Analyzing Qualitative Data: Quick Guide

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Introduction

Qualitative data consists primarily of words and observations, rather than numbers. It can come in many forms and a variety of sources including responses to open-ended survey questions, focus groups notes, interview transcripts, internship supervisor comments, essay responses, and student portfolios, to name a few. Analyzing qualitative data for the first time or in a new context can be daunting. This guide is intended to be a quick reference to get you started with analyzing qualitative data for assessment in academic programs or courses. For more in-depth information or descriptions of qualitative data analyses in other contexts, please see the references at the end of this guide.

Analyzing Textual Data

Once you have qualitative data, what do you do with it? The steps below outline the basic elements of analyzing qualitative data.

Step 1: Get to Know Your Data

Often qualitative data used for assessment is in textual form. The data set can be brief responses to open-ended questions on a survey or long transcripts from a focus group. Information may be from a group or from a single individual. In some cases, the qualitative data may focus on a particular area of interest, while other times the area of interest may be interwoven with unrelated textual information. Understanding your data set and what questions you want to answer are important first steps in qualitative data analysis.

To better understand your data, read and re-read the text. Make notes and jot down overall impressions. These impressions can inform the direction of analysis and contribute to more effective and streamlined analysis.

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Step 2: Focus Your Analysis

What questions do you want to answer with your qualitative analysis? Do you have a specific question in mind (e.g., how is the new curriculum working for students?) or are you exploring the data to answer general questions? Do your qualitative data complement or explain your quantitative data? Whether or not you begin with a hypothesis or specific question will change how you work with your data.

Step 3: Categorize or Code Your Data

Categorizing or coding data is the crux of qualitative analysis. (Note: The terms category and code are used interchangeably throughout this discussion.) If you have specific question(s) or concepts to address, then you can start with a list of preset categories. Additional categories may be added to the preset categories, as needed. If you analyzing for broader questions, you may take a more inductive approach, reading though the text and finding themes that recur in the data. These become your codes or categories. For an example of coding open-ended responses to a survey question, see figure 1.

Figure 1: Example of coding qualitative data by hand. Codes include real world skills, advisor, and faculty.

As you create categories, provide a descriptive label (name) and note what is and is not included in the category. Re-reading the text facilitates accurate coding. Figure 2 gives an example of coding responses to an open-ended question at the end of a survey.

Your initial list of categories may change. In some cases, you may combine two similar categories. Other times, you may need to split one category into several subcategories to accommodate the data. You may also have to adjust category definitions. Although you will want to create an exhaustive list of categories, sometimes sections of text will fit into more than one category. So, it is useful to find some system for cross-indexing.

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Categories/ Codes	Number of Comments	Quotes
Hands-on Learning	14	– "The labs helped to put into practice what I learned in class." – "The required internship is where I learned the most."
Faculty	10	– "Most of the instructors were top-notch, really well-known in the field." – "Most of my professors were so passionate about what they taught."
Real-world Skills	14	– "They tried to give us skills we can apply in the real world." – "It wasn't just theory"
Other	3	– "Awesome advisor" – "There was good networking."

Figure 2: Coding, organizing, and counting responses to an open-ended question that asked, "What were the strengths of your degree program?"

Step 4: Interpreting and Reporting Findings

As you code your data, overall themes and patterns will begin to emerge. You may be interested in the relative importance of different themes. Simple counts of how many times a certain category is used, while not suited for statistical analyses, can prove a rough estimate of the relative importance of that category or theme. In qualitative research, some controversy exists over doing counts of comments, but for assessment purposes, the practice can be useful.

Identifying connections between categories is also important, because these relationships can help explain *why* something occurs. Ask: How do these categories relate? What data supports your interpretation? Are there other factors that could contribute? You can develop a table or diagram to represent emergent relationships.

Since human behavior, represented in your data, seldom follows a simple cause and effect relationship, be careful not to oversimplify your interpretation. Do not ignore responses that do not fit your categorization scheme, as these often add richness to interpretation. Briefly identify sample size and limitations.

Finally, develop an outline to aid in reporting your findings. Choose quotes to represent your various categories and provide descriptive examples to explain major themes. Often, a diagram can model the relationships between themes (see figure 3 for example).

	Private business/industry *(18 students)*	Faculty/Academic Research *(14 students)*	Teacher, K-12 *(11 students)*	Government/non-academic research *(9 students)*	Private consultant *(8 students)*
Program Strengths	• Real-world skills *(14 comments)* • Hands-on learning *(10 comments)* • Connections to industry *(8 comments)* • Electives diversity *(2 comments)*	• Research opportunities *(12 comments)* • Faculty *(8 comments)* • Hands-on learning *(2 comments)* • Sense of community *(2*	• Hands-on learning *(4 comments)* • Sense of community *(4 comments)* • No strengths listed *(4 comments)*	• Hands-on learning *(6 comments)* • Research opportunities *(5 comments)* • Real-world skills *(2 comments)* • Core courses *(3 comments)*	• Hands-on learning *(2 comments)* • Electives diversity *(2 comments)* • No strengths listed *(3 comments)*

Figure 3: Example representation of qualitative data showing future career plans and perceived strengths of the degree program grouped by future career plans

Tips to Enhance the Analysis

Data Preparation

1) Check your data for anomalies before your begin, re-check periodically if using electric form for analysis
2) Make multiple copies of your qualitative data files, including raw data files
3) Add ID numbers to each respondent, type of survey, survey year, etc.

Data Analysis and Interpretation

4) If working with large quantities of data, consider using qualitative data analysis software or a relational database
5) Take notes on your categorization choices, so you remember them for consistency over time and also it helps to identify any holes in your argument (i.e. are you only seeing what you want to see)
6) Develop a code for keeping track of descriptive or representative quotes
7) Involve others in review and coding of data
8) Avoid over-generalization in coding and interpretation
9) Don't take quotes out of context in representation of data
10) If possible, use complementary sources of data to build understanding and aid interpretation
11) Be careful to maintain confidentiality
12) Acknowledge limitations of data collection and analysis, as well as any alternative hypotheses

Additional References and Resources

- Analyzing Qualitative Data
  Taylor-Powell, E., Renner, M. (2003). University of Wisconsin-Extension: Program Development and Evaluation. http://learningstore.uwex.edu/assets/pdfs/g3658-12.pdf
- Handling Qualitative Data: A Practical Guide
  Richards, L. (2009). *Handling Qualitative Data: A Practical Guide, 2nd Ed.* London, UK: Sage.
- Interpreting Qualitative Data
  Silverman, D. (2011). *Interpreting Qualitative Data, 4th Ed.* London, UK: Sage.

