

Qualitative & Mixed Methods Research Approaches in Public Health

An Introduction for Public Health Practitioners

Tiffany N. Ford, PhD, MPH
Assistant Professor
Community Health Sciences
UIC School of Public Health

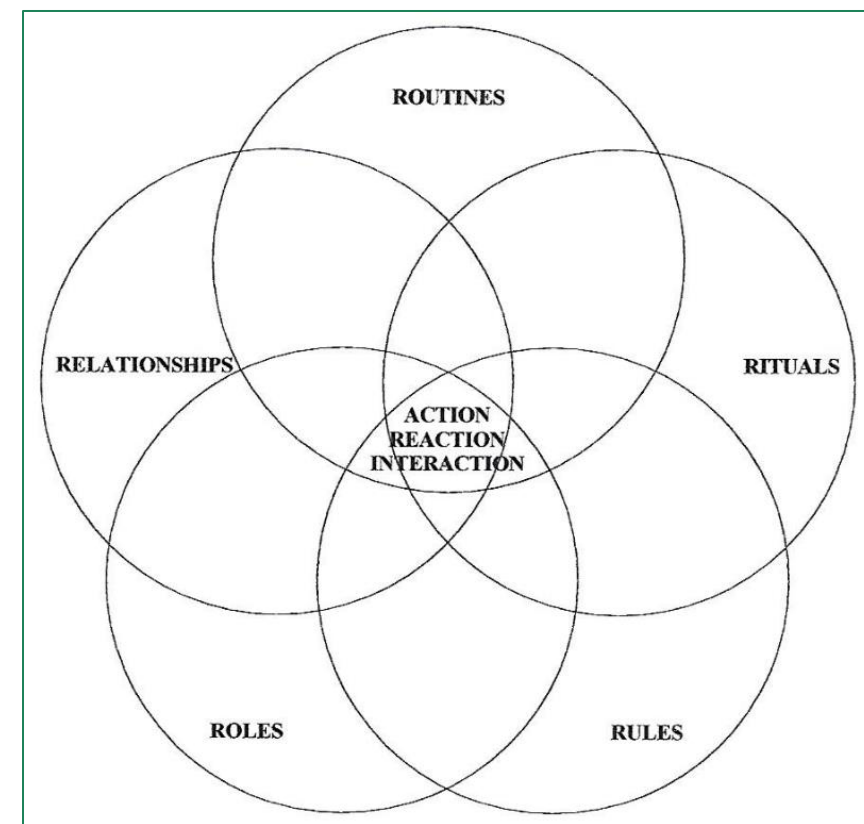
Why Consider Qualitative & Mixed Methods?

- Understanding **the “why”** behind numbers
- **Explains** quantitative findings
- Capturing **human experiences, behaviors, and context**
- Essential for **public health interventions, policy, and practice**
- Appropriate **quantitative measures do not exist**
- Useful to gain a more **complex and detailed understanding** of a topic
- Mixed methods: **Combines depth (qualitative) & breadth (quantitative)**

What is Qualitative Research?

A research approach that **uses textual, visual, or audio sources as data** and is **focused on assessing social processes** (e.g. human actions, reactions, interactions, rules, rituals, routines, relationships, roles) **and their meanings** (Saldaña and Omasta, 2022)

- Exploratory & interpretative
- Focuses on meaning, experiences, and context
- Data sources: **Interviews, focus groups, oral histories, town halls, observations, field notes, documents, media, artifacts, images, videos, sounds, surveys**



Social Processes

Qualitative vs. Quantitative: Key Differences

	Qualitative (Qual)	Quantitative (Quant)
Purpose	Understanding meaning, exploring experiences	Measuring variables, testing hypotheses
Questions	Broad but narrow enough to focus on a few core concepts, relationships between variables tend to be non-directional	Narrow, specific, with variables and their relationships predefined by the literature
Research process	Informed by existing literature but is emergent and evolving	Decided upon based on existing literature at the beginning of the study
Data	Words, images, narratives	Numbers
Role of the researcher	Researcher is an instrument in the research process	Researcher endeavors to be “objective” and have little to no impact on the research process.
Sampling	Small, purposive	Large, random
Analysis	Thematic, narrative; non-linear and iterative	Statistical, numerical; pre-defined

How Do We Analyze Qualitative Data?

Analysis is **non-linear, iterative, and flexible**

- **Coding:** organizing data by attaching codes to relevant segments of text (Felner & Henderson, 2022)
- **Categorizing:** organizing codes by grouping them according to patterns of comparable codes; data reduction

Writing is an essential part of the analytic process

- Field notes → Memos → Metamemos
- **Memoing:** a written conversation with yourself about the data

‘A code in qualitative inquiry is most often a word or short phrase that **symbolically assigns** a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data’

(Saldaña, 2013)

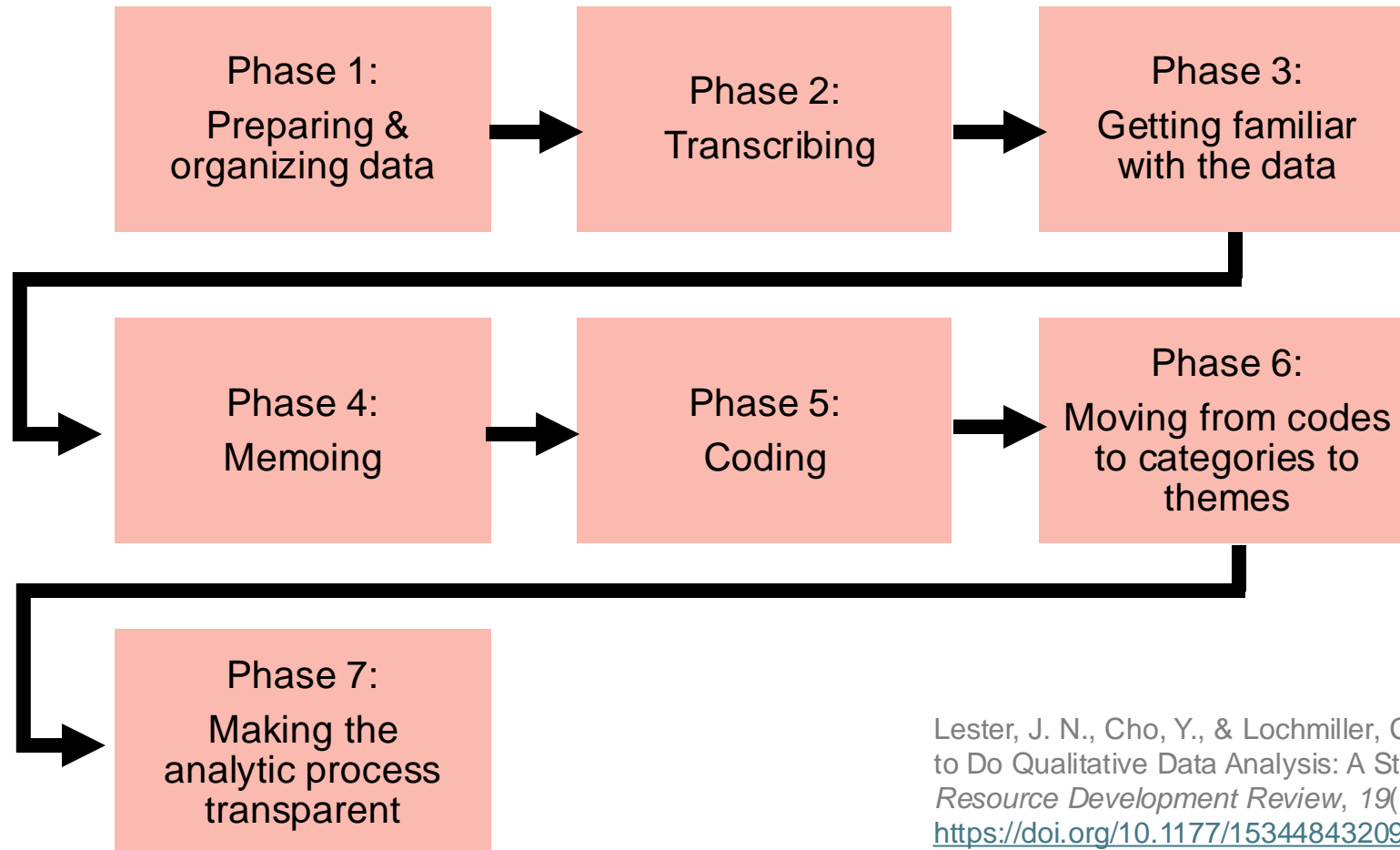
Tools

- Pen and paper
- Dedoose
- MAXQDA
- Nvivo
- Atlas.ti

Approaches

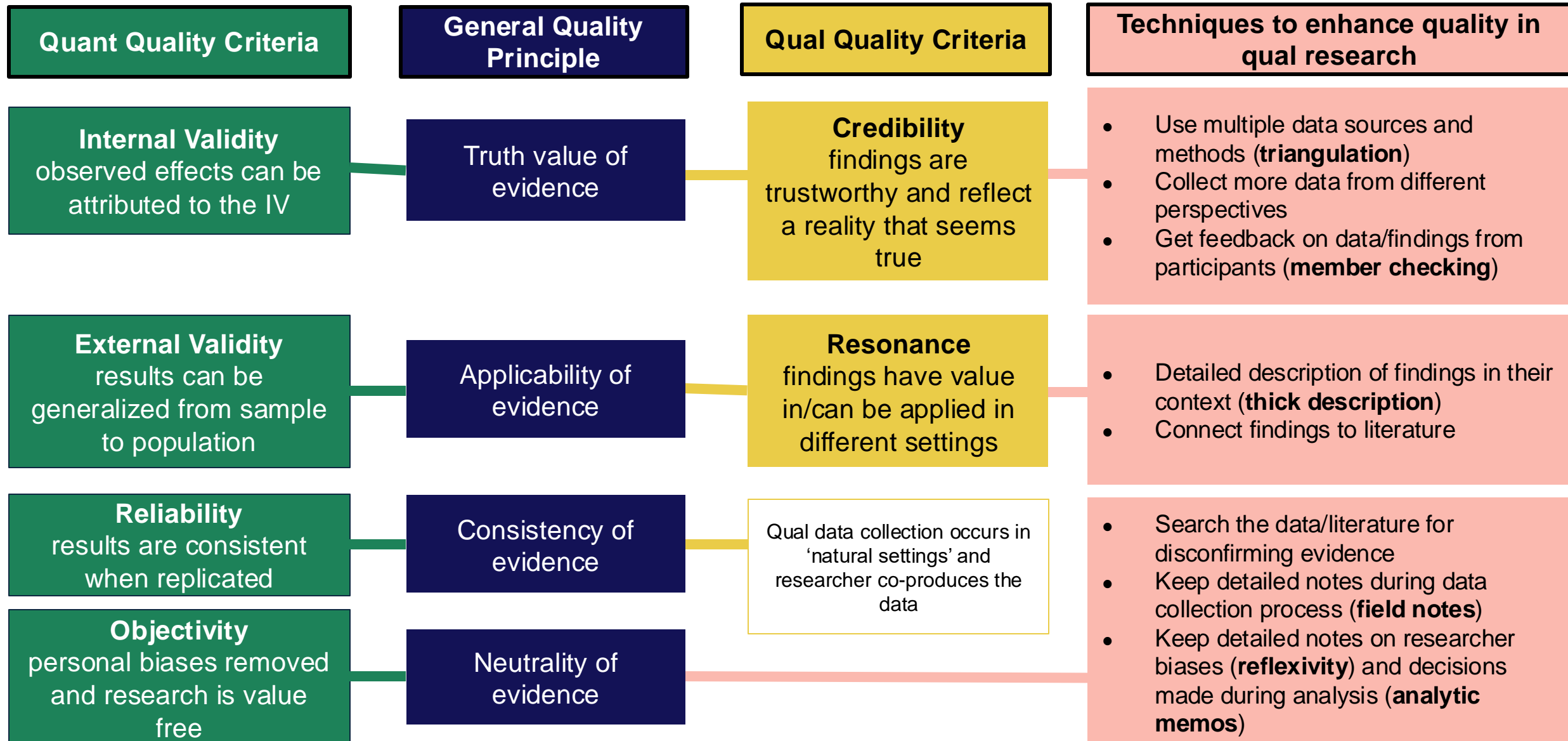
- Thematic analysis: Identifying patterns and themes
- Grounded theory: Developing new theories from data
- Content analysis: Categorizing text-based data
- Narrative analysis: Understanding stories and lived experiences

Conducting Thematic Analysis



Lester, J. N., Cho, Y., & Lochmiller, C. R. (2020). Learning to Do Qualitative Data Analysis: A Starting Point. *Human Resource Development Review*, 19(1), 94–106.
<https://doi.org/10.1177/1534484320903890>

Assessing Quality: Qualitative vs. Quantitative



What is Mixed Methods Research?



An approach to research in which the investigator gathers and analyzes both quantitative and qualitative data, integrates the two, and then draws interpretations based on the combined strengths of both sets of data to understand the answer to the research question (Watkins & Gioia, 2015)

- **Integrates qualitative & quantitative** approaches
- Helps **validate findings** and provide deeper insights

Types of Mixed Methods Designs

	Convergent (or Parallel) QUAL <u>AND</u> QUAN	Exploratory sequential QUAL <u>THEN</u> QUAN	Explanatory sequential QUAN <u>THEN</u> QUAL
Description of design	Merging quantitative and qualitative data at the analysis and/or interpretation phase. One data source is not dependent upon the other. Qualitative and quantitative findings are interpreted collectively to generate conclusions	Collecting and analyzing qualitative data first and using the results to make decisions about quantitative data collection, analysis, and interpretation	Collecting and analyzing quantitative data first and using the results to make decisions about qualitative data collection, analysis, and interpretation
Rationale for choice	Use this approach to corroborate or compare results from different methods	Use this approach to identify variables or concepts when they are unknown, when quantitative instruments are unavailable or when new questions emerged from the qualitative results	Use this approach to gain better insight into quantitative results and to qualitatively explain what is seen quantitatively

Analyzing Mixed Methods Data

Integrating, or “mixing,” qualitative and quantitative approaches **is an essential component of mixed methods** research and distinguishes it from multimethod research.

Table 2: Integration through Methods

<i>Approach</i>	<i>Description</i>
Connecting	One database links to the other through sampling
Building	One database informs the data collection approach of the other
Merging	The two databases are brought together for analysis
Embedding	Data collection and analysis link at multiple points

Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs—principles and practices. *Health Services Research*, 48, 2134–2156; doi:10.1111/1475-6773.12117; Anguera, M. T., Blanco-Villasenor, A., Losada, J. L., Sánchez-Algarra, P., & Onwuegbuzie, A. J. (2018). Revisiting the difference between mixed methods and multimethods: Is it all in the name?. *Quality & Quantity*, 52(6), 2757-2770.

Key Takeaways

- All methodologies have strengths and challenges
- Qualitative research **adds depth & context**
- **Writing** is an essential part of qualitative analysis and interpretation
- Mixed methods **combines the strengths and mitigates the challenges** of qualitative and quantitative approaches
- **Integration** is a key part of mixed methods research
- Valuable in **public health decision-making**