# Improving Student Learning Using Deliberate Approaches

1.5 hours

## Goals

After this workshop, participants will be able to:

- define TAR
- critique and analyze TAR posters/projects using TAR rubric
- create preliminary idea for TAR project

## Resources

Name tents + Markers
Pens
Handouts:

Engage/Elaborate brainstorm worksheet Explore posters + abstracts
Explain TAR/SoTL/DBER table with empty TAR column
Evaluate 4-question feedback form

## 3:35 INTRODUCTIONS – I1

- Name
- Discipline/Department
- Teaching Current/Recent

## 3:40 ENGAGE (5-7 minutes) – I2

[THINK/Handout] - 2-3 minutes

In your teaching experiences, when have you:
1. ...noticed your students struggling conceptually?
2. ...seen opportunity for iterating your course?

[SHARE] 3-4 minutes

## 3:50 EXPLORE (18 minutes) – I2

[Slides] - ~3 minutes - Define TAR.
[THINK/Handout] - 5-7 minutes - Evaluate TAR posters/abstracts using rubric.
[SHARE] – 8 minutes
[Slides] - 1 minute – 7 steps to TAR.

## 4:08 EXPLAIN (~10 minutes) – I1

[Slides] - ~2 minutes - Explain task (chart with blank TAR/AR column below, they construct)
[SHARE/Handout] - 5-7 minutes – group suggests fill-in blanks
"not a goal of the workshop, but good to know the distinction between these terms in case you run across them in your day-to-day"

| | TAR/AR | SoTL | DBER |
|---|---|---|---|
| **Researcher** | Instructor | Instructor | Instructor/Researcher |
| **Scope** | Specific to course | Specific to course | Generalizable |
| **Audience** | Instructional team | Instructional team + public | Public |
| **Purpose/IRB** | Evaluation (no IRB) | Dissemination/Publication (IRB) | Dissemination/Publication (IRB) |
| **Gen. Questions** | How can I improve student learning in my course? | How can I improve student learning in my course? | How do students learn in my discipline? |

## 4:18 ELABORATE (32 minutes) – I2

[THINK/Handout] - 5-7 minutes - Brainstorm TAR ideas

Develop a TAR idea:

1. TAR in your field (conceptual)
2. TAR in many fields (affect, communication, goes beyond individual discipline)

Look at your conceptual struggles / change opportunities response from earlier!

[PAIR] - 5 minutes with half-time announcement – discuss with partner

[SHARE] - 10 minutes (I1 scribe)

## 4:50 EVALUATE (10 minutes) – I1

[Slide] Remaining questions?

[Slide] Last slide - contact info & URL for full handouts (all posters, abstracts, & full rubric)

[Handout] Handout minute paper with these questions:

1. What are the 2 most exciting things you learned?
2. What are 2 questions you still have?
3. What suggestions do you have for improving this session?
4. What, if any, TAR project do you plan to pursue?

# Improving Student Learning Using Deliberate Approaches

Iris Howley, PhD

Gloriana Trujillo, PhD

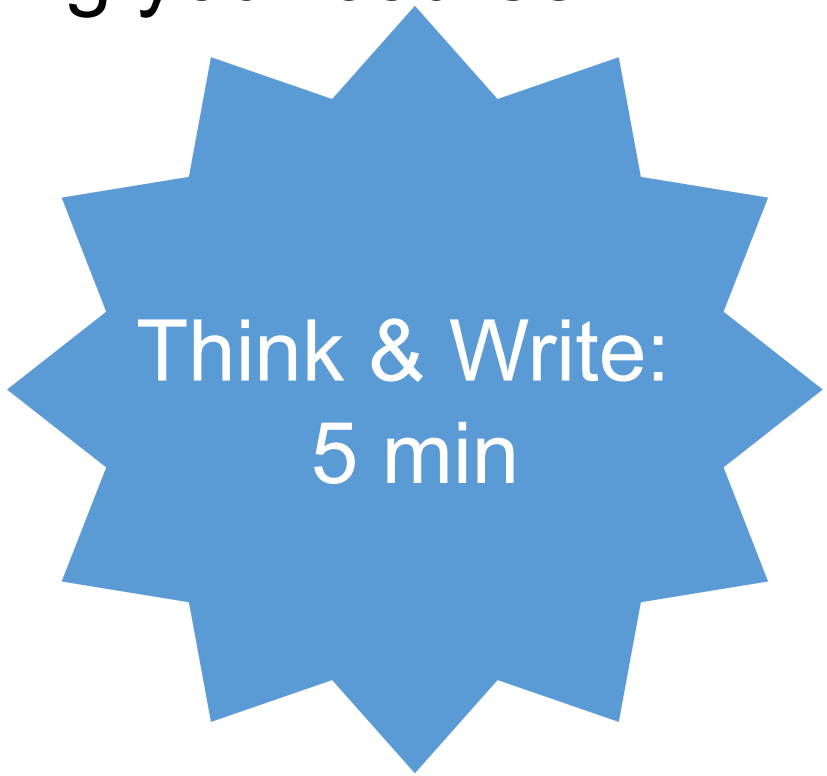
Stanford | Office of the Vice Provost for Teaching and Learning

# Who’s in the room?

- Name
- Department/Discipline
- What you are teaching currently (or what you taught most recently)

# In your teaching experiences, when have you...

- ...noticed your students struggling conceptually?
- ...seen opportunity for changing/improving your course?



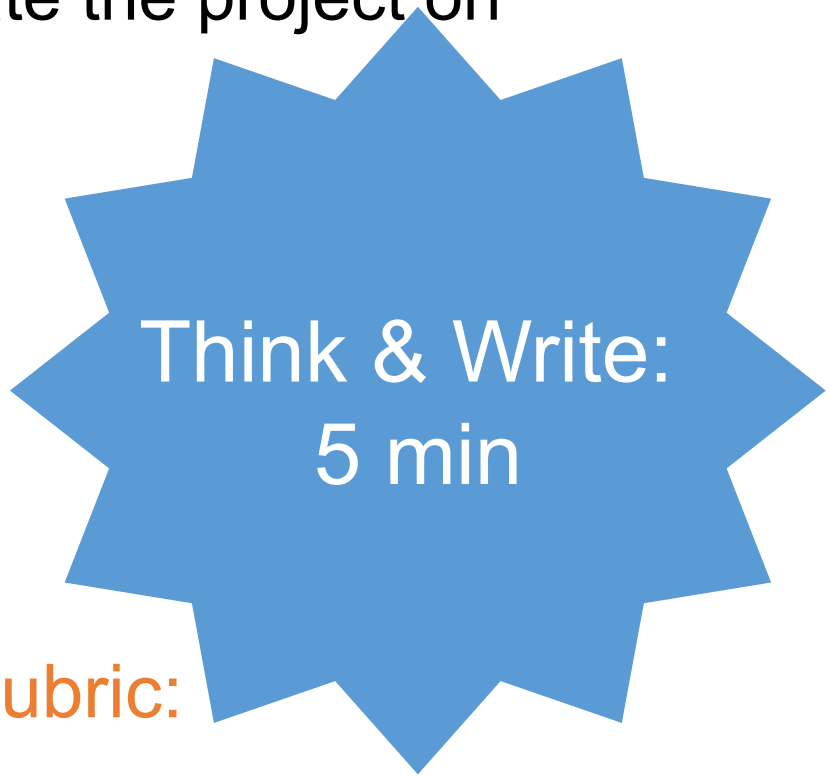
# What is a Teaching as Research Project?

Teaching-as-Research involves the **deliberate**, **systematic**, and **reflective** use of **research methods** to develop and implement teaching practices that **advance the learning experiences** and outcomes of students and teachers.

https://www.cirtl.net/p/core-ideas-teaching-as-research

# What is a Teaching as Research Project?

1. Pick one of the TAR posters or abstracts from your handout packet.
2. Using the TAR rubric from your packet, evaluate the project on each of the 5 items:
   i. Introduction & Research Question
   ii. Literature Background and Support
   iii. Project Objectives
   iv. Evidence/Assessments
   v. Project Approach
3. Justify your rubric choice briefly (why is it comprehensive/developing/cursory?)




More Posters/Abstracts & Full Rubric:
http://bit.ly/_____

# What is a Teaching as Research Project?

- Who evaluated a TAR poster/abstract that was consistently ‘comprehensive’? Why?

- Did anyone choose a poster/abstract that was more cursory or unacceptable on one of the levels? How would you improve it?

Teaching-as-Research involves the **deliberate**, **systematic**, and **reflective** use of **research methods** to develop and implement teaching practices that **advance the learning experiences** and outcomes of students and teachers.

**https://www.cirtl.net/p/core-ideas-teaching-as-research**

Participants in teaching-as-research apply a research approach to their teaching practice. There are **7 Conceptual steps** in the teaching-as-research process.

**https://www.cirtl.net/p/core-ideas-teaching-as-research**

# What is a Teaching as Research Project?

1. What is known about the teaching practice?
2. What do we want students to learn?
3. How can we help students succeed with the learning objectives?
4. What evidence will we need to determine whether students have achieved learning objectives?
5. What will we do in and out of the classroom to enable students to achieve learning objectives?
6. How will we collect and analyze information to determine what students have learned?
7. How will we use what we have learned to improve our teaching?

**https://www.cirtl.net/p/core-ideas-teaching-as-research**

| | Teaching as Research [Action Research] | SoTL [Scholarship of Teaching & Learning] | DBER [Discipline-based Education Research] |
|---|---|---|---|
| **Researcher** | | Instructor | Instructor/Researcher |
| **Scope** | | Specific to course | Generalizable |
| **Audience** | | Instructional team + Public | Public |
| **Purpose/IRB** | | Dissemination/ Publication (IRB) | Dissemination/ Publication (IRB) |
| **General Questions** | | How can I improve student learning in my course? | How do students learn in my discipline? |

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Share TAR results w. wider community!!

# Developing a TAR idea

# Developing a TAR idea

Using worksheet, brainstorm ideas for a…

1. TAR in your field
   - discipline-specific concepts
2. TAR in many fields
   - Affect, communication, beyond individual discipline

Look at your conceptual struggles / iteration opportunities response from earlier!

# What questions do you have?

? ? ? ? ? ?

# Please take a few minutes to help us improve this session, thanks!

- Iris Howley
- Gloriana Trujillo

| *Teaching as Research Project Rubric (simplified) – based on MSU Fast Fellowship Program & "Scientific Teaching"* | | | | | |
|---|---|---|---|---|---|
| | **Instruction & Research Question** | **Literature Background & Support** | **Project Objectives** | **Evidence/Assessments** | **Project Approach** |
| ***Comprehensive*** | Question is deep & relevant to educational setting. Question is based on observations or literature and frames a testable hypothesis. | Clearly builds upon existing studies described in the educational research literature. | Clear description of objectives that will lead to expected outcomes. Successful project will contribute to scholarship of learning. Objectives are measurable. | Evidence/Assessments are useful and actionable feedback. Data is used to draw appropriate conclusions about the outcomes. Criteria for evaluation are clear. | Curricular interventions are clearly based on backward design and align with learning goals. |
| ***Developing*** | Question is relevant and hypothesis is not clearly testable. OR question is not grounded in observations or evidence from the literature. | Some relevant literature cited, but it is incomplete. Claims not well supported by the background. | Objectives are somewhat clear, but the outcomes are not. Objectives are not all measurable. The relationship between question and objectives not well-defined. | Assessments do not provide sufficient feedback about the project outcomes. Rubrics could be clearer. Evidence does not fully address the question. | Activities should be more clearly tied to the project objectives. Not entirely grounded in accepted models or methods of data collection. |
| ***Cursory/ Unacceptable*** | Question is too broad, unanswerable, lacks a testable hypothesis, or is irrelevant. | Research literature provided is irrelevant or does not support the research question, or is entirely absent. | Objectives are inadequate. No description of expected output. | No assessments or assessments do not provide relevant feedback on research question. | Procedure is unclear or incomplete. Approach does not specifically address the research question. |