

K-State Kansas State University

Constructivist Grounded Theory and Qualitative Research Software - NVIVO 7

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Big Picture

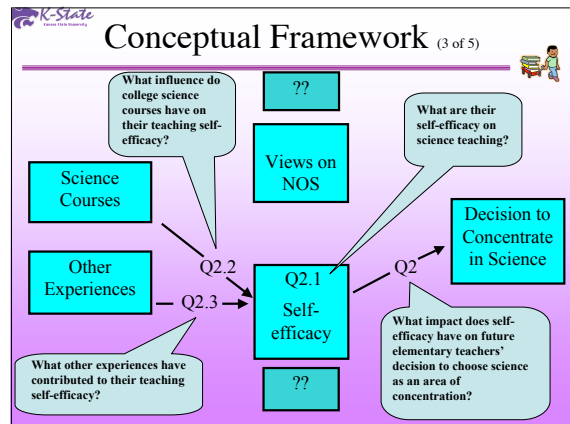
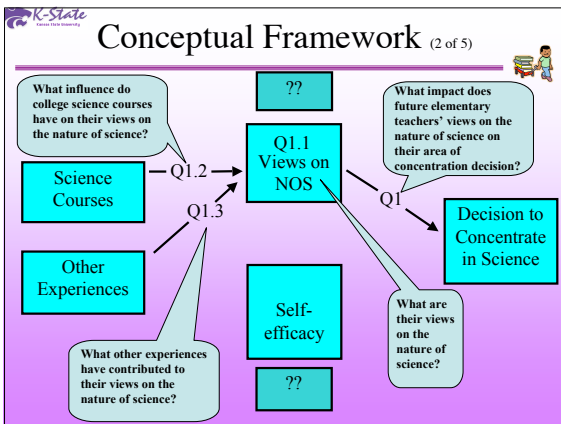
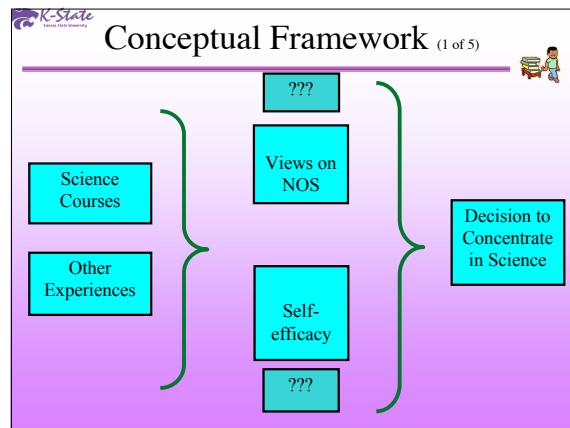
RESEARCH STATEMENT

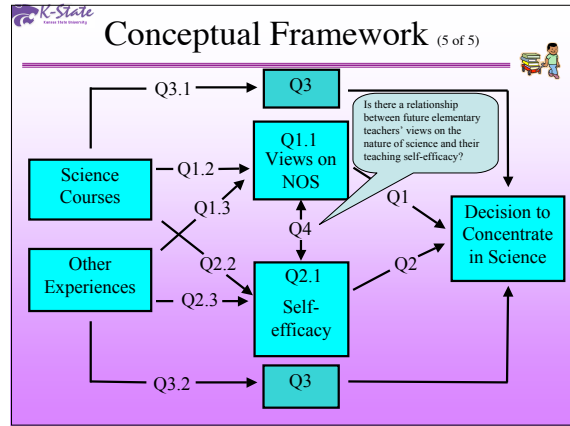
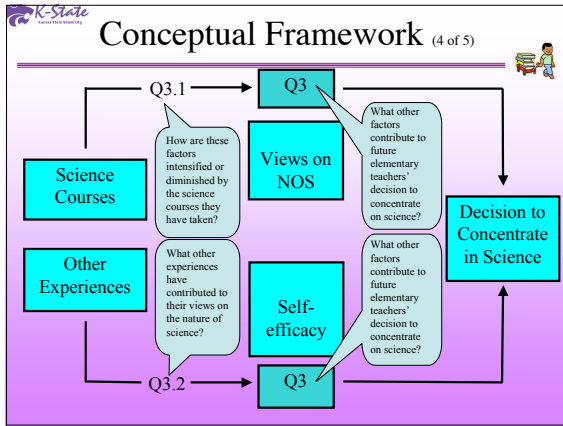
The impact of the science curriculum on future science elementary teachers' area of concentration decision.

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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 crated from shared experiences and relationships with participants"





Data Collection (1 of 3)

Research Questions	Methodology	Methods
1. What impact does future elementary teachers' views on the nature of science on their area of concentration decision?	Descriptive Survey and Constructivist Grounded Theory Approach	VNOS Form C survey, Semi-Structured Interview and Qualitative Research Software - NVIVO 7
1.1. What are their views on the nature of science?		VNOS Form C survey and validation through interviews.
1.2. What influence do college science courses have on their views on the nature of science?		Survey, Semi-Structured Interview and Qualitative Research Software - NVIVO 7
1.3. What other experiences have contributed to their views on the nature of science?		Survey, Semi-Structured Interview and Qualitative Research Software - NVIVO 7

Data Collection (2 of 3)

Research Questions	Methodology	Methods
2. What impact does self-efficacy have on future elementary teachers' decision to choose science as an area of concentration?	Descriptive Survey and Constructivist Grounded Theory Approach	VNOS Form C survey, Semi-Structured Interview and Qualitative Research Software - NVIVO 7
2.2. What are their self-efficacy on science teaching?		STEBI Form B and validation through interviews.
2.3. What influence do college science courses have on their teaching self-efficacy?		Survey, Semi-Structured Interview and Qualitative Research Software - NVIVO 7
2.4. What other experiences have contributed to their teaching self-efficacy?		Survey, Semi-Structured Interview and Qualitative Research Software - NVIVO 7



Data Collection (3 of 3)

Research Questions	Methodology	Methods
3. What other mediating factors contribute to future elementary teachers' decision to concentrate on science?	Constructivist Grounded Theory Approach	Semi-Structured Interview and Qualitative Research Software - NVIVO 7
3.1. How are these mediating factors intensified or diminished by the science courses they have taken?		Semi-Structured Interview and Qualitative Research Software - NVIVO 7
3.2. How are these mediating factors intensified or diminished by their other experiences?		Semi-Structured Interview and Qualitative Research Software - NVIVO 7
4. Is there a relationship between future elementary teachers' views on the nature of science and their teaching self-efficacy?	Descriptive Survey and Correlation	STEBI Form B and VNOS Form C survey and SPSS

Constructivist Grounded Theory



Charmaz

- 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

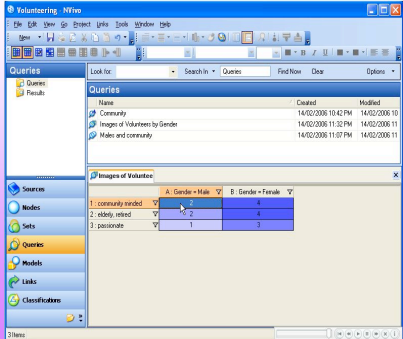
How?

- 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

NVIVO 7 (5 of 6)

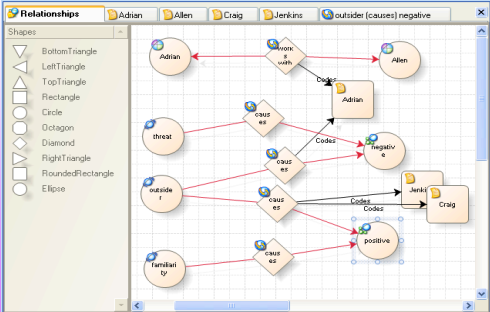
- Queries are ways of locating specific content
- Queries can be saved for future use
 - Re-run them later when data have changed
 - Edit them to make a similar but different search



Images of Volunteers	A Gender = Male	B Gender = Female
1 community involved	2	4
2 rebels raised	2	4
3 passionate	1	3

NVIVO 7 (6 of 6)

Here's a model of some relationships + their coded evidence



The diagram shows a network of nodes representing concepts and their relationships. Nodes include 'Adrian', 'Allen', 'threat', 'outside', 'Familiar ty', 'caus est', 'caus est', 'caus est', 'negative', 'positive', 'Junk', and 'Craig'. Lines connect these nodes, representing relationships between them. A legend on the left lists shapes: BottomTriangle, LeftTriangle, TopTriangle, Rectangle, Circle, Octagon, Diamond, RightTriangle, RoundedRectangle, and Ellipse.

More Information on NVIVO 7:

http://www.qsrinternational.com/products_nvivo.aspx

THANK YOU!