# Guide to Understanding and Coding Qualitative Data

**Download and Create an Account in Dedoose**

Analysis of qualitative data (e.g., focus groups and interviews) will be done in Dedoose. You will need to download Dedoose from the Internet onto your computer. Here are instructions for how to do that:

1. Navigate to Dedoose.com. Click the green "Download" button in the upper right-hand corner.
2. Download the Dedoose application that aligns with your software, either Windows or Mac.
3. Open Dedoose.
4. Email your supervisor to make you an account. This person will provide you with a username and password.
5. Email INSERT NAME (INSERT EMAIL) with your email to be added to the "NAME OF THE PROJECT" project.
6. Load the project by clicking the "Projects" button in Dedoose and then the load button next to "NAME OF THE PROJECT."

**Background Information on Qualitative Data**

**Qualitative data** helps researchers *gain an understanding of how an individual or a group may perceive or give meaning to the world around them*. It is often used to gather in-depth insights into a context (e.g., urban secondary schools), topic (e.g., students' perceptions of school safety), or both (e.g., how students in urban secondary schools experience school safety), which can be used to construct theory, generate new ideas, or inform quantitative data findings. Qualitative data is often not generalizable. It is typically collected through interviews, focus groups, observations, or documents.

Conversely, **quantitative data** helps *researchers "quantify" a topic of interest and generalize results from an often larger sample*. If qualitative data is helpful in understanding the depth of a subject (e.g., how it looks specifically for a targeted group of people), quantitative data is helpful in understanding its breadth (e.g., how it looks on average for most people). Quantitative data is about describing the magnitude of an effect, which can be used to test theory, uncover new patterns, or inform qualitative data findings. Quantitative data is often more generalizable. It is typically called through surveys and administrative data (e.g., grades, test scores).

**Background Information on Analyzing Qualitative Data**

Prior to collecting qualitative data, you will need to identify your qualitative analysis approaches and techniques. This section provides an overview of different qualitative analysis approaches and techniques.

*This project was supported by Award No. 15PNIJ-22-GG-01420-RESS, awarded by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. The opinions, findings, and conclusions or recommendations expressed in this publication/program/exhibition are those of the author(s) and do not necessarily reflect those of the Department of Justice.*

*Learn more about Safety 7 at https://www.childtrends.org/project/centering-youth-experiences-youth-participatory-action.*

**Qualitative Data Analysis Approaches**

There are five common approaches to analyze qualitative data. These are: (a) grounded theory, (b) ethnography, (c) action research, (d) phenomenological research, and (e) narrative research. Table 1 provides definitions for these approaches.

Table 1. Qualitative research approaches

| Approach | What does it involve? |
|---|---|
| Grounded theory | Researchers collect rich data on a topic of interest and develop theories inductively (i.e., there is not a theory developed). |
| Ethnography | Researchers immerse themselves in groups or organizations to understand their cultures. |
| Action Research | Researchers and participants collaboratively link theory to practice to drive social change. |
| Phenomenological research | Researchers investigate a phenomenon or event by describing and interpreting participants' lived experiences. |
| Narrative research | Researchers examine how stories are told to understand how participants perceive and make sense of their experiences. |

Deciding which approach to use will depend on your research topic and context. If you are striving to build theory about a topic, you may want to use grounded theory. Conversely, if you are striving to understand a topic better based on current theory, you may consider using phenomenological research.

**Qualitative Data Analysis Techniques**

There are four common techniques to analyze qualitative data. There are: (a) content analysis, (b) thematic analysis, (c) textual analysis, and (d) discourse analysis. Table 2 provides definitions for these analyses and examples.

Table 2. Qualitative analysis techniques

| Approach | When to use | Example |
|---|---|---|
| Content Analysis | To describe and categorize common words, phrases, and ideas in qualitative data. | A researcher could perform content analysis to find out what kind of language is used in descriptions of homework (e.g., "hard" or "boring"). |
| Thematic analysis | To identify and interpret patterns and themes in qualitative data. | A researcher could apply thematic analysis to explore how homework supports student learning (e.g., |

| | | |
|---|---|---|
| | | "remember class content" or "practice class content"). |
| Textual analysis | To examine the content, structure, and design of text. | A researcher could use textual analysis to understand how homework assignments are structured to support student learning (e.g., "question-based" or "essay"). |
| Discourse analysis | To study communication and how language is used to achieve effect in specific contexts. | A researcher could use discourse analysis to investigate how teachers communicate about homework to encourage students to complete assignments (e.g., "places time constraints" or "offers rewards"). |

**Diving Deeper into Thematic Analysis**

Within thematic analysis, there are two ways in which you can analyze data: (a) inductive and deductive. In both inductive and deductive analysis, **codes** represent patterns or themes within the data. A **codebook** represents all the codes used in a project. Table 3 provides an overview of inductive and deductive analysis.

Table 3. Difference between inductive and deductive analysis

| | Inductive | Deductive |
|---|---|---|
| Definition | Researchers collect data and code the data to generate a codebook. Codes are developed to identify themes from participants' responses and grouped into higher-level codes. | Researchers generate a codebook, collect data, and code the data using the codebook to identify themes that align with the original codebook. |
| Counterexample Analysis | After generating a codebook, another round of data analysis is needed to identify themes that do not fit within the generated codebook, helping to provide evidence that may contradict conclusions drawn. | During coding, themes should be identified that do not align with the original codebook. These codes will capture themes that do not fit the current theory. |
| Example technical term | Constant comparative analysis with deviant case analysis. | Pattern matching with counterfactual analysis. |

**Increasing Credibility and Reliability in Qualitative Data Analysis**

Credibility and reliability is increased when you have multiple data collection points (e.g., multiple focus groups and interviews) and researchers coding data. In an ideal world, qualitative data collection ends when you have reached saturation of new insights and/or understandings (e.g., new participants start repeating the experiences of past participants). Reaching saturation typically takes about 8 focus groups and 10 interviews.

When coding data with multiple researchers, researchers will need to establish **inter-rater reliability**. To do this, a random sample of 25 percent of responses from each data source (e.g., each focus group or interview) should be selected to be independently coded by at least two researchers. Coded responses with an interrater agreement of less than 0.80 should be discussed and reconciled as needed. Discrepancies should be discussed until researchers reach 100 percent agreement.

**Steps for Analyzing Qualitative Data**

These are the broad steps taken to analyze qualitative data with more than one researcher.

**Step 1. Familiarize yourself with your collected data and analysis plan.**

- Consider the following questions: How was the data collected and recorded? What approach will be taken to analysis? What technique will be used? Is there a codebook?

**Step 2. Establish inter-rater reliability.**

- Identify a data source (e.g., one focus group or one interview) and have at least two researchers code it.
    - *Reminder*: A **code** is a brief description (not an interpretation) that represents the theme of what is being said. A code should be specifically defined so that others reviewing your codes can understand their meaning.
- Use memos to identify questions within the data source or codes.
- Review the codes of the other researchers and note codes that are not aligned with your interpretations.
- Discuss discrepancies in codes until researchers reach consensus on what the codes should be for the data source.

**Step 3. Code the remaining data sources.**

- Split the remaining data sources (e.g., focus groups and interviews) for researchers to code based on the understandings established during Step 2.
    - *Reminder*: Coding is a continuous process where themes are moved and organized to gain deeper understanding. Some codes will have sub-codes to represent subthemes of a larger theme. Finally, not all codes may fit into themes and new codes may need to be generated to represent new themes.
- Use memos to identify questions within the data source or codes.
- Periodically review the coding of other researchers to ensure alignment continues.
- Discuss discrepancies in codes that arise.

**Step 4. Organize and review codes to identify patterns and themes.**

- Based on the final codes (and their frequency and importance), organize them into common patterns and themes.

    - *Reminder*: Patterns and themes are active interpretations of the codes and the data. Data in a theme should cohere together meaningfully. There should be clear identifiable distinctions between themes.
- Consider splitting or condensing themes.
- Continue reviewing themes until you feel that you have all the relevant data coded and the right number of themes to accurately represent your data.

**Step 5. Finalize theme names.**

- Theme names should be descriptive and highlight why the theme is relevant in the data.
- At this point, you should be able to tell a coherent story from the data.

**Step 6. Produce your report.**

- The themes are your findings from the data.
- The report should outline your findings as well as your interpretations of each theme.
- It may be important to use available literature to help you interpret your themes.

**Tips for Coding in Dedoose**

This is a video of me explaining how to code in Dedoose. Here are some tips for coding in Dedoose:

1. **Load a data source** under media by double clicking it.
2. To **code a portion of text**, you highlight the text you want to code, right click, and click add code. Then you can select one of the codes that is already there or add a new code by typing it in the box.
    a. *Reminder*: The new code should represent the theme you are trying to capture.
3. To **create a memo**, you highlight the text you want to create a memo on, right click, and click add memo. Then you create or select the group in which you want to categorize the memo (e.g., questions) and write the text for the memo.
4. To **delete a code from a portion of text**, select the portion of text using the grey brackets on the side. Navigate to the selection info panel. Click the X to remove the code. Click X to remove the excerpt.
5. To **rename a code**, hover over the code in the codes panel and click the edit button (looks like a wheel). A pop-up will emerge. Change the name of the code and hit submit.
6. To **move a code beneath another code** (i.e., creating a subcode), navigate to the codes panel and drag and drop the code you want to become the subcode on top of the code you want to become the parent code.
7. To **merge two codes**, hover over the code you want to merge in the codes panel and click the edit button. A pop-up will emerge. Choose which code you want to be the primary code and which code will be merged into that primary code, which is the secondary code. Click submit.