

LESSON 1 - TECHNICAL TERMS USED IN RESEARCH

Research --> a process of **systematic inquiry** that entails:

- collection of **data** - “info used as a basis for reasoning discussion or calculation.”
- documentation of critical **information**
- analysis & interpretation of that data/ information

following suitable methodologies set by specific professional fields and academic principles.

--> conducted to evaluate the validity of a hypothesis or interpretive framework

--> ex: **Action research, thesis, dissertation, and case study**

--> CHARACTERISTICS:	--> PURPOSES:
<ul style="list-style-type: none"> - Accuracy - Objective - Timeliness - Relevance - Clarity - Systematic - Ethical 	<ul style="list-style-type: none"> - Work Independently - Work scientifically or systematically - In-depth knowledge of something - Elevate mental abilities - Improve reading & writing skills - Familiarize with the basic tools of research & diff techniques of gathering data & presenting da findings - Free yourself from the strong influence of a single (maybe biased) source

TYPES OF RESEARCH

1 Pure Research	ideas, principles or abstract concepts. Increase knowledge about a particular subject with discovery & application
2 Applied Research	Societal problems or issues. Purpose - answering a question or solving a problem
3 Qualitative Research	Non-numerical data, highlights human experience. People's thoughts, beliefs, feelings and lifestyles, not measured. (naturalistic)

4 Quantitative Research

Measurement of data in numerical forms.

I.e. percentages, fractions, numbers (experimental)

TERMS & DEFINITIONS

- Variables

- **Independent Variable (experimental or predictor variable)** - may influence or affect other variables. Researcher has control over it, may involve manipulating existing variables or introducing new variables
- **Dependent Variable** - dependent on the independent variable
- **Controlled Variable** - intentionally constant by the scientists
- **Constant Variable** - kept the same, simply constant
- **Relationship** - connection between 2 variables

Abstract - A brief overview of a research study

Introduction - establishes the scope, context and significance of the research to be conducted. Found here is the **Significance of the study** (contribution)

Purpose of the study - research aims & objectives

SOP - Statement of the Problem

Theory - organized body of concepts and principles intended to explain a particular phenomenon

Limitations - identify potential weaknesses of the study

Delimitations - how the study will be narrowed in scope

Correlational Study - type of research design that depicts a relationship between variables, not necessarily cause-effect tho

Descriptive study - describes (duh) "what is"

Experiment - a research design used to find "cause-effect" relationships, usually conducted on the **Experimental Group**

External Validity - How generalizable the results are as it concerns other populations and locations

Participant - respondents whose characteristics and responses are the ones being researched

Sampling - process of selecting participants who are representatives of a larger population

Population - target group under investigation, where **Samples** are drawn—smaller group that represents the population of interest, and when everybody has the same chance of being assigned to any group, it is considered a **Random Sample**

Hypothesis - logical supposition, a reasonable guess, and educated conjecture. State your predictions. Tentative answer to research question that has not been tested

Measures of central tendency - Averages e.g **Mean**(arithmetic average), and when there is a deviation of a group score from this mean, the avg deviation or measure of spread is the **Standard Deviation**

Median - Middle where half the scores fall above, and half below, eliminates the influence of outliers

Mode - Score that occurs the most

Questionnaire - structured sets of questions on specified subjects that are used to gather information

Methodology - systematic approach to conducting the study

Research Methodology - method of **Research Design** which is the method for finding out what the researcher wants to know, experiment, & correlate approximate timeline for completion of the study.

Statistics - Mathematical tools based on the normal curve used to analyze data; must match research design. The application of these statistical processes—compilation, presentation, discussion & interpretation—is called **Statistical Analysis**. And when there is an important finding that did not likely happen by chance it is the **Statistical Significance**.

LESSON 2 - TECHNICAL AND OPERATIONAL DEFINITIONS

DEFINITION	DESC.	TYPE	GUIDELINES
Technical/Conceptual Definition	Explanation or desc. Used to explain a technical terminology or concept to someone who is unfamiliar with or has a little knowledge of it	<ol style="list-style-type: none"> 1. Parenthetical definitions - synonym (alternative phrase). Enclosed in parenthesis or set off by commas 2. Sentence definitions - appear in glossary, within text, or in margin notes. Introduce the term, give its category, and cite its distinguishing features. 3. Extended definitions - terms explained in great detail. Few sentences to several pages long. Textbooks, encyclopedias, wiki sites 	Identify: <ol style="list-style-type: none"> 1. Category term belongs in - ex. Asperger's Syndrome as a disorder 2. Distinct parts & characteristics 3. functions 4. What it is not (when mistaken as something else)
Operational Definition	Defines something in terms of a process it undergoes. Based on the observational characteristics —how it is measured as a variable Researcher Defined	<ol style="list-style-type: none"> 1. Type A Operational Definition - stating the operations or actions that need to be performed to cause a phenomenon or state to occur 2. Type B Operational Definition - describing how a something operates 3. Type C Operational Definition - what a phenomenon or object looks like. characteristics 	<ol style="list-style-type: none"> 1. Identify the means of measuring the term based on the study you are conducting 2. Identify cause to the phenomenon or state 3. State how the thing works or phenomenon functions 4. Describe Obj. or phenomenon; static characteristics

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