

Lecture seven: Qualitative data analysis

7.1. Definition and characteristics of qualitative research

“Briefly defined, the term qualitative research can be taken to refer to research that is based on descriptive data that does not make use of statistical procedures.” (Mackey & Susan, 2015, p. 215)

- ***The following are some of the characteristics of qualitative research:***

1. Rich description: The aims of qualitative researchers often involve the provision of careful and detailed descriptions as opposed to the quantification of data through measurements, frequencies, scores, and ratings.

2. Natural and holistic representation: Rather than attempting to control contextual factors (extraneous variables) through the use of laboratories or other artificial environments, qualitative researchers tend to be more interested studying individuals and phenomena in their natural settings.

3. Fewer participants: Rather than using a large group of participants with the goal of generalizing to a larger population like quantitative researchers, qualitative researchers tend to work more intensively with fewer participants, and are less concerned about issues of generalizability.

4. Open-ended processes: Qualitative research is often process oriented, or open-ended, with emergent categories. The research often follows an inductive path that begins with few preconceived notions, followed by a gradual fine-tuning and narrowing of focus. In contrast, quantitative research usually begins with a carefully defined research question that guides the process of data collection and analysis.

5. Research-generated hypotheses: Research questions tend to be general and open ended and hypotheses may be generated as an outcome of qualitative research rather than in the initial stages of the study.

- **Qualitative data collection tools:**

To collect qualitative data, the researcher can use a variety of data collection tools that can generate open-ended narratives and unstructured/ semi-structured descriptions of phenomena. These can include (and are not limited to): Semi-structured and unstructured classroom observations, Semi-structured and unstructured questionnaires or interviews, diaries, field notes, and learning journals.

7.2. Qualitative data analysis

“Qualitative data analysis involves organizing, accounting for and explaining the data; in short, making sense of data in terms of the participants’ definitions of the situation, noting patterns, themes, and categories.” (Cohen et al., 2007, p. 261).

7.2.1. Thematic analysis

Thematic analysis is a data reduction and analysis strategy by which qualitative data are segmented, categorized, summarized, and reconstructed in a way that captures the important concepts within the data set. Thematic analysis is primarily a descriptive strategy that facilitates the search for patterns of experience within a qualitative data set; the product of a thematic analysis is a description of those patterns and the overarching design that unites them (The Sage Encyclopedia of Qualitative Research Methods, 2008).

What is coding in qualitative data analysis?

A code is a name or label that the researcher gives to a piece of text that contains an idea or a piece of information. Codes can be at different levels of specificity and generality when defining content and concepts. There may be some codes which subsume others, thereby creating a hierarchy of subsumption – subordination and superordination – in effect creating a tree diagram of codes.

7.2.2. Types and examples of qualitative data coding

1. Open coding (initial coding)

At this stage the researcher simply attaches initial descriptive labels to highlight the meaning of each sentence or phrase. To form the labels, the researcher can use a colored highlighter pens or special symbols to differentiate between the different themes emerging from a piece of text.

2. Analytic coding (forming categories)

In this stage, the researcher gives more explanatory and analytic meaning to a group of descriptive codes (categories). This is more interpretive than open coding (e.g. experimenting, testing, measuring), and thus contributes to forming categories of codes.

3. Axial coding

Re-examines the main categories by making connections between categories, thus identifying major/global themes. For example, if the categories are: advocating a work-life balance, being cared for as a whole person, accommodating interests and preferences, then the theme that emerges is “wanting a meaningful experience at work and outside of work”.

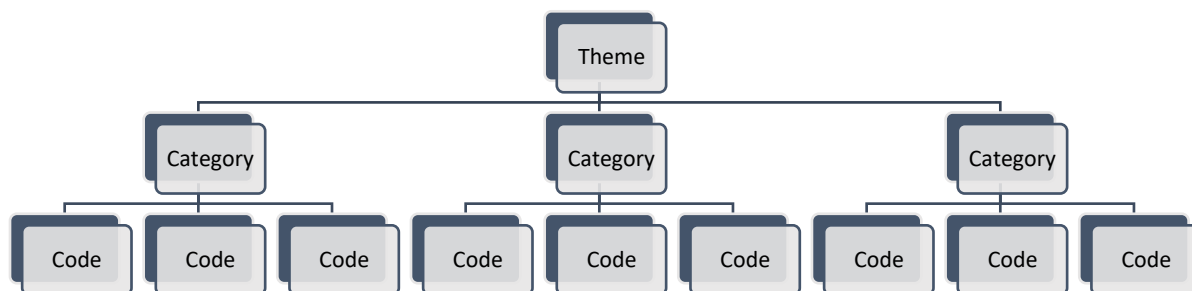


Figure 1. Coding scheme example

Let's practice

Read the following open-ended response and identify codes, categories, and the general theme.

Interviewer: *What are the challenges that you face when employing computer-assisted pronunciation training programs in your classroom?*

Teacher: Generally, students like to work with computer-assisted language learning programs ¹. Although many students don't have previous experience with technology, there is a noticeable increase in participation and motivation during these activities ². The problem, however, is the lack of resources ³. The IT rooms in the school where I teach are very small, and classrooms are overcrowded ⁴. Moreover, while the IT rooms are equipped with computers, they are generally running on very old operating systems and are often not equipped with headsets and microphones ⁵. Under these circumstances, it is difficult to use them for pronunciation training ⁶. Also, sometimes I personally struggle when using new computer programs or applications as I don't have the necessary training or the relevant experience with them ⁷.

7.2.3. The Role of quantification in qualitative data analysis

Some qualitative researchers make use of cyclical data analysis, examining patterns of occurrence in their data and then using them to draw inferences. Although some qualitative researchers avoid the practice of quantification, others are interested in patterns of occurrence and do not exclude the use of the sorts of numbers and statistics that are usually found in quantitative research. Quantification can play a role both in the generation of hypotheses and in the verification of patterns that have been noticed; it can also be used later for the purpose of data reporting. (Mackey & Susan, 2015, p. 234)

7.2.4. Validity and reliability in qualitative data analysis

Validity refers to the extent to which the researcher measured and analyzed what s/he intended to measure. In this regard, the researcher should take care in:

- Defining the variables, you intend to study.
- Preparing codebooks and coding forms.
- Defining what coders should be looking for.

Reliability refers to the overall consistency of a thematic coding scheme. When using a reliable thematic coding scheme, we should expect similar results if the data will be analyzed again (even by a secondary researcher). To check reliability:

- Use multiple analysts or coders, and then determine the degree to which their results agree. This is known as the inter-rater/coder reliability test.
- Use the same analyst to evaluate the data at two separate times.