

# LECTURE 8 TYPES OF RESEARCH DESIGN

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## EXPLORATORY RESEARCH DESIGN

**EXPLORATORY RESEARCH:** This research is conducted for a problem that has not been clearly defined. Exploratory research helps determine the best research design, data collection method and selection of subjects. It should draw definitive conclusions only with extreme caution. Given its fundamental nature, exploratory research often concludes that a perceived problem does not actually exist.

**Given below are some of the uses of exploratory research:**

- Formulating a problem or defining a problem more precisely.
- Identifying alternative courses of action.
- Developing hypothesis.
- Isolating key variables and relationships for further examination.
- Gaining insights for developing an approach to the problem.
- Establishing priorities for further research.

**The following are the circumstances in which exploratory study would be ideally suited:**

1. To gain an insight into a problem.
2. To list out all possibilities, from which one can prioritize that possibility which seems likely.
3. To develop hypotheses.

4. It can also be used to increase the analyst's familiarity with the problem, particularly when the analyst is new to the problem area. Example: A market researcher working for (new entrant) a company for the first time.
5. Exploratory studies may be used to clarify concepts and help in formulating precise problems.
6. To pre-test a draft questionnaire.
7. In general, exploratory research is appropriate to any problem about which very little is known. This research is the foundation for any future study.

**Given below are some of characteristics of exploratory research:**

1. Exploratory research is often the front end of total research design.
2. It is flexible, unstructured and very versatile.
3. Experimentation is not a requirement.
4. Cost incurred to conduct study is low.
5. This type of research allows very wide exploration of views.
6. Research is interactive in nature and also it is open ended.

**Hypothesis Development at Exploratory Research Stage**

At exploratory stage:

1. Sometimes, if the situation is being investigated for the first time, it may not be possible to develop any hypothesis at all. This is because of non-availability any previous data.
2. Sometimes, some information may be available and it may be possible to formulate a tentative hypothesis.

3. In other cases, most of the data is available and it may be possible to provide answers to the problem.

**DESCRIPTIVE RESEARCH:** Descriptive research is used to describe characteristics of a population or phenomenon being studied. It does not answer questions about how/when/why the characteristics occurred. Some of the questions that need to be answered before data collection for this descriptive study are as follows:

- **Who:** unit of analysis
- **What:** information need from the respondent
- **When:** the information should be obtained, before shopping, after shopping, etc.
- **Where:** the respondent should be contacted
- **Why:** why we are getting the info from the respondent
- **Way:** how to get the info, questionnaire, survey, etc.

Hence, research cannot describe what caused a situation. Thus, Descriptive research cannot be used to as the basis of a causal relationship, where one variable affects another. In other words, descriptive research can be said to have a low requirement for internal validity. There are three main types of descriptive methods: observational methods, case study methods and survey methods.

Descriptive research is used:

- To describe the characteristics of relevant groups, such as consumers, salespeople, organizations, or market areas.
- To estimate the percentage of units in a specified population exhibiting a certain behavior.
- To determine the perceptions of product characteristics.

- To determine the degree to which marketing variables are associated.
- To make specific predictions.

**OBSERVATIONAL METHOD:** With the observational method (sometimes referred to as field observation) animal and human behavior is closely observed. There are two main categories of the observational method — naturalistic observation and laboratory observation.

The biggest advantage of the naturalistic method of research is that researchers view participants in their natural environments. This leads to greater ecological validity than laboratory observation, proponents say.

Ecological validity refers to the extent to which research can be used in real-life situations.

Proponents of laboratory observation often suggest that due to more control in the laboratory, the results found when using laboratory observation are more meaningful than those obtained with naturalistic observation.

Laboratory observations are usually less time-consuming and cheaper than naturalistic observations. Of course, both naturalistic and laboratory observation are important in regard to the advancement of scientific knowledge.

**CASE STUDY METHOD:** Case study research involves an in-depth study of an individual or group of individuals. Case studies often lead to testable hypotheses and allow us to study rare phenomena. Case studies should not be used to determine cause and effect, and they have limited use for making accurate predictions.

There are two serious problems with case studies — expectancy effects and atypical individuals. Expectancy effects include the experimenter's underlying biases that might affect the actions taken while conducting research. These biases can lead to misrepresenting

participants' descriptions. Describing atypical individuals may lead to poor generalizations and detract from external validity.

**SURVEY METHOD:** In survey method research, participants answer questions administered through interviews or questionnaires. After participants answer the questions, researchers describe the responses given. In order for the survey to be both reliable and valid it is important that the questions are constructed properly. Questions should be written so they are clear and easy to comprehend.

Another consideration when designing questions is whether to include open-ended, closed-ended, partially open-ended, or rating-scale questions. Advantages and disadvantages can be found with each type:

Open-ended questions allow for a greater variety of responses from participants but are difficult to analyze statistically because the data must be coded or reduced in some manner. Closed-ended questions are easy to analyze statistically, but they seriously limit the responses that participants can give. Many researchers prefer to use a Likert-type scale because it's very easy to analyze statistically.

In addition to the methods listed above some individuals also include qualitative (as a distinct method) and archival methods when discussing descriptive research methods.

It is important to emphasize that descriptive research methods can only describe a set of observations or the data collected. It cannot draw conclusions from that data about which way the relationship goes — Does A cause B, or does B cause A?

Unfortunately, in many studies published today, researchers forget this fundamental limitation of their research and suggest their data can actually demonstrate or “suggest” causal relationships. Nothing could be further from the truth.

## **FACTORS AFFECTING RESEARCH DESIGN**

- Availability of scientific information
- Availability of sufficient data
- Time availability
- Proper exposure to the data source
- Availability of the money
- Manpower availability
- Magnitude of the management problem
- Degree of Top management's support
- Ability, knowledge, skill, technical understanding and technical background of the researcher
- Controllable variables
- Un-controllable variables
- Internal variables
- External variables

## **RELATIONSHIPS AMONG EXPLORATORY, DESCRIPTIVE, & CAUSAL RESEARCH**

The distinctions among exploratory, descriptive, and causal research as major classifications of research designs are not absolute. For example a research project may involve more than one type of research design and thus serve several purposes. Which combination of research designs should be employed depends on the nature of the problem. The following are the general guidelines for choosing research designs:

## A Comparison of Basic Research Designs

	<b>Exploratory</b>	<b>Descriptive</b>	<b>Causal</b>
<b>Objective</b>	Discovery of Ideas	Describes market characteristics	Determine cause and effect
<b>Characteristics</b>	Flexible, versatile, Front-end Research	Prior formulation of hypothesis, planned, structured design	Manipulate independent variables, Control of other variables
<b>Methods</b>	Secondary data	Surveys	Experiments

## Differences between Exploratory and Conclusive Research

<b>Research Project Components</b>	<b>Exploratory Research</b>	<b>Conclusive Research</b>
<b>Research purpose</b>	General: to generate insights about a situation	Specific: to verify insights and aid in selecting a course of action
<b>Data needs</b>	Vague	Clear
<b>Data sources</b>	Ill defined	Well defined
<b>Data collection form</b>	Open-ended, rough	Usually structured
<b>Sample</b>	Relatively small; subjectively selected to maximize generalization of insights	Relatively large; objectively selected to permit generalization of findings
<b>Data collection</b>	Flexible; No set procedure	Rigid: well-laid-out procedure
<b>Data analysis</b>	Informal; typically non quantitative	Formal; typically quantitative
<b>Inferences/recommendations</b>	More tentative than final	More final than tentative