



Research Methods

SESSION 5

Be a thinker

Identify the *independent variable* and *dependent variable* in each of the following experimental hypotheses.

- People are more likely to make a risky decision when they are in a group than when they are alone.
 - An increase in carbohydrates decreases one's ability to concentrate.
 - People will react more quickly to an auditory stimulus than to a visual stimulus.
 - Lack of sleep will affect learning new words negatively.
 - Children who have watched a film with a model hitting a blow-up doll will exhibit more aggressive acts towards a blow-up doll than children who have not watched the film.
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Types of Research

DESCRIPTIVE

DIAGNOSTIC

EVALUATIVE

PROGNOSTIC

Descriptive

Descriptive research design is a scientific method which involves observing and describing the behavior of a subject without influencing it in any way.

Descriptive research is often used as a pre-cursor to quantitative research designs, the general overview giving some valuable pointers as to what variables are worth testing quantitatively.

Quantitative experiments are often expensive and time-consuming so it is often good sense to get an idea of what hypotheses are worth testing.

Observe....Describe...Document

Evaluative Research

Evaluation is a process that critically examines a program. It involves collecting and analyzing information about a program's activities, characteristics, and outcomes. Its **purpose** is to make judgments about a program, to improve its effectiveness, and/or to inform programming decisions (Patton, 1987).

TESTING OR EVALUATING A THEORY

Diagnostic Research

Experimental Research Design

In this type of research design is often uses in natural science but it is different in social sciences. Human behavior cannot be measured through test-tubes and microscopes. The social researcher use a method of experiment in that type of research design. One group is subjected to experiment called independent variables while other is considered as control group called dependent variable. The result obtained by the comparison of both the two groups. Both have the cause and effect relationship between each other.

CORRELATION.

Fundamental Research and Applied Research

Fundamental Research

Fundamental research is the research which is generally conducted to develop some new theories.

Fundamental research is concerned with the development, examination, verification and refinement of research methods, procedures, techniques and tools that form the body of research methodology.

Fundamental research is inductive in nature that means it comes with new theory discoveries.

Fundamental research is also called basic research or pure research.

Fundamental research is qualitative in nature. The professors generally carry out fundamental research and it is used for future benefits.

Applied Research

Applied research is the research which is generally conducted to solve the problem of the organization setting.

Applied research is more concerned with knowledge that has immediate application and would be useful in making decisions and formulating policies.

Applied research is deductive in nature that means it keeps some theories as its base while conducting research.

Applied research is also called action research.

Applied research is quantitative in nature. The managers generally carry out applied research and it is used in day to day life.

Steps of Research

Problem statements often have three elements:

1. the problem itself, stated clearly and with enough contextual detail to establish why it is important;
2. the method of solving the problem, often stated as a claim or a working thesis;
3. the purpose, statement of objective and scope of the document the writer is preparing.

These elements should be brief so that the reader does not get lost.

Defining the problem
statement.

IT'S SIGNIFICANCE

PERSONAL ENGAGEMENT

Forming a
hypothesis-
Testable
prediction

SIMPLE, COMPLEX,
NULL, ALTERNATIVE

Choosing a research design

EXPERIMENTAL
(CAUSE AND EFFECT)

NON EXPERIMENTAL
(CAN'T MANIPULATE
THE VARIABLES)

QUASI EXPERIMENT-
RANDOM SAMPLING
IS NOT POSSIBLE

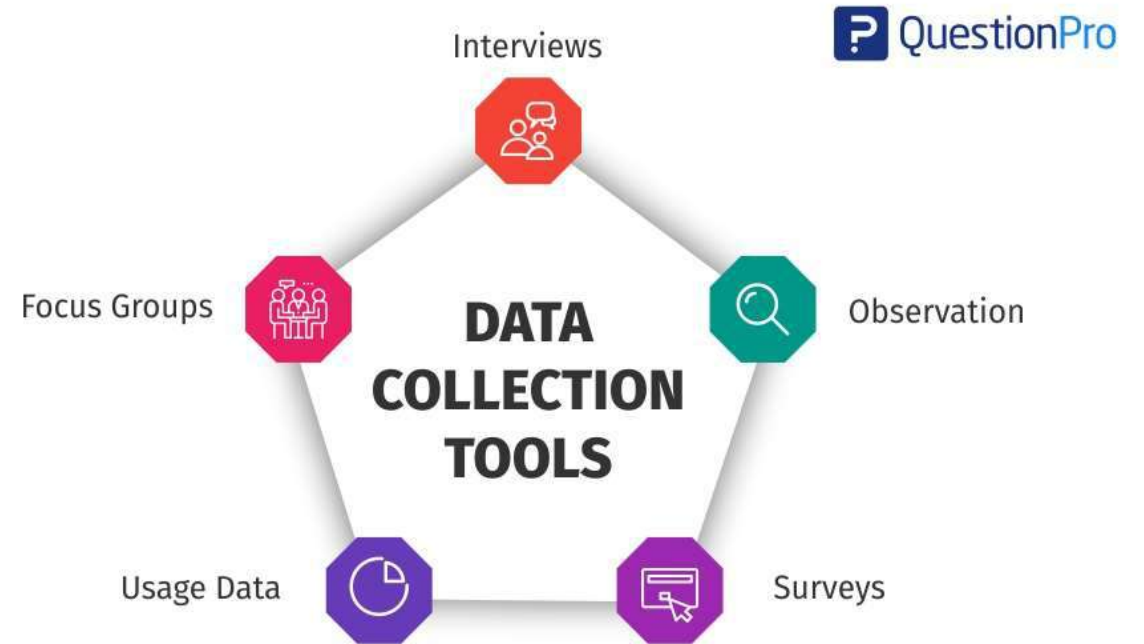
EX POST FACTO-
AFTER THE EVENT
HAS HAPPENED

Sampling

RANDOM, SNOWBALL, CONVENIENCE , ETC

Tools of Data Collection

NATURE OF STUDY: QUALITATIVE
OR QUANTITATIVE



Analysis and Interpretation of Data

Data analysis and interpretation is the process of assigning meaning to the collected information and determining the conclusions, significance and implications of the findings. It is an important and exciting step in the process of research. In all research studies, analysis follows data collection.

According to C.R.Kothari (1989), “The term analysis refers to the computation of measures along with searching for patterns of relationship that exist among data-groups”. Analysis involves estimating the values of unknown parameters of the population and testing of hypotheses for drawing inferences.

Report Writing

1. In simple words:

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Research report is the systematic, articulate, and orderly presentation of research work in a written form.

2. We can also define the term as:

Research report is a research document that contains basic aspects of the research project.

3. In the same way, we can say:

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Research report involves relevant information on the research work carried out. It may be in form of hand-written, typed, or computerized.

Focus Group Discussion

EXPLORING PEOPLE'S ATTITUDE AND BELIEFS TOWARDS A PARTICULAR TOPIC.

FLEXIBLE AND NATURAL SETTING

QUALITATIVE

NEED OF A MODERATOR WHO ASKS: OPEN ENDED QUESTIONS

DRAWBACK: GROUP THINKING COULD ARISE. I.E. THE DESIRE FOR HARMONY AND CONFORMITY CAN RESULT TO IRRATIONAL OR DYSFUNCTIONAL DECISION MAKING

Brainstorming is a [group creativity technique](#) by which efforts are made to find a conclusion for a specific problem by gathering a list of ideas spontaneously contributed by its members.

In other words, brainstorming is a situation where a group of people meet to generate new ideas and solutions around a specific domain of interest by removing inhibitions. People are able to think more freely and they suggest as many spontaneous new ideas as possible. All the ideas are noted down and those ideas are not criticized and after brainstorming session the ideas are evaluated. The term was popularized by [Alex Faickney Osborn](#) in the 1953 book *Applied Imagination*.

Brain Storming

TO SOLVE A PARTICULAR
PROBLEM

	Brainstorming	Focus Group
Purpose	Generate ideas	Improve existing ideas
Trigger	A need to solve a problem	A need to study an existing idea, s process
Condition	Problem exist	Idea, solution or process exist
Setup		
Number of participants	6 - 8	6 - 12
Participant types	Heterogeneous	Can be homogeneous or heteroge
Person running the show	Facilitator	Skilled moderator

Grounded Theory Approach

USE OF INDUCTIVE REASONING

CODES

VS THE HYPOTHETICO DEDUCTIVE MODEL