

ANALYZING QUALITATIVE DATA

OVERVIEW

- 1) What does “qualitative data” include?
- 2) Analyzing qualitative data—what it is
- 3) Handling qualitative data—three general steps:
 - I. Setting up your project
 - II. Working with your data
 - III. Making sense of your data

1) What does “qualitative data” include?

In qualitative research, several materials count as “data.” These include:

- Interview transcript
- Records of observation
- Images/pictures
- Memoires
- Journalistic reports
- Government reports
- Policy documents
- Diaries
- Minutes
- letters
- Notes from books and articles (lit review)
- Research proposal and design notes
- Audio-visual materials
- Emails, texts, virtual communications
- Conversations
- Events and impressions we *recorded and wrote reflections* on
- Memos
- Reflective essays
- Notes on confusions, unclarities, “I’m stuck” feelings
- Log trails – are history of the research project and the thought processes at different stages

- It is possible to say that everything around a qualitative researcher's topic of study and any record about his/her research project is a potential data.

2) Analyzing Qualitative Data

- The purpose of qualitative data analysis is not to reduce data and discover homogeneity, similarity, or single most important factor etc. Rather, qualitative data analysis aims at discovering the richness and complexity of the data by taking in-depth and holistic look at what is collected.
- Data analysis in qualitative research requires a combination of several skills holding both scientific rigor and personal intuition. The researcher must sometimes be creative and artistic while constructing meaning out of the data.
Qualitative data do not say anything by themselves; it is the responsibility of the researcher to goad them into saying something.
- It normally takes much longer than data analysis in quantitative research. The challenge in qualitative data analysis comes mainly from the bulkiness of the data (transcripts, recordings, field notes, observation protocols, memos, etc.) Hence, the first and the main goal of analyzing the data is to CONDENSE it not by reducing, but by organizing the data.

3) Handling Qualitative Data

Three general steps:

- I. **Setting up the project** – research question, purpose, research design, documentations, recording and managing data
- II. **Working with the data** – ways of exploring the data for clear picture of what is going on, reading, coding, developing categories, interpreting, reviewing, recording, annotating, memo writing, and opening up meanings
- III. **Making sense of the data**- synthesizing outcome; constructing theories, patterns, and outcomes out of the data; validating them; displaying themes, relationships, and patterns; determining what is enough and satisfactory; seeing the project as a ‘whole’

I. Setting up the project:

Involves: logging trails, starting to use computer software early, and recording data.

Logging Trail:

- Begins with the research project itself
- It is a process of leaving a trail for your reader on where you got and how you got there (especially important for funded projects and research in graduate schools)
- Logging trails help establish validity and reliability of your study

- You don't have to retrospectively reconstruct how a key idea emerged or how you found a certain idea convincing.
- It is important to keep logs on:
 - each step and shift of ideas and procedures in the project (the history of the research project and the thought process)
 - The different answers you have for the research questions at different stages
 - A reflection on your role in the study ("agency", "reflexivity"- "the way you see it")
 - The ideas you discovered and where they came from (e.g., the thought process that led you to a particular idea)
- Logging changes generally covers four aspects:
 - what happened,
 - why it happened,
 - what were the alternatives, and
 - what are the likely results of this shift or step
- A good logging trail is the result of "telling it" rather than "writing it up"
 - Tell what is going on in your project (as if you tell your friends and supervisors) in spoken or written words using memos, annotations,

diagrams, written letters, or models. THAT is what constitutes an excellent final write up!

- “Tell it” on paper/memo even when you get stuck! That is a potentially valuable data!

When to Use Computer Software?

- Begin learning computer software for qualitative data BEFORE THE “DATA COLLECTION” BEGINS
- Learning software right when data begins to build up—very distracting!!
- Start in your software:
 - Storing literature reviews
 - Early designs
 - Memos to your supervisor (agency/ yourself)
 - Research diaries
- Qualitative data analysis software are designed not only to manage data, but to integrate ALL aspects of the project

II. Working with Your Data:

- “Data *don’t* speak for themselves. We have to goad them into saying things.”
- It is the researcher’s responsibility to:
 - a. Work up from the data into ideas and explanations

- b. Discover themes, categories, concepts, hunches, & ways of relating them
- c. “Emerge” (verb) theories from the data

THERE IS **NO** THEORY HIDDEN IN THE DATA WAITING TO BE DISCOVERED BY THE RESEARCHER. RATHER, THE RESEARCHER **CONSTRUCTS** A THEORY USING THE DATA!

Working with your data includes:

- 1) READING AND ENRICHING YOUR DATA
- 2) OPENING UP YOUR DATA
- 3) STORING YOUR IDEAS
- 4) HANDLING YOUR DISCOVERIES
- 5) REVISITING YOUR DESIGN
- 6) REVIEWING YOUR RECORDS
- 7) WRITING IT UP!

These seven steps are what we learn through process. The best way to learn them is:

- 1) to see other good examples of qualitative research, and
- 2) getting engaged in mini practices with small amount of data

1) READING AND ENRICHING YOUR DATA

- Read your data (e.g., interview transcript) repeatedly and record your thoughts & responses as you do so.
- You don't need any formality!

- *“Sit under a tree with a printout of the data record and scribble in the margin. Or think aloud, tape your reflections and type them up.”* (Richards, 2004, p. 75)
- Record your thoughts however tentative. They might possibly matter.
- Early impressions and thoughts of surprise, conflicts, and excitements are precious! They may have valuable insights to offer. Write everything you recall.
- Record anything interesting about any of the text/data
- Ask yourself “why is it interesting” and record your answer
- Focus on any passage that is especially interesting and play with them. Compare them with other situations this might happen. Write the idea.
- Ask “why am I interested in that?” and record your answer.

2) OPENING UP YOUR DATA

- Involves “TEASING OUT” what is going on in the data.... and CODING
- A good understanding of grounded theory approach is helpful here
- It involves **creating a concept and naming it**
- Suggestion on how to do it:
 - Take a very interesting phrase or statement, and ask under what conditions you might hear that phrase and what would it mean then,
 - Then ask about the consequences of this idea or attitude

- Consider what this will mean for their strategies and interactions
- Coding – gathers material by topic and generates new ideas
- Helps us transfer from seeing our data document by document, to across documents, and by themes and ideas towards categories.
- The goal of coding
 - in quantitative research – to reduce data
 - in qualitative research – to retain and learn from data
- Coding is NOT simply labeling text by topics. A productive coding should help us develop ideas and take our enquiry further.

The different purposes of coding:

- To reflect on what the coded segments tell you about the category and its meanings in the project
- To ask questions about how the category relates to other ideas from the data, and construct theories about those relations
- To gather all material about a case, from different sources, so you can apply the information about the person or site to everything from there, and compare cases on their attitudes, experiences, etc.
- To make further, finer categories, from finding different dimensions in the data gathered by the first coding

- To search for blends or combinations of categories, to find patterns in attitudes on this subject, for example by gender, or to compare text at different categories, seeing the category from a different viewpoint
- To compare how different researchers interpret data

Three types of coding:

- 1) Descriptive coding – more like quantitative coding
 - 2) Topic Coding
 - 3) Analytical coding
- } Qualitative coding types that assist with the interpretive process

1) Descriptive coding – storing information about the case being studied

e.g., age, gender, and department of the interviewee

- Can be stored for each case in separate documents or as a spread sheet of tabular summary for all cases under each attribute. (Should be systematic!)
- How much descriptive information you store depends on how much information you need for context building.
- What attributes we need to have information on depends on our research question and research design.

2) Topic Coding – is done by allocating passages to topics

- Involves little interpretation; is easy to do, and necessary
- It is first step to more interpretive work

Where do codes come from?

- By planning on what topics you need to do coding at (to be determined by your research question and/or conceptual framework)
- Or, by beginning from the data itself to generate possible codes (in-vivo)
- Qualitative data analysis software makes topic coding very easy and flexible.
- Manually, it can be done by using color pencils, folders, and cards.

3) **Analytical coding** – is coding that comes from interpretation and reflection on meaning.

- The hardest and the most rewarding type of coding
- It involves reflecting on meanings of a text in context, and creating categories that express new ideas about the data
- Analytical coding should not be a hurried process. Ask:
 - What is a particular passage about?
 - What category/categories will properly represent that passage?
 - What context should be coded there?
- Examples of analytical codes: ideological assumptions, contradictions, omissions, turning points, ambivalence, etc.

Revisiting the coded data:

- Purpose of coding is NOT to get everything about a topic in one place so that it can be counted or summarized.
- Revisiting a coded data involves:
 - browsing together all of the segments coded at a category,
 - reading, thinking, and reflecting on each segments, and
 - learning new things out of the data.
- Things to look for when revisiting coded data:
 1. Differences—especially the ones that surprise you (e.g., why two interviewees you thought were similar had very different idea about a particular topic)
 2. Similarities that are surprising (e.g., a similar term used to describe seemingly dissimilar contexts)
 3. Anything that does not seem to belong to the category—did you code a segment in a narrow context? Should it be broadened?
 4. Record what you learned about the code in a memo
 5. Keep on coding and keep revisiting the coded data.

BUT AVOID THE CODING TRAP! THE TENSION BETWEEN CREATIVITY & EFFICIENCY

- Reliability in qualitative research means **consistency**
 - E.g., are you using a particular code with the same meaning throughout the coding process?
 - Can someone else view the segment of a text differently than you?

**Inconsistencies – are not threats to reliability inherently; but they become so if they are not reflected upon and learned from.

Coder consistency test

- 1) Consistency over time – code a clean version of the same document you coded earlier.
- 2) Consistency between colleagues - Colleagues code a clean duplicate of the same document.

Then ask:

- What categories are used by one but not by the other(s)?
- What differences are there in the segments selected for coding at each category?
- Are the styles of coding different? (e.g., is one version of the document richly coded at more categories? Does one coder select substantially larger passages for coding?)

3) RECORDING YOUR IDEA

Your ideas should go to:

- a. Annotations – belong with the record and refer to its content (e.g., notes on body language that need to be attached with the interview transcript)
- b. Memos – about themes or ideas that emerge “up” from the data
- c. Links or pointers to related material – e.g. from the relevant passage to the memo

4) HANDLING YOUR DISCOVERIES

- 1) Read and re-read your memos, annotations, notes, etc. and WRITE the story of your interpretation
- 2) Drawing it – the early uses of models – vaguely pictured notions of what is going on and what causes it

5) REVISITING YOUR DESIGN

At this stage, after much detailed work on coding and interpretation, you may find problems on your research design.

- Ask yourself “what should change?”
 - Should the question asked change?
 - Should the way the topic is approached change?
 - The wording of interview questions

6) REVIEWING YOUR RECORD – IN WHOLE OR IN PART

- a. Visit your record, in whole or in part, many times during the project
- b. Try to notice what you see differently each time (you will see)
- c. You learn during your data collection and analysis; so when you revisit, you will have a different picture of what is going on

Example:

- d. When doing your next interview, do not tolerate similarities with the previous interviewee. Deliberately challenge their similarity.

7) WRITING IT

- Continue the log trail
- Keep answering the questions:
 - Why is this interesting? (why should it be written about?)
 - What were the alternatives and why rejected?
 - What likely results is it going to give to the final project?
- Start thinking about categories: e.g., difference of meaning of a certain word across different settings (parts of the data)

III. Making Sense of Your Data

- Trying to “see the whole” is the final phase in qualitative data analysis after several documents are coded, analyzed, and memos are written.
- Ask these questions:
 - What are you seeking? (What **were** you seeking? What are you trying to answer?)
 - How are the codes interrelated?
 - What can you achieve?
 - What is realistic?
 - What is good enough?
 - Can you make a theory? If yes, of what level?

Approaches to Synthesize data:

1. **The big picture** – trying to create a unified account of what’s going on
2. **The pathway** – what specific steps were taken, focusing on identifying and specifying stages, contributing factors, and results of taking that path
3. **The X-ray view** – Constructing and testing, through your data, an explanation of a puzzling behavior or social phenomenon, reducing the complex picture to what matters

4. **The music, not the dance** –trying to show why the phenomena studied (perhaps organization, institution, or ideology) works, establishing the processes behind that and explaining why they operate together

Approaches to Construct Differences:

1. **The dominant pattern:** Making systematic comparison of cases or sites to create a theory of why they are different
2. **The animated model:** developing a model of the interplay of factors, teasing out the relationship between elements of your study and explaining complex processes behind it.
3. **Clarification by typology:** Identifying types of responses or behaviors representing the varieties exposed by your study.
4. **Zooming in:** Explore and challenge or extend an existing theory using your complex data to show the need for more subtle explanations or understandings.