

# Objectives

1. Define citation.
2. Understand purpose of citation.
3. Differentiate between Quoting and Paraphrasing.
4. Enumerate citation styles
5. Understand Vancouver style formats

# Definition

**Citation** is an abbreviated alphanumeric expression embedded in the body of an intellectual work that denotes an entry in the bibliographic references section of the work for the purpose of acknowledging the relevance of the works of others to the topic of discussion at the spot where the citation appears.

## Definition Cont'.

**Generally** the combination of both the in-body citation and the bibliographic entry constitutes what is commonly thought of as a citation (whereas bibliographic entries by themselves are not)

# Purposes

1. To acknowledge intellectual debt.
2. To lend support to arguments by referring to authoritative sources.
3. To help readers verify your claims.
4. To show research done

# Quotations

## **What is a Quotation?**

- is an exact reproduction of spoken or written words.
- Direct quotes can provide strong evidence, act as an authoritative voice, or support a writer's statements.

# Quotations Cont'.

## How to Quote?

- Every direct quotation should appear between quotation marks (" ") and exactly reproduce text, including punctuation and capital letters.
- A short quotation often works well integrated into a sentence.
- Longer quotations (more than 3 lines of text) should start on a new line, be indented and in italics.

# Quotations Cont'.

## When to Quote?

- when the author's words convey a powerful meaning.
- when you want to use the author as an authoritative voice in your own writing.
- to introduce an author's position you may wish to discuss.
- to support claims in, or provide evidence for, your writing.

# Paraphrasing

## **What is Paraphrasing?**

Paraphrasing is a way of presenting a text, keeping the same meaning, but using different words and phrasing.



# Paraphrasing Cont'.

## **How to Paraphrase**

- Read the source carefully. It is essential that you understand it fully.
- Identify the main point(s) and key words.
- Cover the original text and rewrite it in your own words.
- Write the paraphrase in your own style.
- Review your paraphrase.
- Record the original source

# Paraphrasing Cont'.

## When to Paraphrase

- Paraphrase short sections of work only; a sentence or two or a short paragraph.
- As an alternative to a direct quotation.
- To rewrite someone else's ideas without changing the meaning.
- To express someone else's ideas in your own words.
- To support claims in, or provide evidence for, your writing.

## Quotations

- match the source word for word
- are usually a brief segment of the text
- appear between quotation marks
- must be attributed to the original source

## Paraphrasing

- does not match the source word for word
- involves putting a passage from a source into your own words
- changes the words or phrasing of a passage, but retains and fully communicates the original meaning
- must be attributed to the original source

# Citation styles

1. APA style,
2. MLA style,
3. The Chicago Manual of Style,
4. Bluebook,
5. ALWD Citation Manual,
6. ASA style,
7. Harvard referencing, and
8. Vancouver system

# Vancouver system

## Labelling citations

- References are numbered consecutively in order of appearance in the text .
- They are identified by Arabic numerals in parentheses (1), square brackets [1], superscript<sup>1</sup>, or a combination<sup>[1]</sup>.

# General rules

In-text citation and a reference list

Citation within the text is identified by (#)

References are numbered in order they are first used in the text.

The full citation will be included in the reference list at the end

When multiple references are cited together use a hyphen for inclusive # and commas for non inclusive #.

# General rules Cont'.

Include the page # for direct quotes and ideas(3.p55).

The citation in bracket is placed after any commas & periods and before any colons & semi colon

# Reference List

## Books:

**Author Surname initials. Title: Subtitle.  
Edition(if not the first). Place of  
publication. Publisher; Year.**

**-One author**

**-2-6 authors**

**-More than 6 authors.**



# Books

- Organization as Author
- No Author / Editor.
- Government Document.
- Chapter in a book.
- E-book

# Articles in Journal

## **Accessibility:**

- Print/paper
- Journal's website
- On line article database

# Format of citations

## **Standard format :**

Author surname initial. Title of article. Title of journal, abbreviated. Date of publication: Volume number(issue number): Page numbers.

# Journal article from a website

Standard format + (internet) after the name of journal.+ (cited 2009) after year of publication.  
+(about 4pp)after issue # + available from:  
<http://www.....>

# Journal article from an online database

Standard format + (internet) after the name of journal.+ (cited 2009) after year of publication.  
+(about 4pp)after issue # + available from medline: and write the link. <http://.....>

# Websites

## **Standard format:**

Author Surname initials. Title of Website(internet). Place of publication: Publisher; Date of first publication( date of last update; cited date). Available from: URL

# Blog

## **Standard format:**

Author Surname initials. Title of Website(internet). Place of publication: Publisher; Date of first publication( date of last update; cited date). Available from: blog address

# Other Resources

- Newspaper articles.
- Video recordings.
- Dictionary, Encyclopedia
- Personal communication: conversation, letter, E-mail, permission.



# **Publication information Online**

Vancouver style requires the place of publication, publisher and the original publication date as a part of citation.

# **Randomized Controlled Trial (RCT)**

# RCT Basics

- An RCT seeks to measure and compare the outcomes of two or more clinical interventions.
- One intervention is regarded as the standard of comparison or control.
- Participants receive the interventions in random order
- Randomization can be achieved through a variety of procedures. Individuals, groups, and the order in which measurements are obtained can all be randomized
- **RCTs cannot answer all clinical questions**

# What is a Randomized Controlled Trial (RCT)?

**RCT** is a study in which participants are assigned - to a study group.

**In RCT** participants are assigned to treatment - conditions at random.

**-Controlled** to ensure that all participants in all study groups are treated the same except for the factor that is unique to their group.

# GOALS OF RCT

## 1ry goal

test whether an intervention works by comparing it to a control condition, usually either no intervention or an alternative intervention.

## 2ry goal

☐ identify factors that influence the effects of the intervention (i.e., moderators). **In statistics**, a variable that alters the direction or strength of the association between other variables

☐ understand the processes through which an intervention influences change (i.e., mediators or change mechanisms that bring about the intervention effect) **In statistics**, a variable that helps to account for the association between an independent and a dependent variable

# Why Conduct an RCT?

RCT is conducted to test whether an intervention or treatment works.

**The key methodological components of an RCT are**

- (1)** use of a control condition to which the experimental intervention is compared; and
- (2)** random assignment of participants to conditions.

# Advantages RCT design

- 1.** Random assignment ensures that known and unknown person and environment characteristics that could affect the outcome of interest are evenly distributed across conditions.
- 2.** Random assignment equalizes the influence of nonspecific processes not integral to the intervention whose impact is being tested.
- 3.** Random assignment and the use of a control condition ensure that any extraneous variation not due to the intervention is either controlled experimentally or randomized.

# Disadvantages RCT design

1-Not being practical or generalizable.

2-Ethical concerns.

3-They are time- and energy- intensive

4- They are expensive

5- They may not be feasible for all interventions or settings. (e.g., some institutions have policies that prohibit random assignment)



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# Designing an RCT

## *-Maximizing Validity and Minimizing Bias*

-The ability to make valid inferences depends on how well the investigator **designed, conducted, and reported** various procedures to minimize bias in the study

-**Bias** is a systematic distortion of the real, true effect that results from the way a study was conducted. This can lead to invalid conclusions about whether an intervention works.

-**Bias** in research can make a treatment look better or worse than it really is.

-**Inferences about validity** fall into four primary categories: **internal, external, statistical conclusion, and construct validity.**

# Designing an RCT Cont.'

## Internal Validity

the extent to which the results of a study are true. That is, the intervention really did cause the change in behavior.

## External Validity

the extent to which the results can be generalized to a population of interest.

The population of interest is usually defined as the people the intervention is intended to help.

# Designing an RCT Cont.'

## Statistical Conclusion Validity

The validity of inferences about co variation between two variables.

## Construct Validity

The extent to which the study tests underlying constructs as intended.

# Critical Aspects of the RCT Design

1. Sample selection
2. Choice of a control condition
3. Random assignment
4. Blinding
5. Planning for assessment and data collection
6. Intervention/Treatment integrity

# 1. Sample selection

## Important questions to consider:

How will the target population be identified (e.g., What will •  
selection criteria be?

Where will recruitment occur and who will be involved)? •

Who will be invited to participate? •

What will the inclusion and exclusion criteria be? •

How will eligibility be assessed? •

Will the selected sample be representative of the •  
population to which I want to  
generalize?

How many eligible participants do I expect to need to •  
screen in order to randomize the sample size I need?

# Control Condition

1. No-treatment Comparison Condition
2. Wait-list Comparison
3. Treatment as Usual Comparison (TAU)
4. Attention/Placebo Comparison
5. Relative Efficacy/Comparative Effectiveness
6. Parametric/Dose Finding
7. Additive/Constructive Comparison
8. Treatment Dismantling. "component analysis,"

# **Random assignment**

See sampling techniques



# Blinding

1. Double-blind Trials
2. Partial Blinding
3. Unblinded Trials

Good luck and  
see you next  
week in Mid-  
term exam

# **Randomized Controlled Trial (RCT)**





# Sampling Techniques

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# Objectives

1. Define sample
2. Mention types of sampling techniques
3. Understand criteria of good sample
4. Define Reliability and validity.
5. Describe types of Reliability & validity
6. Explain the relationships between R&V.

# Types of sampling

1. Probability
2. Non probability



# Types of probability sampling

1. Simple random
2. Systemic
3. Stratified
4. Multiple/double
5. Multistage
6. Cluster

# Types of non-probability sampling

1. Incidental/ Accidental
2. Purposive
3. Quota
4. Judgmental

# Criteria of a good sample

1. Representation
2. Bias
3. Objectivity
4. Accuracy
5. Economy
6. Subjects are approachable
7. Sample size
8. Feasibility
9. Practicability

# Reliability

- \*The extent to which results are **consistent** over time.
- \*If the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be **reliable**.
- \*The idea of **replicability** or **repeatability** of results or observations

# Reliability Cont.'

\*Researchers would be unable to satisfactorily draw conclusions, formulate theories, or make claims about the generalizability of their research.

\*In addition to its important role in research, reliability is critical for many parts of our lives, including manufacturing, medicine, and sports.

# Reliability Cont.'

1. Stability Reliability: Test-Retest method.

\*Disadvantage: memorization

# Reliability Cont.'

2. Equivalency Reliability: 2 parallel or equivalent forms.

\*Disadvantage: Not complete sure

# Reliability Cont.'

3. Split – half or Odd- Even reliability:

4. Kuder- Richardson: ultimate extension of split-half.

-take the average of all split-halves.

-K-R 20, K-R 21



# Reliability Cont.'

## Factors affect Reliability:

1. The certainty of information sought.
2. Stability of information sought.
3. Researcher's understanding of dynamic being studied.
4. Ability to translate that dynamic into instrument form.
5. Chance factors.

# Validity

\*The degree to which a test actually measured what it is claimed to measure.

\*The appropriateness, meaningfulness, and usefulness of the specific inferences made from test score, i.e. the inferences regarding specific test are validated not the test itself.

# Validity Cont.'

## Types of validity:

### I. External:

\*concerns the extent to which the results of a study can be held to be true for other cases, for example to different people, places or times.

\*it is about whether findings can be validly generalized.

If the same research study was conducted in other cases, would it get the same results?

\*the extent to which the results of a study are generalizable or transferable.

### II. Internal:

is an estimate of the degree to which conclusions about *causal* relationships can be made (e.g. cause and effect), based on the measures used.

# Types of validity Cont.'

## II. Internal:

- 1. Face Validity.**
- 2. Content Validity.**
- 3. Construct Validity.**
- 4. Criterion Related Validity**

# Types of internal validity Cont.'

## 1. Face validity:

- \*is an estimate of whether a test appears to measure a certain criterion
- \*Concerned with how a measure or procedure appears.
- \*Does it seem like a reasonable way to gain the information the researchers are attempting to obtain?
- \*Does it seem well designed?
- \*Does it seem as though it will work reliably?
- \*Unlike [content validity](#), face validity does not depend on established theories for support .

# Types of internal validity Cont.'

## 2. Content Validity:

\*is a non-statistical type of validity that involves “the systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured”.

\*For example, does an IQ questionnaire have items covering all areas of intelligence discussed in the scientific literature?

\*is based on the extent to which a measurement reflects the specific intended domain of content.

# Types of internal validity Cont.'

## 3. Construct Validity:

\*the extent to which operationalizations of a construct (e.g. practical tests developed from a theory) do actually measure what the theory says they do.

\*For example, to what extent is an IQ questionnaire actually measuring "intelligence"?

\*seeks agreement between a theoretical concept and a specific measuring device or procedure.

# Types of internal validity Cont.'

## 4. Criterion Related Validity:

also referred to as **instrumental validity**, is used to demonstrate the accuracy of a measure or procedure by comparing it with another measure or procedure which has been demonstrated to be valid.



# Reliability & Validity

If a test is known to be:

One can conclude:

- |                 |   |                           |
|-----------------|---|---------------------------|
| 1. Valid        | → | The test must be Reliable |
| 2. Not valid    | → | Nothing about reliability |
| 3. Reliable     | → | Nothing about validity    |
| 4. Not reliable | → | The test can not be valid |