



GER Theoretical Frameworks

Wednesday - July 17, 2019
1:30pm - 4:00pm TSU - Humphries 327



GER Theoretical Frameworks

- Sign-in on attendance sheet
- Gain access to google drive folder

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Introduction

- Theoretical Frameworks: The “jury is still out” and not everyone agrees on what they are, when they are appropriate to use, and how is best to use them.
- Instead of a definitive understanding of theoretical frameworks. The goals of today’s workshop are:
 - Consider what utility a theoretical framework may have across various stages of research design, implementation, and dissemination
 - Discuss the various terms that have been used to describe theoretical frameworks
 - Analyze a published example of the use a theoretical framework in GER
 - Map out an example research design and appropriate theoretical framework

Self-Assessment, Introductions, and Knowledge Surveys

- Self-assessment and who is in the room? (Menti.com)
- Knowledge Survey
 - 1 : I am not at all familiar
 - 2 : Given some time and a resource or two I could answer this question
 - 3 : I could give a complete and correct answer right now
- Introductions, Name, Current research role, Why you chose this workshop
- Group Assignment

Agenda

~2:00 Role of Theoretical Frameworks

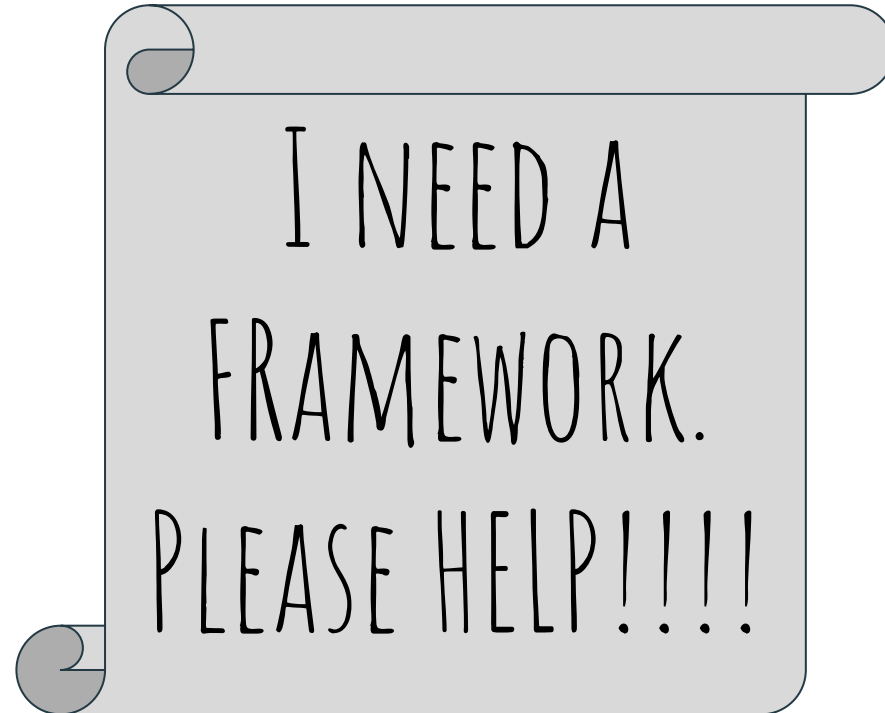
~2:30 Break

~2:40 Using Multiple Theoretical Frameworks, Deconstructing Theory Application in GER

~3:20 Lightning Talks

~3:45 Self-Assessment Knowledge Survey and Workshop Evaluation

Letter to the Author (Patton, 2001, p. 77)



What do Journals say?

Journal of Geoscience Education: From guidelines for authors on Research Design
(<https://www.tandf.co.uk/journals/pdf/author/Research-Manuscripts-JGE.pdf>)

What do Journals say?

Journal of Research in Science Teaching (JRST): From Author Guidelines

(<https://onlinelibrary.wiley.com/page/journal/10982736/homepage/forauthors.html>)

What do Journals say?

International Journal of STEM Education - From Research Articles criteria

(<https://stemeducationjournal.springeropen.com/submission-guidelines/preparing-your-manuscript/research-articles>)

Group Norms

Experts - leave space for others to share and explore ideas

Identify a recorder who has a computer and is comfortable with Google Docs

Identify a moderator to help engage everyone in the conversation

Record your discussion and products in Google Docs Group form

Group Discussion 1 - Brainstorm

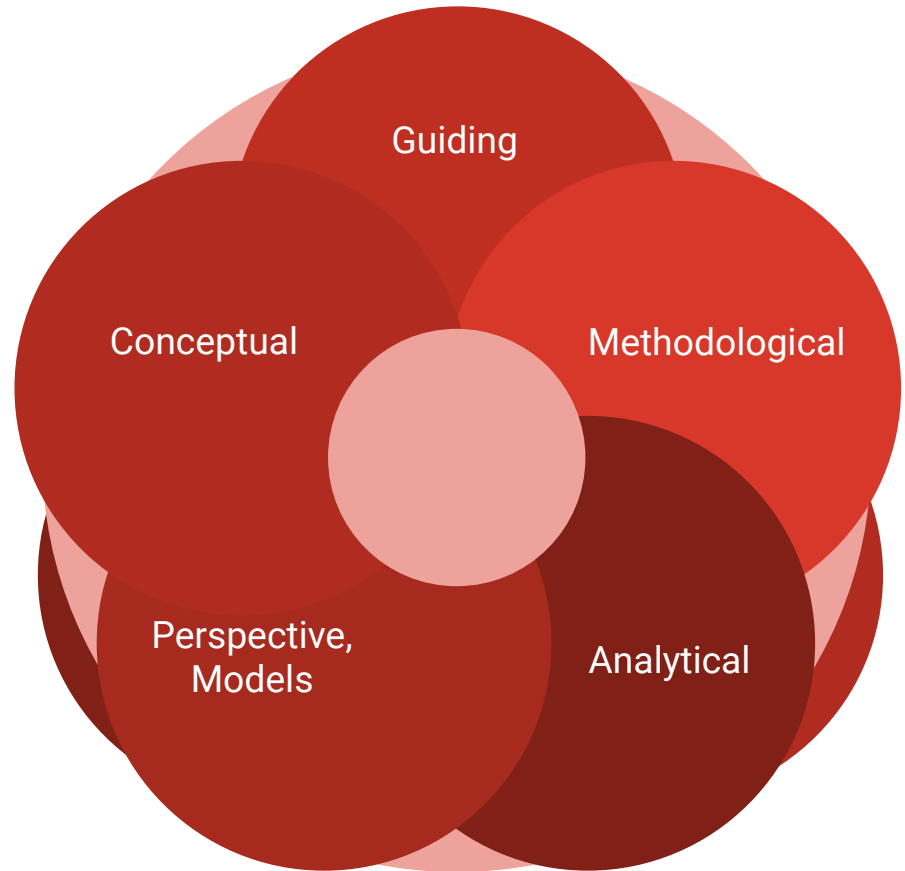
Re-introduce yourself to your group and then answer the following question:

What terms have you heard to describe theoretical frameworks?

Words I've heard

Potential reason for using many words

1. Different research traditions
2. Different functions
 - a. Analytical
 - b. Methodological
3. Multiple theories in one study



What should a theoretical framework do?

What do textbooks say? (Patton, 2001, 3rd Edition)

- ~Grounded in philosophical stances
- ~Aligned with research questions and methods
- ~Have disciplinary roots
- ~Intentionally layered for various research purposes

What do textbooks say?

Patton (2001, 3rd Edition, p.132))

Group Discussion 2

Philosophical Stances

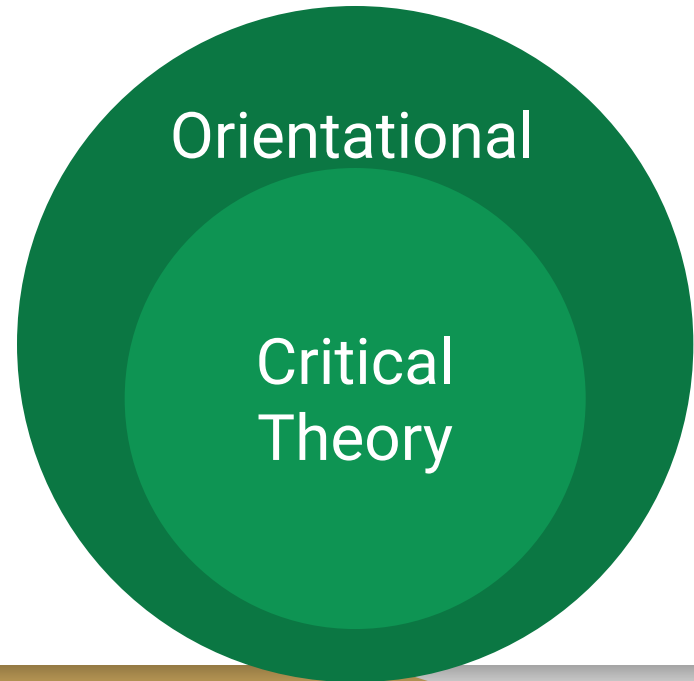
Think, Pair, Share -- What is a philosophical stance?

<https://theperformancesolution.com/earth-ontology-epistemology/>

See Table 1:

Twining, P., Heller, R. S., Nussbaum, M., & Tsai, C. C. (2017). Some guidance on conducting and reporting qualitative studies

How can an epistemological stance align with a theoretical framework



Break Time (10 minutes)

Consider this question: How does one critique the use of a theoretical framework in research?

Questions to ask about Frameworks in Publications

Have the authors identified an epistemological stance?

Does the identified framework align with the stance?

If multiple frameworks are described, how are they aligned with each other?

What pieces of the study were informed by the framework?

Were any theoretical assumptions made?

An example from GER: see Quardokus Fisher et al., 2019

An example from GER

Identify theoretical framework used

Analysis

Have the authors identified an epistemological stance?

Does the identified framework align with the stance?

If multiple frameworks are described, how are they aligned with each other?

What pieces of the study were informed by the framework?

Were any theoretical assumptions made?

Final Group Project (Now until 3:20pm)

Identify a research phenomena (or use a research interest from a member of your group)

Decide on a epistemological and/or ontological stance

Choose a theoretical framework (some examples provided in resources on Google Drive)

Decide how your theoretical framework will guide your research design (questions, methods, analysis, etc.)

Create a 3 minute lightning talk (slides optional) to deliver at 3:20 PM

