

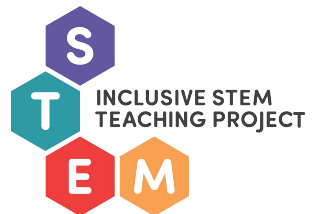
Infusing Active Learning with Inclusive Practices

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MSU COLLEGE TEACHING INSTITUTE
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Inclusive, Active Learning

- Examine the integration of key issues of inquiry, inclusion and of active learning in classroom teaching and student learning activities
- Critique the tension (often tacit) implicit in the opposition of "content vs thinking and connecting" as it plays out in the classroom
- Consider how inclusive, active learning strategies might be applied in your teaching (TA, etc.) contexts.

What is “active learning”?
What is the purpose?



Active learning methods are intended to:

- Promote questioning, comparison of ideas
- Reveal opposing points of view & misconceptions
- Explore alternatives, application of concepts
- Promote problem-solving & communication skills
- Provide additional method of assessing learning

Reflect...

- *Think* of a time when you were a student that you felt actively engaged in the class. What was it about the course or instruction that contributed to your sense of engagement?
- *Pair*: Turn to your neighbor and relate your experience
- *Share*: When prompted – identify common themes in your experiences

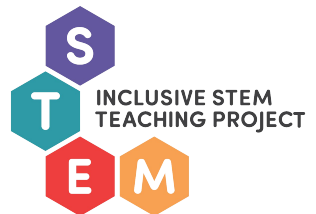
Active Learning Strategies...a Continuum

Simple Tasks
(short & relatively
unstructured)

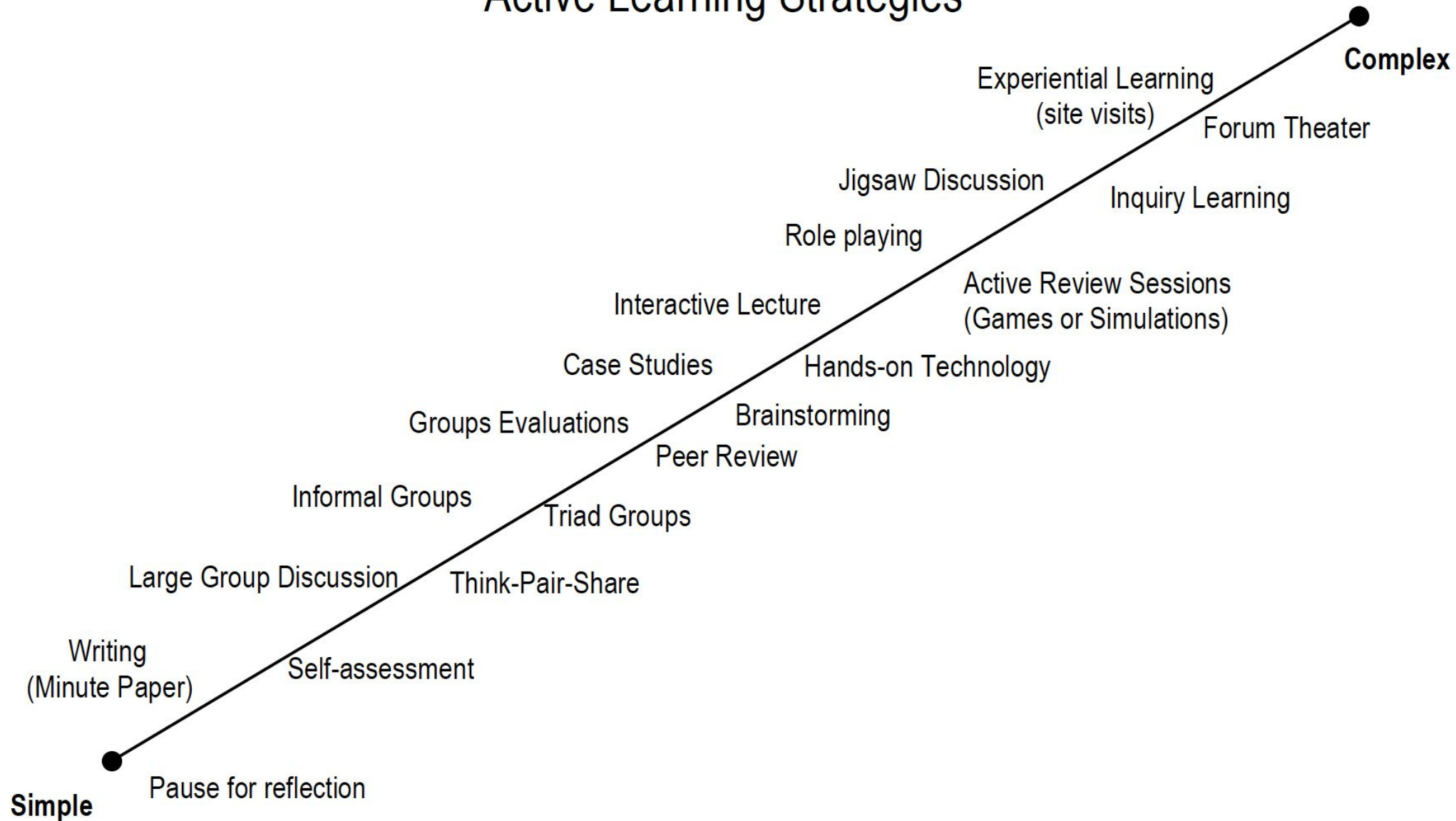


Complex Tasks
(Longer duration; more
carefully structured)

One strategy is not inherently “better” than another; it just depends on your learning goals for the course or session

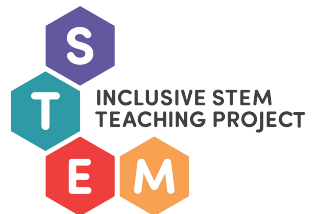


Active Learning Strategies



This is a spectrum of some active learning activities arranged by complexity and classroom time commitment.

Prepared by Chris O'Neal and Tershia Pinder-Grover, Center for Research on Learning and Teaching, University of Michigan



Analyze peer instruction

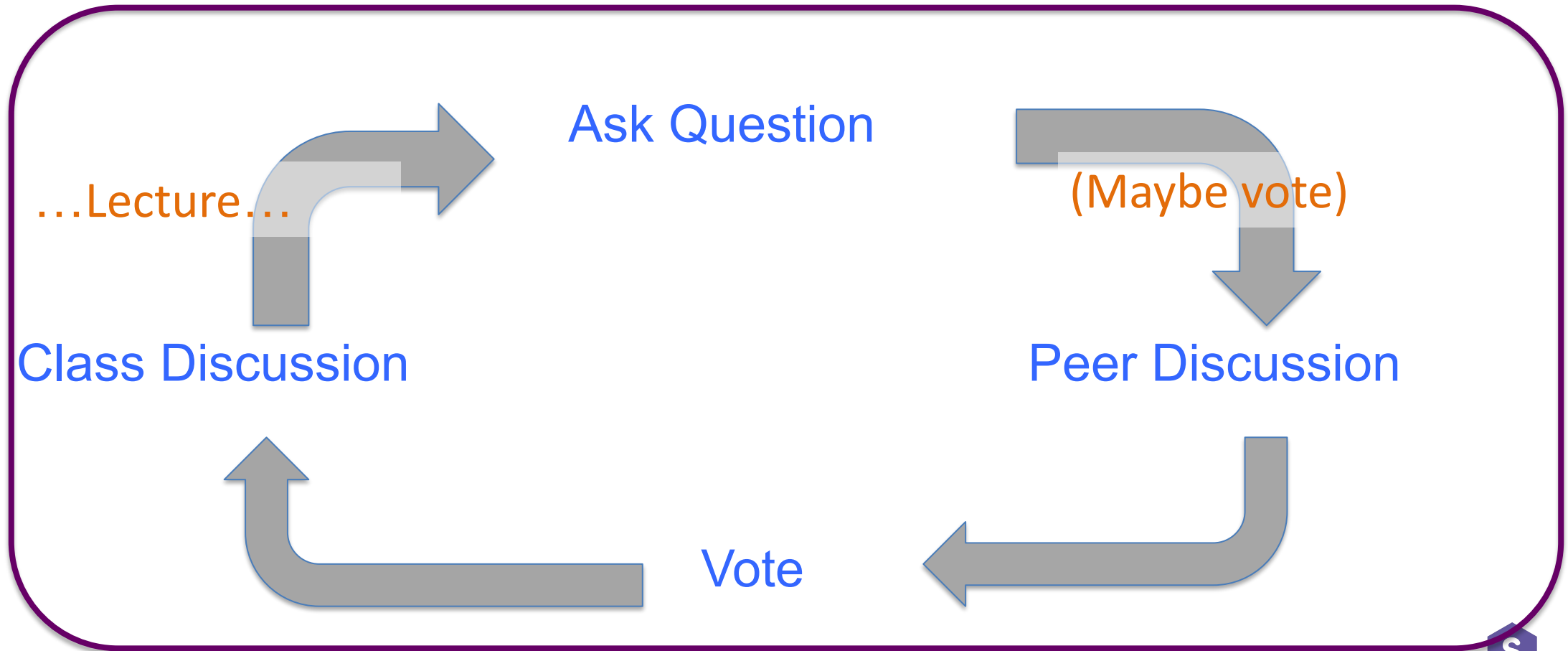
Example question: Biology

A small acorn over time can grow into a huge oak tree. The tree can weigh many tons. **Where does most of the mass come from as the tree grows?**

1. Minerals in the soil
2. Organic matter in the soil
3. Gases in the air
4. Sunlight



Anatomy of Peer Instruction



* See also: Peer Instruction, A User's Manual. E. Mazur.

Inclusive STEM Teaching

Inclusive teaching **requires more than good intentions**; it is an ongoing **commitment to learning and making equitable and inclusive changes** to pedagogical practices and curriculum to support all students.

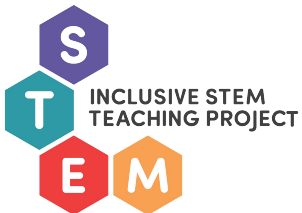


Inclusive teaching in your spaces

Turn to your neighbor, and discuss one of the following:

1. As a student, what activities have you experienced or observed that made you feel connected to the learning?
2. Second, as an instructor, what have you done, or plan to do to create connections within your learning environment?

Record one or more comments on
<https://tinyurl.com/ISTP-1>



Empirically Supported Features



Embodied
Case Studies



Local
Learning
Communities

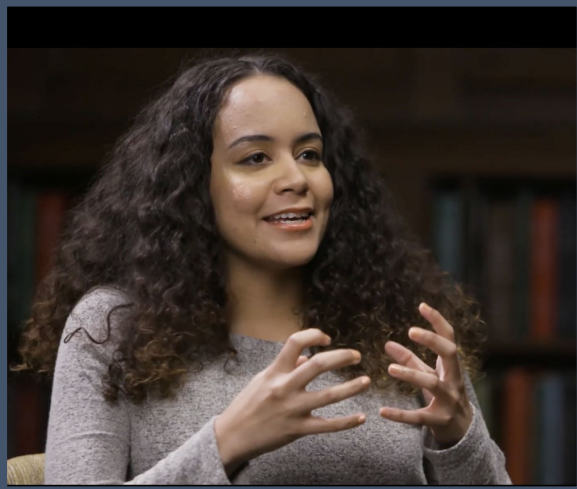


Affinity
Spaces



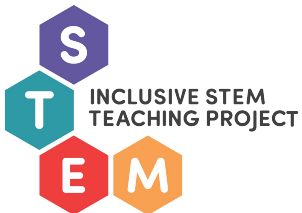
My Inclusivity
Framework

Feature 1: Embodied Case Studies



Example Community Guidelines

1. Make space for everyone to participate in the conversation and check in with one another.
2. Strive for intellectual humility. Be willing to grapple with challenging ideas.
3. Let go of personal anecdotal evidence and look at broader group-level patterns.
4. Recognize how your own social positionality (e.g., race, class, gender, sexuality, ability) informs your perspectives and reactions
5. Differentiate between safety and comfort. Accept discomfort as necessary for social justice growth.
6. Identify where your learning edge is and push it. For example, whenever you think, “I already know this,” ask yourself, “How can I take this deeper?” Or, “How am I applying in practice what I already know?”

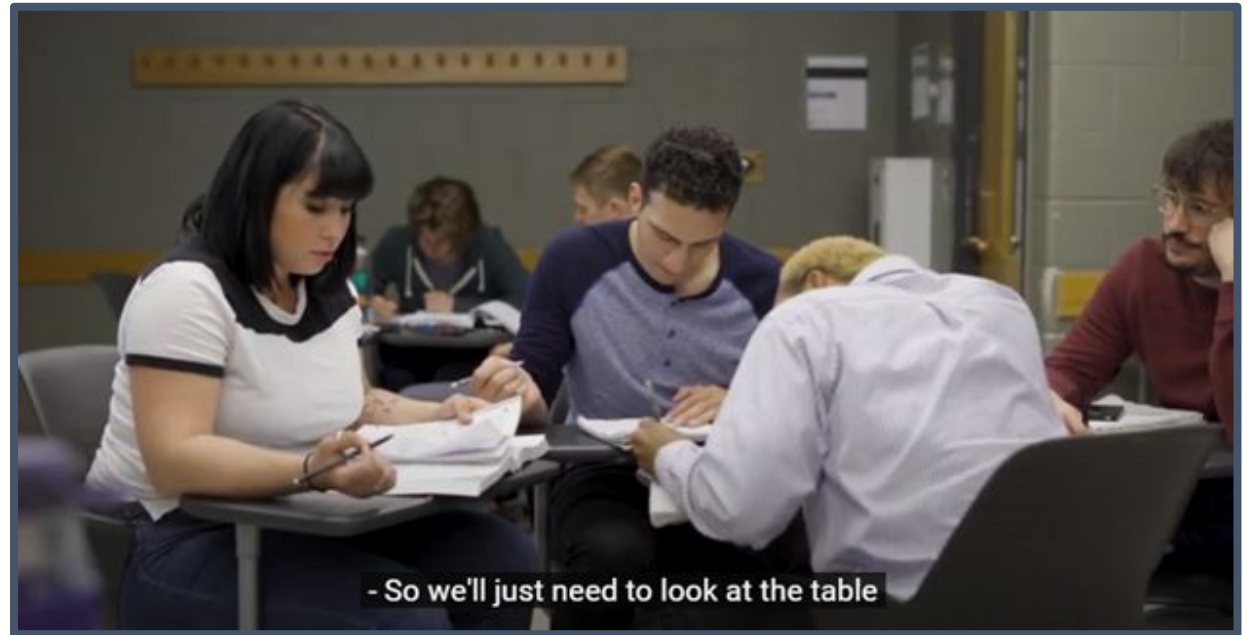


Sensoy, Ö., & DiAngelo, A. (2014). Respect Differences? Challenging the Common Guidelines in Social Justice Education. *Democracy and Education*, 22(2), Article 1. Available at: <https://democracyeducationjournal.org/home/vol22/iss2/1>

Feature 1: Embodied Case Studies



Group work Video



Imagine yourself to be an observer in this [classroom](#). Watch the interactions carefully.

Feature 1: Embodied Case Studies



Group Discussions

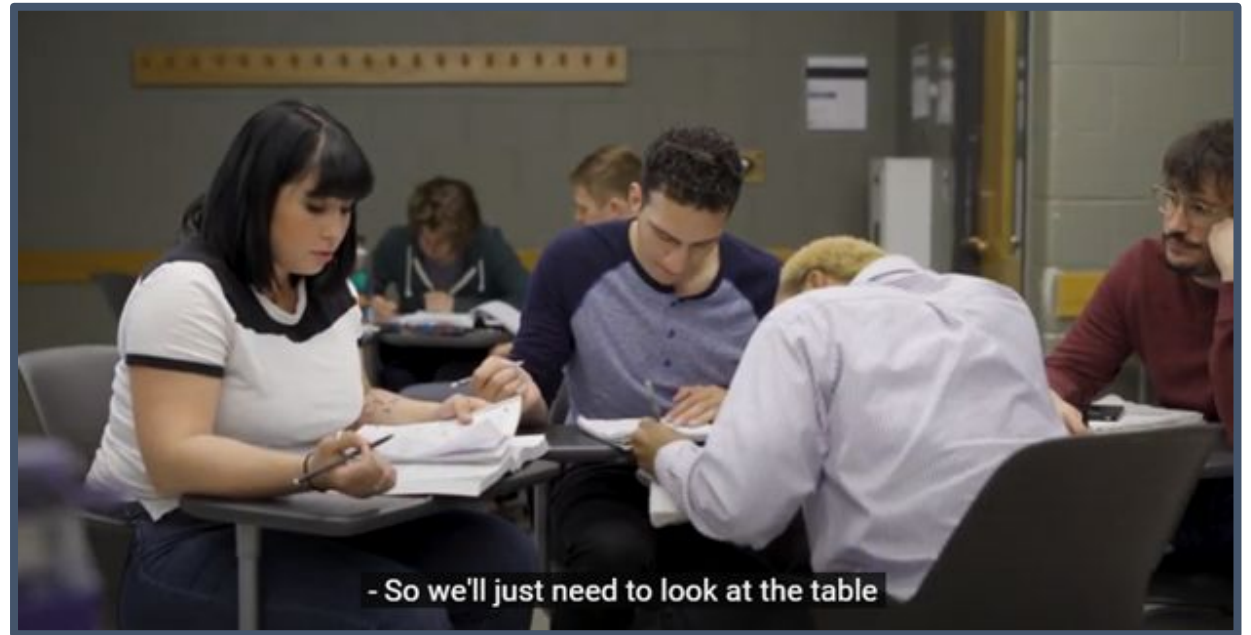
With your group, discuss the following questions:

- What **challenges do you see** occurring in the group work?

Feature 1: Embodied Case Studies



Group work Video



Imagine yourself to be an observer in this [classroom](#). Consider the instructor's choices carefully.

Feature 1: Embodied Case Studies



Group Discussions

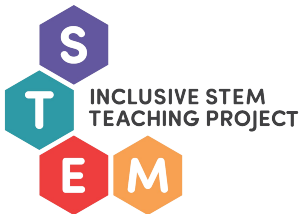
With your group, discuss the following questions:

- How might the observed challenges be **related to choices** made by the instructor?

Hesitancies to implementing inclusive/active learning in discussion/lab

1. I have to follow the instructor's guidelines
2. I don't have time given the material we have to cover
3. I don't know how to be intentionally inclusive, and I'm worried I'll make a mistake
4. I don't get why teaching physics isn't just about physics
5. Others....

Choose one hesitancy and discuss strategies to overcome.



Inclusive teaching in discussion/lab

1. Introduce yourself, your interests, your pathway. Make connections.
2. Learn students' names with correct pronunciation and use them (even when you get them wrong sometimes).
3. Walk around during group/lab bench work and ask open-ended questions
4. Support and implement group work; gently interrupt poor group work behavior; break up social grouping
- 5.

Feature 1: Embodied Case Studies



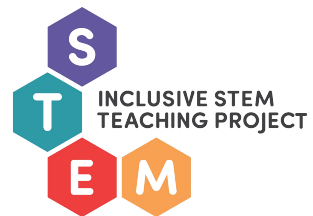
Neighbor Discussions

With your neighbor, discuss the following question:

- What is the **value and utility of an embodied case study**, and one that depicts this group work?

Inclusive STEM Teaching Project

- Professional development initiative designed for faculty, postdocs & doctoral students
- Advance their **awareness, self-efficacy, and ability to cultivate inclusive STEM learning environments for all their students**
- Develop as **reflective, inclusive practitioners**
- Delivered as a **free, open, online edX course** with optional in-person or virtual learning communities led by project-trained facilitators
- Embedded with **research on participants, facilitators, and students**



Free, Open, Online Course



Introduction

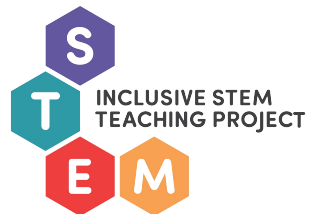
Module 1: Diversity, Equity, and Inclusion in Learning and Teaching in Higher Education

Module 2: Instructor Identity and Authority in STEM Classrooms

Module 3: Student Identities and Experiences in the STEM Classroom

Module 4: Creating an Inclusive STEM Course

Module 5: Fostering an Inclusive Climate in the STEM Course



Discussion goals

Participants in this discussion will be able to:

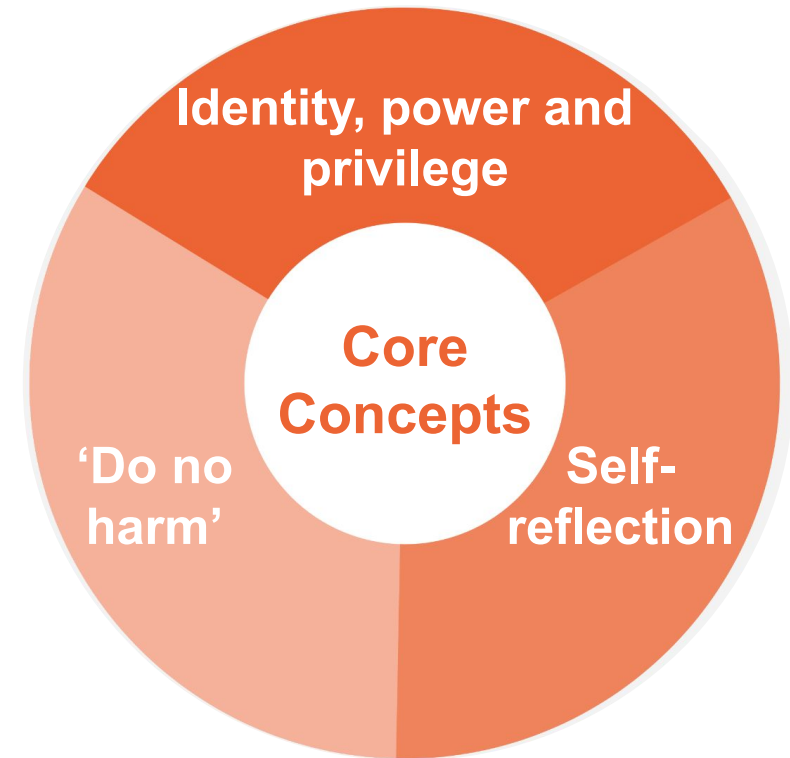
- (1) describe the Inclusive STEM Teaching Project including project goals, impact, pedagogical design and delivery, and research outcomes;
- (2) describe the importance of centering identity, power, positionality and privilege in the development of reflective and inclusive practitioners;
- (3) identify ways they would like to engage in or advocate for inclusive teaching practices in their local context.



Our framework:

Core principles and values

- Center identity, power, privilege and positionality
- Reflect on one's own and student identities *before* curriculum and classroom strategies
- 'Do no harm'



Pedagogy:

Modeling inclusive teaching

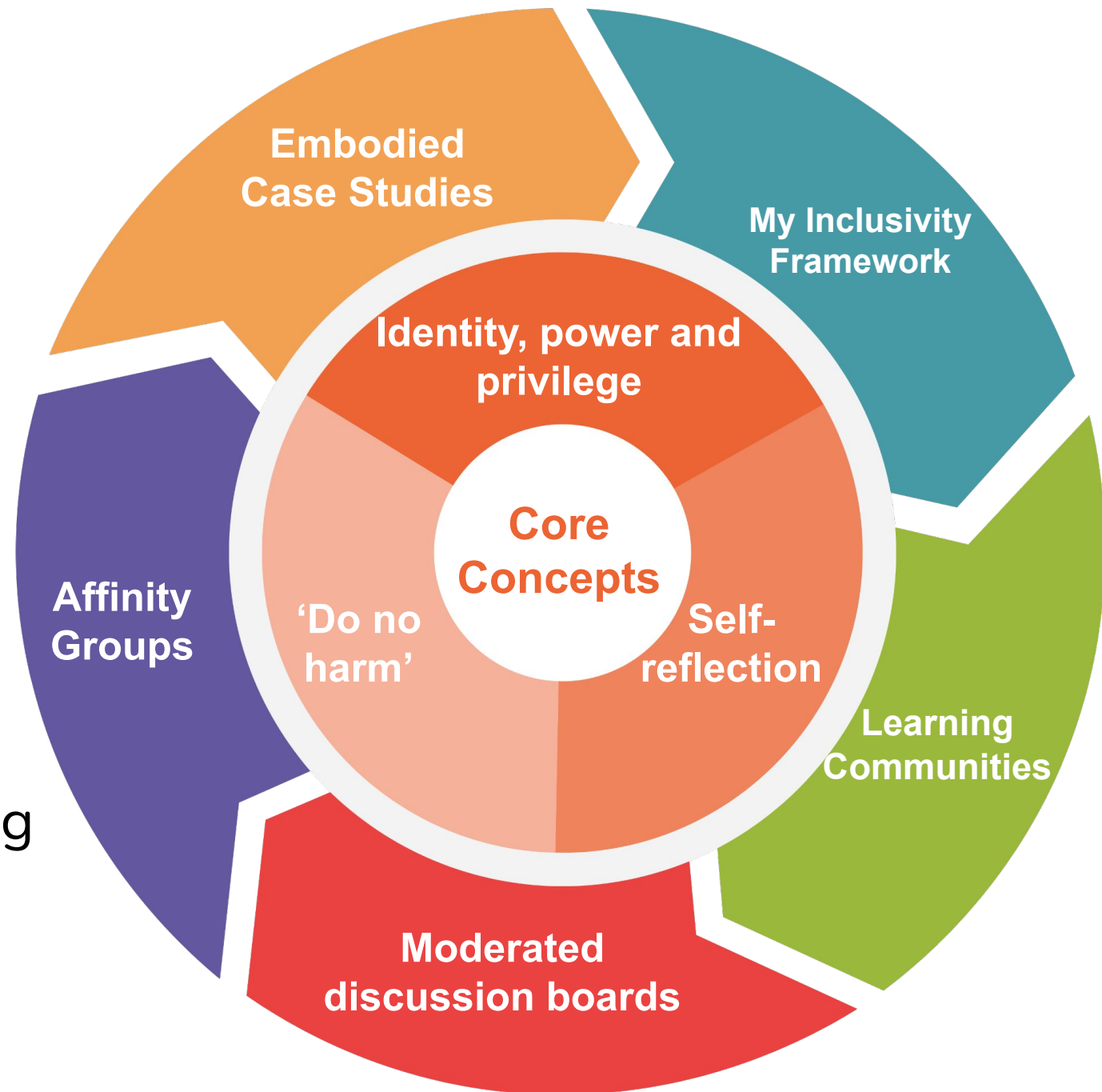
- Interactive; identity focused; multiple means of learning and engagement
- My Inclusivity Framework, affinity group discussions, embodied case studies



Delivery:

Three modes ensure flexibility and adoption

- Free, open online through edX
- Project-trained facilitators lead local learning communities concurrently
- Project-trained facilitators lead local, independent course instance with learning communities



Empirically Supported Features



Embodied
Case Studies



Local
Learning
Communities



Affinity
Spaces



My Inclusivity
Framework

Project accomplishments and engagement to date

6 (of 8 planned) course runs complete:

- 11,240 learners enrolled; 85% instructors; 75% STEM
- 2,564 learners completed the course; 2,196 research consenters
- 53% completion if clicked once
- 71% of completers answered *all* assessments
- 95 learning communities across 87 institutions; 770 participants
- 494 project-trained facilitators at 152 institutions;

On track to nationwide impact

- Across all higher ed: CC, 2-yr, 4-yr, R2 & R1
- 5,000 faculty who teach 1,000,000 STEM students per year (200/yr)
- 300 learning communities driving institutional change



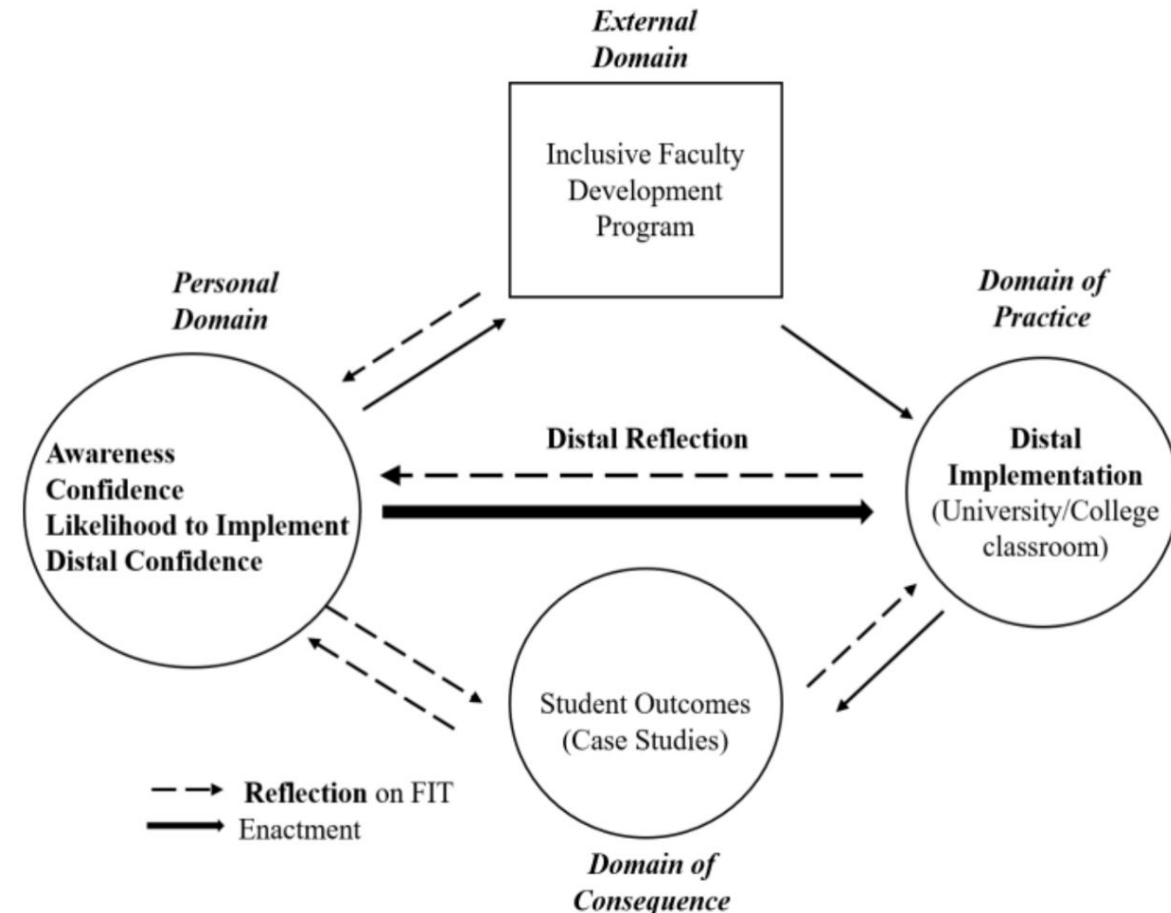
Outcomes for online course completers

- **Full pathway** → Course and learning communities effectiveness → faculty gain confidence and skill → change pedagogical practices → students experience greater equity.
- **Research: Mixed Methods Research, Multiple Data Sources**
 - What is the impact of the inclusive teaching professional development program on participants?
 - What is the impact of learning communities on their facilitators and participants?
 - How do trained program participants affect their undergraduate students in their classrooms?

Research findings on 2,300 course completers

Four validated measures:

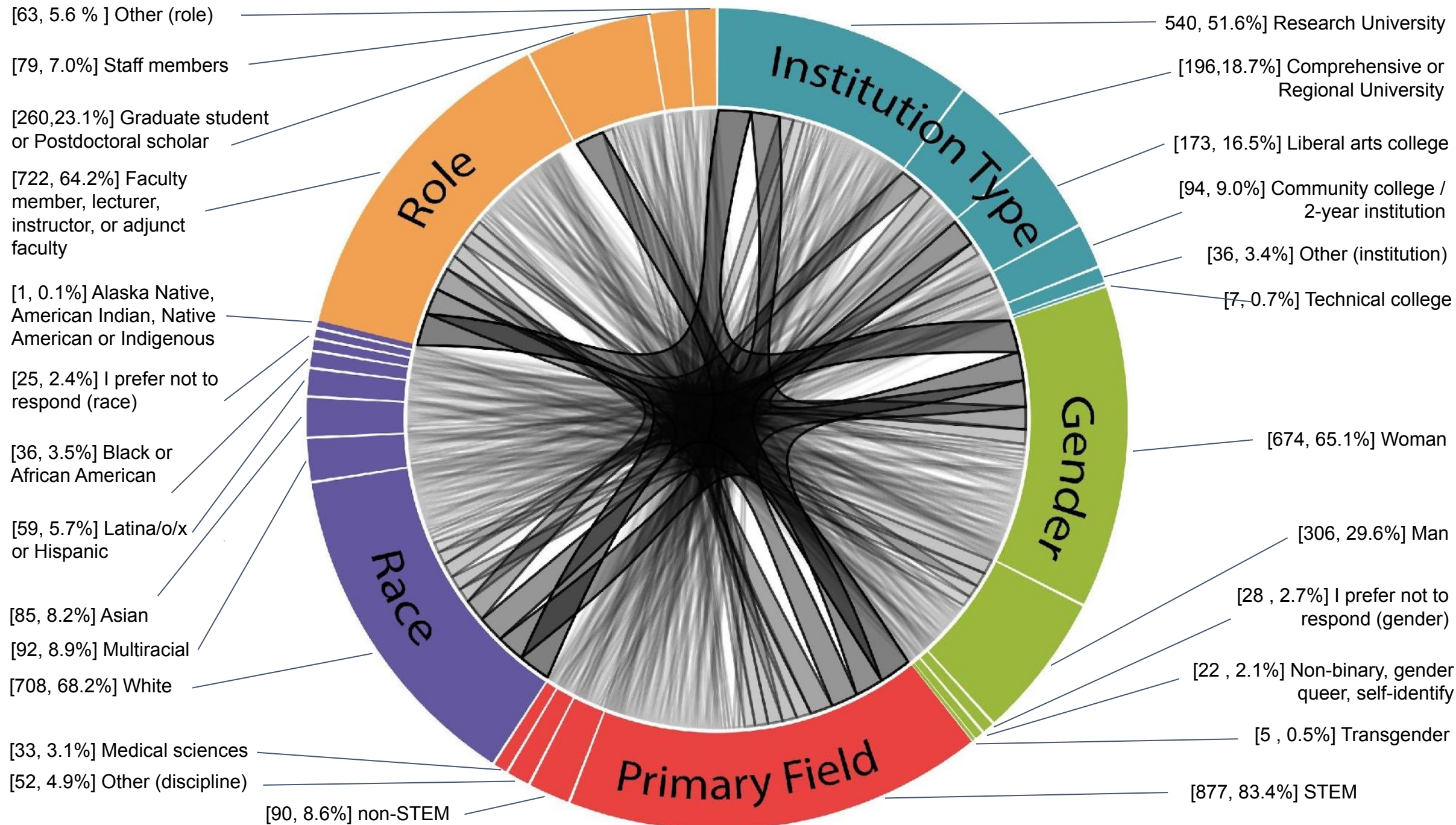
- Awareness of Inclusive Teaching
- Confidence in Inclusive Teaching
- Reflection on Inclusive Teaching
- Likelihood to Implement Inclusive Teaching



Research findings on 2,300 course completers

Findings:

- Large effect size increases in pre- and post- changes in all four measures.
- Interestingly, small differences as a function of demographics, whether career stage, institutions, race/ethnicity, gender, etc.



Empirically Supported Features



Embodied
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My Inclusivity
Framework

Inclusivity framework

- Instructor reflection as a means toward awareness, understanding and change.
- Each module asks, ‘what have you learned,’ & ‘how will you use it in your practice’?
- Research questions:
 - In what skills or knowledge in inclusive teaching did course participants say they **increased confidence**?
 - In what skills or knowledge in inclusive teaching did course participants say they were **still gaining confidence**?
 - Are there differences within subgroups based on gender, race or ethnicity, faculty status, and institutional type?

Inclusivity framework

Findings:

Top areas of increased confidence were in:

- **Course Structure**, which includes designing courses and course elements, along with implementing courses, (31%); and
- **Course Climate**, which includes creating an inclusive environment, and managing conflict and microaggressions, (30%).
- **Gaining confidence described Identity** (comprising awareness and/or expression of instructor identity, student identity, and positionality) (22%).

Inclusivity framework findings

Identity	Awareness of personal, social, and cultural identities and impact	Example quotes
Instructor Identities	Awareness of one's own personal, social, and cultural identities and impacts	“The areas that I gained more confidence are: Instructor identity: After participation in this course I am more willing to share my identity with students. The course made me realize that sharing my identity with students help a lot in creating an inclusive class.”

Inclusivity framework findings

Student Identities	Instructor's awareness of students' personal, social, and cultural identities, and that identity impacts teaching and learning	“Gaining confidence in how student self-identities and lived experience reflect their behavior and feelings of inclusion in the classroom.”
Positionality	A relationship between student and instructor that is impacted by identity	“I feel I am much more confident in understanding the ways in which identity can create power dynamics within the classroom that may not be obvious. The module on inclusive teaching was incredibly enlightening.”

Module 2: Instructor Identity

- Story of my name
- Meaningful object
- Personal narrative



Empirically Supported Features



**Embodied
Case Studies**



**Local
Learning
Communities**



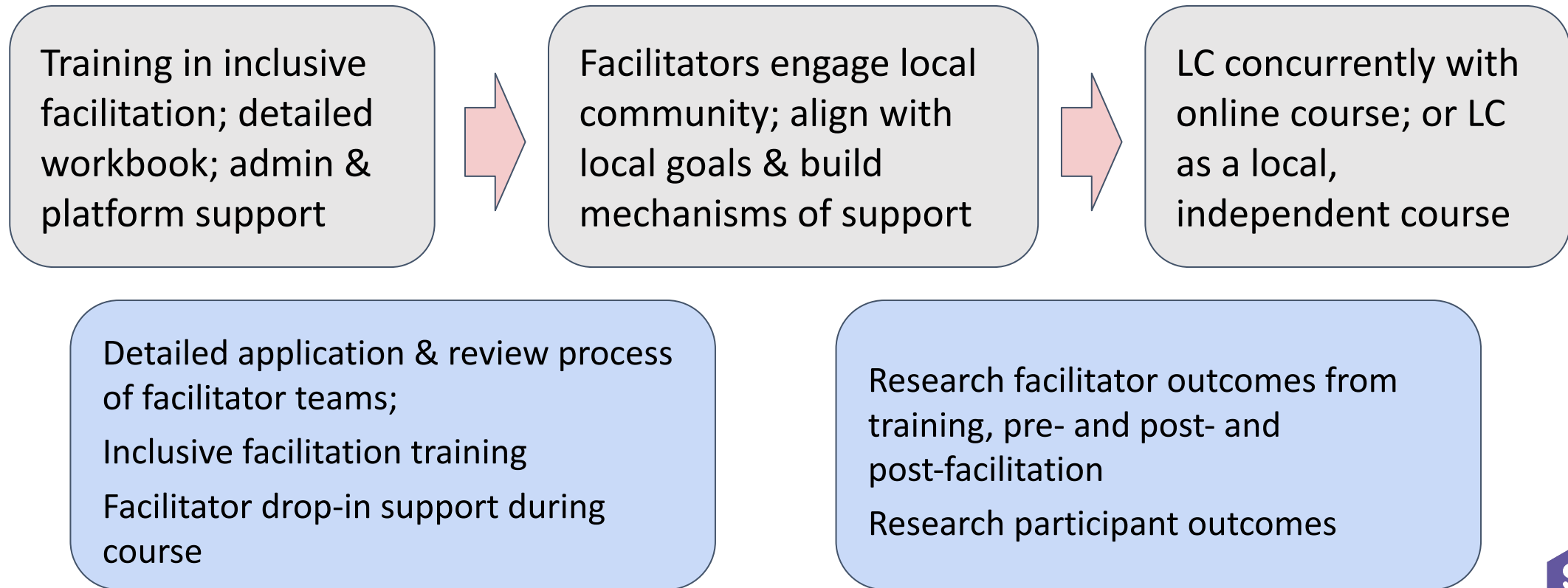
**Affinity
Spaces**



**My Inclusivity
Framework**

Inclusive STEM Teaching Project Learning Communities

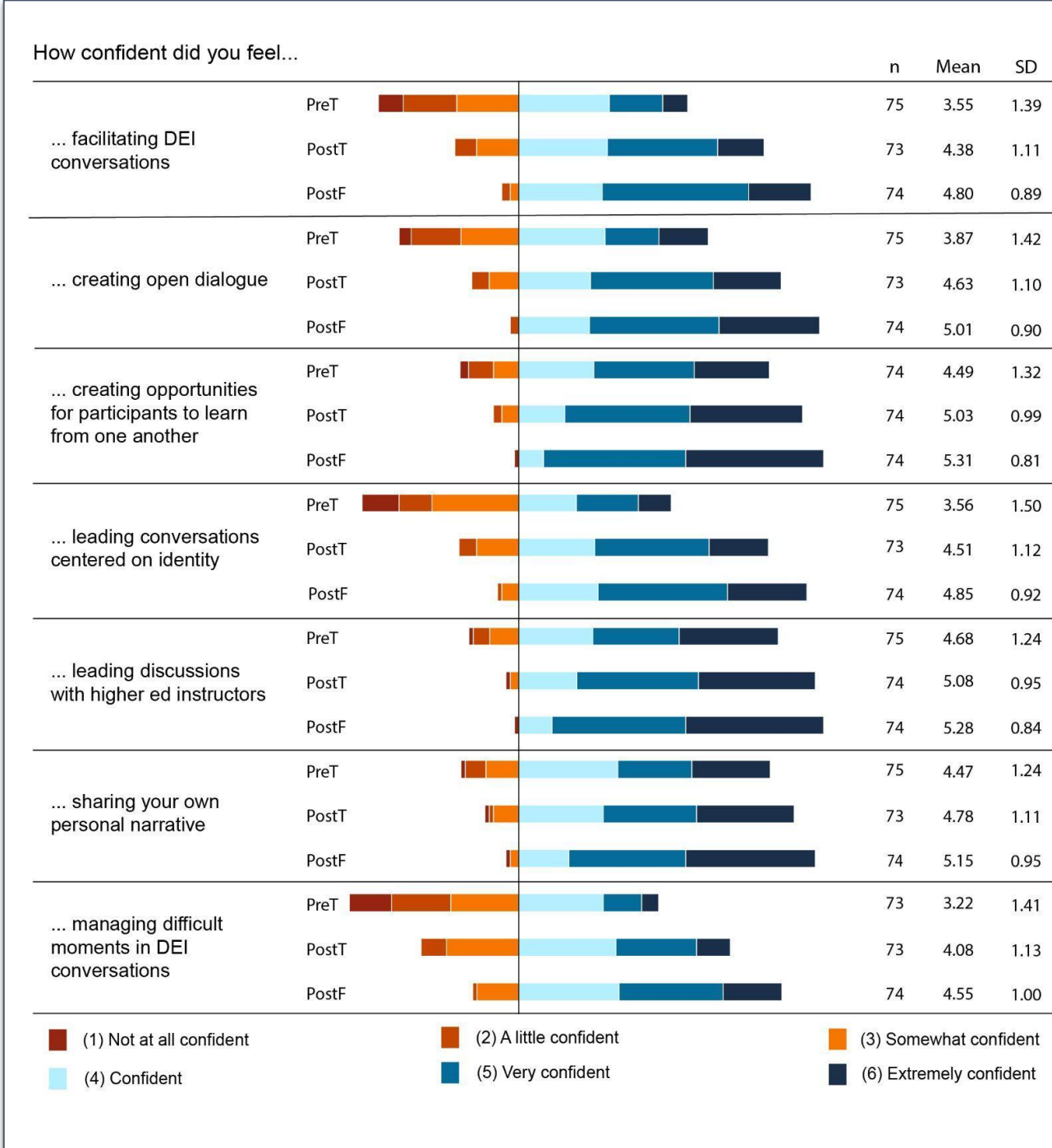
- Time for reflection; deeper learning; apply to context
- Networking with colleagues; sharing; critical mass
- Customizable; adaptable to institution















500+ trained LC facilitators; 150+ institutions; 100+ LCs

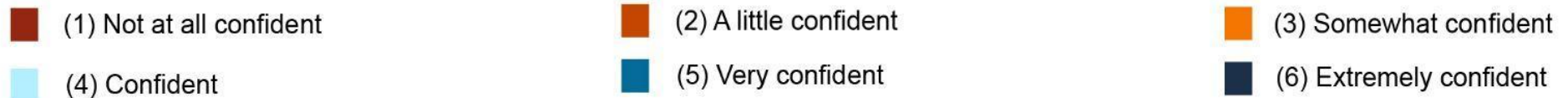
Growth in Facilitator Confidence

Don't worry,
we are going
to zoom in!



How confident did you feel...

			n	Mean	SD
... facilitating DEI conversations	PreT		75	3.55	1.39
	PostT		73	4.38	1.11
	PostF		74	4.80	0.89
... creating open dialogue	PreT		75	3.87	1.42
	PostT		73	4.63	1.10
	PostF		74	5.01	0.90
... creating opportunities for participants to learn from one another	PreT		74	4.49	1.32
	PostT		74	5.03	0.99
	PostF		74	5.31	0.81
... leading conversations centered on identity	PreT		75	3.56	1.50
	PostT		73	4.51	1.12
	PostF		74	4.85	0.92



How confident did you feel...

n Mean SD

...

... leading discussions with higher ed instructors	PreT		75	4.68	1.24
	PostT		74	5.08	0.95
	PostF		74	5.28	0.84
... sharing your own personal narrative	PreT		75	4.47	1.24
	PostT		73	4.78	1.11
	PostF		74	5.15	0.95
... managing difficult moments in DEI conversations	PreT		73	3.22	1.41
	PostT		73	4.08	1.13
	PostF		74	4.55	1.00

(1) Not at all confident

(2) A little confident

(3) Somewhat confident

(4) Confident

(5) Very confident

(6) Extremely confident

Key findings from learning community research

- Facilitators gain confidence and skill from training and facilitation; even those with many years of DEI experience show significant gains
- Facilitators report high fidelity to course pedagogy and design, creating and modeling inclusive teaching environment
- Participants independently report belonging, agency, and experiencing an inclusive environment
- Participants detail plans to implement a variety of inclusive teaching practice

Feature 2

Example learning community activity



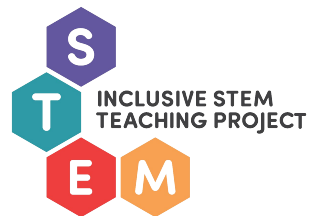
Hesitancies
(Resistances)

Addressing common hesitancies helps overcome barriers:

- Participants share their perspectives, and many note common hesitancies
- Can co-create ways of addressing them, supporting colleagues.

Inclusive STEM Teaching Project

- National, scaled program in inclusive teaching
- Challenges traditional notion of local equity and inclusion training
- Future activities
 - Community College facing
 - Future faculty facing
 - Facilitators as local institutional change agents

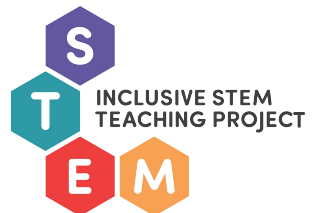


Project Team

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- Stephanie Kusano
- Haley Lewis
- Judy Milton
- Tershia Pinder-Grover
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- Nicole Tuttle
- Veronica Womack
- Sara Woods
- Alexandria Yen
- Alessandra York



Feature 3

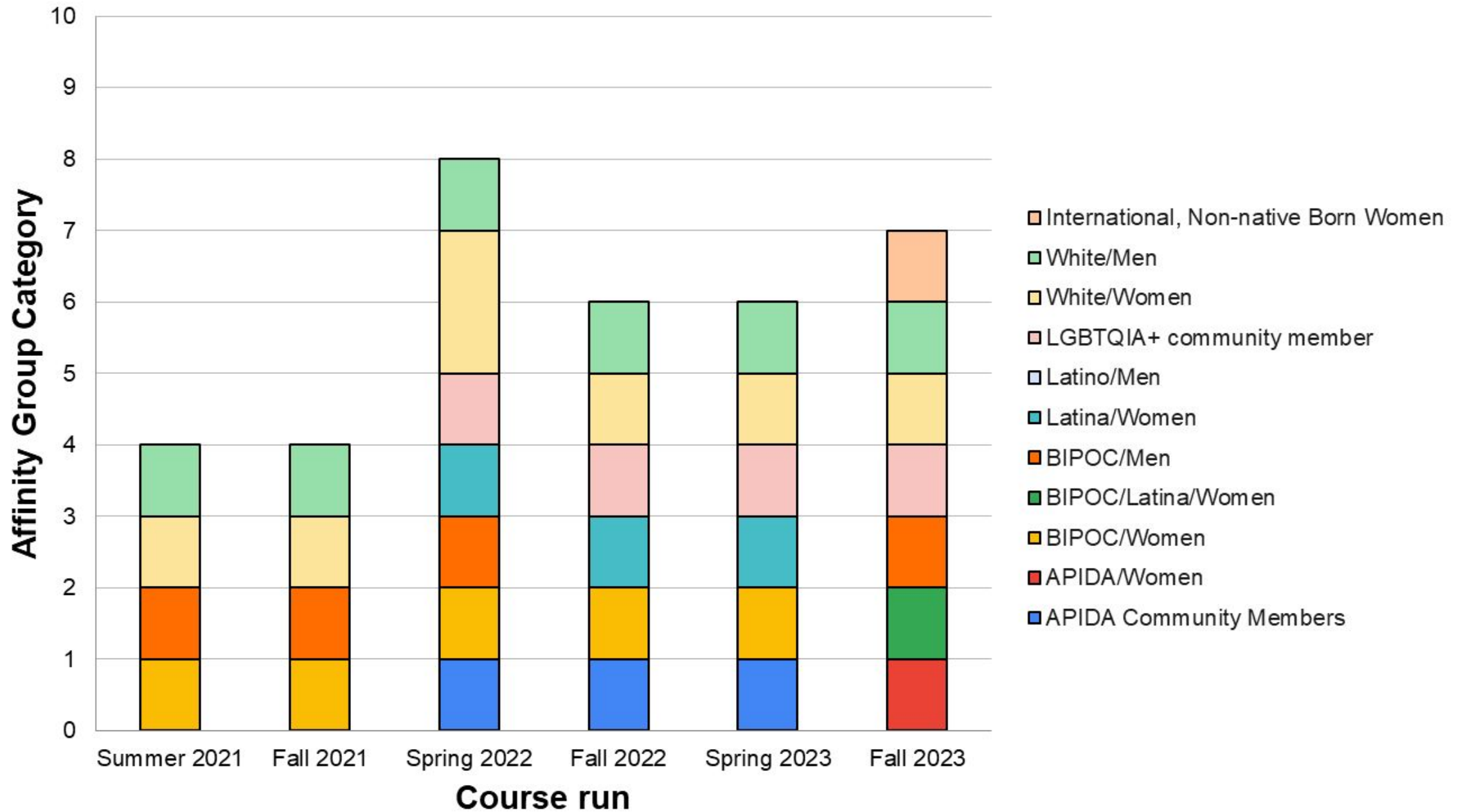
Affinity Spaces



“I really got a lot out of the affinity group. I got to ask questions that I would not feel comfortable asking in other spaces. I felt very supported in this community.”

“I was extremely impressed by how the Affinity Groups were organized. I was particularly appreciative of the care taken to minimize hard [harm] to minoritized participants.”

Affinity Groups by Category by Course Run



Empirically Supported Features



Embodied
Case Studies



Local
Learning
Communities



Affinity
Spaces



My
Inclusivity
Framework

Sustainability

- New collaborative grant proposals will sustain current edX *and* create specialized offerings
 - Community college focus
 - Future faculty focus
- Sustaining local, independent course runs for trained LC facilitators
- Facilitator conference
May 29 & 30, Boston Univ



Feature 4 Inclusivity Framework



315.P: Building Confidence in Applying Inclusive Teaching Practices: An Analysis; Fri, 9:30am Rm 406; Calkins & Woods

Findings:

Top areas of increased confidence were in: (1) **Course Structure**, which includes designing courses and course elements, along with implementing courses, (31%); and (2) **Course Climate**, which includes creating an inclusive environment, and managing conflict and microaggressions, (30%). **Gaining confidence described Identity** (comprising awareness and/or expression of instructor identity, student identity, and positionality) (22%).

Same areas for gaining confidence



Feature 1: Embodied Case Studies



Overview

Benefits of Embodied Case Studies

- Humanizes and centers the lived experience
- Provides a shared point of reference without burdening minoritized students/instructors.
- Presents and honors differential experiences to show how impact \neq intention.
- Requires intentional framing to prepare viewers and reduce harm

Learning Communities Facilitated Across the Nation

- Learning community facilitator teams trained at 135 institutions
 - 6 Community Colleges
 - 23 4-year colleges
 - 15 Research (R2) universities
 - 31 Public Research (R1) universities
 - 13 Private Research (R1) universities
 - 4 HBCUs
 - 2 Women's Colleges
 - 3 disciplinary and teaching networks
- Multiple LC facilitator teams at 35 institutions - evidence of alignment, adoption and institutional change
- 494 facilitator trained by end of January

