Resources

- *Data Analysis*, Chapter 6 in Schuh book (pages 158-168)
- Creswell (2002) or (1998) – you can borrow from me or find in the library
- Online resources (e.g., http://www.sagepub.com/upm-data/43454_10.pdf)
- Harper: Myths and Misconceptions in Qualitative Assessment (handout)

Example research articles (for ideas, not to replicate)
- Asmussen & Creswell Gunman Article (handout)
- Hermanowicz: College Departure process (handout)
Getting Started

• Keep in mind the goals of your project
• Qualitative data analysis can take a great deal of time – leave plenty of time
• Don’t wait until the “end” to get started
  – Can summarize interviews, focus groups, observations as you go; particularly important if you are not recording / transcribing
• One benefit of qualitative projects is they can reveal unexpected or unintended subjects (more “open-ended”)
• Decide who will be doing the analysis and what resources or tools you might need
Basic Steps

1. Preparing and organizing data for analysis
2. Exploring the data ("dwelling with the data")
3. Describing and developing themes from the data
4. Representing and reporting the findings
5. Validating the accuracy and credibility of the findings
6. Addressing your assessment question(s)

*1-5 from Creswell (2002)
1. Preparing and Organizing the Data

• Helpful to have a logbook or matrix that summarizes what data you have available (especially if you are using multiple sources of data)

• Sort and group materials systematically (e.g., all interviews together, all images together, etc.)

• Convert data into usable format (e.g., type up handwritten notes)
Decide if you will use software to support your analysis

- Smaller data sets you can go by hand or use Excel and Word to do most of your coding
- Bigger data sets or analysis of video and images might be better to use software program
  - NDSU does not appear to have any software available in the labs – purchase your own or some free versions available
Qualitative Analysis Software

• Commercial packages can be expensive but quite powerful
• Free packages can work too, but not always as powerful and sometimes buggy
2. Exploring the Data

• Set aside block of time to go through the data
  – “Immersion” or “dwelling” with the data

• Can make memos in the margins of materials (or use comments in Word)
  – “Short phrases, ideas, concepts, or hunches that occur to you” (Creswell, 2002)

• If multiple people involved, can include team meetings and discussions
3. Describing and Developing Themes

• If your goal is to describe something, you may not do much formal coding or theme development

• e.g., describing the culture of floor 7 in Thompson Residence Hall (what do you observe, what do residents say about the floor, and so on)

• Most assessment studies will want to use coding and theme development
What if I Didn’t Transcribe my Data?

• In many assessment projects you will not record and transcribe interviews and focus groups

• However, you should have detailed notes (“memos”) that summarize what occurred

• Essentially still “coding,” but working with notes and not direct transcripts
Coding: Process of data reduction, moving from many pages of text (each section of text its own “code”), to smaller number of codes, and finally to a few themes.
Select a sentence, paragraph, or section of text

– Assign a word or phrase that describes the meaning of that passage
– Can use more than one code for a section of text
– Can use the participant’s actual words (called “in vivo codes”)
– Careful not to “over-code” as you will want to reduce the codes to a small number of themes (5-7 or fewer)
### The Process of Reconstructing Curriculum in a Rural High School Setting

**Codes Here**

- **Close-knit community**
  - LU: Well, I think Greenfield is a fairly close-knit community. I think people are interested in what goes on. And because of that, they have a sense of ownership in the schools. We like to keep track of what our kids are doing and feel a connection to them because of that. The downside of that perhaps is that kids can feel that we are looking too close. But most of the time, that is the nurturing environment that we do provide an atmosphere of concern and care. To back up, you said the health of the community itself is reflected in schools. A lot of times communities look at schools and say they are not doing this or they aren’t doing that, or we're missing something in our schools. I think perhaps we look at the school and see, this is probably a pretty conservative community overall, and look to make sure that what is being talked about in the schools really carries out the community’s values. There is a little bit of an idealization I think, perhaps in terms of what we thought of “basic education.” [And I think there might be a tendency to hold back a little bit too much because of that idealization of “you know, we learned the basics, the reading, the writing and the arithmetic.”] So you know, any change is threatening. [And I think that goes for the community as well as what we see reflected at the school. Sometimes that can get in the way of trying to do different things. I think, again, idealization, older members of the community forget, some of the immaturity that they experienced when they were in school and forgetting that kids are kids. So there is a little bit too much of that mental attitude. But for the most part, I think there is a sense of we’re all in this together, and concern for the kids.]

- **Health of community or community values**
  - LU: In terms of looking at leadership strengths in the community, where does Greenfield set in a continuum there with planning process, understanding the need to plan, forward-thinking, visionary people. You talked about that a little bit before.

- **Change is threatening**
  - LU: I think there are people that have wonderful visionary skills. I would say that the community as a whole would be . . . would not reflect that. I think there are people who are driving the process, but the rest of the community may be lagging behind a little bit. I think we have some incredibly talented people who become frustrated when they try to implement what they see as their . . .

**Themes (And other Ideas) Here**

- Potential theme: The community
- Idea: getting a good sense here for the community and its values
- A good quote
- Potential theme: Leaders
- Idea: returns to description of community again

*Source: Reprinted with permission of Jean Jones, Ph.D.*
Coding strategies

- Use comments in Word (highlight text and "add comment" using reviewer tools)
- Print and do it by hand with colored highlights or pens
- Use software programs
- Cut and paste text onto index cards or sticky notes, sort and group cards by hand
- Identify quotes or phrases that you want to be sure to capture in your final report (prepares you for the report writing)
Moving from Codes to Themes

• You might have 25-30 or more codes after your first run
• Try to group the codes into 5-7 themes at the top level
  – It may take several iterations before you get down to 5-7
  – Helpful to think of it as a hierarchy, or “tree”
    • Some software programs allow you to build these interactively, otherwise you can build by hand
Reasons for improving your teaching

- Want to do a good job
  - Commitment to institution / department
- Interested in student learning
  - Care about students
  - Do research on student learning
- Intrinsic elements make teaching interesting
Activity

• Say I interviewed 10 students about life in the residence halls – this is the transcript from one interview

• First read through and get a sense of the interview, use the right margin to note comments, ideas, anything of interest

• Then use the left margin to develop your codes

• Then try to reduce codes to 5-7 (probably 1-3 for this short excerpt)
Coding FAQs

Why didn’t we all come up with the same exact codes?

• In qualitative inquiry it is understood the researcher plays a role in influencing the findings – important to “write yourself into” your report so reader can understand your perspective
• Member checking, triangulation, audit can all bring you back if you start to drift too far
• “Thick and rich” description allows reader to draw his / her own inferences and check the researcher’s interpretations
Coding FAQs

How much detail do I need in my coding?

• Remember, aiming for 5-7 themes at the most. Codes can help you when you are writing, but most people tend to over-code, especially when getting started.

• Can build a code-book of commonly used codes that you then use in later coding (Excel is handy for this because it remembers text you’ve used before)
Coding FAQs

Do I “weight” my coding? If 4 people said residence halls were great, but 1 said they were terrible, who do I believe?

• Remember in qualitative studies you are not trying to “prove” something. You are seeking to describe and understand.

• In your written summary you can highlight the differences, or note that not all students were in agreement, or try to understand why there were different experiences.

• Should not dismiss perspectives of those in the minority – want to serve all students
Using Excel for Coding

- Excel won’t do analysis for you, but here are some suggestions on how you might use Excel


- The nice thing about Excel is the ability to sort text and codes together; makes it easy to find quotes when writing your summary (Word search will include comments but no easy way to sort)
Converting Qualitative Data into Quantitative Data

• This is a different way to analyze qualitative data
• For example, interview students about their perspectives on interacting in various cultural settings, then score the student using an intercultural competence rubric
• “Converts” qualitative data into a number
Other Examples of Data Conversion

• Count the number of times a certain word or phrase is used
• Score or evaluate images of dining halls with regard to how they support healthy eating choices
• Gather quantitative data on the study’s participants (e.g., GPA, depression scores) as part of a in-depth case study, write about what was learned from qualitative observations and quantitative indicators
Limitations of Data Conversion

• Conversion of data does not change a qualitative study into a quantitative study
  – i.e., your sampling choices are probably still qualitative (purposeful not random)
  – Your write-up would include both qualitative and quantitative elements (a mixed methods study)

• Get to be much more complex and take longer to complete
4. Representing and Reporting the Findings

• Can organize the report by themes, then use the codes to talk about those themes

• Discussion and interpretation of the theme, support the interpretation with words directly from the participants

• See the example papers for more information on how to write “think and rich” description
  – Transport the reader to the research site
Writing tips

• Consider writing about:
  – Events (what happened?)
  – Chronology (in what order?)
  – The setting (what is the place?)
  – People (who is involved?)
  – Processes (how do things work?)
  – Issues (what issues are important?)
<table>
<thead>
<tr>
<th>Forms of Narrative Discussion</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>A discussion that presents a chronology</td>
<td>The chronology of a teacher's experiences with her special education coordinator leading to her resignation from the school</td>
</tr>
<tr>
<td>A discussion that describes events and setting (context)</td>
<td>A description of adolescents reading “teen” magazines</td>
</tr>
<tr>
<td>A discussion of themes</td>
<td>A discussion about the theme of the “in-classroom” landscape of a teacher</td>
</tr>
<tr>
<td>A discussion of a figure</td>
<td>A figure presenting a model of the process of art therapy with clients</td>
</tr>
<tr>
<td>A discussion about layering or interconnecting themes</td>
<td>A discussion about the levels of complexity in a campus response to a gunman incident</td>
</tr>
<tr>
<td>A discussion incorporating past literature and research studies</td>
<td>A discussion incorporating past literature of efforts to develop campus plans for potential violence</td>
</tr>
<tr>
<td>A discussion raising further questions that need to be addressed</td>
<td>A discussion that raises questions about the equality and fair treatment of women</td>
</tr>
<tr>
<td>A discussion using participants' views to challenge accepted or hidden assumptions</td>
<td>A discussion that probes practices of discrimination in our schools</td>
</tr>
<tr>
<td>A discussion about how participants are empowered or change</td>
<td>A discussion about how a teacher, by sharing her story, felt empowered</td>
</tr>
</tbody>
</table>
**Example Comparison Table for Themes or Descriptions by Groups**

**TABLE 9.2**

A Sample Comparison Table Used to Represent Information in a Qualitative Study

<table>
<thead>
<tr>
<th>Female Statements about “Professionalism”</th>
<th>Male Statements about “Professionalism”</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Helping fellow teachers is part of my day.</td>
<td>• Being concerned about following the coordinator’s advice about curriculum shows a high level of professionalism.</td>
</tr>
<tr>
<td>• When another teacher asks for advice, I am generally a good listener.</td>
<td>• It is important to be in charge in the classroom and to be aware of student off-task behavior.</td>
</tr>
<tr>
<td>• It is important, once I achieve a certain level of experience, that I become a mentor to other teachers, especially new ones.</td>
<td>• I set standards for myself, and try to achieve these goals each year.</td>
</tr>
<tr>
<td>• Caring about how other teachers employ high standards in their classroom is a sign of my own professionalism.</td>
<td>• It is necessary that each teacher “pull” their weight in this school—a sure sign of professionalism.</td>
</tr>
</tbody>
</table>
Writing yourself (or team) into the report

- In contrast with quantitative projects, objectivity is not assumed
- “qualitative researchers believe that personal views can never be kept separate from interpretations” (Creswell, 2002, 279)
- It is more than okay to tell about your biases, perspectives, history or background with the issues
  - Understanding the author(s) helps readers draw their own interpretations and support the trustworthiness of the findings
Examples

• See the handouts for some example write-ups
• The standard for writing up an assessment project is not the same as it is for a published research article, so don’t try to replicate these articles
• Rather, use them as ideas for how to write the findings section in a compelling manner
5. Validating Accuracy and Credibility of your Findings

• Should anyone believe your findings?
• Talked about this quite a bit last spring (see SA3 Module 3, starting with slide 31)
“The basic issue in relation to trustworthiness is simple: How can an inquirer persuade his or her audiences (including self) that the findings of an inquiry are worth paying attention to, worth taking account of? What arguments can be mounted, what criteria invoked, what questions asked, that would be persuasive on this issue?”

(Lincoln and Guba, 1985, p. 290)
Implications for Analysis

• Member checking
  – Ask one or more participants in your study to check the accuracy of your account
  – E.g., send a draft summary of the results to your focus group to see if it still “rings true”

• Triangulation
  – As you are drawing some interpretations, use evidence from multiple places and sources to corroborate your findings
Implications for Analysis

• Can also use an external audit
• These can take a great deal of time so often have to pay someone
  – Usually only done in the context of a funded study
• I can help with a basic audit but may not have sufficient time to do something thoroughly
• Working in a team can be another way to verify each other’s interpretations and coding (this is common)
6. Addressing Your Assessment Questions

• Important to link your findings back to your initial assessment questions (this is why you did assessment in the first place, right?)

• Qualitative studies also allow the identification of new or unexpected issues, so can include these in your analysis even though they weren’t planned.
A note about Assessment vs. Research

• I view assessment as applied action research – using the tools of research to make inquiry into student learning and development

• Much of what we discussed today is research techniques that we are applying in an assessment project
• Standards of rigor vary depending on the severity of the consequences from the use of the findings

• If the use of the findings will have severe consequences (e.g., major impact), then a higher standard of rigor is needed

• As the assessment team you can decide how much time and resources you have to put toward your project and your planned use of the findings

• Overkill can be just as bad as under-kill
  – “There’s nothing more dangerous than a wounded mosquito”
Next Steps

• Don’t wait to get started with your data analysis and jot notes ("memos") and interesting findings as you go
  – Also allows for follow-up or member checking as you go
• Leave plenty of time
• If working with a team, schedule regular meetings to discuss and work through analysis
• Analyzing qualitative data can be really fun!