Toward inclusive learning cultures in STEM: Integrating embodied understanding of diversity and identity through self-authored narratives and theatre

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Globalization in STEM learning:

- inclusivity
- excellence through diversity
- intersectionality and identity
US data: Persistence of undergrad STEM aspirants


How do students articulate the effects and meaning of their learning?
The learning experiences that most stood out to students:

- Connections between how their learning environment facilitated a sense of self-worth and empowerment.
- Importance of individual identity as central to their meaning-making.
- Students’ personal development.
- Intentionally making the diversity of students’ experiences part of the discourse and applicable to course material.
Patti McGill Peterson’s keynote:
• Knowledge
• Skills
• Attitudes [Dispositions]
Other themes from yesterday:

- enduring questions of humanity; social context (Penprase)
- integration of ethical understandings into engineering education (Helfand)
- rooted globalism (Pickus) – being knowledgeable about each other’s histories...
- defamiliarization (Dwyer) – seeing your own world through the vision of someone else
- scaffolded connections between "self" and humanity as a whole – the concentric circles of experience (Gonzalez)
being present
generosity
risk-taking
celebrating failure
Faculty

Who are you? What inspires you?
What assumptions might others have about you?
What have your own experiences been during your educational/scientific training?

Inclusivity; Microaggressions
Who are the students in your classroom? What assumptions do you/have you had about them? Or, what assumptions do they/might they have about you?

What does it mean to “belong” (and not belong) in STEM?

Stereotype threat
Theatre + STEM inclusive pedagogy: an integrated framework

How do we create a welcoming space: - physical presence, gestures, generosity, reciprocity – “Yes, and…”

Be present, intentional in the language that we use.
Theatre + STEM inclusive pedagogy: an integrated framework

Celebrating failure – creating a space for the narrative of failure.

Narratives and pathways: telling our stories of STEM – the importance of failure in this narrative.

- Samuel Beckett, Worstward Ho
Inclusivity and Course Context

Identities

Microaggressions

Stereotype threat

Narratives; Failure as a process

Generosity; Physical space; Exploration of boundaries

STEM includes our identities, stories, meaning-making, embodied understanding

Inclusive STEM pedagogy for global mindset
STEM as a space for students to contribute their identities; to belong; to connect across the disciplines and beyond the curriculum; to author their narratives as global citizens.
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