Qualitative Data Analysis Software

A workshop for staff & students
School of Psychology
Makerere University

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Outline for the workshop

CAQDAS

NVivo Overview

Practice

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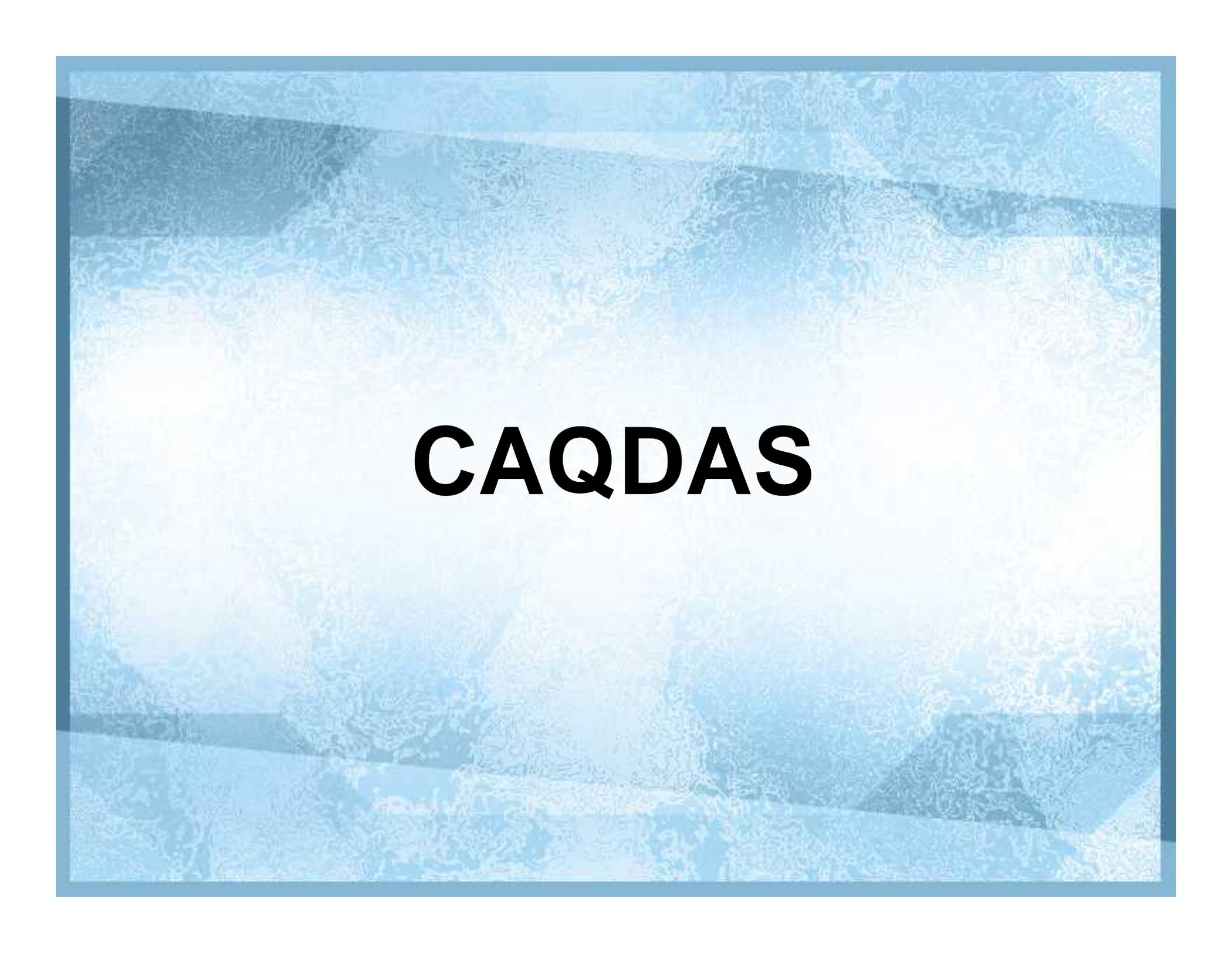
CAQDAS

Before we start…

- What is qualitative data?

- What are some of the examples of qualitative data sources?

- What is qualitative analysis?

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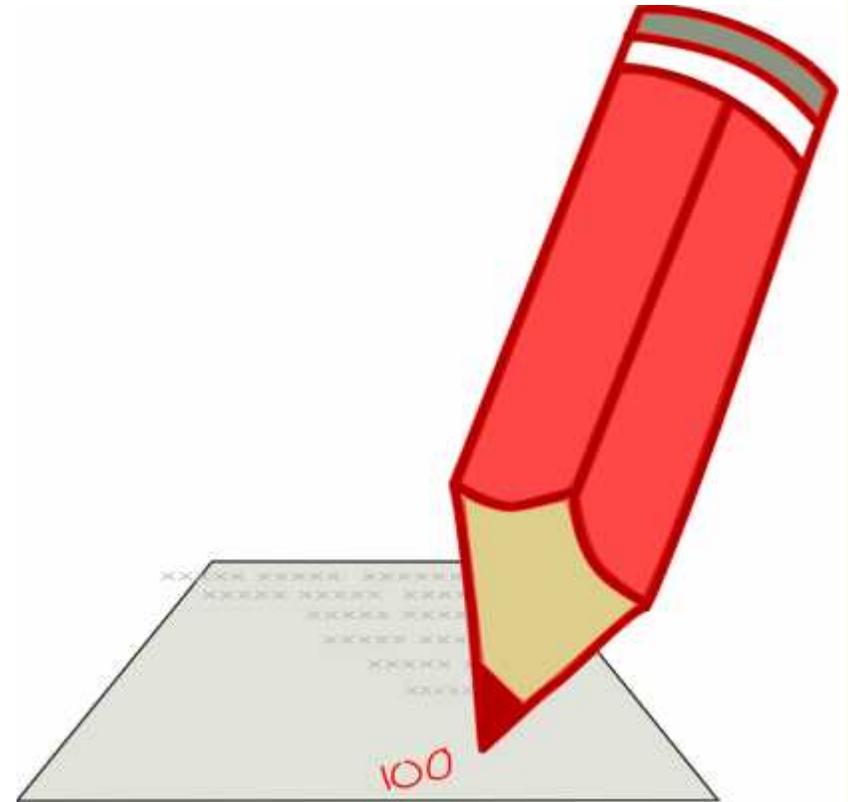
What is qualitative data?

- Non-numerical – converse of quantitative data

- Typically word based – but may include image, video, etc.

- Can record attitudes, behaviours, experiences, motivations, etc.

- Descriptive – describing events/opinions etc.

- Explanatory – explaining events/opinions etc.

Examples of Qualitative Data Sources

- Interviews
- Focus groups
- Speeches
- Questionnaires
- Journals/diaries
- Documents
- Observation
- Audio/visual materials
- Websites
- Social media

Analysing Qualitative Data

Identify similarities

Extract themes

Identify relationships

Highlight differences

Create generalisations

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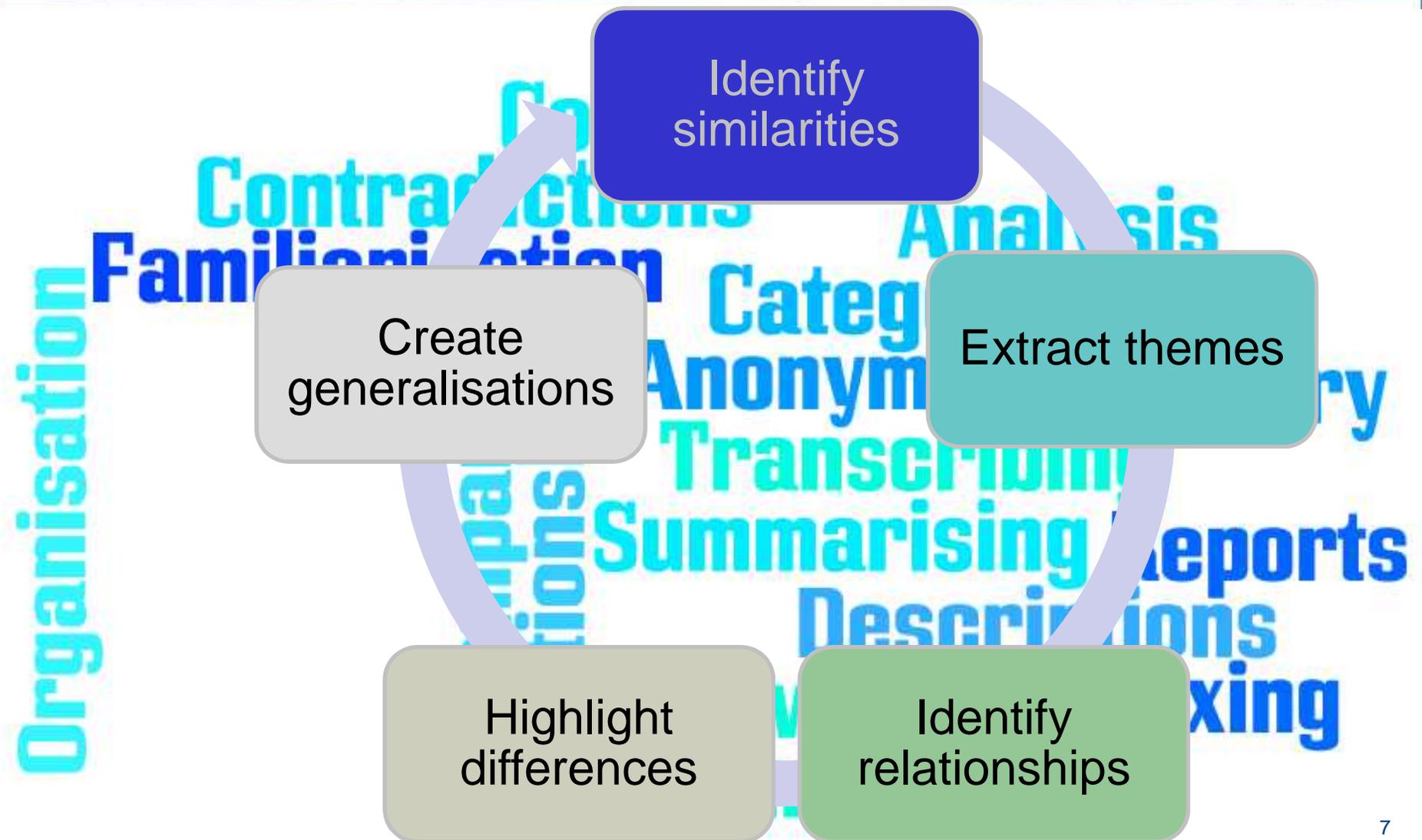
Qualitative data analysis

- The identification, examination and interpretation of themes in the data to answer research questions.

- Miles and Huberman (1994), see qualitative data analysis as involving data reduction, data display, and drawing conclusions - a process parallel to quantitative analysis.

- It is in this context that most **CAQDAS** has developed.

- **CAQDAS** instead allows the researcher to operate on an entirely new level.

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What is CAQDAS?

- Computer Aided Qualitative Data Analysis Software (CAQDAS)

- A database with some powerful qualitative analysis tools

- CAQDAS searches, organizes, categorizes, and annotates textual and visual data.

- Programs of this type usually support theory-building through the visualization of relationships between data and/or theoretical constructs.

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CAQDAS tools

- Main features to handle the data include:
  - Content searching
  - Linking tools
  - Coding tools
  - Query tools
  - Writing and annotation tools
  - Mapping or networking tools

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Examples of CAQDAS

- QSR NVivo [http://www.qsrinternational.com]
- ATLAS.ti [http:www.atlasti.com],
- MAXqda [http:www.maxqda.com]

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Organizing Data for analysis

developing your codes

coding your data

finding themes, patterns, and relationships

summarizing your data.

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Developing your codes

Coding is a process for categorizing your data.

Develop a set of codes using both codes that you predefine and ones that emerge from the data.

 Predefined codes are categories and themes that you expect to see based on your prior knowledge.

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Coding Data

- Divide data into meaningful units
  - Use words/phrases e.g. 'physical environment', 'interpersonal relationships'
- Codes can be '**data-driven**' or '**theory-driven**'
  - **A priori codes** are developed before examining the data
  - **In vivo codes** are derived from the data
  - **Co-occurring codes** partially or completely overlap
  - In NVivo, codes are stored within **Nodes**
- Keep a master list of codes used

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Types of Code

Descriptive
- What are the attributes of the source?

Thematic
- What are the topics being discussed?

Analytic
- What is going on?
- How can this be interpreted?
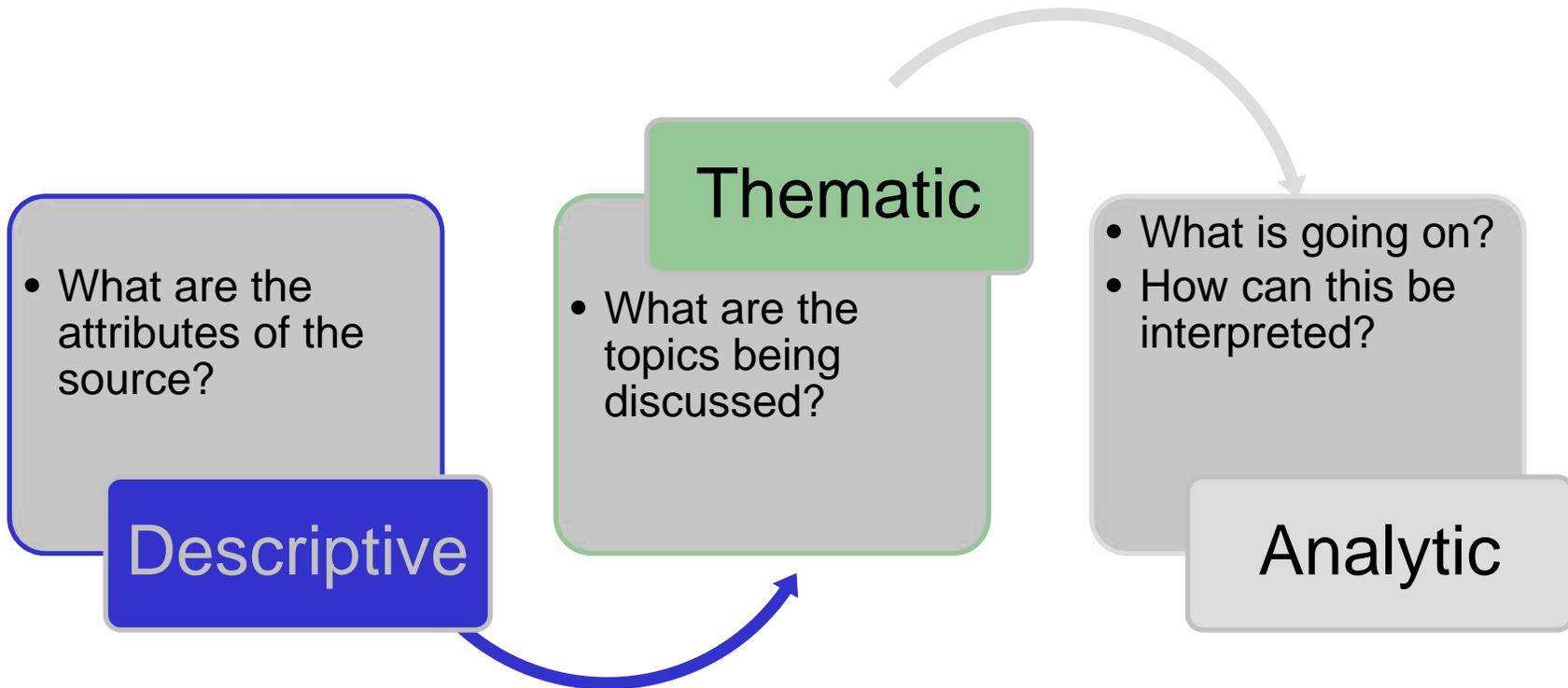
Types of Code

- This took place at Head Office
- This is about discrimination against women
- This is a reflection on misogyny in the workplace

Analytic

Descriptive

Thematic

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Finding themes, patterns, and relationships

- Step back from the detailed work of coding your data and look for the themes, patterns, and relationships that are emerging across your data.

- Look for similarities and differences in different sets of data and see what different groups are saying.

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Themes

- A theme is generated when similar issues and ideas expressed by participants within qualitative data are brought together by the researcher into a single category or cluster.

- This 'theme' may be labelled by a word or expression taken directly from the data or by one created by the researcher because it seems to best characterize the essence of what is being said.

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Summarizing your data

- Write a summary of what you are learning after you have coded a set of data, such as transcripts of interviews or questionnaire responses,.

- Summarize the key themes that emerge across a set of interview transcripts. Include quotations that illustrate the themes.

- Look across the various summaries and synthesize your findings across multiple data sources.

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NVivo Overview

Qualitative Analysis Using NVivo

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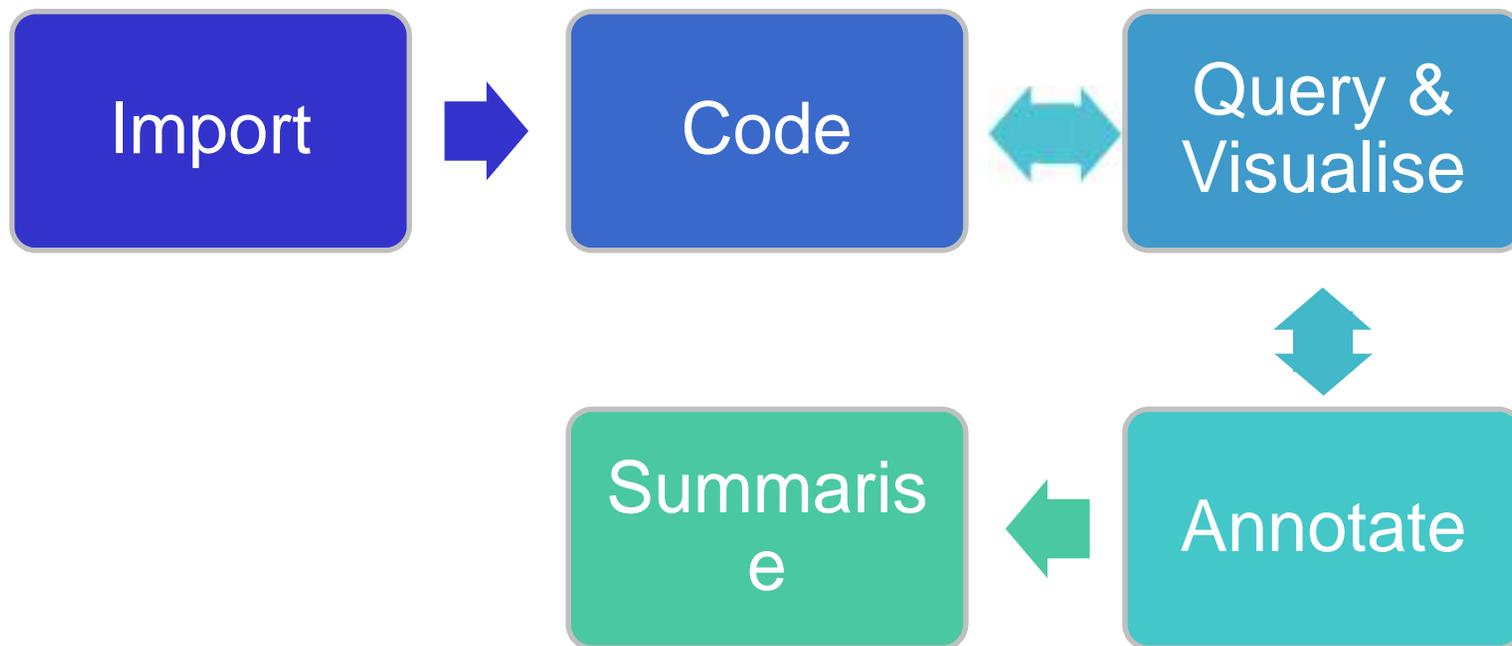
Importing Sources

- Name documents appropriately before importing
- Text-based data can be imported in .doc(x), .rtf, .txt or text-based .pdf format
  - For Microsoft Word documents, apply consistent heading styles to use autocoding
- Multimedia files can be imported in a variety of formats including: .mp3/4, .wav, .jp(e)g
  - Edit videos before importing   Julius F. Kikooma

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Other Datasets

- Can connect to SurveyMonkey to import survey results

- Import datasets such as Excel spreadsheets or Access database tables

  - Cannot edit datasets after importing – format and structure datasets before importing

- Use NCapture to import social media data such as Facebook, Twitter or LinkedIn feeds

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Coding in NVivo

What is this?
- Descriptive code
- Classification/attribute

Why is this interesting?
- Thematic code
- Annotation/memo

Why is this relevant to my research question?
- Analytic code
- Memo

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Creating Nodes

Code Selection	▶	Code Selection At Existing Nodes...	Ctrl+F2
Code In Vivo	Ctrl+F8	Code Selection At New Node...	Ctrl+F3
Uncode Selection	▶	Code Selection At Current Nodes	Ctrl+F9

- Use a separate node for each element
    - Who, what, how, when
    - Each node should encompass one concept only
- Text can be coded at multiple nodes
- Move free nodes into trees where appropriate
- Organise trees based on conceptual relationships
    - Not observed or theoretical associations
    - E.g. events, strategies, attitudes, beliefs, characteristics
- Each concept should appear in only one tree

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Tree Structures in NVivo

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Queries

- Find and analyse words or phrases
- **Text Search Query** – search for a word/phrase
  - Create a **word tree**

- **Word Frequency Query** –
  most frequently occuring words
  - Create a **tag cloud**
- Use memos to record what you learn
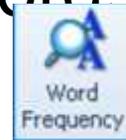
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Literature Reviews in NVivo

- Create a source folder called 'Literature'
- Code articles by themes
  - Create nodes for **statistics**, **quotes**, **definitions**, etc.
- Annotate content you want to follow-up
- Use memos to add descriptions or critiques
- Use source classifications for **date**, **author**, etc.
- Use queries to find common themes or gaps

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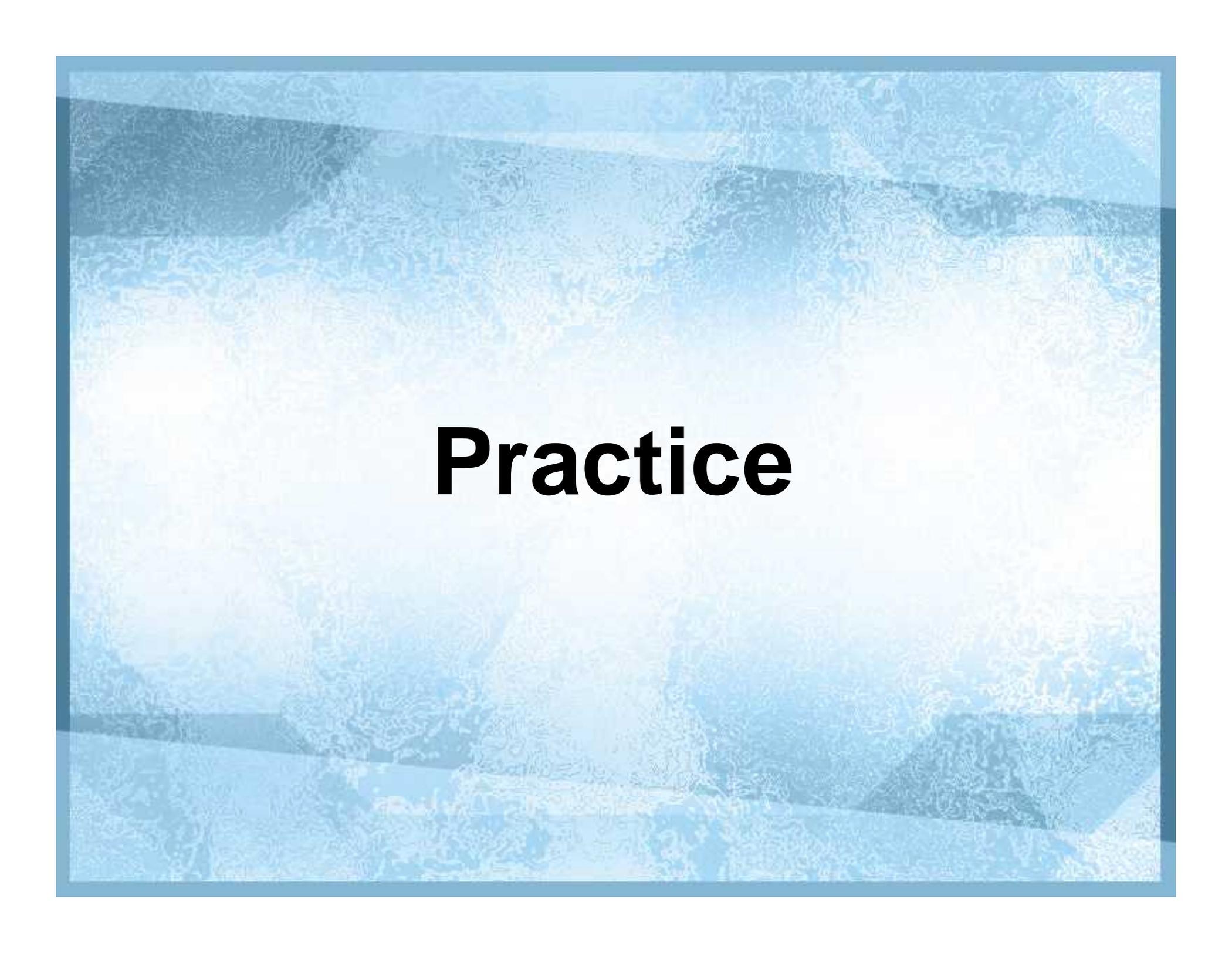
Practice

How confident do you feel…?

- Analysing qualitative data
- Navigating NVivo
- Creating a project
- Adding data sources
- Creating a node tree
- Coding deductively
- Coding inductively

- Using classifications
- Using sets
- Using search folders
- Creating charts
- Creating tree maps
- Creating graphs
- Running a text search query
- Running a word frequency query
- Running a matrix coding query

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