How To Do Research

15 Labs for the Social & Behavioral Sciences

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LAB 5

Qualitative Research

Objective

The purpose of this lab is to introduce qualitative research as an alternative or complementary approach to quantitative research. Some qualitative methods are described, and the concept of coding is introduced. It concludes with a consideration of issues relevant to the decision to use qualitative, quantitative, or both approaches (mixed methods) for a given research area. Additional material includes further discussion of content analysis and the introduction of grounded theory.

Target Article

Edin, K., & Lein, L. (1997). Work, welfare, and single mothers' economic survival strategies. *American Sociological Review, 62,* 253–266. Available from http://pages.ucsd.edu/~aronatas/Edin_Lein_PS.pdf

How do mothers on welfare manage to survive, and how do they feel about getting a job? Interviews of 379 mothers in four cities in the United States suggested that neither welfare nor a low-wage job is adequate to provide for themselves and their children. These mothers use a

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variety of strategies to manage, depending on where they live and how much of a social safety net they have. Some of these strategies are more conducive to finding a job than others. While many of the mothers wanted to depend on a job rather than welfare, the type of survival strategy used and the costs of having a job (such as clothing, transportation, child care) made the transition difficult. This study analyzed the content of interviews to arrive at these conclusions. The result was descriptions of themes common in the interviews. This produced qualitative rather than quantitative information. Could the researchers have gotten the same information using quantitative methodology? Probably not.

QUALITATIVE RESEARCH: WHAT IS IT, AND WHAT DO YOU DO WITH IT?

Much of the research you may have come across has probably been quantitative—something that can be reduced to numbers and analyzed using inferential statistics. Sometimes, however, a question is better answered with qualitative data—verbal, descriptive information. This is often a good approach if studying a complex or targeted situation (e.g., specific people in specific circumstances), especially when a lot is not already known about the phenomenon. You might create transcripts as you interview many different people from many different perspectives then take that massive amount of data and look for patterns by coding it. You might use qualitative data to develop a grounded theory in order to clarify issues for future research.

Different disciplines may value one type of research or the other (or perhaps both) depending on the types of research questions pursued by that discipline. Whether you use quantitative or qualitative research depends on the question you want to ask. If you want to know whether children who experience an after-school tutoring program perform better on standardized tests or have higher self-esteem, then you are asking a question that can be answered with numbers. You can collect a test score (or self-esteem score) for each child in the experimental group (the ones who participated in the tutoring program) or a control group (children who are as alike to

those in the experimental group as possible but who were not tutored). You can describe the resulting information using descriptive data (for example, group means, frequency distributions, variance from the mean) then compare group means using an inferential statistic such as a *t*-test. However, if you want to understand the *reasons* parents sought out the tutoring program for their children, or what barriers they experienced that made participation difficult, then you are asking questions that need descriptive, qualitative data. You might interview parents or children to find out how they felt about their time in the program, or hold a focus group to find out what community members would like in an after-school program. Some research questions may best be addressed by using both approaches to come at the same issue from different directions. Both quantitative and qualitative research approaches are valuable and can be used to build new knowledge in many fields of study (see Table 5.1).

Let's start by considering comparing the two types of research.

Although Table 5.1 is about human participants, there are other sources of data. Both qualitative and quantitative approaches to research can study people or animals, but either may also study data such as books, stories, artifacts, history, symbols, or archived data (for example, arrest records in a particular area). The difference is not so much in the source of the information, but in the nature of the research questions and resulting data.

Examples of Qualitative Research Methods

The type of qualitative design used will vary across disciplines, and researchers from a variety of disciplines might make use of the same methodology for different purposes. For example, someone in history or communication might use document content analysis, someone in social work might create case studies, researchers in anthropology or sociology might utilize ethnography, and so on. A few illustrations are listed here, and several of these will be emphasized in this lab and in others. In each case, the to-be-analyzed material consists of descriptions rather than numbers.

Observation—The observer systematically records information gathered via a variety of senses. In some cases, the observer wants to remain unnoticed so as not to influence the behavior of the target (naturalistic). In other situations, however, the observer may be neutral, in which participants are aware of the observer, but interaction with participants is not featured (for

Table 5.1 Comparison of Qualitative and Quantitative Research

	Qualitative	*Quantitative*
What are the overarching goals?	Interested in holistic, contextual (focus on the big picture) issues. The underlying philosophy assumes that people create their realities based on the totality of their experiences.	This focus is reductionist (studies the details). The underlying philosophy holds that phenomenon can be broken down and studied using the scientific method.
What is the end product?	Qualitative data can be quite varied and may report language, themes, signs, and meaning.	Measures are expressed as numbers.
Are the data analyzed?	Even though qualitative research doesn't produce numbers, it can nonetheless be analyzed. Analyses should be rigorous, systematically planned, and clearly described. Examples include coding or documenting themes.	Yes, it can be analyzed using descriptive and inferential statistics.
Why would I use this type of research?	Qualitative data might be used to explore a new field. If little is known about a research area, then qualitative data may be used to get enough information to generate theories that can later be tested. Qualitative research can be used to try to understand questions that came up during quantitative research. It can be used for program or policy analysis.	Quantitative analyses test hypotheses generated by existing theories.
How are the participants chosen?	Participants/cases can be purposefully selected because they represent some desired characteristic, and they may not be representative of a larger population.	Ideally, participants are chosen randomly. The sample should match the population it represents as much as possible.

(Continued)

Table 5.1 (Continued)

	Qualitative	*Quantitative*
Does the researcher interact with the participants?	The researcher becomes part of the data collection process. The researcher doesn't need to interact with each participant in the same way, but can modify the protocol to take advantage of unexpected directions.	Interaction is limited; the researcher does not want to influence the participants' responses. Once the research protocol is started, all participants must experience the same procedure; the experimenter can't change midstream.
Strengths	Qualitative data is good for generating new theories and hypotheses. It does a good job of establishing content validity (Does my instrument measure the construct it is supposed to measure?). Qualitative research allows for greater diversity of responses and can explore unexpected outcomes.	With appropriate sampling, quantitative methods provide results that are representative. With appropriate instruments, this approach can produce reliable measures with some degree of precision. Results can be concisely summarized as figures and tables.
Weaknesses	Qualitative data is usually difficult to graph or display in mathematical terms. The results may be bulky and difficult to summarize concisely.	This approach can't explore unexpected outcomes. If the experiment doesn't go as planned, some data may have to be discarded or it may be necessary to start all over again.

example, standing on a street corner recording information about people who pass by). Alternatively, the observer may become a participant in the observed setting, such as Margaret Mead did. She became part of a Samoan culture to observe the lives of adolescent girls in this culture from the perspective of an "insider." Ethnography makes use of observational research as well as interviews.

Interviews and Focus Groups—An interview is a situation in which the data collector asks specific questions of participants in hopes of understanding their perspective. It goes a step beyond just observing. It may be unstructured, semistructured, or structured. In qualitative research, the interview is something like a conversation. A structured interview is something like a verbal questionnaire, while an unstructured interview is very open (for example, "What did you experience as a teenager emigrating from another country?"). Although the interviewer has a goal in mind, an unstructured interview can take different directions for different people. Interviews may also be used for case studies. A focus group is a discussion or group interview about a specific topic for the purpose of data collection. Examples of focus groups include understanding customer response to a new product or evaluating how members of a community respond to a neighborhood initiative. Just for fun (really—you'll laugh), look at an early version of a focus group: https://www.youtube.com/watch?v=eh6mCImeylE {suggested search term *focus group Wizard of Oz*}.

Case study—A case study is an in-depth study of a single individual, often including data from multiple sources all aimed at gaining an in-depth understanding of that person or phenomenon. It might collect quantitative data (for example, scores on an achievement test or a personality inventory) or qualitative data (for example, asking the person to describe their impressions of growing up during the Depression). A qualitative case study is useful to determine why or how a person behaves in a certain way and the context in which this takes place. It provides a great deal of detailed information about an individual. One could also conduct a case study of nonliving subjects, such as an organization or event.

Content Analysis—Likewise, content analysis may collect qualitative, quantitative, or a mix of data. It may record information about manifest (the surface, obvious content) or latent (underlying meaning) content. The researcher decides in advance what the unit of the analysis should be. The researcher uses some type of coding system to record data about the "meaning units" (words/phrases/text that are related in some way). Coded information is used to identify main ideas or themes about the verbal or written material that are interpreted in some way. For example, someone in a health-related field might use content

analysis of intake interviews for new patients with a substance-use disorder to better understand the factors that lead to seeking help for this condition. Someone in criminal justice might use it to analyze transcripts of trials.

Mixed Methods—Qualitative research may be used as the only approach to research, or the information may be reported along with quantitative analyses (multi-method research). Likewise, several qualitative methods might be used together. For example, someone might do content analyses of interviews from case studies and integrate the information into a single report.

TRY IT YOURSELF—CANNED DATA

For those who would like to try their hand at qualitative content analysis, first watch a three-minute video on coding at http://www.methodspace.com/video/eppi-centre-and-ncb {suggested search term *video code qualitative data*} then see the interactive exercises at http://www.sagepub.com/schuttisw7e/study/resources/schutt_7e_activities/engines/index.htm {suggested search term *qualitative data interactive practice*}.

Choose "Qualitative Data Analysis" then "Research in Context" (or another area if your instructor chooses to do so). Take the quiz and answer the questions. You can go to http://www.sagepub.com/upm-data/43454_10.pdf to look for answers.

Another possibility is to go to the following website and see teachers' reasons for choosing a career in teaching. Following the instructions, categorize the verbal responses listed at http://www.indiana.edu/~educy520/sec5982/week_5/qual_data_analy_ex1.pdf {suggested search term *qualitative data analysis exercise*}.

TRY IT YOURSELF—COLLECT YOUR OWN DATA

One way to collect data might be to decide on a behavior to observe and then work individually or with a group to collect observational descriptions of the behavior. Discuss how you could summarize the findings into meaningful units. Similarly, your instructor could direct you to written material to code and analyze.

Another approach could be to form a focus group using a semistructured or structured interview. A focus group is a type of discussion group that might be formed for the purpose of finding out people's opinion of, beliefs about, or attitudes toward something. It might be an idea (e.g., How successful do you think a teen pregnancy center would be in this neighborhood?), a product (e.g., a new laundry detergent), a program (e.g., reactions to a new neighborhood safety program and clients' perception of how effective it is), an advertisement (e.g., How does this commercial make you feel about the XYZ product?), and so on. You can pick the participants who are in the best position to give you useful feedback. A focus group usually takes place in a familiar setting (e.g., a community hall, church, temple) rather than in a research laboratory. The discussion is interactive; the experimenter may have a list of specific questions to ask, but ultimately the direction of the discussion is determined by the group members. It is a way to get valid information about a certain population that allows for diverse responses, finding out what people really think, or discovering new directions to be explored. Focus groups allow collection of a great deal of data in a relatively quick, low-cost manner. Don't get too excited, however—once you have the data you will need to process a large amount of verbal material, so a qualitative approach doesn't mean a quicker or easier research project.

In the present suggested activity, you will use focus groups to generate suggested pedagogical practices to facilitate learning among college students. Form groups of four to six people each. Decide who will play the roles of facilitator (the experimenter) and recorder (or, if everyone agrees, record the session and transcribe the recording later).

In this lab, we're going to use a focus group to identify factors that help college students learn. We'll start with forming focus groups to generate ideas, then code the resulting suggestions, and think about whether any conclusions can be drawn from the data.

Roles

1. Facilitator: One person should volunteer to be the facilitator. A focus group facilitator should be able to deal tactfully with outspoken group members, keep the discussion on track, and make sure every participant is heard. After a participant makes a long statement, try to sum it up in a sentence or two.

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a. Make sure there is a recorder keeping notes or the discussion is recorded.

b. Tell the group the objective and ground rules for the discussion.

c. Ask the questions one at a time. Encourage everyone in the group to respond in some way to each question. If the discussion takes a new direction, go with the flow. Explore the ideas that emerge.

2. Recorder: Another person should be the recorder and keep a record of suggestions and answers to questions.

Information above based on http://www.cse.lehigh.edu/~glennb/mm/FocusGroups.htm.

Focus Group Objective: Which classroom or instructional conditions best facilitate learning by college students? Let's suppose there are few, if any, theories about this topic. We won't start with a hypothesis; we're exploring, not trying to test anything.

Ground rules

1. Every group member participates.

2. Treat each other with respect.

3. Avoid debate. This is the time to share your opinion, not to try to persuade someone else to your viewpoint.

4. Offer your opinion openly. What is said in the focus group stays in the focus group. That being the case, please don't discuss the statements of specific individuals outside of this group.

Questions

1. In which college class you have taken thus far have you learned the most? Why did you learn more in that class than in others?

2. What are specific things that instructors do, avoid, or provide that promote learning?

3. What specific strategies or techniques (actions or materials) are most effective at helping you learn?

The following figure is intended to illustrate the coding process for the comments collected from the focus group. I've started with individual

comments then coded the information as a step on the way toward developing a grounded theory.

Once you have all the comments recorded, look for patterns in the ideas the group generated. This can involve several types of coding: open, axial, and selective. Open coding involves categorizing the ideas, looking for patterns. One way to do this is to put each idea on an individual card and sort through them several times to see if you can come up with any themes, trends, or patterns.

Once you have identified patterns, look for links among the categories. Do any of the themes group together logically? This next step is called *axial coding*.

Finally, selective coding takes the groups of categories and tries to determine how the groupings relate to core concepts.

This figure is just an example of how qualitative data might be coded; your results may be very different from this. That's fine. Let the data lead you.

Figure 5.1   Coding Qualitative Data
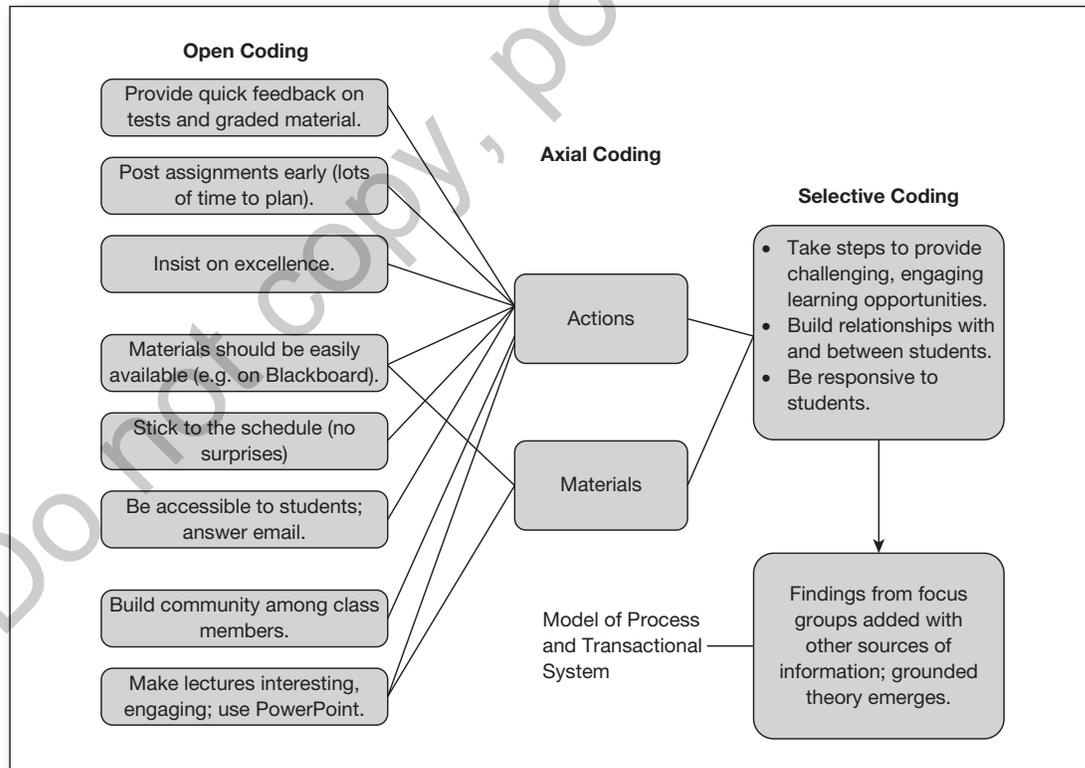
This is a very brief introduction to the idea of coding. Entire books could be (and have been) written on coding techniques and considerations. One example of a resource is http://www.sagepub.com/books/Book237888 {suggested search term *qualitative coding manual*}.

Things to Consider for All Types of Research

To gather objective data, we need to use methods that are as free from any bias as possible. While our measures or coding are unlikely to be completely free of bias, the researcher or coder needs to make a great effort to remove as much subjectivity as possible. One way to do this in the example above is to define categories very specifically. If you are uncertain of how to categorize a datum (the singular form of data), refer back to the definition of the categories rather than to your opinion.

A related issue is reliability between raters. This is addressed in the lab on survey research, but how might it apply here? Let's say there are multiple people who are coding. You want to make sure that everybody would code a datum in the same way (i.e., you have inter-rater reliability). There are several ways you could do this. You could have everybody code all the data. When disagreement between raters occurs, you could require them to discuss the issue until they reached consensus or perhaps put it to a vote. Alternatively you could have all raters code the same subset of data independently then check to see whether they coded each datum the same way.

I've Done the Coding—Now What?

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Write about your findings and conclusions. Describe the process you used to collect and code the data. There is not just one right way to do this; think about how to present your data in a way that is easy for others to follow. There are many examples of qualitative research reports within your discipline. Your instructor can direct you to an example or take a look at one of the papers available at http://www.nova.edu/ssss/QR/QR13-1/index.html {suggested search term *The Qualitative Report* and choose a specific issue}.

<div style="text-align: right">

IF YOU WANT TO GO FURTHER . . .

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Content Analysis

As described above, another type of qualitative research is to analyze written or spoken content rather than conversation. Let's think about that a bit more in depth for a moment. One can focus on the concepts that occur (Are they present? How frequently do they appear?), or one can go an additional step by considering how the concepts relate to each other. For example, I could look through editorials in newspapers from a specific era and record how many times reference was made to contemporary political parties' slogans. I could then look to see whether such references were intended as sarcasm. Computer programs are available to help researchers code the material.

In both cases, the researcher would start with specific research questions and identify appropriate sources. The researcher has to decide on the unit of analysis. For example, would the research question best be addressed by looking for specific words, phrases, or idea units? Will concepts be considered only if specific criteria are met (e.g., the word *scandalous* must be used) or will the criteria be looser (e.g., any reference to shocking behavior)? How will you decide whether a unit qualifies as a target concept? In other words, what are your inclusion and exclusion criteria? When you come across unexpected material, will you ignore it or alter your criteria?

Once you have the data, it must be analyzed. Some of your findings may be expressed quantitatively, such as indicating a certain idea appeared, for example, in 30% of the sources. Other times, it may make more sense to describe the findings verbally. Either way, be cautious in your interpretation of the results. OK, that last statement applies to any research, not just content analysis.

For additional information about analyzing qualitative data look at the following source:

Thomas, D. F. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation, 27,* 237–246. doi:10.1177/1098214005283748 Available online at http://www.researchgate.net/pub lication/224029397_A_general_inductive_approach_ for_analyzing_qualitative_evaluation_data {use title as suggested search term}.

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Relational analyses may focus on the linguistic features of the material or create network models of the ideas in the material. This could be a visual representation of the concepts and their interrelationships. For example, a researcher may want to represent psychological relationships (such as what emotion or worldview appears to be implied by the material), whether ideas appear to be closely or more distantly related to each other (this may be indicated by the spatial representation of the concepts in the network), or whether concepts can be grouped together in "metaconcepts" that are implied by commonalities in the concepts. This approach reflects ideas adapted from cognitive science and models of artificial intelligence. For an example of this and other approaches to coding see the website below. Exhibit 10.6 is an illustration of a network model.

http://www.sagepub.com/upm-data/43454_10.pdf_{suggested search term *network model concepts image*}.

If content analysis is important in your field, take a few moments to practice this. Decide

1. What is your research question?

2. What is appropriate source material? Your instructor can suggest a suitable document to analyze.

3. Does your research question lead you to ask questions about the presence of concepts or should you look for relationships among concepts?

4. How will you code the material? Define the criteria for your coding decisions.

5. Decide how you'll analyze the resulting data.

6. Do the coding. Analyze the coded material.

7. Interpret your findings. What patterns or concepts emerged? What do these mean in terms of better understanding the field?

Alternatively, it may be most appropriate to perform content analysis on something other than text. For example, you might analyze children's drawings to gain insight into their perceptions of and attitudes toward older adults.

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WHAT'S THE POINT OF ALL THIS QUALITATIVE INFORMATION? DEVELOPMENT OF A GROUNDED THEORY

Remember, we started the section on focus groups by pretending to explore a new research area, so there aren't (in our make-believe scenario) any theories to generate hypotheses to be tested. Ultimately, the goal is to develop a theory of good classroom practices. Remember, a theory is just your explanation for why something happens or why it is the way it is. A theory that evolves in this manner is a grounded theory because it is rooted in the experiences and perceptions of people who are closely involved with or affected by the phenomenon under investigation. You may need to look at other studies on your topic (you may have described these in your introduction) along with your findings and develop an explanation for the pattern of findings. If there are no published studies on your topic, be very careful about developing a theory based on one study. You use inductive logic (drawing a conclusion from multiple observations) to develop this theory. Your theory should be modifiable (sensitive to change as new findings are reported) and specific enough that researchers can generate hypotheses to test the theory.

Develop a theory of how the music composer for the Harry Potter movies used music to enhance the action on the screen. You can read about an exercise to do this in

Messinger, A. M. (2012). Teaching content analysis through Harry Potter. *Teaching Sociology, 40,* 360–367. doi:10.1177/0092055X12445461.

This can be found online at http://tso.sagepub.com/content/40/4/360.full .pdf+html {suggested search term *Teaching content analysis through Harry Potter*}.

You can view the scenes described in the article from a purchased copy of the movie or find the individual scenes posted online (there may be commercials). For example,

Practice scene:

Opening scene from *Harry Potter and the Philosopher's Stone*

https://www.youtube.com/watch?v=O6cddFuTPBA

Scene to code:

Opening scene from *Harry Potter and the Goblet of Fire*

https://www.youtube.com/watch?v=6Ug8Q8xedx0

COMMUNICATING THE RESULTS

Research that is not communicated is research that is lost. Your data do no good if you don't share your findings. The type of qualitative project you use will dictate the format of presenting your data. One example is listed below. Your instructor can direct you to articles within your discipline that can serve as models.

Ellett, A. J., Ellis, J. I. Westbrook, T. M., & Dews, D. (2006). A qualitative study of 369 child welfare professionals' perspectives about factors contributing to employee retention and turnover. *Children and Youth Services Review, 29,* 264–281. doi:10.1016/j.childyouth.2006.07.005