

Qualitative Data Analysis

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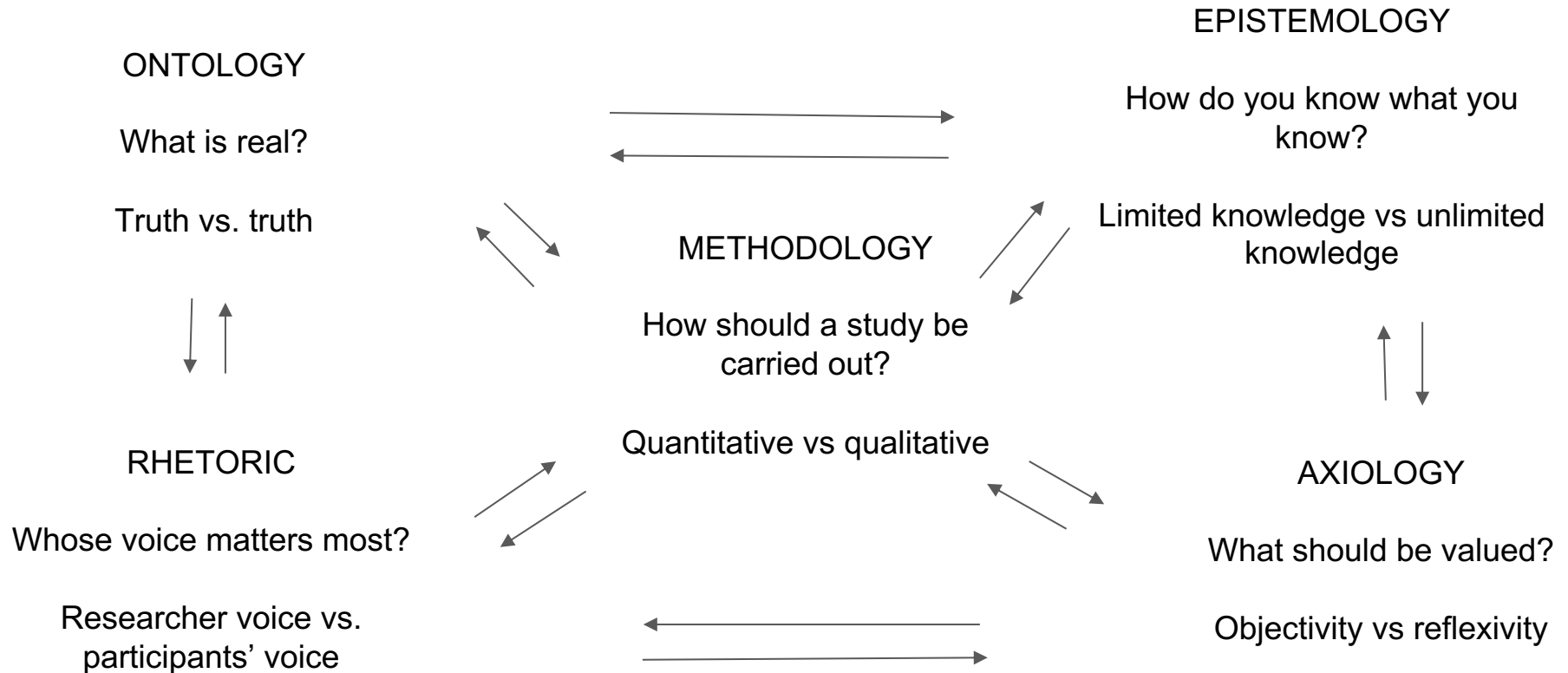
What is Qualitative Research?

“Qualitative researchers are after meaning. The social meaning people attribute to their experiences, circumstances, and situations, as well as the meanings people embed into text, images, and other objects, are the focus of qualitative research. Therefore, at the heart of it, qualitative researchers extract the co-created meanings they gather from their participants’ data in order to get at multiple subjective accounts” (Hesse-Biber, 2017, p. 4)



- Meaning
- Experience
- Phenomenon
- Context
- How, why, and what
- Inductive
- Meta voice
- Subjectivity/intersubjectivity

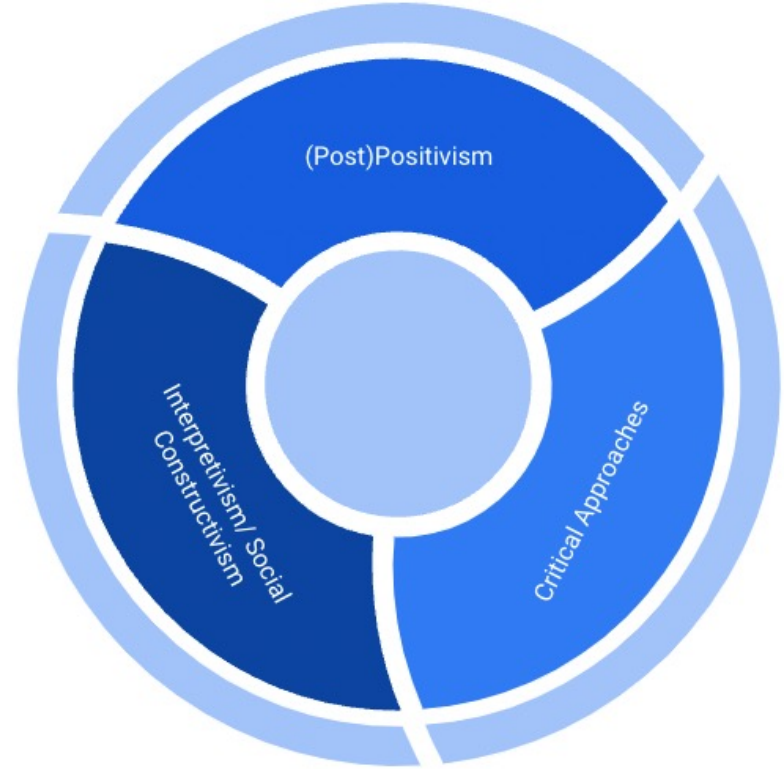
The Philosophy of Research/Sciences



Quantitative Research vs Qualitative Research

Ont	Truth	truth
Epi	Limited Knowledge	Unlimited Knowledge
Axi	Objectivity	Reflexivity
Rh	Researcher Voice	Participant Voice
Me	Quantitative	Qualitative

Three Main Paradigms in Social Science



Positivism

Characteristics/
Assumptions?

Focuses on uncovering a **universal Truth** that exists in reality.

Knowing?

Researchers can come to know through the **scientific method**.

Researcher's
Role?

Researchers must aim to be objective. This means being detached from their research since subjectivity might be considered a liability.

Language?

Researchers must use “scientific” language - utilizing an omniscient narrator with a third person removed perspective.

Methodology?

Quantitative methods and “fly-on-the-wall” observations

Interpretivism/ Social Constructivism

Characteristics/ Assumptions?

Focuses on understanding, interpretation, and social meaning with a belief that multiple truths simultaneously exist.

Knowing?

Meaning is socially constructed through interactions, including those between the researcher and participants.

Researcher's Role?

Researchers must understand how their own subjectivities shape their understandings. They may then act as **interpreters or translators**.

Language?

Language should be highly descriptive. Subjective "I" and "We" can also be used.

Methodology?

Qualitative methods - with emphasis on voice through interviews and observations with attention to researcher bias and the researcher/participant relationship.

Critical Approaches

Characteristics/ Assumptions?

Focuses on understanding multiple truths that are the result of hegemonic **power** relationships.

Knowing?

Meaning is socially constructed through interactions as shaped by power, including those between the researcher and participants.

Researcher's Role?

Researchers must understand how their own subjectivities and power relationships shape their understandings. They should act as **advocates** and **change agents**.

Language?

Language should be highly descriptive. Subjective "I" and "We" can also be used.

Methodology?

Qualitative methods - with emphasis on voice through interviews and observations with attention to researcher bias and the researcher/participant relationship.

Qualitative Research Traditions

1

Universalistic

Boundaries. Individual(s). Event(s). Process(es). Can be applied to most other traditions.

- Case study*

2

Experience & Theory

Discovery. Experiential knowledge. Phenomenon. Subjectivity

- Grounded theory*
- Phenomenology*
- Heuristic inquiry
- Consensual qualitative research

3

Meaning in Symbol & Text

Language. Symbols. Story. Identity. Context.

- Symbolic interaction
- Semiotics
- Life history*
- Hermeneutics
- Narratology*
- Photovoice
- Critical discourse or

4

Cultural Experiences & Processes

Culture. Prolonged engagement. Participant observation. Fieldwork.

- Ethnography*
- Ethnomethodology
- Autoethnography*
- Portraiture

5

Research for Change

Power analysis. Action research. Change of conditions, context, researcher, participants.

- Participatory action research*
- Indigenous research methodologies*
- Critical race theory*



Formulate RQ

Determine data collection

Determine write-up

Link RQ and research design

Draw sample

Determine analysis & interpretation

Detail validity and limitations



What is reflexivity?
Why is it important in
qualitative research?



Reflexivity:

“The active self-reflection of an investigator on the research process”
(Hays & Singh, p. 137)

- Provides researcher with awareness of:
 - Assumptions
 - Reactions
 - Behaviors
 - Emotions
 - Interactions
 - Phenomena

What is subjectivity? Why does it matter in qualitative research?

- “The qualitative researcher’s internal understandings of the phenomenon” (p. 144)
- From a constructivist or critical point of view, subjectivity is valued
- Provides means for understanding a phenomenon more intimately

What is positionality? Why does it matter in qualitative research?

It is a methodology that “requires researchers to identify their own degrees of privilege through factors of race, class, educational attainment, income, ability, gender, and citizenship, among others” for the purpose of analyzing and acting from one’s social position “in an unjust world.”

(Pascua Yaqui/Chicana scholar M. Duarte
(2017, p. 135)

- Encompasses the researcher's social , cultural, and personal locations and relationships to the research phenomenon and participants
- How do my subjectivities position me in relation to the phenomenon and to my participants?
 - In what ways am I close to this research and to my participants (insider)?
 - In what ways am I distant from this research or from my participants (outsider)?

Reflexive strategies

- Attending to subjectivities
 - Keep a reflexive journal
 - Talk through issues that arise with participants, research teammates (if applicable), trusted peers, and/or trusted advisors
- Attending to participant voice
 - Member checking
 - Data triangulation
 - Peer debriefing
 - Working in a research team

Common Qualitative Study Design

- Ethnography/Netnography
- Phenomenology: Bracketing?
- Grounded Theory Approach
- Participatory Action Search
- Case Study

Common Qualitative Methods/Practices

- Observation
 - Field notes
 - Overt/Covert
 - Participating observer -> non- participating observer
- Interview
 - Structured interview
 - Semi-structured interview
- Focus Group Discussion
- Open-Ended Survey
- Diary
- Images
- Talking stories

Methodologies	Theories	Methods/ Data Sources
Phenomenology	Critical Race Theory	Interviews
Narrative Inquiry	Feminist Theory	Observations
Grounded Theory	Queer Theory	Documents
Ethnography	Intersectionality	Images
Discourse Analysis	Sense of Belonging	Surveys
Indigenous Research Methodologies	Integration	etc
Photovoice	Engagement Theory	
etc	Involvement Theory	
	etc	

Qualitative Data

They are data representing information and concepts that are not represented by numbers.

- Texts
 - Notes
 - Historical documents: news papers, tweets
 - Journals
- Images/Maps
- Audio recordings
- Video recordings

Qualitative Data Analysis

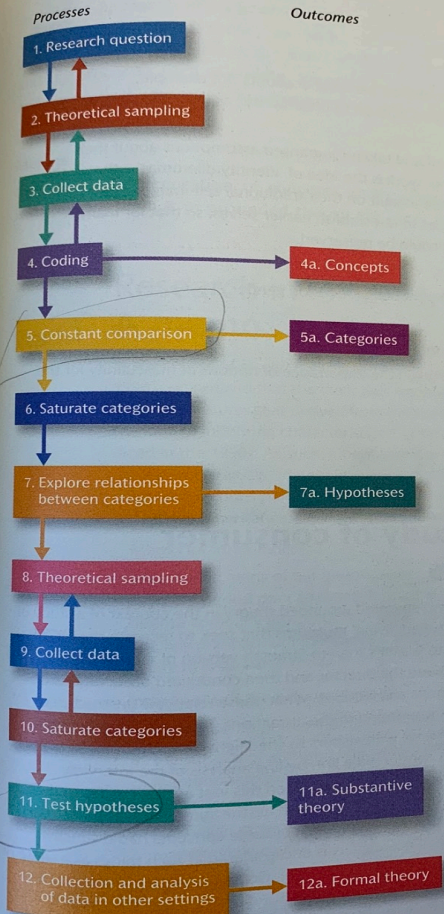
The process that we gain understanding, interpretation, and explanation of the people or phenomenon that the study is investigating.

- Thematic Analysis
- Grounded Theory
- Narrative Analysis
- Secondary analysis of qualitative data
- Content Analysis
- Discourse Analysis
- Framework Analysis

Process of GTA

- Constant Comparison
- Data/categories/theme saturation

Figure 24.2
Processes and outcomes in grounded theory



Possibilities for Qualitative Synthesis

1. Codes & Coding

Labels “each individual datum for purposes of pattern detection, categorizing, & unifying” (ch. 9, pt. 1, p. 2)

Examples:

- Management - classroom
- Management - students

2. Categories

“A word or short phrase applied to a grouped pattern of comparable codes and coded data” (ch. 9, pt. 1, p. 9).

Examples:

- Impression management
- Positive interactions
- Negative interactions

3. Themes

“Themes extrapolate from the data their main ideas, and are not just topical content” (ch. 9, pt. 1, p. 12).

Examples:

- Diabetes management is knowing how the disease affects your body
- DM means understanding your symptoms

4. Constructs

A concept “symbolically represents a suggested meaning broader than a single item or action - a bigger picture idea beyond the tangible and apparent” (ch. 9, pt. 2, p. 2)

Examples:

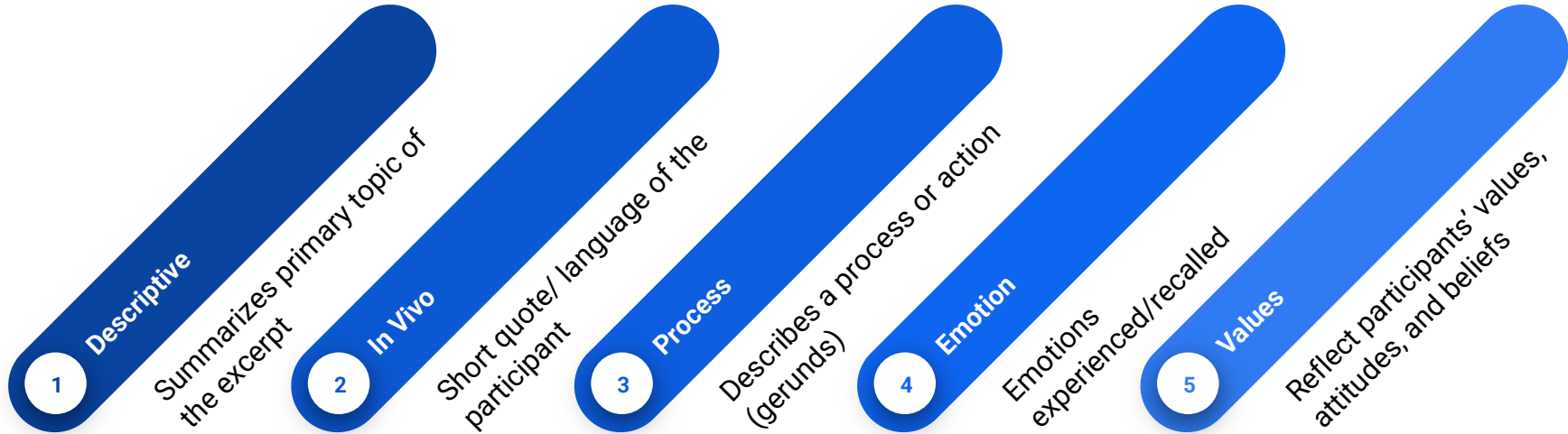
- DM as physical caretaking
- DM as mental vigilance

5. Theories

“A theory summarizes the totality of the research experiences into one or more sentences about social life that holds transferable applications to other settings, contexts, populations, and possibly time periods” (Ch. 10, pt. 1, p. 5)

Example: Inequality is largely the cause of crime in society.

Coding Types



As I walked toward the school, there was a 7-11 convenience	Business
store 1 block away, next to a small professional office building:	
an optometrist, podiatrist, and other medical/health-related	
clinics. Directly across the street was an empty lot, but next to	
that stood a Burger King restaurant.	

(Miles, Huberman, & Saldaña, 2020, p. 65)

DESCRIPTIVE CODING: Summarizes the basic topic of a passage in a word or short phrase

I hated school last year. Freshman year, it was awful, I	“Hated school”
hated it. And this year’s a lot better actually. I, um, don’t	“This year’s a lot better”
know why. I guess, over the summer I kind of stopped	“Stopped caring”
caring about what other people thought and cared more	
about, just, I don’t know.	

(Miles, Huberman, & Saldaña, 2020, p. 65)

IN VIVO CODING: Uses words or short phrases directly from participants as codes

Well, that's one problem, that [my school is] pretty small, so	
<u>if you say one thing to one person, and they decide to tell</u>	Spreading rumors
two people, then those two people tell two people, and in one	
period everybody else knows. Everybody in the entire school	Knowing what you said
knows that you said whatever it was.	

(Miles, Huberman, & Saldaña, 2020, p. 66)

PROCESS CODING: Uses gerunds as codes to highlight actions and processes in the data

I just hated it when he got awarded with the honor. I mean,	“Hated it”
we’re praising mediocrity now. Never mind that what you’ve	Bitterness
accomplished isn’t worth squat, it’s all about who you know in	
the good ol’ boys network.	

(Miles, Huberman, & Saldaña, 2020, p. 66)

EMOTION CODING: Creates codes that label participants’ experiences of emotions

Government regulation of women's health issues has gotten	B: government control
out of hand. It's not about "protecting" us, it's about their need to	
control and dominate women through covert religious ideology.	B: covert religious motives
White Christian men are deciding what's law and what's moral	
and what's, how it's supposed to be. They can say, "It's not a war	A: misogynist motives
on women" all they want, but trust me -- it's a war on women.	

(Miles, Huberman, & Saldaña, 2020, p. 66)

VALUES CODING: Creates codes to reflect participants' values, attitudes, and beliefs - revealing their perspectives or worldviews.

Coding Steps

- Open coding/line-by-line coding
- Axial coding : category
- Selective/focused coding
- Form a theory (Optional)

Data Management

- Data cleaning
- Data reduction : chunking
- Data interpretation : clustering
- Data representation: telling the story/
'making sense of the data for others

Trustworthiness in Qualitative Research

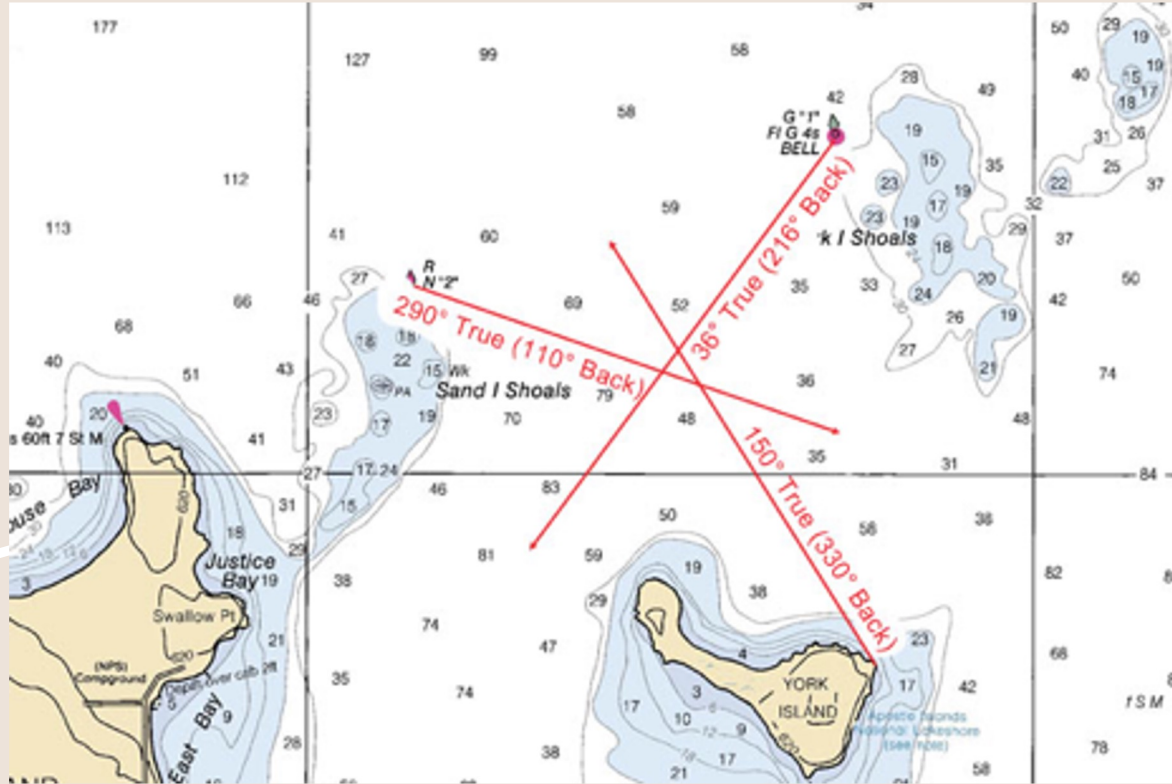
- **Credibility** : Overall believability, internal validity
- **Transferability**: generalizability, external validity
- **Dependability**: Consistency, reliability
- **Confirmability**: Neutrality of researcher
- **Authenticity**: Truthful to participants
- **Coherence**: Consistency of research approach
- **Sampling Adequacy**: Appropriate sample size and composition for research purpose
- **Ethical Validation**: Engraining in research that informs practice
- **Substantive Validation**: a worthwhile contribution
- **Creativity**: Novelty and flexibility in research design

(Hays&Singh, 2012)

Strategies of Trustworthiness

- Reflexive Journals/Field Notes/Memos
- Member Checking
- Prolonged Engagement
- Peer Debriefing
- **Triangulation**
 - Data Source
 - Investigators
 - Data methods
 - Theory
- Simultaneous Data Collection and Analysis

The Triangulation Metaphor



Report findings

- Title page and abstract
- Introduction
 - Research topic
 - Research purpose
 - Significance of the research
 - Research questions
- Literature review
- Theoretical/conceptual framework (if applicable)
- Positionality
- Research design
 - Explanation of design choice
 - Study site and/or participant selection criteria and/or other data sources
 - Sampling
 - Methods of data collection
 - Methods of data analysis
 - Ethical considerations
- Data analysis and interpretation (or *Findings* and *Discussion*)
- Conclusion and implications
- References
- Appendices

Common Qualitative Software

- NVivo
- MAXQDA
- ATLAS.ti
- Dedoose
- QDA Miner
- HyperRESEA
- RCH
- Quirkos
- RQDA
- Weft QDA
- Transana

The screenshot displays the NVivo software interface. The top menu bar includes File, Home, Import, Create, Explore, Share, Modules, and Document. The left sidebar shows 'Quick Access' with options like Area and Township, Interviews, Literature, News Articles, Social Media, Survey, File Classifications, and Externals. Below this is the 'ORGANIZE' section with 'Coding' (Codes, Relationships, Relationship Types) and 'Cases'.

The central 'Interviews' table lists the following data:

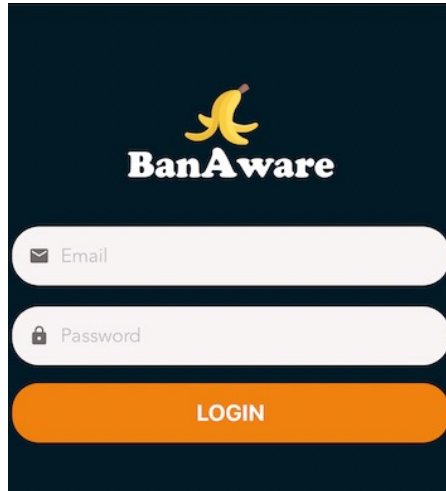
Name	Codes	References
Helen	14	50
Ken	17	56
Betty and Paul	13	41
Barbara	43	197
Charles	38	134
Dorothy	39	128
Margaret	35	78
Maria and Daniel	43	150
Mary and James	42	111
Richard and Patricia	35	101
Robert	31	96
Susan	47	146
Thomas	28	112

The main text editor window shows an interview transcript with highlighted text: 'Interview with Barbara on February 19th, 2009 at her home in Bettie, North Carolina. Barbara writes cooking curriculum materials and does earth science environmental consulting work for soil scientists.' Below this is a section titled 'Q.1. Connection to Down East' with a question: 'Tell me about your personal and family history in Down East. How long have you or your family been living Down East full time or part time?'. The transcript continues with a section for 'Henry' and 'Barbara'.

The bottom of the interface shows a code panel with the code 'job' and a search bar containing 'Jobs and cost of living (Codes)\Economy'. The status bar at the bottom indicates 'MCT 14 Items Codes: 43 References: 197'.

Banana Project

Ethnic Group	Meth-Use Rate
NHFPI	7.7%
Whites	3.7%
Blacks	2.7%
Other Asians	3.1%
Hispanic and Latinos	5.7%



The image shows a login interface for 'BanAware'. At the top center is a yellow banana logo above the text 'BanAware'. Below the logo are two white input fields: the first is labeled 'Email' with an envelope icon, and the second is labeled 'Password' with a lock icon. At the bottom is a large orange button with the text 'LOGIN' in white capital letters.



Aim 1:

Feasibility of using wearable devices for remote digital monitoring and EMAs in NHFPI

- Sample Size: 40
- What we want to learn
 - Experiences
 - Why they reply or do not reply
EMA notification
 - Significances/meanings
 - Personal/social/cultural values and practice
- Challenges so far
 - Recruiting
 - IRB
 - Maintain contacts

Group Discussions

- Discuss your positionality with others as a group (3-4 person/group)
 - Researcher:
 - Interviewer:
 - Observer:
- How do you think that your positionality impacted your selection of your research topic and research questions?
- What are the difficulties when you interview others?
- What are the challenges when you take notes?
- Do you have any theme generate from the short interview as a group?
- What are the potential challenges that the Banana Project might encounter ?
- How to address these problems?
- What are some of the reasons a researcher might employ a mixed method approach?
- What are the strength of qualitative research in human-centered design?
- What are the weakness of qualitative research in general and how to address it?