



# Data Analysis

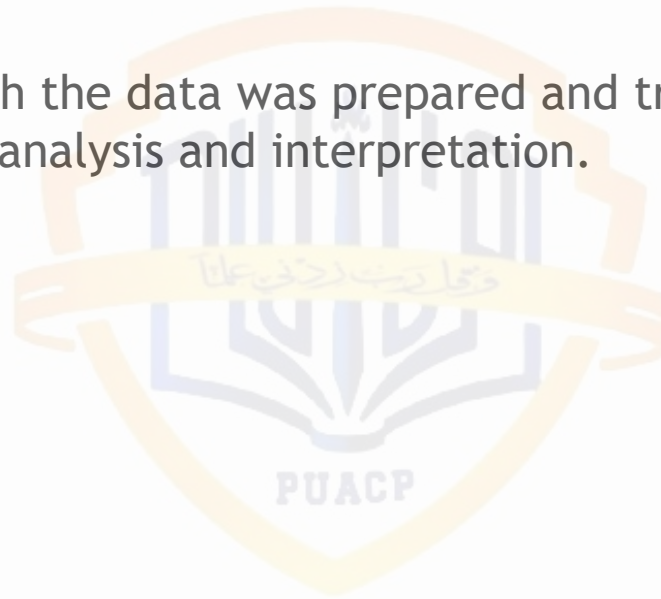
Dr. Muhammad Shaban Rafi

# The Data

- ▶ A thorough presentation of the data and results is essential if your work is to be taken seriously.
- ▶ Generally, about half of the thesis can be viewed as a sequence of three components: first, how the data was gathered and what it is intended to represent; second, what the gathered data looks like; third, how it should be interpreted. How to present 'what the gathered data looks like.'
- ▶ Readers won't trust your results unless they understand that your data is fair, unbiased, and representative

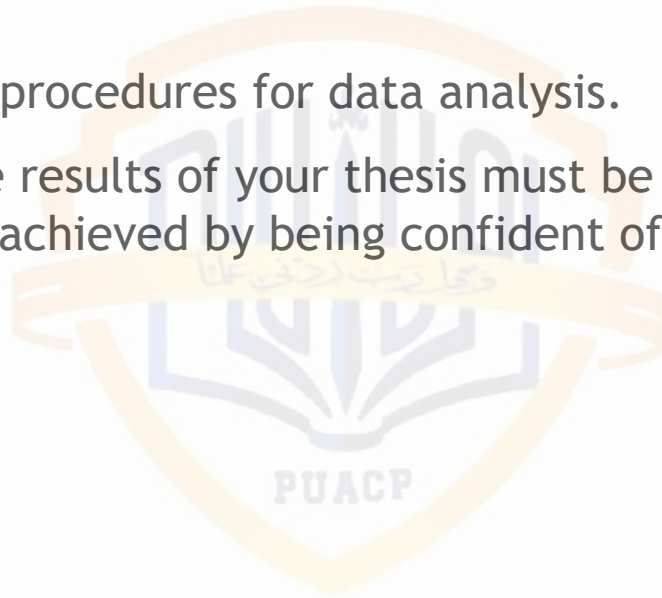
# Data Preparation

- ▶ Describe the ways in which the data was prepared and transformed in the process of readying it for analysis and interpretation.



# Data Analysis Procedure

- ▶ Describe, and justify, the procedures for data analysis.
- ▶ To impress examiners, the results of your thesis must be clear, verifiable, and well presented. Clarity is achieved by being confident of what to report, and what to leave out.



# Quantitative or Qualitative or both Analysis

- ▶ The approach you take to presentation and interpretation of your data depends on whether the research approach is quantitative or qualitative.



# From Data to Results

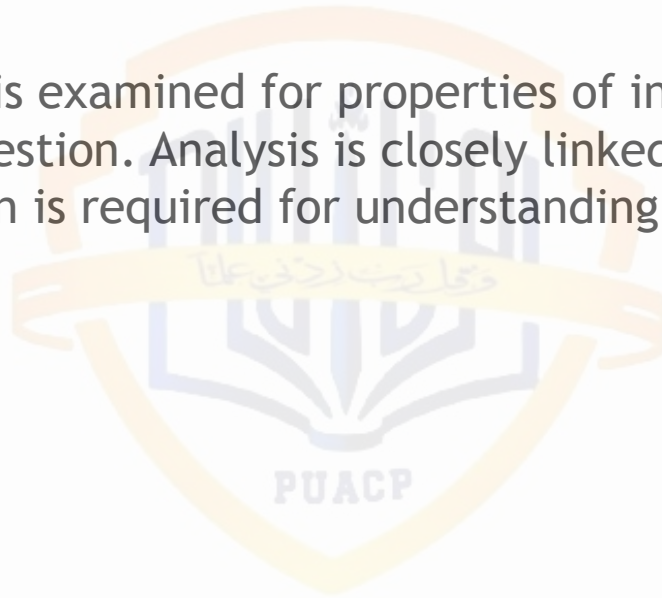
- ▶ Data is meaningless without interpretation. Results are obtained by showing how the data relates to the original question via an argument.
- ▶ Keep in mind, too, that having well-organized data helps protect you from possible accusations of falsification of results and gives you confidence in the outcomes.
- ▶ Materials that are in a mess suggest that the thinking is in a mess.

# Presentation

- ▶ You need to explain the data to your reader; this may be more difficult than you expect. It is summaries and interpretations of the data, not raw numbers, transcriptions, or photographs, that are likely to be of the most value.
- ▶ This presentation should not be haphazard. The presentation should educate the reader.
- ▶ You have used the data to draw conclusions as objectively as you can; now the task is to use representative examples drawn from the data, and example analyses of the data, to persuade the reader of the validity of findings.
- ▶ Inclusion of all the data is unlikely to be feasible

# Analysis/Interpretation

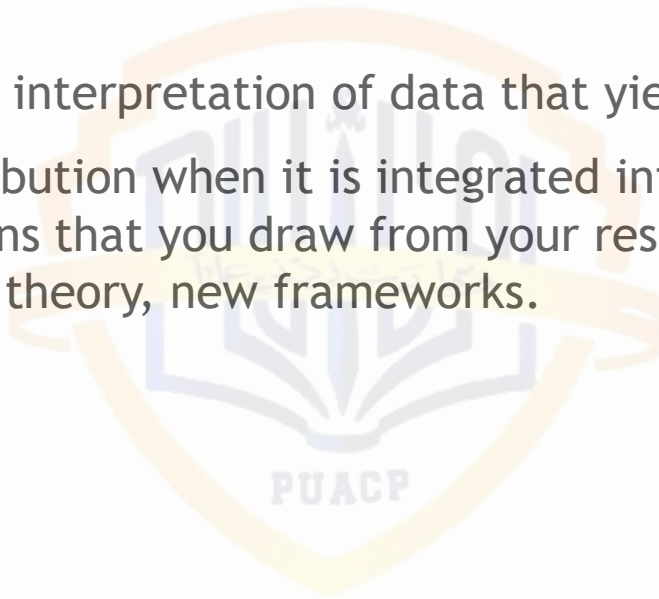
- ▶ Analysis of data is how it is examined for properties of interest, which can then be related to the question. Analysis is closely linked to presentation, because good presentation is required for understanding the results.





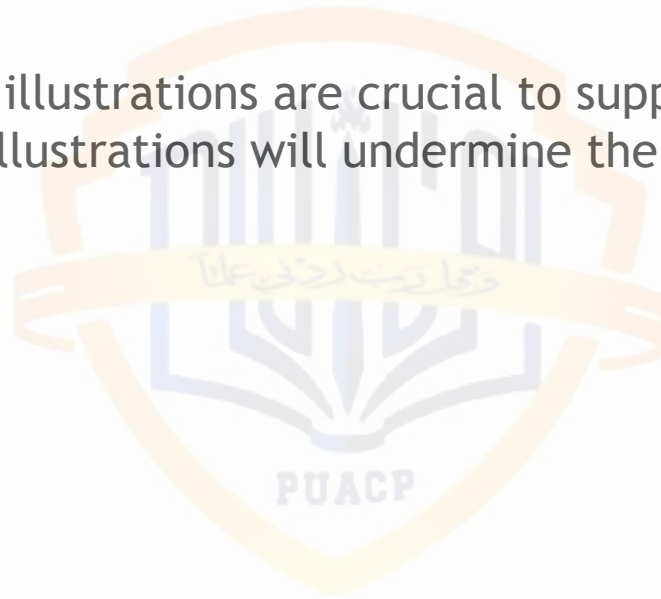
# Reasoning from Data

- ▶ A strong result rests on an interpretation of data that yields new knowledge.
- ▶ Knowledge makes a contribution when it is integrated into a way of looking at things. It is the implications that you draw from your results that are useful to others: new insights, new theory, new frameworks.



# Illustrations

- ▶ In many theses, effective illustrations are crucial to support the explanations and interpretation. Poor illustrations will undermine the value of your work.



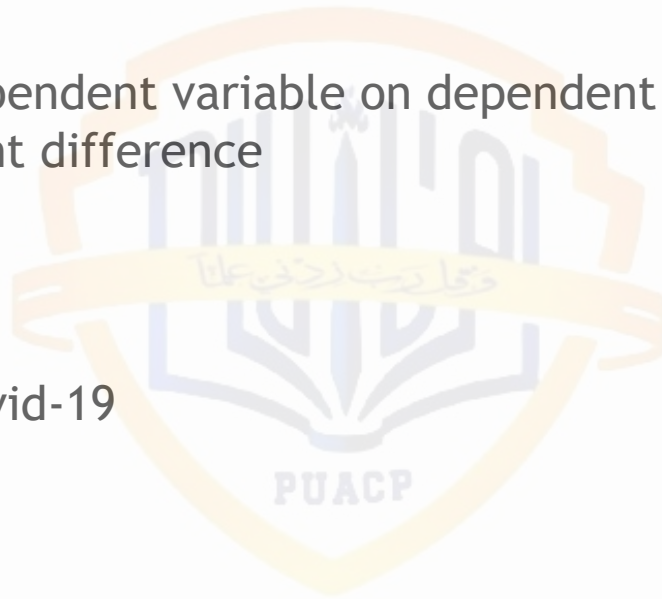
# Qualitative Data

- ▶ Texts, Codes, Categories and Themes
- ▶ Example: Writing Challenges and Facilitating Strategies



# Quantitative Data

- ▶ Variables: Impact of independent variable on dependent variables, correlation, and significant difference
- ▶ Model Fit
- ▶ Example: Language of Covid-19



# Reading Task

- ▶ Discourse and Discourse Analysis from Flick, U. (Ed). The Sage handbook of qualitative data analysis. Los Angeles: Sage Publication. Pp. 341-351

