Approaches to Coding Your Data in Qualitative Research

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Overview for Today

- Coding
- Organization & preparation
- Iterative approach
- Preview of other coding approaches/strategies
- Discussion & questions

What is [Qualitative] Coding?

- Coding
  - Process to assess and assign interpretation of data
  - *"Coding is not a precise science; it is primarily an interpretive act"* (Saldaña, 2016, p. 5)

- Codes
  - Words or phrases that are a summative attribute for data (Tracy, 2013)
  - *Researcher-generated* translation of data
    - Interpreted meaning
    - *some 'codes' may be theoretical/concept-based*

- Different from quantitative definitions
  - Qualitative: the "researcher is the instrument" & making interpretations

Organizing & Preparing Data

- Prepare all raw materials
- Identify how best to process the data
- Consider various organizational schemes
  - Chronological
  - By source
  - By type of data
  - By attributes of participants

Analysis Logistics

- What's your coding process and procedure?
  - Details needed; protocol; procedures
  - Team coding?
    - Training(s)?
    - *Do they all have IRB approval for access to (de)identifiable data*
- Manual approaches
  - Hard copies; marking up with pen
  - Cutting and organizing or stringing them together
  - Creating "tabletop categories"
  - Whiteboards

Analysis Logistics

- Computer-aided approaches
  - Word documents and spreadsheets
  - Highlight functions in Word documents
  - Printing a hard copy
  - Cut and paste on computer
- Qualitative software
  - ATLAS.ti
  - Nvivo
  - QDA Miner

Note: software does not "do" analysis for you!
That would be counterintuitive to qualitative approaches

The Iterative Approach

- Iterative analysis
  - Alternates between emergent readings of data (emic) and using extant models / theories (etic)
- Visiting and revisiting data
- A reflexive process
- Immersion in one's data
- *Start analysis alongside data collection*

- Timeline for completion?
  - …It depends!
  - Data set complexity and amount
  - Time needed to adequate primary- and secondary-cycle coding
  - Solo v. team coding

Primary-Cycle Coding

- Begins by reading data
  - Assigning codes
  - Spending ample time immersed in data
- First-level codes
  - Descriptive
  - Focus on what is present in data
  - Require little interpretation
  - EX: ‘using Facebook to seek news’ or ‘rolling eyes at boss’

Primary-Cycle Coding

- In-Vivo codes
  - EX: “Sup?” *or* “Having depression feels like I live in a black hole.”

- Emulates ‘constant comparative method’ (grounded theory)
  - Compare new data to extant codes
  - Modify codes, if necessary
  - Add new codes, if necessary

PRACTICE: Primary-Cycle Coding

- ***Interviewer:*** *How can professors fix the problem of 'cheating'?*
- **Interviewee:** Well, they can make different versions of exams and have them printed in different colors. They must cruise around the room to make sure there are no crib notes, cell phones, or iPads. They can't just sit in the front of the room, even in small classes.
- ***Interviewer:*** *Have you witnessed cheating in the classroom?*
- **Interviewee:** Yes, I have. It's easy to cheat in college now days. And professors are too busy doing other things in the classroom, especially when there are 30+ students to manage and they usually don't have a TA. So, we just wait until they are doing something else or helping another students. Then, we might get out our phone really quick or ask each other a question about the test.
- **Interviewer:** *So, how can colleges eliminate the problem of cheating?*
- **Interviewee:** Cheating has been going on since Adam and Eve. With pressures ever increasing on students not only to succeed but to do so with the highest possible grades, some will find ways to cheat. The stakes are too high. How else do you get into the best graduate schools, medical schools, and law schools, not to mention getting the best jobs with the best *companies?*
- ***Interviewer:*** *So, the focus should be on reducing cheating and not trying the impossible. You mentioned color coded exams. What else?*
- **Interviewee:** Well, for one, don't allow friends to sit next to each other during exams, rather, assigning seats randomly or alphabetically. Give professors more support in the classroom, at least for exam day. Maybe have better scanning software to check student papers that are turned in online, like on Blackboard.
- ***Interviewer:*** *What else?*
- **Interviewee:** Make the penalties of cheating severe enough that trying to cheat is not worth the cost. Students who cheat on a paper, for instance, would not just get a "F" on the paper but an F for the entire course. Repeat offenders should be expelled. This sounds draconian, but I want a fair playing field and for my degree to mean something.

Our Codes?

- What are a few you wrote down?
- Probably look quite different
  - And that is okay within the qualitative approach!
  - Would also vary based on our RQs
  - Likely would be refined in the next iteration of coding
- It is the job of the researcher to demonstrate *why* codes are relevant and justifiable
  - Demonstrate support for codes > themes > how these support findings + RQs

Focusing the Analysis & Creating a Codebook

- Create a list of codes and a description
- Codebook
  - Detailed description of each code with an abbreviation and an example
  - *Codebook formats vary!*
- Limit to ~25 codes (Tracy, 2013)
- Revisit research questions and *sensitizing concepts*
  - Any modification(s) needed?

Codebook Example

(Tracy, 2013, p. 192)

Codebook excerpt

Abbreviation	Code	Definition/Explanation	Examples (Hypothetical – Unless Otherwise Indicated Through Direct Quotes)
		First-level [descriptive] codes	
Tr-Self	Traits – set interviewee apart	Answer to question about what has set the interviewee apart from other employees, as a leader, and/or about any other characteristics the interviewee attribute to his career success.	My education; I am always working.
PolSug	organizational policy suggestions for work–life	Answer to the question: What could organizations do to make work–life balance easier or to help women in their on-ramping? Any other information interviewee offers concerning ways in which organizations could make work–life easier.	Flexibility; telecommuting; day care; giving more sick days.
WL-Fut	Future work–life balance	Descriptions of how interviewee thinks his children will manage work–life balance	I think they've seen that mom's staying home works well in our marriage, so they'll likely do the same.
		Second-level [analytic] codes	
Private	Privatization of work–life policy	When asked about organizational policy, interviewees provide an answer about their personal beliefs, practices, experiences, and situations	When asked in general about women going to work, respondent talks about how hard it is to find good day care; interviewee is asked four times about workplace policy before he says anything (in earlier answers he spoke about private familial views and practice).
Choice	Choice – women's work	Statements suggesting that interviewees view women's work as more of a "choice" than of a necessity and therefore think that women have only themselves to blame if there are work–life problems.	"I don't think my daughter will choose to go to work." I think women should stay home with the children.
Off-OK	Off-ramping OK	Statements that suggest interviewee thinks that it is acceptable (and even praiseworthy) for women to leave the work world when they have a baby	I applaud women who leave work in order to take care of children.

Secondary-Cycle Coding

- Secondary-cycle coding
  - Examine existing codes
  - Organize them into interpretive concepts
  - *Codebook refinement can still occur*

- Second-level codes
  - Analytic
  - Identify patterns / categories
  - Often include much more interpretation vs. 1st level codes

Synthesizing & Making Meaning from Codes

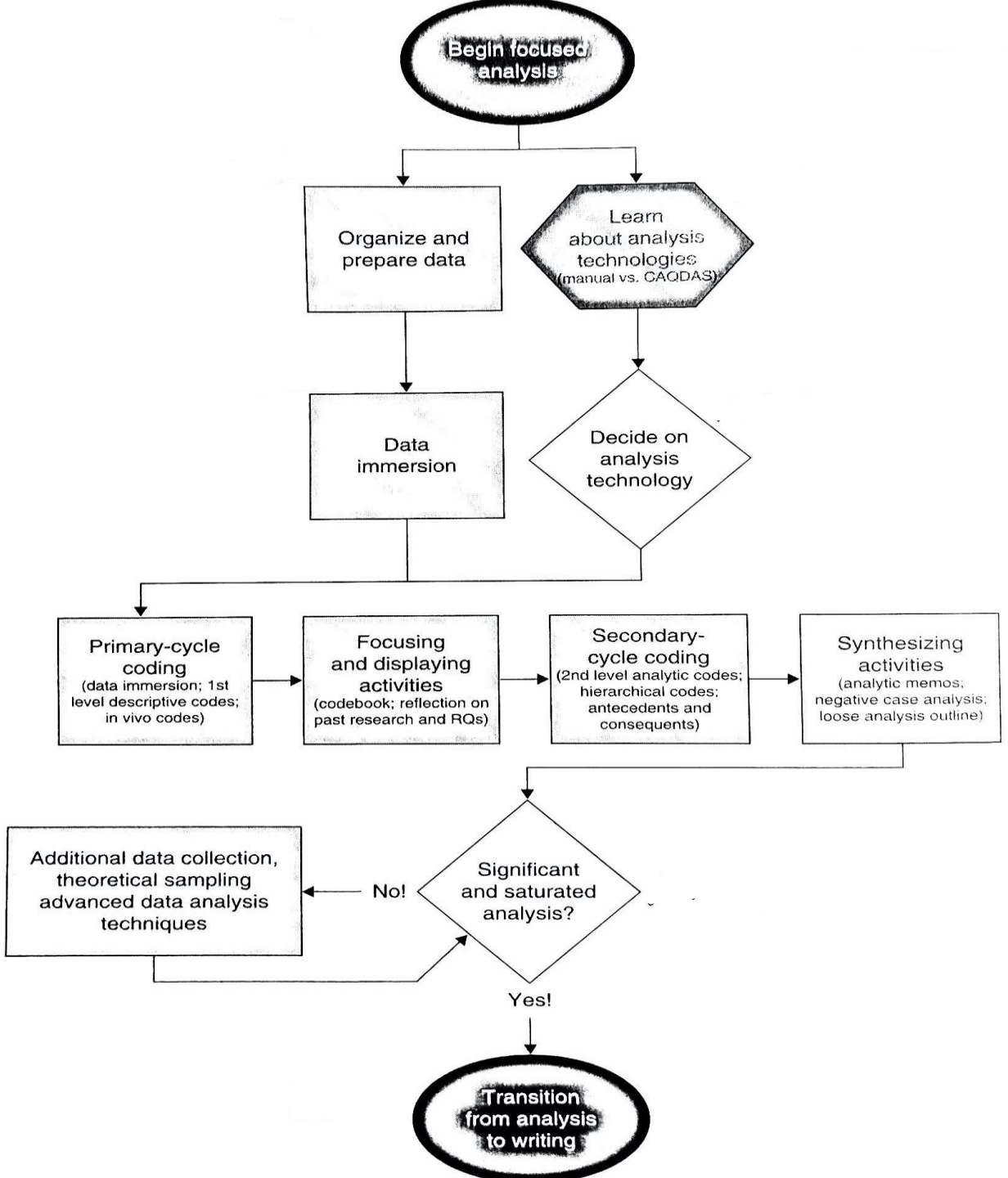
- ***Record all coding & analysis activities***
  - You'll need it for your "Methods" section
  - Keep a "methods log"
  - Publishing codebook is becoming a common request
    - Demonstrates research ethics
- Write analytic memos
  - Focus on code meanings and relations
  - Highlight exemplars
- Loose analysis outline
  - ½ way through secondary-cycle coding
  - Documents how RQs relate to your codes

Secondary-Cycle Coding

- Sometimes, analysis points you towards collecting more data
- Theoretical sampling
  - Back to field to gather more data to inform an emerging theory
- How do you know when you're done coding?
- Theoretical saturation
  - New data is not adding to emergent theory or suggesting new codes

In Sum:
Iterative Analysis Process

(Tracy, 2013)



Many Other Strategies to Analysis/Coding

- Grounded theory procedure(s)
  - Glaser & Strauss (1967)
  - Charmaz (2014)
- Phenomenology
  - Hermeneutic (van Manen, 1990)
  - Transcendental (see Creswell, 2013)
- Thematic analysis (see Boyatzis, 1998; Braun & Clarke, 2006; Nowell et al., 2017)
- Narrative analysis (Fisher, 1984; Riessman, 1993)
- Qualitative Content Analysis process (see Davis & Lachlan, 2017)

- General coding information for qualitative researchers: Saldaña (2016)

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ORS Resources

Research Design & Data Analysis Lab: https://www.uttyler.edu/research/ors-research-design-data-analysis-lab/

Schedule a consultant appointment with me: https://www.uttyler.edu/research/ors-research-design-data-analysis-lab/ors-research-design-data-analysis-lab-consultants/

Questions?

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