Constructivist Grounded Theory and Qualitative Research Software - NVIVO 7

Charles Mamolo

Big Picture

RESEARCH STATEMENT

The impact of the science curriculum on future science elementary teachers’ area of concentration decision.

Philosophical View

• Positivist Leaning - e.g. Glaser
  o Stable and predictable view of the world
  o Emergence of categories as automatic results

• Postpositivist Leaning - e.g. Charmaz
  o Unstable and context bounded view of the world
  o "places priority on the phenomena of study and sees both data and analysis as created from shared experiences and relationships with participants"

Conceptual Framework (1 of 5)

Conceptual Framework (2 of 5)

Conceptual Framework (3 of 5)
What is science? Other research questions:

Q3.1 What other factors have contributed to future elementary teachers' decision to choose science as an area of concentration?

Data Collection:

1. What impact does future elementary teachers' views on the nature of science have on their decision to choose science as an area of concentration?

2. What are their views on the nature of science?

3. What influences do college science courses have on their views on the nature of science?

4. What other experiences have contributed to their views on the nature of science?

Methodology:

- **Q3.1** Descriptive Survey and Constructivist Grounded Theory Approach
- **Q3.2** STEBI Form C survey and SPSS

Constructivist Grounded Theory

- Both researcher and research participants interpret meanings and actions
- "World" portrayal is not an exact picture of it
- Theory formulation as oppose to Theory Driven
- Coding, Memo-writing, Theoretical Sampling, Saturation and Sorting
**Coding in Grounded Theory**

**Initial Coding**
- Remain open
- Stay close to the data
- Keep your codes simple and precise
- Construct short codes
- Preserve actions
- Compare data with data
- Move quickly through the data

**Gathering Reach Data (1 of 3)**

**Types of Coding**
- Word-by-word coding
- Line-by-line coding
- Coding incident to incident
- In Vivo Codes (participants language)

**FIT and RELEVANCE**

**Gathering Reach Data (2 of 3)**

**Focused Coding**
- Directed, Selective and Conceptual
- Which of the initial codes make the most analytic sense to categorize your data incisively and completely?
- Not entirely a linear process

**Gathering Reach Data (3 of 3)**

**Coding Problems**
- Coding at too general a level
- Identifying topics instead of actions and processes
- Coding out of context
- Attending to disciplinary or personal concerns rather than participants’ concerns
- Using codes to summarize but not to analyze

**Memo Writing (1 of 2)**

**Intermediate step between data collection and writing drafts of papers**

**Why?**
- Prompts analysis of data and codes
  - Stop and think about your data
  - Discover gaps in data collection
  - Develop connection between categories
  - Link data-gathering, data analysis, and report writing
  - Build whole sections of papers and chapters

**Memo Writing (2 of 2)**

**Intermediate step between data collection and writing drafts of papers**

**How?**
- Begin memo my titling it.
- Define the category you intend to treat
- Bring raw data into the memo
- Think where both the category and the data it subsumes lead you.

Partial, preliminary, and provisional. Distinguish between conjectures and those in firm ground.
Theoretical Sampling (1 of 2)

Seek pertinent data to develop your emerging theories

- directs where to go (to find samples but not to represent population) to refine categories
- but only if conceptual categories are constructed from data
- in order:
  - to fill gaps
  - to check hunches
  - to saturate categories
  - to distinguish and clarify relationships between categories

Theoretical Sampling (2 of 2)

When is data saturated?

- When fresh data no longer sparks new theoretical insights

What do you do with memos?

- use them as “titles” for diagramming toward theory development

Comparative Method Analysis

NVIVO 7 (1 of 6)

Select a folder (you can create your own too)

Folder’s items appear in List Pane

Contents of selected item appear in tabbed Detail Pane

Sources comprise Documents, Externals and Memos

NVIVO 7 (2 of 6)

... are Initial Codes

... are Focus Codes

... Cases have Attributes

... are also Focus Codes

NVIVO 7 (3 of 6)

Memo Icons

- Every Source and Node can have its own unique Memo
  - Use Memos for discussions about their own Source or Node
- Free or unattached Memos can also be created
  - Useful for more research topic discussions
- Memos, like any Source, can be coded, and given links and annotations.

NVIVO 7 (4 of 6)

Annotations are similar to Ms. Word™

- Can list & inspect them globally
- Can be text-searched like Sources
• Queries are ways of locating specific content
• Queries can be saved for future use
  – Re-run them later when data have changed
  – Edit them to make a similar but different search

More Information on NVIVO 7:
  http://www.qsrinternational.com/products_nvivo.aspx

THANK YOU!