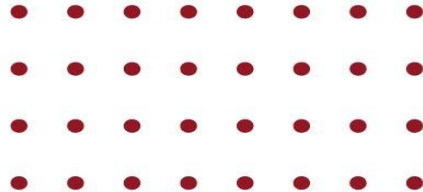


Research Methodology for PhDs



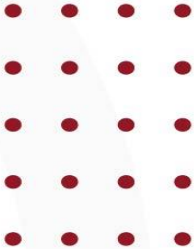
Session 9-1 Topics

- Overview of utilization of specialized software for qualitative analysis

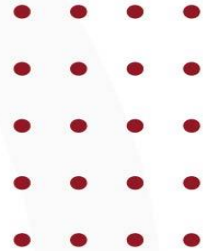
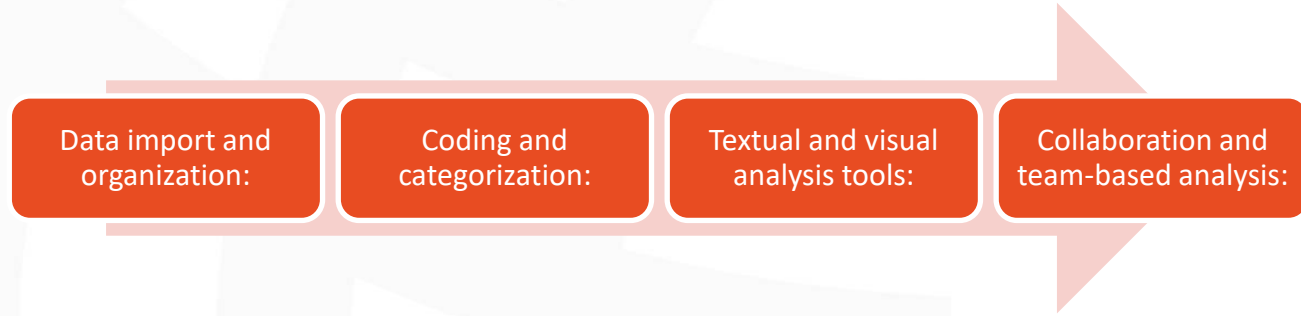
Qualitative Analysis Software Tools

Qualitative Data Analysis are specialized tools enable researchers to efficiently manage, code, and analyze large volumes of qualitative data, ensuring rigor, consistency, and scalability in the research process.

They empower researchers to uncover hidden patterns, facilitate collaboration, and ultimately enhance the quality and depth of qualitative research across various domains.



Features of Qualitative Data Analysis Software Platforms



Features of Qualitative Data Analysis Software Platforms

Annotations:

- Annotations are a great feature that enables inserting of texts and images for greater flexibility and ease of use. This also helps to connect various pieces of data to offer evidence by creating links to other coded segments, documents, case studies, or websites.

Data Visualization:

- The software also enables visualization of data in form of heat maps, clustering, multidimensional scaling, which allow one to quickly identify trends and patterns.

Media Analytics:

- The software can help gather and analyze data from various media outlets to make business decisions.

Mixed methods research:

- The software helps in conducting research by gathering, analyzing and inter grading quantitative research for example surveys, experiments and qualitative research such as focus groups and interviews.

Multi-language:

- The software supports several languages

Qualitative Comparative analysis:

- The software helps describe, compare and test a hypothesis on qualitative data

©<https://www.predictiveanalyticstoday.com/top-qualitative-data-analysis-software/>

Features of Qualitative Data Analysis Software Platforms

Sentiment Analysis:

- The software helps in the process of identifying and classifying opinions computationally and express in form of text to determine the attitude of the writer towards a particular subject.

Text Analytics:

- The software helps in text data mining or obtaining high-quality information from text

User research Analysis:

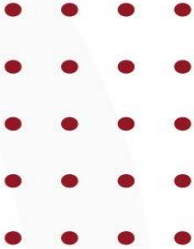
Provides Content searching tools

Provides Coding tools

Provides Linking ability

Provides tools for Mapping or networking

Tools for Query, Writing and annotation

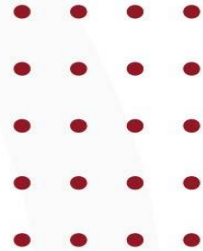
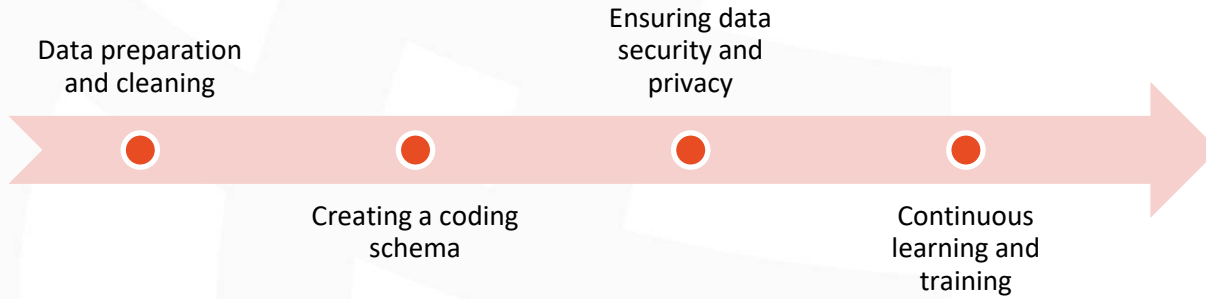


List of QDA Software Tools

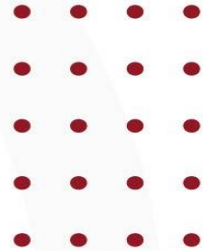
- 1. NVivo
- 2. ATLAS.ti
- 3. MAXQDA
- 4. Dedoose
- 5. QDA Miner
- 6. HyperRESEARCH
- 7. Quirkos
- 8. Weft QDA
- 9. WebQDA
- 10. Transana



Best Practices



CRISP process (Cross Industrial Process for Data Mining & Machine Learning)



Data Cleansing & Preparation

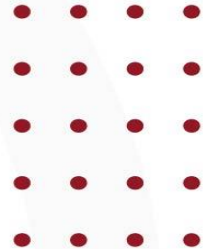
1. Duplicate data needs to be removed. The same data may be received from multiple sources. When merging the data sets, data must be de-duped.

2. Missing values need to be filled in, or those rows should be removed from analysis. Missing values can be filled in with average or modal or default values.

3. Data elements may need to be transformed from one unit to another. For example, total costs of health care and the total number of patients may need to be reduced to cost/patient to allow comparability of that value.

4. Continuous values may need to be binned into a few buckets to help with some analyses. For example, work experience could be binned as low, medium, and high.

5. Data elements may need to be adjusted to make them comparable over time. For example, currency values may need to be adjusted for inflation; they would need to be converted to the same base year for comparability. They may need to be converted to a common currency.



Data Cleansing & Preparation (Cntd)

6. Outlier data elements need to be removed after careful review, to avoid the skewing of results. For example, one big donor could skew the analysis of alumni donors in an educational setting.

7. Any biases in the selection of data should be corrected to ensure the data is representative of the phenomena under analysis. If the data includes many more members of one gender than is typical of the population of interest, then adjustments need to be applied to the data.

8. Data should be brought to the same granularity to ensure comparability. Sales data may be available daily, but the salesperson compensation data may only be available monthly. To relate these variables, the data must be brought to the lowest common denominator, in this case, monthly.

9. Data may need to be selected to increase information density. Some data may not show much variability, because it was not properly recorded or for any other reasons. This data may dull the effects of other differences in the data and should be removed to improve the information density of the data.

Challenges

Potential pitfalls and biases

Technical issues and troubleshooting

Ethical considerations



Session 9-2 Topics

- Example of specialized software for qualitative analysis
 - MaxQData

MaxQData Main Features



AI Assist

Qualitative data analysis meets AI. Discover how the new virtual research assistant can simplify your work.



Interview Analysis

Transcribe and code interviews. MAXQDA has powerful functions to support the analysis and visualization of your results.



Literature Review

Organize and analyze literature. MAXQDA comes with many features to make your literature review faster and easier.



Mixed Methods

MAXQDA is the best choice for your mixed methods analysis. It works with a wide range of data types and offers powerful tools.



Content Analysis

Use MAXQDA to manage your entire research project. Easily import and organize your data. Link relevant quotes to each other, and share your work.



Questionnaire Analysis

Whether your survey contains standardized or open-ended questions, with MAXQDA you can easily import and analyze both types.

Interface & Features Overview

The screenshot displays the MAXQDA Analytics Pro (24.5.1) interface. The top menu bar includes Home, Import, Codes, Memos, Variables, Analysis, Mixed Methods, Visual Tools, Reports, MAXDictio, and Stats. The toolbar contains icons for New Project, Open Project, Reset Activations, Logbook, Teamwork, Merge Projects, Save Project As, Save Anonymized Project As, Project from Activated Documents, External Files, Archive Data, and What is AI Assist?.

The interface is divided into three main sections:

- Documents Panel (Left):** Shows a tree view of documents. The selected document is "Week 1 - Assignment 2 (1)".
- Codes Panel (Bottom Left):** Shows a tree view of codes. The selected code is "Top-level comment with...".
- Document Viewer (Right):** Displays the content of the selected document, "Week 1 - Assignment 2 (1)". The viewer shows a search bar, a breadcrumb trail "tube import > Top-level comment with... > 6 replies", and a list of replies.

The document viewer content includes the GBSB logo and the following text:

FORMATIVE ASSESSMENT 2

Effective Teamwork



Thank You!
Read the Recommended Readings
You're welcome with your discussions and
questions in VLE!
Which QDA tool do You implement?
Share your experience

Please note, that since the recordings are done, some Readings may become unavailable. Inform us immediately in VLE, so we can offer substitutions