



University of Phoenix
**School of Advanced
Studies**

Introduction to Qualitative Data Analysis

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Qualitative Studies Characteristics



Qualitative is an inductive approach



Questions tend to be exploratory and open ended and data is often in narrative form.



Analysis predominantly deals with meanings, descriptions, values and characteristics of people and things.



The outcome sought is the development of explanatory concepts and models



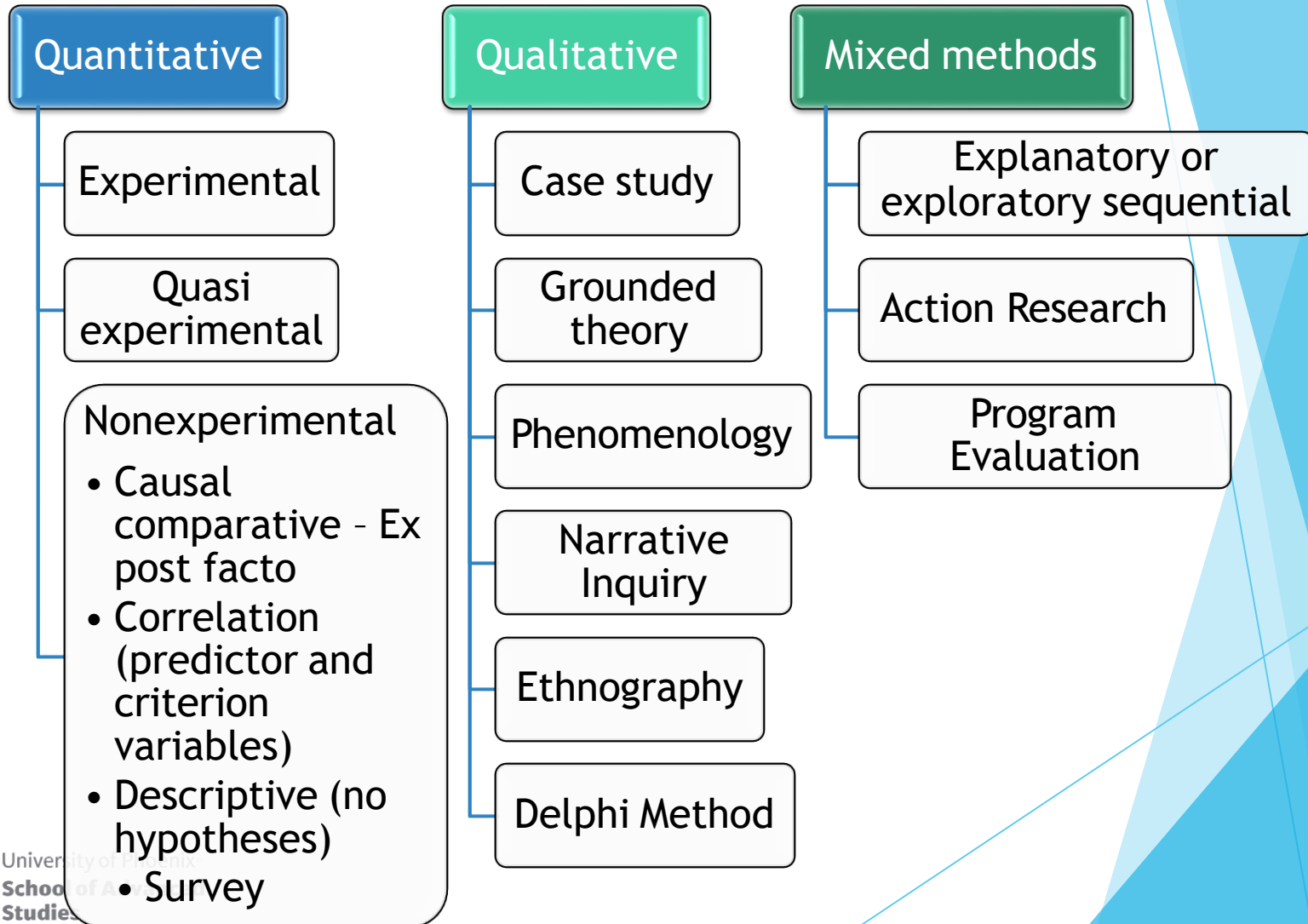
Widespread generalisation (apart from logical application - that is from similar instance to similar instance) is avoided.

Deductive versus Inductive Reasoning: important notion for study implications

Quantitative Studies; Deductive reasoning goes from general principles to specific conclusions (e.g. All digital devices run on electricity, I have a computer, therefore it must run on electricity)

Qualitative studies; Inductive reasoning goes from specific instances to a general conclusion (e.g. You have a laptop that has a battery, I have a tablet that has a battery, all digital devices must have a battery)

Research Methods and Designs



Explain and Justify your sample

- Aligned with the design
- A rationale for the selected sample
- A description of how the sample was selected (e.g. purposive, convenience, snowball, extreme cases, typical cases, etc.)
- How participants were approached and how this might have affected the sample
- Details of non-participation and gaps in coverage and their implications for the study
- The sample size, saturation, and other characteristics, which should be a detailed profile of the sample

Qualitative Data Collection

Interviews

Focus Groups

Observations

Open-ended surveys

Document or artifact analysis

Journal notes or reflections

Qualitative Data Analysis Software

Computer Assisted Qualitative Data Analysis Software, CAQDS

- Content searching tools
- Coding tools
- Linking tools
- Mapping or networking tools
- Query tools

Qualitative Data Analysis Software

Computer Assisted Qualitative Data Analysis Software, CAQDS

Dedoose	Web-based	Text, Audio, Video	All (web browser)	Coding, Query, Visualization, Statistical Tools	Standard License, Single User: \$12.95 monthly
NVivo	Client	Text, video, audio, pictures, webpages	Windows, macOS	Coding, Aggregation, Query, Visualization	Student License (12 month): \$120 Standard License: \$1,380
RQDA	Client	Text	Windows, macOS, Linux	Coding, Aggregation, Query, Visualization	Free/Open Source

Qualitative Data Analysis like Cleaning Closet

Take everything out of the closet




Sort everything out - save or toss?



Look at what you have left and organize into sub-groupings (chunking)



Organize sub-groups into clusters of similar things that belong together (clusters, codes)



As you put things back, how would you group them to maximize functionality. How do the groups make it work together? (interpretation, presentation)

Four Steps for Analyzing Qualitative Data


Raw data management- 'data cleaning'



Data reduction, I, II - 'chunking', 'coding'



Data interpretation - 'coding', 'clustering'



Data representation - 'telling the story', 'making sense of the data for others'



Step 1: Raw Data Management

The process of preparing and organizing raw data into meaningful units of analysis

- Text or audio data transformed into transcripts
- Image data transformed into videos, photos, charts

As you review your data, you find that some of it is not usable or relevant to your study

Step 2: Data Reduction I- Chunking

Get a sense of the data holistically, read several times (immersion)

Classify and categorize repeatedly, allowing for deeper immersion

Write notes in the margins (memoing)

Preliminary classification schemes emerge, categorize raw data into groupings (chunking)

Step 2: Data Reduction II - Clustering

The process of reducing data from chunks into clusters and codes to make meaning of that data

Chunks of data that are similar begin to lead to initial clusters and coding

- Clusters - assigning chunks of similarly labeled data into clusters and assigning preliminary codes
- Codes - refining, developing code books, labeling codes, creating codes through 2-3 cycles

Example - Chunks and Clusters

- I always wanted to get my doctorate but I never felt I had the time; then I reached a point in my career where I saw that without the credentials, I would never advance to the types of positions I aspired to..but I doubted I could do the work. I wasn't sure I could go back to school after so much time. And did I have the time, with working and a family? These were the things I struggled with as I looked for the right program.
- -finally starting the program with others like me, it felt surreal. Once you switch gears from being an established administrator at a college to being a doc student, you realize you lose control over your life. You are not in charge in that classroom, like you are in your office. But also, once you say you are a doc student, people look at you differently. And people at work began to take me more seriously, ask for my opinion as if I now possessed special knowledge because I was going for the doctorate. It was the same information I had shared previously but somehow it had a special quality? Its like magic!

Which sections of data are broadly similar? (red for credentials, blue for personal struggles, green for shift in identity)

Which 'chunks' can be clustered together to relate to a broad coding scheme?

Transcript of Interview Data

Chunking? Clusters?

Coding Process

Initial coding may include as many as 30 categories

Reduce codes once, probably twice

Reduce again and refine to codes that are mutually exclusive and include all raw data that was identified as usable

A Priori or In Vivo Codes

A Priori

- Codes derived from literature, theoretical frames

In Vivo (inductive)

- Codes derived from the data by using code names drawn from participant quotes or interpretation of the data
- “Its like magic” is a phrase that could form the basis for a code category

Coding Types

Open coding is achieved by segmenting data into meaningful expressions and describing them in single words or short sequence of words

Axial coding is a process of looking for relationship identification between **open codes**

Selective coding means to cease **open coding** and to delimit **coding** to only those variables that relate to the core variable in sufficiently significant ways as to produce a **theory**

Coding Levels

Descriptive to Interpretative to Pattern Coding

- Moves from summary to meaning to explanation

Open to Axial to Selective Coding

- Moves from initial theory to developing relationships between codes for emerging theory

First cycle to second cycle coding

- Moving from describing the data units to inferring meaning

Example - Coding

- I always wanted to get my doctorate but I never felt I had the time; then I reached a point in my career where I saw that without the credentials, I would never advance to the types of positions I aspired to..but I doubted I could do the work. I wasn't sure I could go back to school after so much time. And did I have the time, with working and a family? These were the things I struggled with as I looked for the right program.
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Chunking to coding:

Red for credentials - codes include career goals CG, career advancement CA

Blue for personal struggles- codes include self-doubt SD, time management TM

Green for shift in identity - codes include student role SR, identity at work IW, shift in control SC

Transcript of Interview Data

Chunking? Clusters? Coding?

Step 3: Data Interpretation and Themes

‘Chunks’ of related data that have similar meaning are coded in several cycles

Once coded, those ‘chunks’ become clustered in similar theme categories

Create meaning for those clusters with labels

Themes emerge from those clusters

Interpret themes to answer research questions

Example - Themes

- I always wanted to get my doctorate but I never felt I had the time; then I reached a point in my career where I saw that without the credentials, I would never advance to the types of positions I aspired to..but I doubted I could do the work. I wasn't sure I could go back to school after so much time. And did I have the time, with working and a family? These were the things I struggled with as I looked for the right program.
- -finally starting the program with others like me, it felt surreal. Once you switch gears from being an established administrator at a college to being a doc student, you realize you lose control over your life. You are not in charge in that classroom, like you are in your office. But also, once you say you are a doc student, people look at you differently. And people at work began to take me more seriously, ask for my opinion as if I now possessed special knowledge because I was going for the doctorate. It was the same information I had shared previously but somehow it had a special quality? Its like magic!

How do you compile the clusters into emerging themes?

(red for credentials, blue for personal struggles, green for shift in identity)

Begin to see themes emerge:
Getting the degree,
becoming a new person,
personal achievement...

How do broad sections emerge into thematic groupings?

Transcript of Interview Data

Felice D. Billups, EdD., NERA Webinar Presentation

Step 4: Data Representation

Interpretation or analysis of qualitative data simultaneously occurs

Researchers interpret the data as they read and re-read the data, categorize and code the data and inductively develop a thematic analysis

Themes become the story or the narrative

Data Representation Types

Telling the story with the data

- Storytelling, Narrative
- Chronological
- Flashback
- Critical Incidents
- Thematic
- Visual representation
- Figures, tables, charts

Demonstrate Trustworthiness and Quality

Make your data analysis visible:
Present the detailed procedure
about your data analysis and coding

- Reports of data analysis should include methods of processing such as data entry, transcription, data management and security, verification of data integrity, coding, and anonymization. (Twining et al. , 2017)

Trustworthiness Criteria-Guba (1981)

Credibility, (internal validity)

- How consistent are findings with reality?

Transferability, (external validity/generalisibility)

- The extent that the findings can be applied to other situations

Dependability (reliability)

- The extent that study can be repeated

Confirmability, (objectivity)

- The extent to which the researcher admit his/her own predisposition

Explain Implications



Qualitative studies results are not generalized but applicable to the similar context/sample



Provide a comprehensive description about your sample and context

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Research Methods and Designs

Enhance and Share your Skills and Conduct Research

Research Methodology Group

Research Methodology Special Interest Group (RM SIG) is a cross disciplinary community consists of committee of methodologists and members who are experts and interested in social science research methods and designs.

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Thank you

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