

An intensive data-driven approach to teaching qualitative data analysis with MAXQDA

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Background

In the last two decades, the task of teaching qualitative data analysis software applications has shifted a great deal. In the 1990s, the focus was to encourage qualitative researchers to integrate software into their analysis process. Today, our task is to teach a generation that takes software and apps for granted *how to do qualitative data analysis*.

Here, we present an approach to teaching qualitative data analysis and MAXQDA software that is both intensive and data-driven. This one-week course (30 hours) is offered for Masters-level students, and targets students who have taken an introductory course in qualitative research methods and data collection. The course is typically limited to about 25 students, and walks them through an analysis of 4 real-world interview transcripts through a combination of lectures, small group activities, lab exercises, and group discussions.

Methods

- Day 1 of the course provides an overview of qualitative data analysis, the course dataset, and MAXQDA software. Course activities then mimic a team-based approach to analysis.
- On Day 2, students begin writing memos on a single transcript, with 5-6 students working on each transcript. Their work is then combined in a single project using the teamwork function so they can review and discuss each others' memos.
- Day 3, the class identifies themes based on their initial memo-writing and review, and we define a codebook. Students then code their transcripts and we combine all coding through the teamwork function so students can compare their coding.

- In order to avoid the automatic merging of similarly coded segments, students add their name to the end of each codename: **condoms/contraception_Karen**

Students then review the coding, assess which codes appear to have good agreement and which ones are less consistent. They re-read text where agreement is poor and adjust definitions. Finally, they discuss differences in segmentation and the implications for data retrieval and review later in the analysis. Day 3 concludes with practice developing a case-based (within case) analysis for one or two codes for each transcript. Day 4 focuses on data retrieval and review functions in order to move toward code-based (across-case) analysis. MAXMAPS is introduced, and students begin exploring the data visually.

- Day 5 presents advanced search functions, strategies for data reduction and writing results.
- Students are given a **final assignment** with 3 components:
 - Descriptive analysis of the code "EXCLUSIVITY," including 2-3 properties/dimensions of that theme, and a discussion of its intersection with one other code in the dataset
 - Comparative analysis of the theme across 2 groups
 - A MAP showing their use of MAXMAPS to explore data

The results presented here are from 23 final assignments written by students in August 2014. We focus on 13 students who wrote on the intersection between EXCLUSIVITY and CONDOMS/ CONTRACEPTION, and compared their findings by race/ethnicity.

EXCLUSIVITY
 Code definition: references to fidelity/infidelity, faithfulness/unfaithfulness, monogamy, having multiple sexual or romantic partners at same time, cheating, trust/ mistrust pertaining to cheating. Applies for participant or partner.

CONDOMS/CONTRACEPTION
 Code definition: references to condoms and contraceptive devices used to prevent pregnancy and/or STIs/HIV.

Results

Memos

- The combined project included memos written by all 23 analysts, with 5-6 writing on each transcript. Memos clearly cluster around rich text passages, and often converge. In this example, 4 analysts wrote about "Oliver" being nervous about initiating sex, while 2 focus on the "empty house" - lack of supervision - as an indication that sex could occur.

<p>Hemo 8 (R, 8/19/2014) Respectfully about to initiate sex in the relationship. "You know, me being a male, I was kind of scared because it would be the first time"</p> <p>Hemo 10 (R, 8/19/2014) Lack of supervision from an adult indicated that something more intimate/sexual would occur</p>	<p>Anxiety (R, 8/19/2014) Interesting that he recognizes and admits anxiety about sexual initiation</p> <p>Signals (R, 8/19/2014) Was there any talk about having sex together previously?</p> <p>Empty house = signal for sex? "She threw those signals out there" - what</p>	<p>First Time (R, 8/19/2014) Nervous about first time-wasn't expecting it</p> <p>Feelings about first sex (R, 8/19/2014) uncertain, scared, feeling young</p>
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Course Overview

	Morning Session	Afternoon Session
Day 1	Course Overview Introduction to Qualitative Data Analysis	Introduction to Course Dataset Introduction to MAXQDA
Day 2	Memos: Annotating Qualitative Data	Memos in MAXQDA: Practice writing memos to identify themes
Day 3	Codes: Segmenting and Coding Textual Data in MAXQDA	Comparing and Reconciling Coding Case-based Analysis
Day 4	Visualizing coded text using MAXMAPS Using Variables in Comparative Analysis	Code-based Analysis Describing Themes across Cases
Day 5	MAXQDA advanced search functions Data reduction techniques	Data reduction strategies Final assignment and course evaluation

Results (continued)

Coding

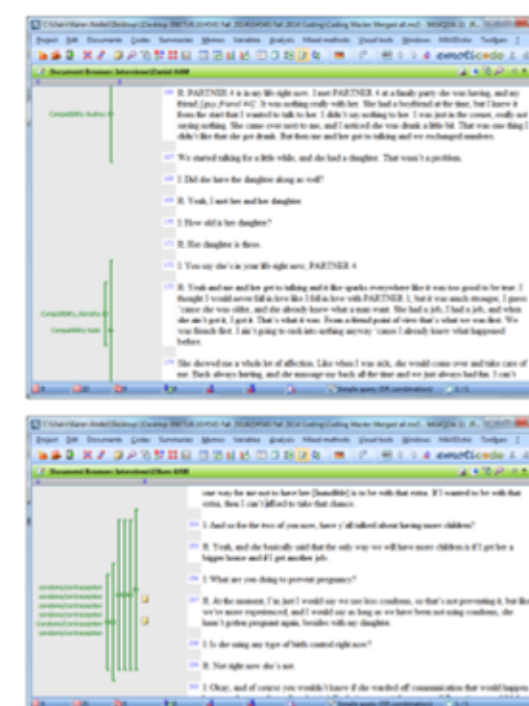
- We deliberately define at least one code poorly, so students can experience the challenge of fitting ill-defined codes to textual data. This session, it was **COMPATIBILITY**, defined as: *references to perceptions of (in)appropriate or (un)desirable and/or ideal partners*. When reviewing the combined coding, it is clear that this code has more instances when only one or two coders apply the code, compared to other codes, which tend to cluster (see screenshots).
- **CONDOMS/CONTRACEPTION** is one of the more concrete codes, which requires little interpretation when coding; it is common to see clusters with all coders applying the code.
- Other codes, such as **EXCLUSIVITY**, are more complex concepts, and students found that they needed to discuss specific text segments in order to build a shared notion of what the code was meant to capture

Segmentation

- It is not uncommon to see a wide range of segmentation styles. This exercise also allows students to develop standard segmentation rules (e.g. include the interviewer's question).

Discussion

Rarely do we have an opportunity to observe 23 analysts working on the same 4 transcripts. Combining and comparing students' work during the course enriches their learning by providing immediate comparisons and opportunities for discussion. The examples presented here suggest that QDA software has the potential to ignite new discussions around important issues in qualitative research, such as agreement, saturation, and even replicability.

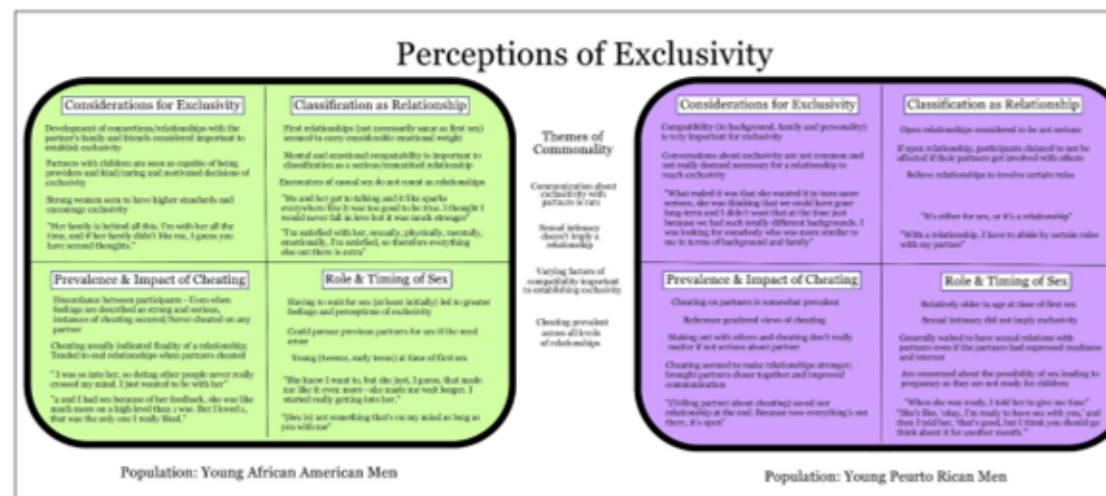
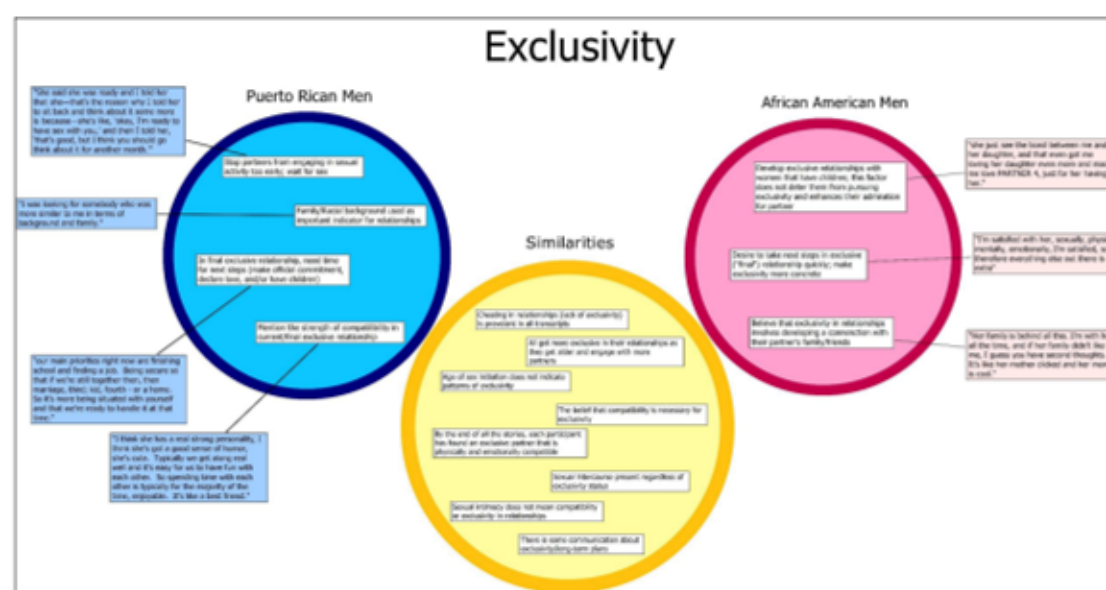
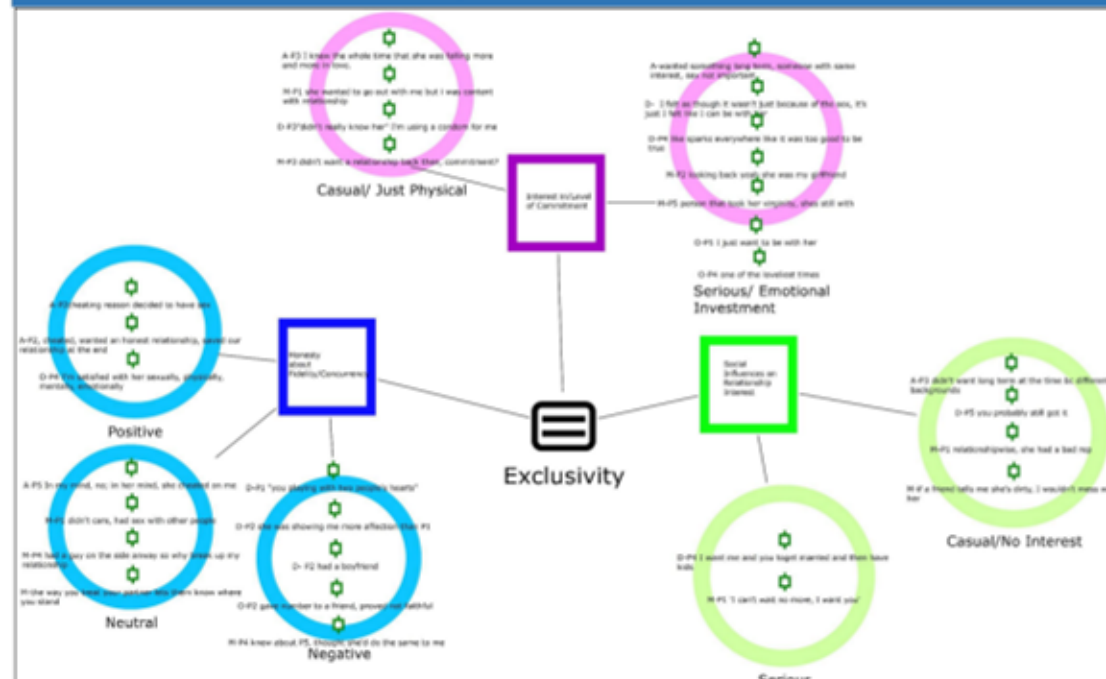


Consistency in Findings

In their analyses, students often came to very similar conclusions, as seen in these comments on the relationship between **Love** and **Sex without a Condom**:

- They linked love to being able to have unprotected sex.
- Also, participants that were in concurrent relationships described not using condoms with the partner whom they loved, while they insisted on using condoms with the partner that was purely a physical relationship.
- The other two participants, who were both African American, report not using condoms when they have sex with partners for whom they described a strong emotional connection.
- Intentional condom non-use also depended on whether the participant loved their partner.
- With more serious and exclusive partners, participants use condoms or contraception initially, but do not always continue taking prevention measures.
- Two of the four participants expressed that being in an exclusive relationship made them comfortable with not using contraception, as they had no fears of contracting STDs and were not averse to the idea of getting their partner pregnant.
- The most common avenue for talking about condom/contraceptive use was when the men did not use condoms or contraception. There were two main instances for this: 1) the man loved the woman...
- He reported using condoms "off and on" because "I loved her. That was the main reason. That was the only main reason." This trend of not always using condoms in committed relationships was also demonstrated by Daniel and Oliver.
- It appears from the data that the participants were more likely to be adamant about using condoms in more 'casual' sexual relationships than in their 'committed' relationships.

Examples of MAPS



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Course Data

The data provided for this course are life history interviews that were conducted with African American and Puerto Rican young adult men (18-25) in Philadelphia in 2006-2008. Men were asked to describe their most important intimate relationships, including communication around sexual behavior, pregnancy and HIV/STI prevention. The study was funded by the US Centers for Disease Control and Prevention through a cooperative agreement with and data were collected by the Family Planning Council of Philadelphia (#U58/CCU323065). The study was reviewed and approved by the Institutional Review Boards of both agencies. Class transcripts contained no identifying information; transcripts were assigned pseudonyms.