

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

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The Weed-Out Philosophy

- 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/aIIndcprx3raq>

The Weave In Philosophy:

- Focus on engaging, attracting, recruiting & educating a much broader spectrum of students in terms of pre-college opportunity (opportunity \neq 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.

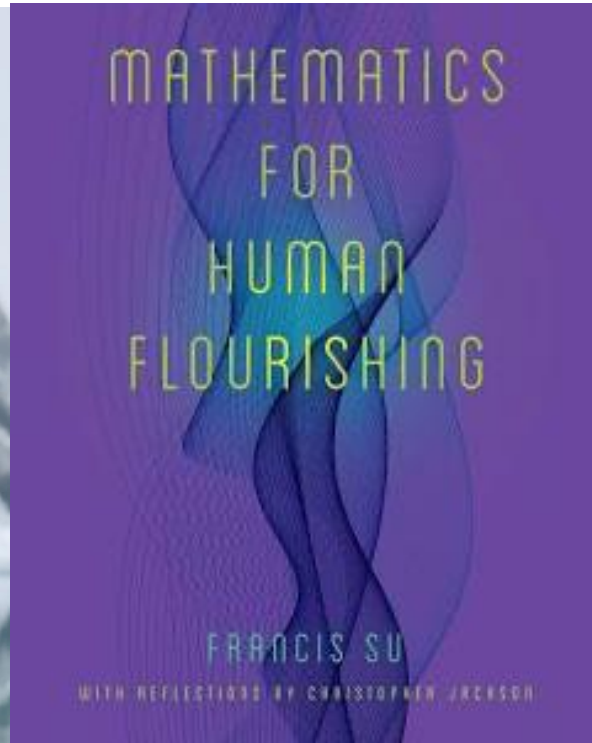
Active learning (IBL, projects, teaming), mastery-based assessment, student skills development, wrap-around support services, community- & identity-building, asset-(vs deficit) based approaches

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**



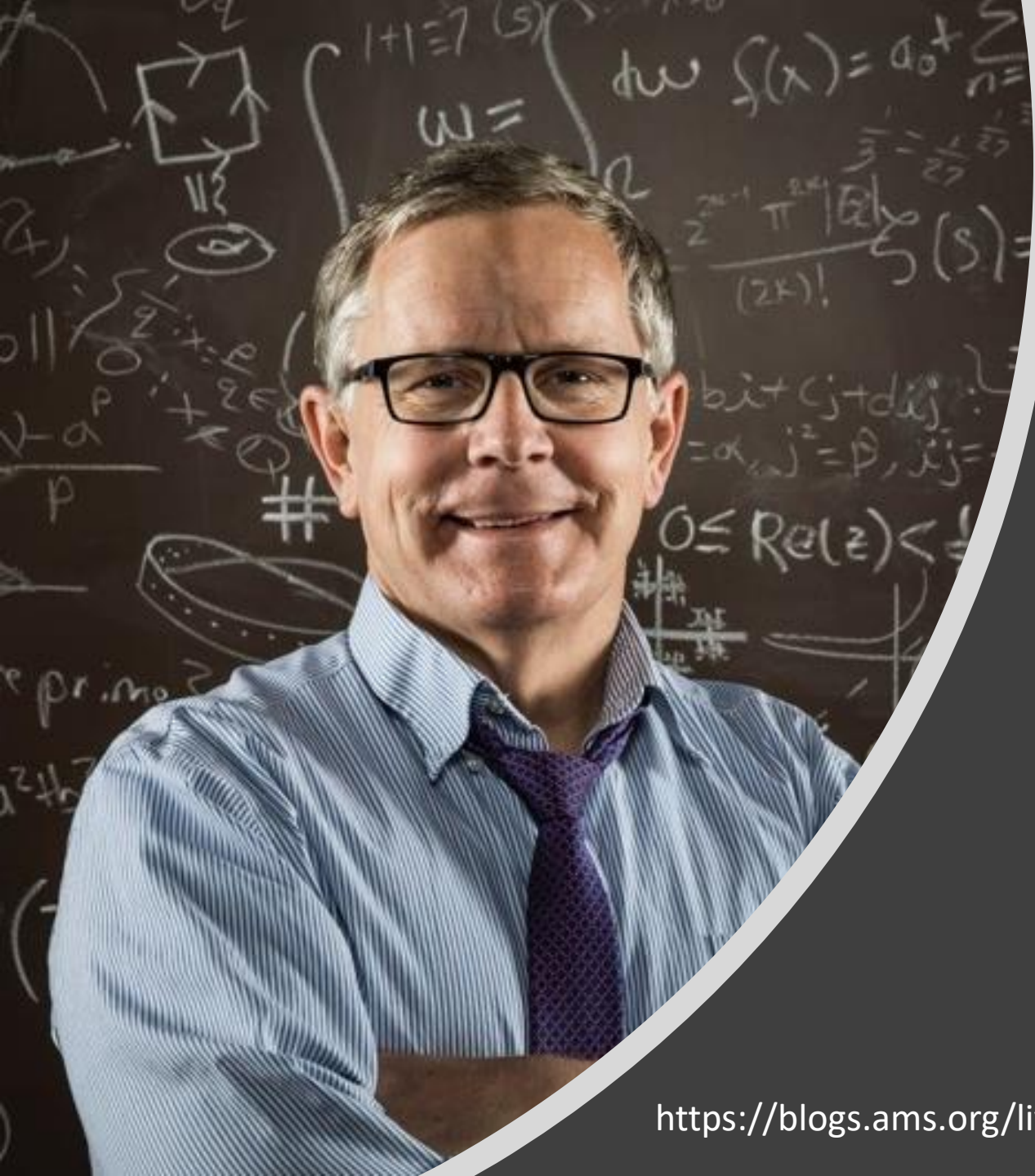
Three Stories



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...



A word cloud of terms related to implicit bias and social justice. The words are arranged in a roughly circular pattern. The most prominent words are 'IMPLICIT', 'BIAS', 'unconscious', 'disrespect', 'stereotype', 'preferences', 'ethnicity', 'reaction', 'social', 'judgement', 'unfair', 'groups', 'hidden', 'behavior', 'gender', 'damaging', 'people', 'disrespect', 'stereotype', 'preferences', 'ethnicity', 'reaction', 'social', 'judgement', 'unfair', 'groups', 'hidden', 'behavior', 'gender', 'damaging', 'people'. The words are in various colors including red, orange, and brown.

people
unconscious
damaging
disrespect
stereotype
preferences
gender
ethnicity
reaction
social
judgement
unfair
groups
hidden
behavior
BIAS



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**

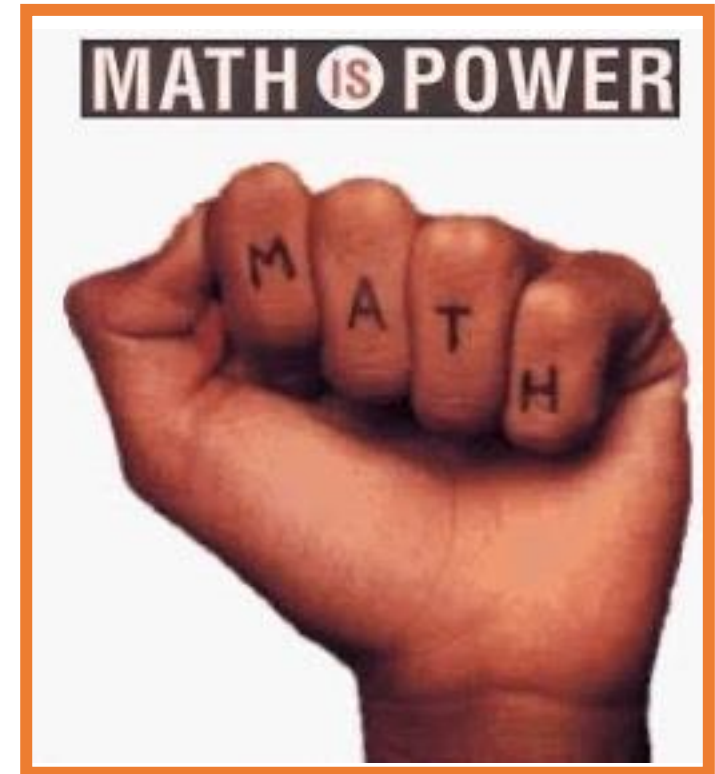


How Do We
Support Equity in
the IBL Classroom?

**#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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