

Qualitative Research: A Refresher for Scholars and Practitioners

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Introduction

- The following slides represent an abbreviated adaptation of the slides developed by the following SHSU (Department of Educational Leadership) students who were doctoral students—and in one case, a primary school student—at the time of their qualitative research methodology workshop that they presented to students and faculty members as part of the 13th Annual Thinking Qualitatively Workshop Series, Edmonton, Alberta, Canada:
- Rachel N. Smith
- Valerie Tharp Byers
- Eunjin Hwang
- Chaerin Park (8 years old at the time)

(Smith, Byers, Hwang, Onwuegbuzie, & Park, 2013)

Introduction

- Some of these slides also represent an abbreviated adaptation of the slides developed by the following SHSU (Department of Educational Leadership) students who were doctoral students at the time of their focus group methodology workshop that they presented to students and faculty members as part of the 13th Annual Thinking Qualitatively Workshop Series, Edmonton, Alberta, Canada:
 - Leah McAlister-Shields
 - Shirley H. Dickerson
 - Magdalena A. Denham

(McAlister-Shields, Dickerson, Denham, & Onwuegbuzie, 2013)

Introduction

- A book is now being written based on these presentations. So, please watch this space.....

OVERVIEW

- As noted by Smith, Byers, Hwang, Onwuegbuzie, and Park (2013), there are Six Major Components of the Qualitative Research Process:
 - Philosophy
 - Research and Sampling Design
 - Data Collection
 - Data Analysis
 - Legitimation
 - Meaning Making and Presenting

Component #1: Philosophy

Philosophical Assumptions and Stances

- Philosophical assumptions and stances refer to the core philosophical or epistemological assumptions of the methodology.
- It includes beliefs regarding axiomatic components:
 - Ontology
 - Epistemology
 - Methodology

Philosophical Assumptions and Stances

Also, they include beliefs regarding several issues:

- Rhetoric
- Nature of knowledge
- Knowledge accumulation
- Goodness or quality criteria
- Axiology (i.e., role of values)
- Ethics
- Inquirer posture
- Training

Philosophical Assumptions and Stances

- As such, research philosophy “guides the inquirer’s gaze to look at particular things in particular ways and offers appropriate philosophical and theoretical justification for this way of seeing, observing, and interpreting” (Greene, 2006, p. 93).

Philosophical Clarity

- “the degree that the researcher is aware of and articulates her/his philosophical proclivities in terms of philosophical assumptions and stances in relation to all components, claims, actions, and uses in a . . . research study” (Collins, Onwuegbuzie, & Johnson, 2012, p. 855)
- Thus, philosophical clarity plays an important role in qualitative research.

Table 1. Selected Underlying Belief Systems of the Qualitative Research Tradition and Distinguishing Characteristics

| Paradigmatic Element | Constructivism | Critical Theory | Participatory |
|------------------------------|--|--|---|
| Ontology | Multiple contradictory, but equally valid accounts of the same phenomenon representing multiple realities | Virtual reality influenced by social, political, cultural, ethnic, racial, economic, and gender values that evolve over time | Subjective-objective reality co-created by the world order |
| Epistemology | Subjective knower and known are not separable; Triadically subjective, co-created findings/meaning | Fractional/subjectivist, value-mediated findings | Experiential, propositional, and practical knowing; co-created findings |
| Methodology | Hermeneutical/ dialectical; impossible to differentiate fully causes and effects; inductive reasoning; time- and context-free generalizations are neither desirable nor possible | Dialogic/ dialectical | Political participation in collaborative action research; emphasis on practical |
| Rhetorical | Detailed, rich, and thick textual description, written directly and somewhat informally | Critical discourse | Use of language based on shared experiential context |
| Nature of knowledge | Individual and collective reconstructions that may unite around consensus | Structural/ historical insights | Enriched epistemological emphasis on practical knowing and critical subjectivity |
| Knowledge accumulation | Elaborate reconstructions; vicarious experience; internal dialectical generalization; case-to-case transfer; naturalistic generalization | Historical revisionism; generalization by similarity; internal dialectical generalization; analytical generalization; case-to-case transfer; naturalistic generalization | In communities of inquiry contained in communities of practice |
| Goodness or quality criteria | Truthfulness, dependability, confirmability, transferability, authenticity | Historical situatedness; reduction of ignorance and misperceptions; involve participants in knowledge construction and validation | Congruence of experiential, propositional, and practical knowing leads to action to transform the world |
| Values (i.e., Axiology) | Research is value-bound | Research is value-bound; formative seeks to reveal injustice | Research is value-bound |

| Paradigmatic Element | Constructivism | Critical Theory | Participatory |
|-----------------------|---|--|--|
| Ethics | Intrinsic; process proclivity toward revelation | Intrinsic; moral proclivity toward revelation | Intrinsic; moral proclivity toward revelation |
| Inquirer posture | "Passionate participant" as facilitator of multivoice reconstruction | "Transformative intellectual" as advocate and activist | Primary voice manifest via aware self-reflective action; secondary voices in revealing theory, narrative, etc. |
| Training | Resocialization; qualitative and quantitative; history; values of altruism, empowerment, and liberation | Resocialization; qualitative and quantitative; history; values of altruism, empowerment, and liberation | Researchers, who learn via active engagement in study, need emotional competence, democratic disposition and skills |
| Qualitative analysis | All forms of qualitative analyses | All forms of qualitative analyses | All forms of qualitative analyses |
| Quantitative analysis | Descriptive statistics; some inferential statistics that lead to internal (statistical) generalization but not to external (statistical) generalization | Descriptive statistics; most, if not all, forms of inferential statistics that lead to internal (statistical) generalizations and external (statistical) generalizations | Descriptive statistics; inferential statistics that lead to both internal (statistical) generalizations and external (statistical) generalizations |

Adapted from Onwuegbuzie, A. J., Johnson, R. B., & Collins, K. M. T. (2009). A call for mixed analysis: A philosophical framework for combining qualitative and quantitative. *International Journal of Multiple Research Approaches*, 3, 114-139. doi:10.5172/mra.3.2.114

Framework Clarity

- Framework clarity also plays an important role in qualitative research.
- Indeed, qualitative researchers should determine whether to use a practical framework, conceptual framework, or theoretical framework.

Framework Clarity

- A conceptual framework represents “an argument that the concepts chosen for investigation, and any anticipated relationships among them, will be appropriate and useful given the research problem under investigation” (Lester, 2005, p. 460).
- In contrast, a theoretical framework guides the research process via the use of formal theory “developed by using an established, coherent explanation of certain sorts of phenomena and relationships” (Lester, 2005, p. 458).
- A practical framework “guides research by using ‘what works’ in the experience of doing something by those directly involved in it” (Lester, 2005, p. 459).

Component #2:
Research and Sampling Design

Qualitative Research Designs

- Waller, Onwuegbuzie, and Johnson (2016) have identified more than 50 qualitative research designs.

Qualitative Research Designs
(Creswell, 2013)

- Ethnography
- Case Study
- Grounded Theory
- Narrative Research
- Phenomenology

Qualitative Sampling Designs

Table 1: Minimum Sample Size Recommendations for Selected Qualitative Research Designs

| Research Design/Method | Minimum Sample Size Suggestion |
|------------------------|---|
| <i>Research Design</i> | |
| Case Study | 4-5 participants (Creswell, 2013) |
| Phenomenological | 3-10 (Dukes, 1904); ≥ 6 (Morse, 1994); 5 to 25 (Polkinghorne, 1989) |
| Grounded Theory | 20-30 (Creswell, 2013) |
| Ethnography | 1 cultural group (Creswell, 2002); 30-50 interviews (Morse, 1994) |
| Ethological | 100-200 units of observation (Morse, 1994) |
| Narrative | 1-2 (Creswell, 2013); > 2 to develop a collective story |

Adapted from Onwuegbuzie, A. J., & Collins, K. M. T. (2007). A typology of mixed methods sampling designs in social science research. *The Qualitative Report*, 12, 281-316. Retrieved from <http://www.nova.edu/ssss/QR/QR12-2/onwuegbuzie2.pdf>

Component #3: Data Collection

Data Collection

- Leech and Onwuegbuzie (2007) identified four major sources of data:
 - Talk
 - Documents
 - Observation
 - Visual/spatial

Talk

Talk data can be collected

- individually [e.g., interviews] OR group-based [e.g., focus groups]
- face-to-face [interviews, focus groups] OR virtually [e.g., online focus groups, chatroom discussions, listservs]
- synchronously [SMS, text] OR asynchronously [emails]
- verbally [i.e., voice of each interviewee] OR nonverbally [e.g., proxemics, kinesics, paralinguistics, chronemics]

Documents

Documents can be collected

- non-digitally [e.g., articles, books, newspapers] OR digitally [e.g., blogs, tweets, facebook, emails, chat room]

Observations

Observations can be collected

- emic-based [e.g., onsite observations] OR etic-based [e.g., Geographic Information Systems]
- Interactively [i.e., live observations] OR non-interactively [i.e., past observations]
- first hand [e.g., by the qualitative researcher] OR second hand [e.g., by someone else]

Visual/Spatial

Visual/spatial data can be collected via images that are:

- still [e.g., drawings, paintings] OR moving [e.g., videos]
- 2-dimensional [e.g., drawings, paintings] OR multidimensional [e.g., movies]
- Non-virtual [e.g., drawings] OR virtual [e.g., I-phone, I-Pad, Youtube, Panoramio, Flickr, iMovie, Instagram]

Most Common Ways of Collecting Qualitative Data

Talk data are the most common data collected in qualitative research

- For example, Denham and Onwuegbuzie (2013) who examined all 401 articles published in *The Qualitative Report*, between 1990 and 2012, documented that
 - 285 (71.1%) involved the collection of some form of talk data
 - 250 (62.3%) involved the collection of talk data from individual interviews

Talk Data: Types of Interviews

- Thus, we will focus on the collection of qualitative data via interviews.
- Types of interviews include the following:
 - Individual Interviews
 - Paired Depth Interviews
 - Focus Group Interviews
 - Critical Dialectical Pluralist Focus Group Interviews
- On the continuum of interviews, paired depth interviews lie between one-on-one interviews and focus groups (Wilson, Onwuegbuzie, & Manning, in press).
 - Even more specifically, they lie between one-on-one interviews and “mini-focus groups” that Krueger (1994, p. 17) conceptualized as containing three or four participants.

Individual Interviews

- Involve one interviewer (i.e., usually the researcher) and one interviewee (i.e., participant) at a time.
- For *intrinsic case studies, biographies, and narrative research studies*, the number of interviews can be as small as 1. Otherwise, most of the time, the number of interviews in a qualitative research study is at least three.

Individual Interviews

- Guest, Bunce, and Johnson (2006) demonstrated that 12 interviews are sufficient to “understand common perceptions and experiences among a group of relatively homogeneous individuals” (p. 79).”
- Also, Guest et al. (2006) demonstrated that six interviews might be “sufficient to enable development of meaningful themes and useful interpretations” (p. 78).

Paired Depth Interviews

- As defined by Wilson et al. (in press), *paired depth interviewing*—also called *paired interviewing* or *joint interviewing*—is commonly defined as one researcher interviewing two people together for the purposes of collecting information about how the pair perceives the same event or phenomenon.
- *Paired depth interviews* do not represent two interviews being conducted simultaneously but separately, with the intent of pairing interviewee responses from each interview.
- They involve the researcher interviewing two people at the same time and in the same place so that the two interviewees can interact during the interview.

Focus Group Interviews

Blank area for notes related to Focus Group Interviews.

Focus Group Characteristics

| | |
|--|--|
| Typically last between 1 and 2 hours | Optimally contain between 6 and 12 members |
| Can contain as few as three or four participants (i.e., mini-focus groups) when the group members have specialized knowledge and/or experiences | Trustworthy involve between 3 and 6 focus groups if multiple groups are to be used |
| Can comprise pre-existing groups of people (e.g., members of a family or team) or can be formed by the researcher because the participants are representative of a target population and/or have shared attributes or experiences (e.g., first-grade students with attention deficit hyperactivity disorder) | |

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Critical Dialectical Pluralist (CDP)
Focus Group Interviews

- *Critical dialectical pluralism* (CDP) is a metaparadigm developed by Onwuegbuzie and Frels (2013) that operates under the assumption that, at the macro level, social injustices are ingrained in every society.
- Is a branch of Johnson's (2012) *Dialectical Pluralism*
- *Critical dialectical pluralists* are committed to research that promotes and sustains an egalitarian society
- They aim to promote both universalistic theoretical knowledge and local practical knowledge
- They promote culturally progressive research

CDP Focus Group Interviews

- Rather than the researcher presenting the findings (e.g., conferences, journal articles, books, technical reports), the researcher assumes a research-facilitator role that empowers the participants to assume the role of participant-researchers, who, in turn, either
 - perform the findings themselves (e.g., using Web 2.0 applications)
 - or co-perform the findings with the research-facilitator(s)
- Participants have a co-equal say in how research should be conducted, what should be studied, which methods should be used, which findings are valid and acceptable, how the findings are to be implemented, and how the consequences of such actions are to be assessed

CDP Focus Group Interview Steps

Stage 1: the researcher forming the Focus Group Discussion (FGD) groups

Stage 2: scheduling the pre-FGD sessions;

Stage 3: participant-researchers co-constructing research questions during the pre-FGD sessions

Stage 4: participant-researchers co-constructing the FGD interview question(s) during the pre-FGD sessions

Stage 5: participant-researchers selecting the moderator and assistant moderator and conducting the first FGD sessions

Stage 6: participant-researchers conducting the first FGD session

Stage 7: participant-researchers transcribing and distributing the transcripts from the first FGD session

CDP Focus Group Interview Steps

- Stage 8: participant-researchers conducting the second FGD session to member-checking the transcripts;
- Stage 9: participant-researchers conducting the third FGD session to co-analyze the FGD data
- Stage 10: participant-researchers deciding how they will document and disseminate the FGD findings and interpretations.

Philosophical Frame for Interviews

- Roulston (2010) developed a typology for conceptions of qualitative interviews.
- This typology can be extended to paired depth interviews, mini focus groups, focus groups, and CDP focus groups
- This typology also can be applied to some degree to other forms of qualitative data collection such as observations.
- Roulston (2010) comprised the following six conceptions: neo-positivist, romantic, constructionist, postmodern, decolonizing, and transformative.

Table 1. Roulston's (2010) Six Conceptions of Qualitative Interviews

| Conception | Theoretical Assumptions About Social Research |
|-----------------|---|
| Neo-positivist | By taking a marginal role in the interview process, using open and non-leading questions, and not expressing their own experiences and perceptions about the research topic, interviewers can minimize or even avoid influencing the interviewee's voice. Able to access the interviewee's authentic self. |
| Romantic | Interviews "generate the kind of conversation that is intimate and self-revealing" that "lead[s] the interviewer to establish rapport and empathic connection with the interviewee in order to produce intimate conversation between the [interviewer] and [interviewee] in which the interviewer plays an active role" (p. 217). Through rapport, the interviewer can obtain an accurate understanding of the interviewee's emotions and assumptions about the research topic. Able to access the interviewee's authentic self. |
| Constructionist | Knowledge is co-constructed by both the interviewer and interviewee "to generate situated meanings and possible ways of talking about research topics" (p. 218). Interviewers <i>not</i> able to access the interviewee's authentic self. |
| Postmodern | Interviewers do not attempt to obtain a comprehensive account of the underlying, but rather attempt "to open up spaces for new ways of thinking, being, and doing" (p. 220). Interviewers not able to access the interviewee's authentic self. Interview data represent situated performances of selves that are co-constructed by interviewer and interviewee. |
| Decolonizing | To "contribute to restorative justice for indigenous communities" (p. 214). To contribute to "the agendas of decolonization, transformation, mobilization and healing of indigenous peoples" (p. 214). Interviewee and interviewer co-generate the type of conversation that is valued by a particular indigenous community. Interviewer utilizes her/his knowledge of the indigenous community's customs, practices, beliefs, and the like in designing the interview. Interview data are presented respectfully by the researcher for the good of the community studied and in ways that are accessible to the community members. |
| Transformative | To "challenge and change the understandings" of the interviewees (p. 220). To promote emancipatory and social justice. To transform the interviewer's life by "opening up new subjective possibilities" (p. 220). The interviewer and interviewee "develop transformed or enlightened understandings as an outcome of dialogical interaction" (p. 220). |

Types of Interview Data

- What humans say accounts for 7% of how they communicate with each other
- Conversely, nonverbal communication accounts for 93% of how humans communicate with each other
- Thus, the following types of data should be collected during the interview process
 - Verbal
 - Nonverbal communication

Debriefing the Interviewer

- Onwuegbuzie, Leech, and Collins (2008) developed an array of debriefing interview questions that the debriefer could ask the interpretive researcher. These questions were categorized into two types:
 - questions based on researcher bias
 - questions based on Guba and Lincoln's (1989) principles of authenticity criteria

Debriefing the Interviewer

- The questions pertaining to researcher bias are based on the following eight concepts:
 - the researcher's experience with interviewing
 - the researcher's understanding of the participant(s)
 - the researcher's depth of knowledge of non-verbal communication
 - how the researcher interprets the findings from the interviews
 - thoughts regarding how the study affected the researcher
 - concerns regarding the impact of the study on the participants
 - ethical or political issues that might have come up at any stage of the research
 - the researcher's identification of problems that stemmed from the interviews

Debriefing the Transcriber

- Most recently, Frels and Onwuegbuzie (2016) provided a framework for debriefing the transcriber.
- As part of this framework, they designed questions for the researcher to ask the transcriber to address representation and legitimation and also to facilitate movement into a deeper investigation.

Table 1
Possible Debriefing Topics and Questions Relating Directly to Transcriber's Perceptions

| Goal of Question | Topic | Question |
|------------------|------------------------------|---|
| Representation | Quality of recordings | What is your opinion regarding the recording quality (e.g., sound technology) of the interviews? How easy or difficult was it to understand the interviews regarding accent, style, speech patterns, pace, or any other interactive elements? How easy or difficult was it to understand the content that was delivered? |
| Representation | Interpretation of interviews | Is there anything in particular that stands out to you about the interviews? Looking back to when you transcribed the interviews, what positive thoughts come to mind? Looking back to when you transcribed the interviews, what negative thoughts come to mind? |
| Representation | Impact on the transcriber | Is there any particular interview that impacted you and if so how? Is there any particular interview that surprised you and if so how? |
| Representation | Impacts on the transcriber | In what ways, if any, do you feel you are a different person now that you have transcribed these interviews? In what ways, if any, do you feel your gender/race/culture/class/status/age influenced your thoughts about the interviews? What experiences have you had that you believe impacted your thoughts regarding these interviews? |

Component #4: Data Analysis

Importance of Qualitative Data Analyses

- Denzin and Lincoln (2005) declared: Qualitative researchers must remain faithful to this indigenous organization and deploy analytic strategies that are fitted to it. We need rigorous work that pays systematic attention to the systematic relations among the interaction order, orders of talk, representational orders, and the organized properties of material culture. . . . We need more principled and disciplined ways of accounting for the world and its organization. [emphasis added] (pp. 646-647)

Qualitative Data Analysis: Definition

- Schwandt (2001) defined “analyzing qualitative data” as:
“the activity of making sense of, interpreting, or theorizing data. It is both art and science. . . . If data speak for themselves, analysis would not be necessary” (p. 6).

Cross-Case Analysis and Within-Case Analysis Designs

- Within-case analysis designs are bounded within a single case.
- Cross-case analysis designs investigate multiple cases.

Within-Case Analysis Designs

Miles and Huberman (1994) conceptualized the following four types of within-case analysis designs:

- Partially Ordered Displays
- Time-Ordered Displays
- Role-Ordered Displays
- Conceptually Ordered Displays

Within-Case Analysis Designs: Partially Ordered Displays

- Visual representations that uncover and portray what is occurring in a local setting or context by imposing minimal conceptual structure on the data—such as
 - *poems*
 - *context charts* (i.e., networks that map in graphic form the interrelationships among groups and roles that underlie the context of individual behavior)
 - *checklist matrices* (i.e., way of analyzing/displaying one major concept, variable, or domain that includes several unordered components)

Within-Case Analysis Designs: Time-Ordered Displays

- Visual representations that order data by time and sequence, maintaining the historical chronological order of events and facilitating an analysis of when the events occurred and their antecedents, such as
 - *event listing* (i.e., matrix or flowchart that organizes a series of concrete events by chronological time periods and sorts them into multiple categories)
 - *critical incident chart* (i.e., maps a few critical events)
 - *time-ordered matrix* (i.e., maps when particular phenomena occurred)

**Within-Case Analysis Designs:
Role-Ordered Displays**

- Order information according to the participant’s roles in a formal or informal setting, such as
 - *role-ordered matrix* (i.e., maps the participant’s “roles” by sorting data in rows and columns that have been collected from or about a set of data that reflect their views, beliefs, expectations, and/or behaviors)
 - *role-by-time matrix* (i.e., maps the participant’s “roles,” preserving chronological order)

**Within-Case Analysis Designs:
Conceptually Ordered Displays**

- Order the display by concepts or variables, such as
 - *conceptually clustered matrix* (i.e., a text table with rows and columns arranged to cluster items that are related theoretically, thematically, or empirically)
 - *thematic conceptual matrix* (i.e., reflects ordering of themes)
 - *cognitive maps* (e.g., displays the person’s representation of concepts pertaining to a particular domain)
 - *effects matrix* (i.e., displays data yielding one or more outcomes in a differentiated manner, focusing on the outcome/dependent variable)
 - *causal network* (i.e., displays the most important independent and dependent variables and their inter-relationships)

Cross-Case Analysis Designs

Miles and Huberman (1994) conceptualized the following four types of cross-case analysis designs:

- Partially Ordered Displays
- Conceptually Ordered Displays
- Case-Ordered Displays
- Time-Ordered Displays

Cross-Case Analysis Designs:
Partially Ordered Displays

- Visual representations that uncover and portray what is occurring in a local setting or context by imposing minimal conceptual structure on the data—such as
 - *partially ordered meta-matrices* (i.e., display descriptive data for each of several cases simultaneously)

Cross-Case Analysis Designs:
Conceptually Ordered Displays

- Order the display by concepts or variables, such as
 - *Decision tree modeling* (i.e., displays decisions and actions that are made across several cases)
 - *Variable-by-variable matrix* (i.e., displays two major variables in its rows and columns ordered by intensity with the cell entries representing the cases)
 - *Causal models* (i.e., network of variables with causal connections among them in order to provide a testable set of propositions or hunches about the complete network of variables and their interrelationships)
 - *Antecedents matrix* (i.e., display that is ordered by the outcome variable, and displays all of the variables that appear to change the outcome variable)

Cross-Case Analysis Designs:
Case-Ordered Displays

- Order the cases by variables, such as
 - *case-ordered descriptive meta-matrix* (i.e., contains descriptive data from all cases but the cases are ordered by the main variable of interest)
 - *two-variable case-ordered matrix* (i.e., displays descriptive data from all cases but the cases are ordered by two main variables of interest that are represented by the rows and columns)
 - *scatterplot* (i.e., plot all cases on two or more axes to determine how close from each other the cases are)
 - *case-ordered effects matrix* (i.e., sorts cases by degrees of the major cause of interest, and shows the diverse effects for each case)

Cross-Case Analysis Designs:
Time-Ordered Displays

- Order the concepts or variables by time, such as
 - *time-ordered meta-matrix* (i.e., table in which columns are organized sequentially by time period and the rows are not necessarily ordered)
 - *time-ordered scatterplots* (i.e., display similar variables in cases over two or more time periods)
 - *composite sequence analysis* (i.e., permit extraction of typical stories that several cases share, without eliminating meaningful sequences)

Qualitative Data Analysis Approaches

- Leech and Onwuegbuzie (2008) presented 18 qualitative data analysis approaches

Table 1. Most Common Qualitative Analyses

| Type of Analysis | Short Description of Analysis |
|------------------------------------|---|
| Constant Comparison Analysis | Systematically reducing data to codes, then developing themes from the codes. |
| Classical content analysis | Counting the number of codes. |
| Word count | Counting the total number of words used or the number of times a particular word is used. |
| Keywords-in-context | Identifying keywords and utilizing the surrounding words to understand the underlying meaning of the keyword. |
| Domain analysis | Utilizing the relationships between symbols and referents to identify domains. |
| Taxonomic analysis | Creating a system of classification that inventories the domains into a flowchart or diagram to help the researcher understand the relationships among the domains. |
| Componential analysis | Using matrices and/or tables to discover the differences among the subcomponents of domains. |
| Theme analysis | Developing themes from the domains. |
| Conversation analysis | Utilizing the behavior of speakers to describe people's methods for producing orderly social interaction. |
| Discourse analysis | Selecting representative or unique segments of language use, such as several lines of an interview transcript, and then examining the selected lines in detail for rhetorical organization, variability, accountability, and positioning. |
| Secondary data analysis | Analyzing non-naturalistic data or artifacts that were derived from previous studies. |
| Membership categorization analysis | Utilizing the role that interpretations play in making descriptions and the consequences of selecting a particular category (e.g., baby, sister, teacher, mother, father = family). |
| Semiotics | Using talk and text as systems of signs under the assumption that no meaning can be attached to a single term. |
| Manifest content analysis | Describing observed (i.e., manifest) aspects of communication via objective, systematic, and empirical means (Berelson, 1952). |
| Latent content analysis | Uncovering underlying meaning of text. |
| Qualitative comparative analysis | Systematically analyzing similarities and differences across cases, typically being used as a theory-building approach, allowing the analyst to make connections among previously built categories, as well as to test and to develop the categories further. |
| Narrative analysis | Considering the potential of stories to give meaning to individual's lives, and treating data as stories, enabling researchers to take account of research participants' own evaluations. |
| Text mining | Analyzing naturally occurring text in order to discover and capture semantic information. |

Adapted from "Qualitative data analysis: A compendium of techniques and a framework for selection for school psychology research and beyond," by N. L. Leech and A. J. Onwuegbuzie, 2008, *School Psychology Quarterly*, 23, p. 601. Copyright 2008 by the American Psychological Association.

Qualitative Data Analysis Approaches

- Leech and Onwuegbuzie (2008) also identified the 18 qualitative data analysis approaches that can be used to analyze each of the four sources of qualitative data conceptualized by Leech and Onwuegbuzie (2007), namely:
 - Talk
 - Documents
 - Observation
 - Visual/spatial

Table 2
Relationship Between Type of Qualitative Data Analysis Technique and Source of Qualitative Data

| Source of Data | Type of Qualitative Technique |
|----------------------------|--|
| Talk | Conversation Analysis Discourse Analysis Narrative Analysis Semiotics Qualitative Comparative Analysis Constant Comparison Analysis Keywords-in-Context Word Count Membership Categorization Analysis Domain Analysis Taxonomic Analysis Componential Analysis Classical Content Analysis Micro-interlocutor Analysis |
| Observations | Qualitative Comparative Analysis Constant Comparison Analysis Keywords-in-Context Word Count Domain Analysis Componential Analysis Taxonomic Analysis Manifest Content Analysis Latent Content Analysis |
| Drawings/Photographs/Video | Qualitative Comparative Analysis Constant Comparison Analysis Word Count Manifest Content Analysis Latent Content Analysis Secondary Data Analysis |
| Documents | Semiotics Qualitative Comparative Analysis Constant Comparison Analysis Keywords-in-Context Word Count Secondary Data Analysis Classical Content Analysis Text Mining |

Adapted from "Qualitative data analysis: A compendium of techniques and a framework for selection for school psychology research and beyond." by N. L. Leech and A. J. Onwuegbuzie, 2008, *School Psychology Quarterly*, 23, p. 590. Copyright 2008 by the American Psychological Association.

Saldaña's (2012) Coding Techniques

- Saldaña (2012), in his seminal book, identified 32 coding methods.
- Saldaña (2012) conceptualized these 32 coding methods as being representative of either the first cycle or second cycle, with one hybrid method lying in between them.

Saldaña’s (2012) Coding Techniques

- *First Cycle* methods are coding strategies that occur during the initial coding of data, and which are sub-divided into the following seven subcategories:
 - *Grammatical methods* (i.e., attribute coding, magnitude coding, subcoding, simultaneous coding)
 - *Elemental methods* (i.e., structural coding, descriptive coding, in vivo coding, process coding, initial coding)
 - *Affective methods* (i.e., emotion coding, values coding, versus coding, evaluation coding)
 - *Literary and Language methods* (i.e., dramaturgical coding, motif coding, narrative coding, verbal exchange coding)
 - *Exploratory methods* (i.e., holistic coding, provisional coding, hypothesis coding)
 - *Procedural methods* (i.e., protocol coding, outline of cultural materials coding, domain and taxonomic coding, causation coding)

Saldaña’s (2012) Coding Techniques

- Conversely, the *Second Cycle* methods are coding strategies that “require such analytic skills as classifying, prioritizing, integrating, synthesizing, abstracting, conceptualizing, and theory building” (p. 58), as follows: *Pattern coding, Focused coding, Axial coding, Theoretical coding, Elaborative coding, and Longitudinal coding.*
- Finally, *Theming the data*, which includes eclectic coding, lies in between the first and second cycles.

Computer-Assisted Qualitative Data Analysis Software (CAQDAS) Programs

- There are several computer-assisted qualitative data analysis software programs. However, the most popularized programs are as follows:
 - NVivo
 - (<http://www.qsrinternational.com/product>)
 - QDA Miner
 - (<http://provalisresearch.com/products/qualitative-data-analysis-software/>)
 - Max QDA
 - (<http://www.maxqda.com/>)
 - Atlas-ti
 - (<http://atlasti.com/>)

Computer-Assisted Qualitative Data Analysis Software (CAQDAS) Programs

- Of the CAQDAS software programs, the following programs actually directly facilitate mixed methods data analyses:
- QDA Miner
 - (<http://provalisresearch.com/products/qualitative-data-analysis-software/>)
- Max QDA
 - (<http://www.maxqda.com/>)

Computer-Assisted Qualitative Data Analysis Software (CAQDAS) Programs

- Leech and Onwuegbuzie (2011) illustrated in a step-by-step manner how to use the NVivo (Version 9) qualitative software program to conduct the following qualitative data analysis approaches:
 - constant comparison analysis
 - classical content analysis
 - keyword-in-context
 - word count
 - domain analysis
 - taxonomic analysis
 - componential analysis

Component #5: Legitimation

Legitimation

- Denzin and Lincoln (2011) discuss what they refer to as the crisis of legitimation, which makes problematic the traditional criteria for evaluating and interpreting qualitative research.
- It involves a serious rethinking of such terms as *validity*, *generalizability*, and *reliability*, terms already retheorized in postpositivist..., constructivist-naturalistic..., feminist..., interpretive..., poststructural..., and critical...discourses.
- This crisis asks, “How are qualitative studies to be evaluated in the contemporary, poststructural moment?”

Legitimation

- Discussion of threats to verification/trustworthiness/legitimation/authenticity/credibility /transferability/dependability/confirmability of the data includes works by
 - Creswell (2013)
 - Guba and Lincoln (1989)
 - Lather (1993)
 - Lincoln (1995)
 - Lincoln and Guba (1985)
 - Maxwell (1992, 1996, 2005, 2012)
 - Miles and Huberman (1994)
 - Miles, Huberman, and Saldaña (2014)

Legitimation

- Onwuegbuzie and Leech (2007) conceptualized what they called the *Qualitative Legitimation Model*, which contains 29 elements of legitimation for qualitative research at the following three recursive stages of the research process:
 - research design/data collection
 - data analysis
 - data interpretation
- This model incorporates many of the popularized legitimation frameworks.

Meaning Making and Presenting

- Oral Story Telling
- Visualizing
- Performing
- Writing

Oral Story Telling

- Qualitative research findings and interpretations can be presented orally via story telling
- Ancient tradition
- Personal and intimate form of meaning making and knowledge sharing
- Flexible form of knowledge sharing
- Immediacy of knowledge sharing
- Empowering form of knowledge sharing

Visualizing

- Drawings
- Paintings
- Photographs
- Videos
- Multimedia

Performing

- Performance ethnography “is concerned with embodying aspects of ethnographic description” and “focuses on the important transformative process of becoming” (Alexander, 2005, p. 412)
- Qualitative researchers can perform their findings and interpretations
 - Poetry
 - Music
 - Movement
 - Dance

Writing

- To assist in the qualitative writing process, Frels, Sharma, Onwuegbuzie, Leech, and Stark (2011) presented a checklist that was developed by Tony Onwuegbuzie.

The Checklist

- Likert-format scale format for each item ranging from 1 (strongly disagree) to 5 (strongly agree).
- Students use the *Checklist* to understand the necessary components regarding data collection, data analysis, and data interpretation to include when writing their qualitative research reports.
- Students use the *Checklist* and detailed feedback from instructors to help guide their subsequent qualitative notebook write-ups.

Parts of the Checklist

- Part I – Content: the rubric for feedback pertaining to the essential components of qualitative research
- Part II – Style: the rubric for feedback pertaining to adherence to American Psychological Association (APA, 2010) guidelines.

Checklist – Content (Part I) –

- Title
- Method
- Instruments
- Procedure
- Analysis
- Legitimation
- Results
- Discussion
- Reference list
- Appendix

Table 3
Samples from the Procedure Section of the Checklist

| Procedure | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| 50. All data collecting procedures are clearly described. | | | | | |
| 56. Citations are provided for selected correlates of research paradigm. | | | | | |
| 59. If a case study design is used, the type of case study (i.e., instrumental, intrinsic, collective/multiple; Stake, 2005; Yin, 2009) is identified and described clearly. | | | | | |
| 60. If a phenomenological design is used, the type of phenomenology (i.e., reflective/transcendental, dialogical, empirical, existential, hermeneutic, social, psychological; Creswell, 2007) is identified and described clearly. | | | | | |
| 66. Evidence is provided that any interviewers did not influence the content of the interviewees' focus group's description in such a way that these descriptions do not truly affect the actual experience. | | | | | |

Table 5
Samples from the Legitimation Section of the Checklist

| Legitimation | | 1 | 2 | 3 | 4 | 5 |
|--|--|---|---|---|---|---|
| 78. The discussion of threats to Verification/Trustworthiness/Legitimation/Authenticity/Credibility/Transferability/Dependability/Confirmability of data is adequately undertaken using a framework (e.g., Creswell, 2005; Guba & Lincoln, 2005; Lather, 1991; LeCompte & Goetz, 1982; Lincoln & Guba, 1985; Miles & Huberman, 1984) | | | | | | |
| 79. Each legitimation threat discussed is labeled appropriately. | | | | | | |
| 81. All important threats to legitimation are discussed. | | | | | | |
| 82. At least one verification procedure is described in detail (e.g., prolonged engagement, persistent observation, triangulation, contextualization of observations, method of constant comparison, checking for representativeness of sources of data, checking for researcher effects, weighing the evidence, examining extreme cases, checking for spurious relations, examining rival explanations, looking for negative evidence, obtaining feedback from informants, leaving an audit trail, thick description, assessing structural relationships, use of referential material, theoretical sampling). | | | | | | |

● *Happy Writing!!!!*

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