How to Analyse and Make Sense of your Research Data

What is Data Analysis?

- you have collected your data now you need to see what it is telling you – does it answer your research question?

- data analysis is the process of 'making sense' of the data you have collected to understand its significance

- To find this out you need to organize, process and analyse it.

1. Organize & prepare your data

Organize and prepare all your data so it is ready for analysis.

✓ Enter your data (for example, entering data from your surveys into an Excel file or into a Word file using text and charts).

✓ Save all your data (charts or surveys or interview or research notes) in properly labeled folders or organized with paper clips and post its

2. Confidentiality

- Please remove any identifying names or details as needed

- Don't leave your research lying around

3. Connecting the Dots & Making Sense of the Data

Quantitative Surveys, Content Analysis, Some types of Observation and Experiments

- **Crunch the numbers:** look at the most frequent and infrequent responses. This may include answers to how many, how long, how much, etc.

- What are the majority of participants saying? What is the second most frequent response?

    o **Example:** 50% of participants identified bullying as a significant barrier to their learning

Qualitative Observations & Interviews

What perspectives are represented in the data?

- o These are often represented as participants' opinions.

- What experiences are represented in the data?

  - o These are often descriptions of what happened.

- What are impacts are represented in the data?

  - o These are descriptions of how an experience affected the participant or their community.

- What responses are represented in the data?

  - o Responses include how a participant reacts or responds to an event or experience.

Grouping the data Identifies common groupings within or across data sets.

Subgroups could include

> **gender**

> **age**

> **grade level**

> **aptitude level**

> **athletes**

> **any other type of group**

Comparing & Contrasting the data Look at comparisons between two or more groups.

- What are the differences and/or similarities in responses between groups of participants?
  - o **Example:** While the majority of the academic level boys texted in class, the majority of girls at the same level did not.
  - o Sometimes this includes complex issues where more than one issue is connected for instance looking at gender and aptitude or gender and age or all three

4. Building your Analysis

- **Descriptive analysis:** involves creating a list of findings based on the data **without** examining the significance, meanings or relationships in and between these. **Describes what you saw or found.**

- **Interpretive analysis**: you give significance, hierarchical order, or meaning to the findings. **Decide if one factor was more important than another.**

- **Critical analysis:** This step takes interpretive analysis a step further and assigns political significance to the findings. Critical analysis looks at participants' actions/experiences and places them in a wider context (the 'so what?' question). **Explain how the findings are important to life or school or family or relationships.**

Let's practice crunching the numbers

Simple Quantitative Analysis

Data calculation example : Current Health Status. **Calculate what percentage** of participants said that their current health status is **less** than 'good.' Calculate both actual percentage and 'adjusted percentage' (adjusted percentage is based on total number of participants that answered the question).

Q. Would you say your current health is:

ratings	frequency
Excellent	9
Very good	13
Good	23
Fair	20
Poor	10
Adjusted Total	**75**
Missing	3
Actual Total	**78**