Course : Research Research methodology

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Level : Master two

Lecture : 6

Thematic Analysis versus Content Analysis

Lecture objectives

- Definition of thematic analysis

- When it is used

- Its procedures (coding, analysis)

- how to present the results

- Its strengths and weaknesses

- Definition of content analysis

- Its procedure

- Strength and weaknesses

Introduction

Qualitative research is an inductive rather than a deductive research. The former is generally considered as hypothesis generating while the latter focuses on testing hypotheses. Qualitative data collection is inductive in using open, non-directional measures. Qualitative data analysis is inductive by letting key categories and concepts emerge from the data Schreir, 2012).The interview, focus group and class observation are collection methods that are most of the time used in educational research and require from the researcher to be aware of the nature of the data and its thematic connectivity. Among the qualitative types of analyses, thematic analysis is usually used to analyze data obtained from interviews, focus groups and observations. Content analysis is another type used to analyze qualitative data

**1. Qualitative data analysis process**

Once data are collected, it is necessary to organize them into a manageable, easily understandable, and analyzable format (Mackey and Gass, 2016, p. 112). The analysis of qualitative data usually goes through some or all of the following stages:

- Familiarisation with the data through review, reading, listening
- Transcription of tape-recorded material: it is the full script of an interview or a conversation, or the procedure of producing a written version of these methods.
- Organization of data: After the transcription, it is necessary to organize the data into easily retrievable sections.

- Coding (called indexing): for example, sections of text transcripts may be marked by the researcher in various ways: underlining in a coloured pen, highlighting, giving a numerical reference, or bracketing with a textual code in the margin
- Identification of themes
- Development of provisional categories
- Exploration of relationships between categories, finding possible and plausible explanations for findings
- Report writing

2. Qualitative data analysis

After collecting data either by observing or interviewing participants through different means including visual recording, jotted notes, or field notes, the obtained data are considered raw data which require cleaning or getting rid of any unnecessary data. The next phase which consists of sorting, classifying and labelling the data is called open coding, followed by axial coding during which the researcher tries to find out if there are relationships between the codes. This helps to reduce the number of codes and leads to the final phase called selective coding in which the core category emerges involving the central theme.
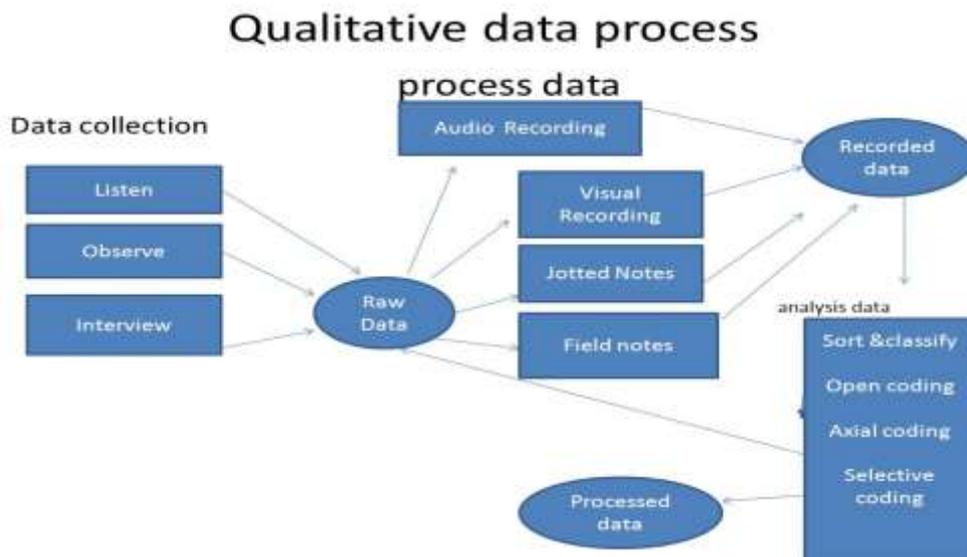
2.1 Coding

After being familiarized with the data obtained, for example from an interview, the researcher transforms the oral data into written data (transcription) excluding unnecessary information. After the transcription and cleaning of the data, the next important stage is coding referred to as "how you define what the data you are analysing are about" (Gibbs, 2007). It is about labeling sections / passages of texts to identify interesting features of the data. It involves taking text data or pictures gathered during data collection, segmenting sentences (or paragraphs) or images into categories, and labeling those categories with a term, often a term based in the actual language of the participant (Cresswell, 2014).

Three types of coding are used in qualitative research: open coding, axial coding and selective coding as seen in the figure. Open coding: the researcher breaks the text into discrete parts while in axial coding, he draws connection between codes. "Selective coding continues the axial coding at a higher level of abstraction through actions that lead to an elaboration or formulation of the story of the case" (Flick, 2009, p. 310). Selective coding identifies a core category which is the central theme of the research**.**
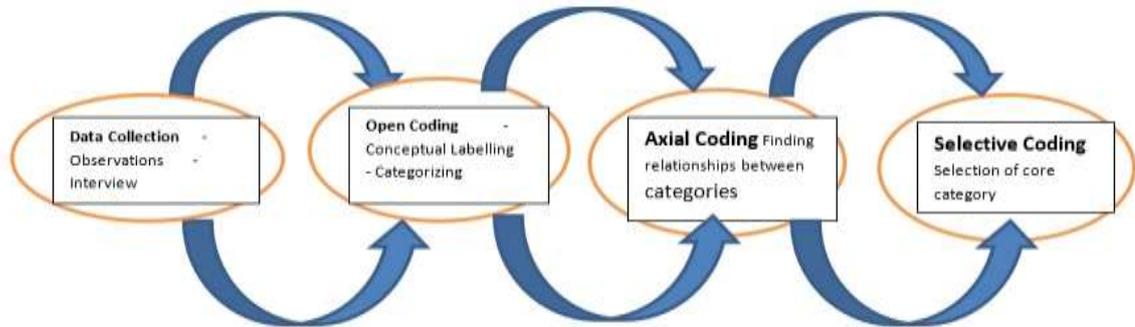
Figure 1: Types of coding

3. Thematic analysis

Thematic analysis is the process of identifying patterns or themes within qualitative data(Braun & Clarke (2006, p. 76). Thematic analysis is a method for analyzing qualitative data that entails searching across a data set to identify, analyze, and report repeated patterns (Braun and Clarke 2006). Its aims is to generate codes and construct themes to be used for the interpretation of the data. It can be used to analyse qualitative data collected from interviews, focus groups, surveys, obsrvations, different kinds of texts and visual methods. The typical process used in thematics analysis is as follows :

- **Familiarising oneself with the data** (text; may be transcriptions) and identifying items of potential interest.
- **Generating initial codes** that identify important features of the data relevant to answering the research question(s); applying codes to the dataset (segmenting and "tagging") consistently; collating codes across segments of the dataset .
- **Searching for themes**; examining the codes and collated data to identify broader patterns of meaning.
- **Reviewing themes**; applying the potential themes to the dataset to determine if they tell a convincing story that answers the research question(s); themes may be refined, split, combined, or discarded.
- **Defining and naming theme**s; developing a detailed analysis of each theme
- **Producing a report**; weaving together the analytic narrative and data segments, relating the analysis to extant literature (Braun & Clarck, 2006)

4. Tips on how to write the results section

After the identification of themes, the researcher should decide on how to present the results and how to interpret them. There is more than one approach to presenting the results. One way is ordering the main themes based on their importance and their relation to the research questions. If you choose this way, think of the themes as the basic headings in an outline and then start each section with a brief description of that theme. Follow that with relevant quotes, then discuss them.

Example: Suppose you collected data from teachers and students about the advantages and challenges of the use of Moodle platform in teaching/ learning English through semi-structured interviews. In this case, you will have more than one section:

Section 1: Teachers opinions about the advantages of Moodle including the main themes ordered and each one described using selected extracts, then discussing/ interpreting them.

Section 2: Students opinions about the advantages of Moodle including the main themes ordered and each one described using selected extract, then discussing/ interpreting them.

Section 3: Teachers opinions about the challenges of Moodle, including the main themes ordered and each one described using selected extracts, then discussing/ interpreting them.

Section four: students' opinions about the challenges of Moodle including the main themes ordered and each one described using selected extracts, then discussing/ interpreting them.

We can shift to a comparison between the two groups opinions on both the advantages and challenges of Moodle.

5. How can we visualize the findings?

There is no clear-cut answer. This depends on what we want to present, the aim and the kind of the study.

We can use tables with the themes, frequency and number of participants. However, not all the researchers agree on the use of tables, arguing that qualitative data are not quantified. Other kinds of visualizations such as diagrams or charts can also be used depending on the study if they make sense.

6. Strengths and weaknesses of thematic analysis

- accessible approach to researchers with little or no experience of qualitative research.
- Relatively easy and quick method to learn and do.
- It is flexible (more than one way to interpret the meaning from the data set).
- Results are generally accessible to educated general public.
- Useful method for working with participatory research paradigm, with participants as collaborators.
- Can usefully summarize key features of a large body of data, and/or offer a 'thick description' of the data set.
- Can highlight similarities and differences across the data set.
- Can generate unanticipated insights.
- Allows for social as well as psychological interpretations of data (Braun & Clarck 2006).
- Flexibility can lead to inconsistency and lack of coherence when developing themes from the research data (Holloway & Toddres, 2003).
- Difficult to focus.
- No objection about the respondents' language.

7. Content analysis

Content analysis is a method used to analyze qualitative data (non-numerical). It is a strategy which transform qualitative data into quantitative / numerical data. QCA is a method for systematically describing the meaning of qualitative material. It is done by classifying material as instances of the categories of a coding frame (Chreier, 2012). It can be used to analyze interview transcripts, films, audio-recordings, magazine articles, books, advertisements, speeches, TV programmes.

7.1 Steps in conducting content analysis

- **Identify and collecct data** (important to capture the data needed for content analysis). Sampling is also required; this refers to the content itself.
- Determine coding categories (division of the content into categories; to focus on those patterns that can answer the research questions).
- **Codes (numbers) to be assigned to each category/** Coding identifies the frequency, the direction of the content…
- **Check validity and reliability/** the codes need to be tested to check if they measure what they are intended to measure and if the results are consistent.
- **Analyse and present the results** in an understandable report format in addition to graphs…

7.2 How can we test validity and reliability in content analysis?

- After coding and analyzing your data, you need another person or even two who are experienced in qualitative data analysis to also code and analyze (inter-rater reliability) so that you can compare.
- When there is conflict and consensus is not reached, you might need a third person's opinion to resolve.
- You can also get an expert in qualitative data analysis to review your coding and analysis process and the themes generated. This is called peer-debriefing. Your supervisor(s) may be the best person(s) to help you out with this.

7.3 Strengths and weaknesses of content analysis

- Cheap
- High in reliability as it follows systematic procedures
- Quantifies the meaning by using frequencies
- If the coding is inaccurate, the findings are invalid

8. Qualitative analysis software

Different softaware can be used to process and analyse qualitative data, such Atlas. Ti, NVIVO, QDA Miner, Content Analyis (Lightside) and CAQDAS. The software can be used in data storage and management, data searching and retrieval, coding, developing and testing theory and writing reports. However, they cannot replace the human as they lack the capacity to think, reflect and analyze.

References

Braun V, Clarke V. (2006). Using thematic analysis in psychology. Qual Res Psychol. 3(2):77–101.

Flick, O. (2009). *An introduction to qualitative research. London: Sage.*

Gibbs, G. (2007). Analyzing qualitative data. London: Sage

Schreier, M. (2012). Qualitative content analysis in practice. London: Sage.