

# Getting Started in SoTL

2020 Earth Educators' Rendezvous

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# Mini-workshop outline

00:00 Welcome, overview of mini-workshop, virtual introductions to each other & SoTL

00:15 Identifying the “end users” of SoTL

- Defining who these people are
- Empathizing with their needs

0:40 What are the tools in our SoTL toolbox?

- Conducting research with human subjects
- Tools to collect data: surveys, interviews, and other assessments. Links to existing resources are on our program page.

01:00 Break - Stretch your legs, tend to other tasks, or peruse existing resources.

01:30 Discussion and planning time in breakout rooms

- What questions about your course(s) would you like to have answered?
- What tools will you use?
- How will you analyze your data?
- What potential opportunities and challenges exist that could make this project easier or harder to tackle?

02:00 Digital Gallery Walk: Getting and giving feedback on your SoTL plan

02:20 Workshop evaluation & wrap up

02:30 Adjourn

# Introductions to each other & SoTL

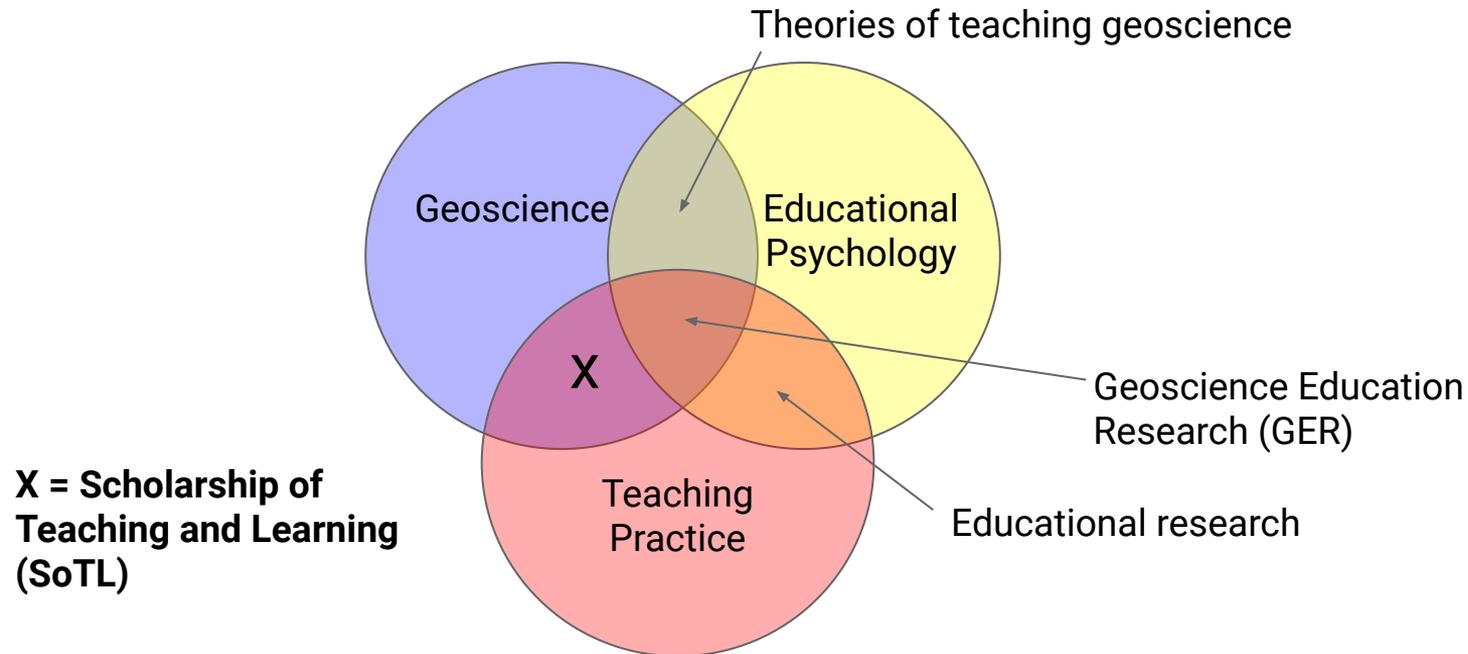


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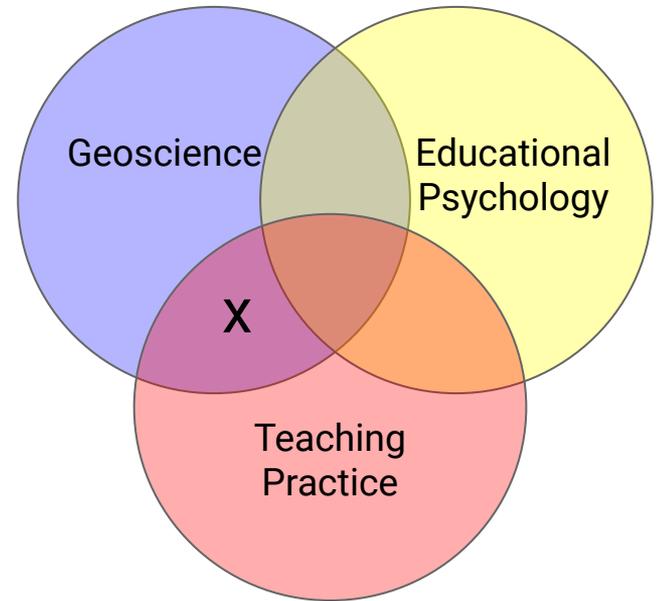
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# An introduction to SoTL

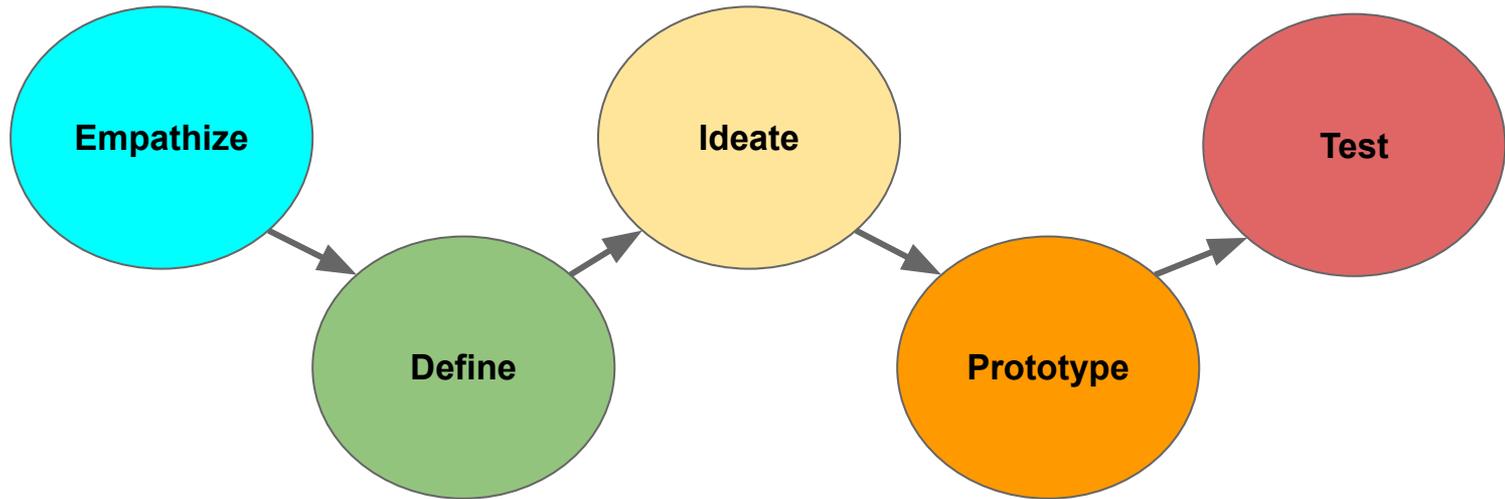


# An introduction to SoTL

- “**Systematic study of teaching and/or learning** and the **public sharing and review** of such work through presentations, performance, or publications” (McKinney, 2006; p. 39)
- “**Marries scholarly inquiry to...the work of teaching** – designing a course, facilitating classroom activities, trying out new pedagogical ideas, advising, writing student learning outcomes, evaluating programs” (Schulman, 1998)
- “Encompasses a **broad set of practices** that engage teachers in looking closely and critically at student learning in order to improve their own courses and programs, and to **share insights with other educators** who can evaluate and build on their efforts” (Hutchings et al., 2011; p. xix)



# Workshop outline: Design Thinking for SoTL



Who are our SoTL end users and what are their needs?:  
Whole group discussion

What are the problem statements for our end users?: Small group discussion

What are some innovative solutions to the problem statement? Overview of “your SoTL toolbox”

Identify the best possible solution: Workshopping ideas in small groups

Get peer review: digital gallery walk

Empathize

Define

Ideate

Prototype

Test

# Empathize: Who are our end users?

Enter your answer in the chat box!



Mute



Start Video



Security



Participants

1



Chat



Share Screen



Record



Reactions

End

# Define: What are the core problems or problem statements for our end users?

You are going to be randomly assigned to a breakout room. Each room has been assigned a possible SoTL end user with a persona.

Your goal as a group is to generate a list of core problems your persona has that could be addressed with a SoTL project. One person will record them on your slide. Identify who will speak for your group.

## Core problem examples:

- Student: *identifying the best ways to study for petrology.*
- Departmental colleagues: *deciding what active learning techniques to use in a shared intro geo course*
- Community of geo ed: *finding the most effective ways to communicate about climate change*
- Administrators: *maximizing enrollment in a second-level geology course*

You will have 10 minutes. When we come back to the main room, we will ask your speaker to report out two core problems for your end user group.

## **Breakout Room 1**

**End User:** Student

**Persona:** Georgina is a sophomore at College U. She transferred in after three semesters at Anytown Community College. She has always been interested in rocks and minerals, but is nervous about the math requirement of the degree. Her goal after graduation is to get a job with an environmental consulting company. She is not sure what experience might best qualify her for this job.

**Recorder:**

**Presenter:**

**Core problems that could be addressed with a SoTL Project:**

- Example: Identifying the best ways to study for petrology
-

## **Breakout Room 2**

**End User:** Departmental Colleagues

**Persona:** Kevin has been teaching at College U for 23 years, most of which have included at least two courses of introductory environmental geology. He has attended several workshops put on by the college's Center for Teaching Excellence, but isn't sure if "all that fuss" about active learning is helping or hurting students. He knows you've been thinking a lot about your teaching and wants to hear what's been working in your classroom.

**Recorder:**

**Presenter:**

**Core problems that could be addressed with a SoTL Project:**

- Example: Deciding what active learning techniques to use in a shared intro geo course
-

## **Breakout Room 3**

**End User:** Community of Geoscience Educators

**Persona:** Akilah is in the geoscience department at Nexttown U and is excited to attend the 2021 Earth Educators' Rendezvous. Her department has six other people and she is expected to bring back information to help everyone improve their teaching. Everyone in the department regularly teaches three courses a semester, at least one of which has a lab. The number of majors is small compared to the other departments, but the department has several large enrollment, general education classes with and without labs.

**Recorder:**

**Presenter:**

**Core problems that could be addressed with a SoTL Project:**

- Example: Finding the most effective ways to communicate about climate change
-

## **Breakout Room 4**

**End User:** Administrators

**Persona:** Chris is the geoscience department chair at Nexttown U; they and the other six faculty regularly teach three courses a semester, at least one of which has a lab. All are expected to teach intro geology at least once a year. The number of majors is small compared to the other departments, but the department has several large enrollment, general education classes with and without labs. Chris, along with the other NU department chairs, has been asked to help support incoming, junior faculty in their teaching.

**Recorder:**

**Presenter:**

**Core problems that could be addressed with a SoTL Project:**

- Example: Maximizing enrollment in a second-level geology course
-

**Pause: Take three minutes and...**

- 1) Find the slide with your name on it. You will build on this in the Prototype & Test phase!
- 2) Define the end user for your project.
- 3) Write a brief persona - this can be a typical (average) or exceptional (particular) end user.
- 4) What are your end user's core problems that could be addressed with a SoTL project?
  - a) Review the previous few slides for ideas if you get stuck!

**Human subjects research** is any research or clinical investigation that involves human subjects. This includes SoTL and related education research! However, not all human subjects research carries the same risk.

**Exempt Category 1:** Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.



Example applications: <https://www.usi.edu/ospra/institutional-review-board-irb/irb-examples/>

Pause! Doing research with human subjects

Empathize

Define

Ideate

Prototype

Test

# Ideate: Challenge assumptions and create ideas.

**End user:** Departmental colleagues

**Core problem:** *Deciding what active learning techniques to use in a shared intro geo course*

*Tests & other  
performance-based  
assignments*

*Classroom  
observations*



*Surveys and  
questionnaires*

*Artifact analysis (e.g. syllabi,  
course notes, student  
reflections, instructor journal)*

*Interviews*

*Trace data*

*Focus groups*

**Break time! Stretch your legs, tend to other tasks, peruse existing resources, or work on your slide. We will re-convene in 30 minutes.**



# Prototype: Start to create solutions.

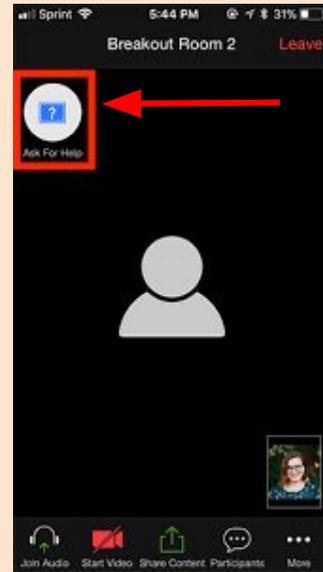
You are going to be randomly assigned to a breakout room. Each person will have two minutes to share their end user, persona, and 1-2 core problems that could be addressed as part of a SoTL project.

This will be followed by 8 minutes of discussion. You are encouraged to ask each other questions!

- “I’m not sure how...”
- “How will you know if...”
- “Have you considered..”

Record your prototyping notes on your slide. This will eventually be a part of our “digital gallery walk,” coming up next in the “Test” phase.

If you hit a roadblock, call for help. Katherine or Laura will join you ASAP!



**NAME**

**End User:**

**Persona:**

**Core problems that could be addressed with a SoTL Project:**

- 

**What data could I collect that might speak to this core problem?**

- 

**Where am I stuck or what (if anything) do I need feedback on?**

- 

Gallery Walk Reminders:  
Add comments (Insert →  
Comment) about questions  
you have, suggestions of  
other data that might be  
useful to collect, things that  
might raise a concern, or  
words of encouragement.

Empathize

Define

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Prototype

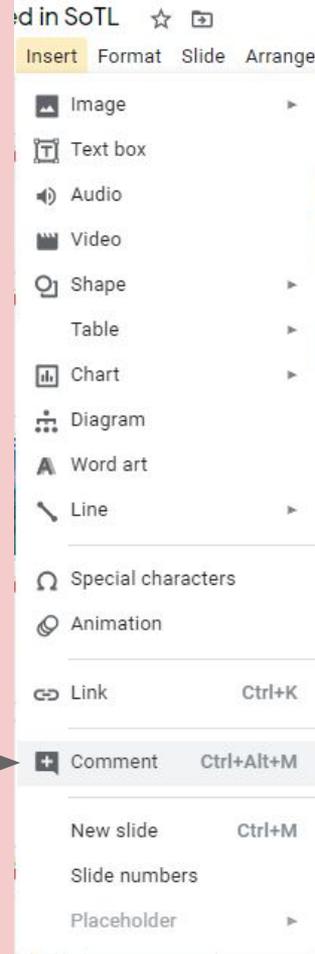
Test

# Test: Rigorously testing your prototype!

In the next 18 minutes, provide feedback **on at least three slides**. These can be questions, observations, or insights from your own experiences.

Start with the slide immediately after yours. This is so everyone gets at least one other set of eyes. (If your slide is at the end, circle back to the first slide!)

Use Google's comments feature to leave your feedback. You can do this by right clicking on the part of the slide you want to give feedback on then selecting Comment, or going to the Insert Menu and selecting Comment. Once you've made your comment, be sure to click "Comment" to add it to the document.



Empathize

Define

Ideate

Prototype

Test

# Final report out: *My next step is...*

Enter your answer in the chat box!



Mute



Start Video



Security



Participants



Chat



Share Screen



Record



Reactions

End

# References

- Hutchings, P., Huber, M., & Ciccone, A. (2011). *The Scholarship of Teaching and Learning Reconsidered*. San Francisco: Jossey-Bass.
- Lukes, L. A., LaDue, N. D., Cheek, K. A., Ryker, K., & St. John, K. (2015). Creating a community of practice around geoscience education research: NAGT-GER. *Journal of Geoscience Education*, 63(1), 1-6.
- McKinney, K. (2006). Attitudinal and structural factors contributing to challenges in the work of the scholarship of teaching and learning. *New Directions for Institutional Research*, 129 (Summer), 37-50.
- Shulman, L. S. (1998). Course anatomy: The dissection and analysis of knowledge through teaching. *The course portfolio: How faculty can examine their teaching to advance practice and improve student learning*, 2, 5-12.