Weaving Students In Versus Weeding Them Out: Research-Based Strategies that Support Equity in the IBL Classroom

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• For much of their history, STEM disciplines have worked to weed out all but the *perceived* brightest and best, with the belief that the majority of students in our classes didn’t have what it takes to make it.

• We have broadened somewhat our notions of which students have potential in the STEM classroom and dropped some of the more overt weed-out practices, but *many of the mindsets, structures, policies, traditions, practices, and approaches* used in our STEM classes today are still rooted in and perpetuate the weed-out philosophy.
Can you name an area where weeding out still influences STEM disciplines and classes?

https://www.menti.com/alndcprx3raq
The Weave In Philosophy:

- Focus on engaging, attracting, recruiting & educating a much broader spectrum of students in terms of pre-college opportunity (opportunity ≠ ability!).

  That places equity at the core of what we have to do.

- Multiple, rich entry points & pathways that use robust, evidence-based student success strategies in & outside the classroom.

  Active learning (IBL, projects, teaming), mastery-based assessment, student skills development, wrap-around support services, community- & identity-building, asset-(vs deficit) based approaches
Outline

• Three stories
• How To Support Equity in the IBL Classroom
  • Create a Culture Where Every Student Belongs
  • Expand the Focus
  • Use Team Roles & Emphasize Team Responsibility
  • Assign Competence (Praise Effort over Ability)
  • Communicate High Expectations
  • Teach Valuable Learning Practices
Three Stories

Mathematics for Human Flourishing
My Story
Another story...

Dr. Michael Dorff
Past President of the Mathematical Association of America
Professor of Mathematics
Brigham Young University

How Do We Support Equity in the IBL Classroom?

#1 – Create a culture where all students belong
Our Implicit or Unconscious Biases undermine our efforts at every step...
How Do We Support Equity in the IBL Classroom?

#2 – Expand the Focus
How Do We Support Equity in the IBL Classroom?

#3 – Use Team Roles & Emphasize Team Responsibility
How Do We Support Equity in the IBL Classroom?

#4 – Assign Competence (Praise Effort Over Ability)
How Do We Support Equity in the IBL Classroom?

#5 – Communicate High Expectations
Expectancy Theory

- **expectancy**: Belief in likelihood of success
- **instrumentality**: Belief that behavior -> desired outcomes
- **valence**: Value placed on outcomes
How Do We Support Equity in the IBL Classroom?

#6 – Teach Valuable Learning Practices
6 Ways to Support Equity in the Classroom

1. Create a Culture Where Every Student Belongs
2. Expand the Focus
3. Use Team Roles & Emphasize Team Responsibility
4. Assign Competence (Praise Effort over Ability)
5. Communicate High Expectations
6. Teach Valuable Learning Practices
Questions?
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References

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