process

Quantitative research may involve qualitative research elements. To sum up, qualitative research is often appropriate when:

- I. The intended research area is not well studied or understood
- II. **A subject needs in depth study**
- III. A holistic perspective is needed
- IV. **Behavioral aspects of people need to be studied**
- V. Measurement techniques like questionnaires are not considered suitable
- VI. **A researcher is more interested in the process (how it works) and not the product (the outcome)**

Methods for data collection in qualitative research

- | | |
|------------------------------|-----------------------------|
| a) Focus groups | e) Role play and simulation |
| b) Direct observation | f) Case study |
| c) In-depth interviews | |
| d) Diary method | |

8. Approaches in qualitative research

- i. Narrative research**
- ii. Phenomenology**
- iii. Ethnography**
- iv. Case study research**
- v. Grounded theory**

Characteristics	Quantitative	Qualitative
Main objective	To establish relationships between measured variables.	To understand the phenomena in the real world (social settings)
Basic assumption	A single reality that can be measured by an instrument; knowledge acquisition through rational approach (rationalism)	Multiple realities; knowledge acquisition through 'Sensory experience' (Empiricism)
Theory development	General to specific – deductive in nature	Specific to general – inductive in nature
Testing of hypotheses	Hypotheses is usually stated before the study and tested during the study	Hypotheses is developed and refined during the study
Variables	Controlled and manipulated	No explicit variables – the focus is to study the phenomena occurring in their natural settings
Data Collection	Objective/ large population	Subjective – interaction with respondents
Research design	Decided at the outset, not flexible	Flexible – developed during the study

Characteristics	Quantitative	Qualitative
Sample selection	Carefully chosen to represent larger populations	In-depth study of individual cases
Analysis	Simplified and reduced to the extent possible	Wholesome analysis – detailed
Generalization	Simplified, reduced, universal, and context free	Detailed, wholesome, and context based



Research classification-Based on Concept

Conceptual Research

Conceptual research is generally used by philosophers and thinkers to develop new concepts or to reinterpret the existing concepts. It is related to some abstract idea or theory.

Empirical Research

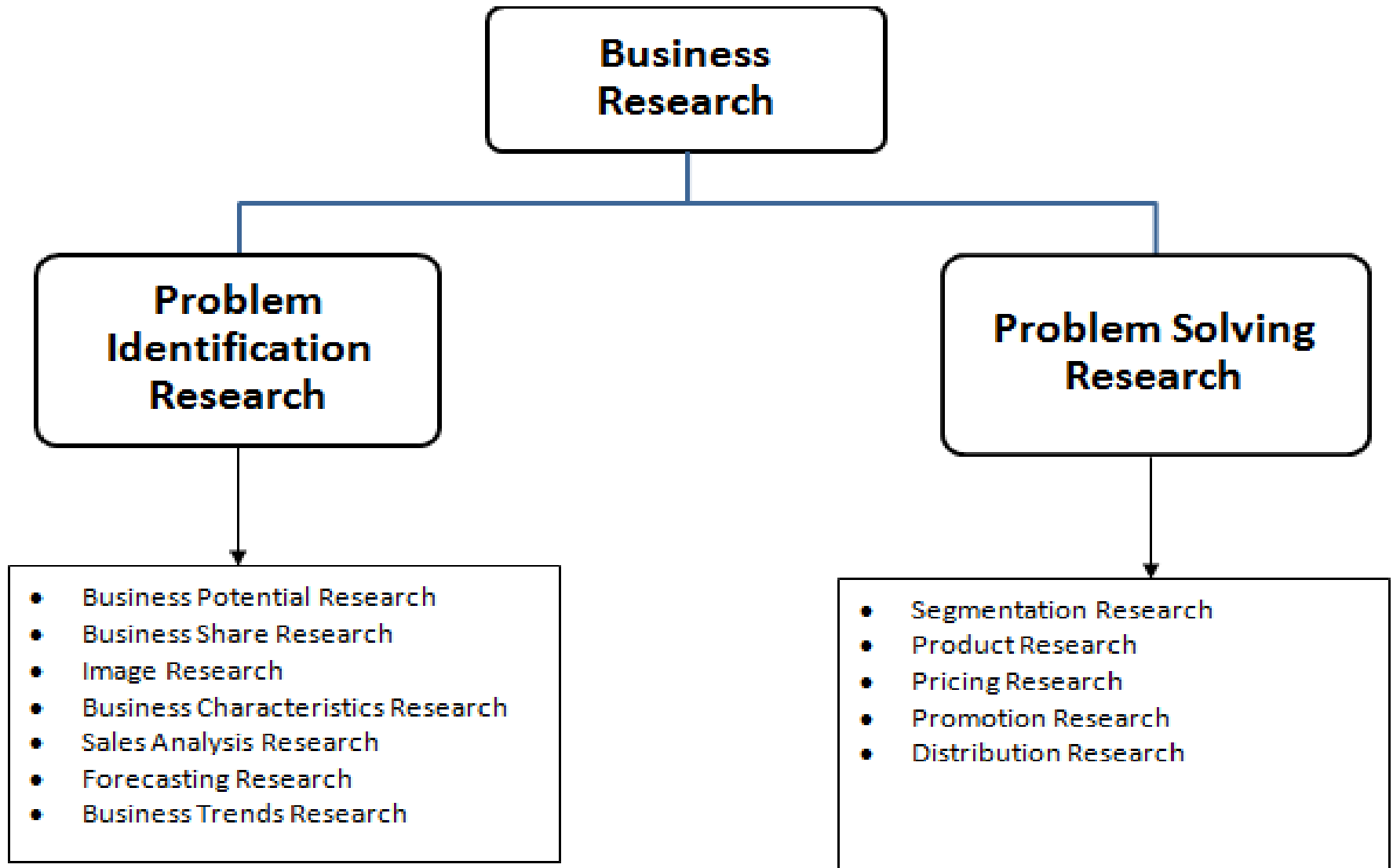
Empirical research relies on experience or observation alone, which is often without due regards for system and theory. It is a data-based research coming up with conclusions that are capable of being verified by observation or experiment.

In this research, the researcher must formulate a working hypotheses. He collects data to prove or disprove his hypotheses. The researcher is in control over the facts. Empirical research is appropriate when proof is sought that certain variables affect other variables in some way or the other.

9. Research Process

Step 1: Formulating Research Problem • Literature review • Formulation of objectives • Identifying research and measuring scales • Formulating hypotheses	Step 2: Preparing Research Design • Problem structure • Study design ➤ Experimental study ➤ Non-experimental study	Step 3: Developing Data Collection Instrument (Research Instrument) • Types of data • Methods of data collection • Designing research tool	Step 4: Selecting Samples • Types of samples ➤ Probability ➤ Non-probability • Determining sample design
Step 5: Writing a Research Proposal • Main elements ➤ Need ➤ Benefits ➤ Types of data ➤ Justification for funds and other resources	Step 6: Collecting Data • Observations • Interviews • Questionnaire • Schedules	Step 7: Processing & Analyzing Data • Editing and Coding • Classification of data • Tabulation • Analysis • Hypotheses testing	Step 8: Writing a Research Report • Title page • Table of contents • Chapters • Bibliography • Appendices, etc.

Business Research



Problem Identification Research

Problem identification research is undertaken to help identify problems that are perhaps, not apparent on the surface and yet exist or are likely to arise in the future. Examples of problem identification research include market potential, market share, brand or company image, market characteristics, sales analysis, short-range forecasting, long-range forecasting, and business trends research.

A survey of companies conducting market research indicated that 97 percent of those who responded were conducting market potential, market share, and market characteristics research. About 90 percent also reported that they were using other types of problem identification research. Research of this type provides information about the marketing environment and helps diagnose a problem.

Problem Identification Research

For example, a declining market potential indicates that the firm is likely to have a problem achieving its growth targets. Similarly, a problem exists if the market potential is increasing but the firm is losing market share. The recognition of economic, social, or cultural trends, such as changes in consumer behaviour, may point to underlying problems or opportunities.

Once a problem or opportunity has been identified, problem solving research are used in making decisions that will solve specific marketing problems. Most companies conduct problem solving research. Table (next slide) shows the different types of issues that are addressed by the problem solving research, including segmentation, product, pricing, promotion, and distribution research.

Problem Solving Research	
Segmentation Research	
Determine basis of segmentation	
Establish market potential & responsiveness for various segments	
Select target markets and create lifestyle profiles, demography, media, and product image characteristics	
Product Research	Promotional Research
test concept	optimal promotional budget
optimal product design	sales promotion relationship
package tests	optimal promotional mix
brand positioning and repositioning	copy decisions
test marketing	media decisions
control store tests	creative substantiation
	evaluation of advertising effectiveness
Pricing Research	Distribution Research
importance of price in brand selection	type of distribution
pricing policies	attitudes of channel members
product line pricing	intensity of wholesale and retail coverage
price elasticity of demand	channel margins
response to price changes	location of retail and wholesale outlets

Problem Identification Research

Classifying marketing research in two main types is useful from a conceptual as well as a practical viewpoint. However, problem identification research and problem solving research go hand in hand, and a given marketing research project may combine both types of research.

This was illustrated in the opening IBM example. The tracking study identified potential demand for Linux-driven mainframes (problem identification). Subsequent research led to the introduction of two new Linux-driven servers and a Linux-only mainframe computer (problem solving).