The Design of an Inclusive Teaching Course for STEM Faculty

Centering Identity

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Roadmap

1. Introduction to Social Identity
2. Project Overview & Goals
3. Features & Activities - Interactive
4. Preliminary Results from Pilot
5. Next Steps
Part 1: Social Identity
Social Identity

Describes the set of characteristics by which a person is recognizable or known by the society in which they live, often in relation to social groups (e.g., race, gender, ability status, citizenship, etc.)

- Tied to histories of social groups
- Can change over time
- Can be self-ascribed or ascribed to you
- Is intersectional
- Is not universally or predictably experienced
A Brief Social-Belonging Intervention Improves Academic and Health Outcomes of Minority Students

Gregory M. Walton\textsuperscript{3} and Geoffrey L. Cohen\textsuperscript{1,2}

SOCIAL SCIENCES

Coming out in STEM: Factors affecting retention of sexual minority STEM students

Bryce E. Hughes\textsuperscript{*}

Discrimination and Bias, Underrepresentation, and Sense of Belonging on Campus

Sylvia Hurtado and Adriana Ruiz Alvarado

Image: kcl.ac.uk/news/diversity-in-stem
Attention to Racial Inequity and Violence

Image: kcl.ac.uk/news/diversity-in-stem

Covid-19 Fueling Anti-Asian Racism and Xenophobia Worldwide
National Action Plans Needed to Counter Intolerance

Black In The Ivory
@BlackInTheIvory
Amplifying the voices of "Blackademics" to speak truth about racism in academia | #BlackInTheIvory | Creator @DrShardeDavis
blackinthelvory@gmail.com blackinthelvory.com Joined June 2020
1,847 Following 8,519 Followers

Reese
@_reese99
So a group black students THAT ATTEND the university of Delaware had the cops called on them at the library for being too loud and were asked if "they attend the school"........ I dont understand what was the point in calling the cops but I guess that happens when u attend a PWI
Developing an Inclusive Mindset

Table 8.1. Informative Versus Transformative Approaches

<table>
<thead>
<tr>
<th></th>
<th>Informative</th>
<th>Transformative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location of knowledge</td>
<td>Instructor</td>
<td>Instructor and participants</td>
</tr>
<tr>
<td>Direction of knowledge</td>
<td>Instructor to participants</td>
<td>Between/across all participants and instructors</td>
</tr>
<tr>
<td>Frequency of interaction</td>
<td>Usually one session programming</td>
<td>Multisession programming</td>
</tr>
<tr>
<td>Type of knowledge valued</td>
<td>Academic knowledge valued above all other types of knowing</td>
<td>All forms of knowledge/knowing are valued (academic, experiential, tacit, affective, reflective)</td>
</tr>
<tr>
<td>Value on content versus process</td>
<td>Content valued above process</td>
<td>Content and process valued equally</td>
</tr>
<tr>
<td>Social identities and power structures are intentionally surfaced</td>
<td>Unlikely</td>
<td>Yes</td>
</tr>
<tr>
<td>Desired outcome</td>
<td>Knowledge of instructor is accepted, retained and replicated by students</td>
<td>Students and instructor surface ambiguity, challenge assumptions, broaden perspectives, and build relationships toward a co-created expansion of knowing and being/acting</td>
</tr>
</tbody>
</table>
Part 2: Project Overview
The 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 themselves as reflective, inclusive practitioners

The content delivered as a Massive Open Online Course (MOOC) blended with in-person or virtual learning communities on participating campuses
Major goals: The Inclusive STEM Teaching Project

1. **Nationwide impact:** 2000 faculty & 4000 PhDs and Postdocs take course; teaching **300,000 STEM students** across higher education landscape

2. **Research full professional development pathway:** Examine impact on participants, on facilitators and learning communities, on participants shifting teaching practices, and also, the change experienced by students in their classrooms

3. **Deliberate interactions:** Develop and deliver content that is challenging and intentional creates productive discomfort for learning, while doing no harm.
“Centering instructor and student identity is central to inclusive teaching.”

“Lived experiences, backgrounds, and identities, as well as how they are perceived by others, shape student’s learning experiences.”

“Systems of oppression are the problem, the identities we hold are not.”

“Individuals in majority groups benefit from systems of oppression whether they realize it or not.”

“Instructors have the responsibility to create an equitable environment in which all students can learn.”
Part 3: Features & Activities
Empirically Supported Features

- Local Learning Communities
- Embodied Case Studies
- Affinity Spaces
Feature 1: Local Learning Communities

Overview

Challenge: Not every campus or department has the same needs or priorities around inclusive teaching.

Benefits of Local Learning Communities

- Accountability to complete the course
- Additional time for reflection
- Networking with colleagues who share similar values and goals
- Fully customizable to meet the needs of the group
Feature 1: Local Learning Communities

Discussion Guidelines

Bennett Goldberg, Ph.D.
Northwestern University

Tershia Pinder-Grover, Ph.D.
University of Michigan Ann Arbor

Viewing prompt: Click on the link shared in the chat and watch this short video on discussion guidelines for the course.

Apply the guidelines presented in this video to the breakout room conversations you have today.
Option 1: Story of my Name
Share a 1 minute story about your name (how you were named, what your name means, what it’s like to have your name)

Option 2: Meaningful Object
Share an object that hold some significance to you and explain why. Share it on camera or describe it if it isn’t near you.
In the chat, answer the following question(s):

What were the benefits of centering identity in building community within your group?

How might you use this activity in your own teaching?
**Overview**

**Feature 2: Embodied Case Studies**

**Challenge:** It is difficult to discuss harmful experiences in the classroom without a common point of reference. It is also difficult to create a meaningful point of reference without burdening minoritized students/instructors to share their trauma for the sake of others’ learning.

**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 ≠ intention.
- Requires intentional framing to prepare viewers and reduce harm
Viewing prompt: Click on the link shared the chat.

Imagine yourself to be an observer in this classroom. Watch the interactions carefully. What challenges do you see occurring in the group work? How might those challenges be related to choices made by the instructor?
Instructions: In your breakout groups, discuss the following questions:

- What kinds of conversations might a tool like this enable?
- What skills could it set you up to support others in developing?
In the chat, answer the following question(s):

What kinds of conversations might a tool like this enable?
What skills could it set you up to support others in developing?
Feature 3: Affinity Spaces

Overview

Challenge: Minoritized learners are often put in a position to teach majority peers about their experiences or must witness those peers grapple with their own privilege. Majority learners may fear offending others and avoid pushing themselves or asking risky questions.

Benefits of Affinity Spaces

- For majority learners, it offers them a space to question deeply held assumptions/biases without harming others. They can also learn from others on a similar journey.
- For minoritized learners, it offers a space to process/validate experiences and connect with others, especially if they are isolated in their own universities/departments.
Feature 3: Affinity Spaces

Hesitancies (Resistances)

Lack of relevance. “DEI doesn’t apply to my content”

Keep science “pure”. “Politics don’t belong in the STEM classroom”

Myth of Meritocracy. “I don’t actually need to do this. If students just try hard, they can succeed in my class.”

Color-blindness. “Isn’t it more fair to ignore student differences so I can treat everyone the same way?” or “If I focus on the concerns of underrepresented students, won’t I just be tokenizing or marginalizing them further?”

Coddling students. “Students are too sensitive.” or “Learning science/the real world is supposed to be challenging.”
Lack of time. “I have so much material to cover; I don’t have time to focus on diversity and inclusion, too.”

Lack of confidence. “I don’t have the necessary skills or knowledge to talk about sensitive or controversial subjects. I’d rather avoid it altogether than do it wrong.”

Emotional Fatigue. “I’m already doing disproportionate labor around DEI and I’m drained.”

Fear of being perceived as biased. “I don’t want to be seen as self-serving or biased because of the identities others perceive I hold.”

Repercussions for your career. “I don’t know how this will impact my tenure, student evaluations, perceptions among my peers, service load?”

Feature 3: Affinity Spaces

Hesitancies (Challenges)
Instructions: In your breakout groups, discuss the following questions:

- Which hesitancies do you think are most common in your department and why?
- What might you say to support a colleague dealing with that hesitancy?
In the chat, answer the following question(s):

How did you think about your own social identity/positionality when completing this activity?

What would be the benefit of talking through these challenges with others who have shared social identities?
Part 4: Preliminary Results
Fall 2020 Pilot with 70 participants

Boston University*
Des Moines Area Community College*
Northwestern University
University of Michigan, Ann Arbor
University of Wisconsin, Madison

*Asynchronous Only
Pilot Research and Evaluation Structure

Research and Evaluation Teams: Gina Frey, Lucas Hill, Tim Immelman, Judy Milton, Julia Savoy, Sophia Shin, & Veronica Womack

Intent:
- Examine ‘do no harm’
- Explore learning gains; course structure, content and format

Structure:
- Feedback from module and overall course surveys
- Survey elements co-created from learning goals with content developers
- Facilitator reflections
- Facilitator focus groups
- Direct participant response to in-course reflections

Response rate:
- Pre-Survey 83% (58/70)
- Post-Survey 51% (36/70)
- 85% participated in a learning community
- fac; postdoc; phd; demogr
- 80% of learning community facilitators participated in evaluation
Participant surveys explored scales of:

- **Awareness (31 items)**
  - Common challenges instructors face
  - How positionality is central to instructor-student interactions
  - Strategies to learn more about your students

- **Confidence (19 items)**
  - Use measures of course climate to improve student learning
  - Encourage social belonging in the course
  - Implement inclusive course design practices
  - (No gain) Work to address my biases.; My gaps in understanding how systemic oppression impacts teaching and learning experiences.
Participant surveys explored scales of:

- **Reflection (high means for all items)**
  - The kinds of challenges students holding minoritized identities might experience
  - My use of instructional choices
  - Why student identity matters

- **Likely to implement (high means for all items)**
  - Learn more about my students (e.g., backgrounds, goals and motivations)
  - Build positive relationships with my students
  - Encourage social belonging in the course

- **Overall informative, impact & satisfaction**
  - The content of the course was informative
  - Future participants of this course will learn a lot
  - The course has made a positive impact on me professionally
Have you ever encountered any of these challenges in your teaching?

Yes, I would say that the lack of skills/expertise, repercussions for teaching evaluations/tenure, and my inherent desire to avoid conflict at all costs (avoiding difficult discussions) are likely the top three barriers to implementing all of the inclusive teaching practices that I have been exposed to and would like to practice in my classroom. I'm hoping that through this course, I will gain both the knowledge (including the correct terms to use when discussing DEI topics) and confidence to engage in more meaningful discussions with my students and create the inclusive learning environment that I envision for my classroom.

Yes: 1) Relevance. I teach an intro statistics course. 2) Too much to cover is always true in my course. There's never enough time! 7) Cancel culture is very real and with the internet, everything you say is public knowledge. Often times people call for a person to be canceled at the very first hint of an error.
Preliminary Evidence of Learning

Transparency: “clear introduction to the purpose and guidelines”, “explanations for why various features along with their underlying assumptions,”

Reflection: “honesty and reflection conducted by the organizers” “excited about the explicit framing around the value of inclusive teaching for minoritized students/groups”

Engagement with reflection: “when sharing my thoughts and reflecting on my experience and practices right after watching videos,” “when reading my peers' posts or comments,” “during personal reflections because I can relate and think it out,”
Minor and major course modifications:
- Greater consistency
- Holistic approach
- Shorter videos; fewer prompts
- Transparency of expectations
- Modifications to surveys for research and evaluation
Listen to facilitators and participants
https://youtu.be/YrrocOyzvFY
Part 5: Next Steps
Participate & Collaborate

Learners:
1200+ learners in the course. Register at https://www.edx.org/course/the-inclusive-stem-teaching-project

Facilitator:
40 trained facilitators running learning communities at Cal State Channel Islands, Utah, Harvard Medical, Auburn, Northwestern, UW-Madison, Emory, Georgia Tech

https://tinyurl.com/inclusivestemteaching
Ideation!

How might a program like the benefit instructors at your institution?

Who are the stakeholders who you would want to partner with to bring an identity-centered inclusive teaching curriculum to your campus?

What questions do you have for the project team?