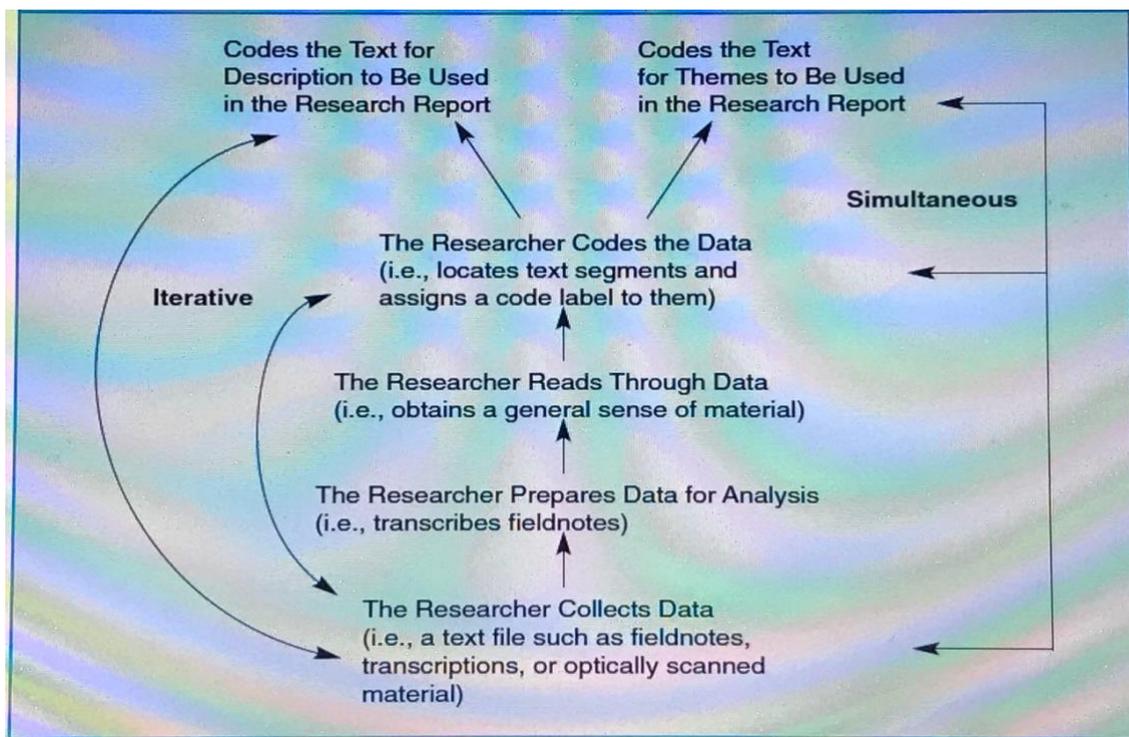


- 1-Preparing and organizing the data.
- 2- Exploring and coding the database.
- 3- Describing findings and forming themes.
- 4-Representing and reporting findings.
- 5-Interpreting the meaning of the findings.
- 6-Validating the accuracy of the findings

These steps are not always taken in sequence, but they represent preparing and organizing the data for analysis, engaging in an initial exploration of the data through the process of coding it.

1-Preparing and organizing the data

The first step begins by collecting data and then preparing it for data analysis. This analysis initially consists of developing a general sense of the data, and then coding description and themes about the central phenomenon. Figure [1] explains some features of this step in details



Initial preparation of the data for analysis requires organizing the vast amount of information, transferring it from spoken or written words to a typed file and making decisions about whether to analyze the data by hand or by computer.

-Organizing data through;

- ◆ Developing a matrix or a table of sources.
- ◆ Organizing the materials by type: all interviews, all observations, all documents.
- ◆ Keeping duplicate copies of all forms of data.

-Transcribe Data through;

- ◆ Create 2-inch margins on each side of the text document.
- ◆ Leave extra space on the page between the interviewer's comments and the interviewee's comments.
- ◆ Highlight or mark in some way the questions asked by the interviewer.
- ◆ Use complete, detailed headers that contain information about the interview or observational session.
- ◆ Transcribe all words, and type the word “[*pause*]” to indicate when interviewees take a lengthy break in their comments.

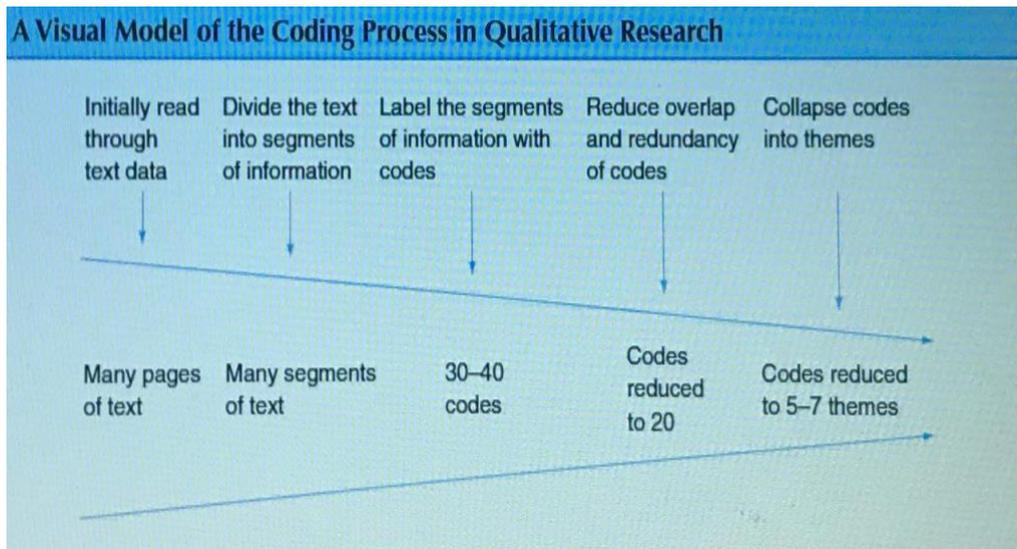
Researchers have a choice about whether to hand analyze data or to use a computer. The **hand analysis of qualitative data** means that researchers read the data, mark it by hand, and divide it into parts. The **computer analysis of qualitative data** means that researchers use a qualitative computer program to facilitate the process of storing, analyzing, and representing or visualizing the data.

2- Exploring and coding the database

A preliminary exploratory analysis in qualitative research consists of exploring the data to obtain a general sense of the data, memoing ideas, thinking about the organization of the data, and considering whether you need more data.

-Coding data through;

- ◆ Read all of the transcriptions carefully. Jot down in the margins some ideas as they come to mind.
- ◆ Pick one document. Choose the most interesting, the shortest, or the one on the top of the pile.
- ◆ Begin the process of coding the document. This process involves identifying text segments, placing a bracket around them, and assigning a code word or phrase that accurately describes the meaning of the text segment.
 - ◆ After coding an entire text, make a list of all code words. Group similar codes and look for redundant codes.
 - ◆ Circle specific quotes from participants that support the codes.
 - ◆ Reduce the list of codes to get five to seven themes. Figure [2] explains the coding process in qualitative research



3- Describing findings and forming themes

Describing and developing themes from the data consists of answering the major research questions and forming an in-depth understanding of the central phenomenon through description and thematic development.

-Description

Description is a detailed rendering of people, places, or events in a setting in qualitative research. In some forms of qualitative research design, such as in ethnography or in case studies, the researcher provides a considerable description of the in setting. Developing detail is important, and the researcher analyzes data from all sources to build a portrait of individuals or events.

-Themes

In addition to description, the use of themes is another way to analyze qualitative data. Because themes are similar codes aggregated together to form a major idea in the database, they form a core element in qualitative data analysis. Like codes, themes have labels that typically consist of no more than two to four words (denial, campus, planning).

Types of themes

- ◆ *Ordinary themes*: themes that a researcher might expect to find.
- ◆ *Unexpected themes*: themes that are surprises and not expected to surface during a study.
- ◆ *Hard-to-classify themes*: themes that overlap with several themes.
- ◆ *Major and minor themes*: themes that represent the major ideas and the minor, secondary ideas in a database.

4-Representing and reporting findings.

Qualitative researchers often display their findings visually by using figures or pictures that augment the discussion. Different ways to display data are;

- ◆ *Create a comparison table.*
- ◆ *Develop a hierarchical tree diagram.*
- ◆ *Present figures.*
- ◆ *Draw a map.*
- ◆ *Develop a demographic table.*

The primary form for representing and reporting findings in qualitative research is a narrative discussion. A **narrative discussion** is a written passage in a qualitative study in which authors summarize, in detail, the findings from their data analysis. Narrative elements includes;

- ◆ Include dialogue that provides support for themes.
- ◆ State the dialogue in the participants' native language or in the regional or ethnic dialect.

- ◆ Use metaphors and analogies.
 - ◆ Report quotes from interview data or from observations of individuals.
 - ◆ Report multiple perspectives and contrary evidence.
 - ◆ Write in vivid detail. Find good descriptions of an individual, event, or activity.
 - ◆ Specify tensions and contradictions in individual experiences.
- Figure[3] explains the forms of narrative discussion

Forms of a Narrative Discussion in Qualitative Research	
Forms of Narrative Discussion	Examples
A discussion that presents a chronology	The chronology of a teacher's experiences with her special education coordinator leading to her resignation from the school
A discussion that describes events and setting (context)	A description of adolescents reading "teen" magazines
A discussion of themes	A discussion about the theme of the "in-classroom" landscape of a teacher
A discussion of a figure	A figure presenting a model of the process of art therapy with clients
A discussion about layering or interconnecting themes	A discussion about the levels of complexity in a campus response to a gunman incident
A discussion incorporating past literature and research studies	A discussion incorporating past literature of efforts to develop campus plans for avoiding potential violence
A discussion raising further questions that need to be addressed	A discussion that raises questions about the equality and fair treatment of women
A discussion using participants' views to challenge accepted or hidden assumptions	A discussion that probes practices of discrimination in schools
A discussion about how participants are empowered or change	A discussion about how a teacher, by sharing her story, felt empowered

5-Interpreting the meaning of the findings.

Interpretation in qualitative research means that the researcher steps back and forms some larger meaning about the phenomenon based on personal views, comparisons with past studies, or both.

Interpreting includes many steps;

- ◆ A review of the major findings and how the research questions were answered.
- ◆ Personal reflections of the researcher about the meaning of the data.
- ◆ Personal views compared or contrasted with the literature.
- ◆ Limitations of the study.
- ◆ Suggestions for future research.

6-Validating the accuracy of the findings

Validating findings means that the researcher determines the accuracy or credibility of the findings through strategies such as member checking or triangulation.

There are three primary forms typically used by qualitative researchers to validate qualitative accounts : triangulation, member checking, and auditing.

◆ Qualitative inquirers triangulate among different data sources to enhance the accuracy of a study. **Triangulation** is the process of corroborating evidence from different individuals, types of data or methods of data collection in descriptions and themes in qualitative research.

◆ Researchers also check their findings with participants in the study to determine if their findings are accurate. **Member checking** is a

process in which the researcher asks one or more participants in the study to check the accuracy of the account.

◆ Researchers may also ask a person *outside* the project to conduct a thorough review of the study and report back, in writing, the strengths and weaknesses of the project. This is the process of conducting an **external audit**, in which a researcher hires or obtains the services of an individual outside the study to review different aspects of the research.

CONCLUSION

This chapter tackles the six steps that involved in analyzing and interpreting qualitative data, preparing and organizing the data, exploring and coding the database, describing findings and forming themes, representing and reporting findings , interpreting the meaning of the findings, and validating the accuracy of the findings. This chapter will help students to Identify the six steps in the process of analyzing and interpreting qualitative data, and Describes how to prepare and organize the data for analysis. It Describes how to explore and code the data which will build description and themes. We need to use these steps in our educational project in order to design it in a perfect and efficient results.

John W. Creswell. Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research. 2012, 4th ed.

PART II

The Steps in the Process of Research

Analyzing & Interpreting Qualitative Data

Chapter Eight

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