

A Mathematics Learning Community on Inclusive Teaching (LCIT)

Faculty Communities for Inclusive Teaching, 2019 Nina White, Gavin LaRose

Project Overview

- **Participants in W/Sp/Su19:**
 - Grad students (6)
 - Post-docs (7)
 - Continuing Faculty (8)
 - Visitors & School of Ed (16)
- **Meetings:**
 - 2x in F18 (*books*)
 - 5x in W19 (*articles*)
 - 6x in Sp/Su19 (*books*)
- **Goals:** Building on W18 work,
 - Engage more instructors,
 - Increase utility to instructors
 - Catalyze departmental change
- **Themes:** Inclusivity in math teaching, in the Department, and in the discipline



Next Steps

Immediate

- Fall 2019 meetings
- LEO IT PDF visitor
- Continuing changes to instructor training
- Inclusive problem sets and lecture notes for Intro Program courses

Later

- Lesson Study group focused on inclusive teaching
- GSI-led LCIT for GSIs
- Systemic support for inclusive teaching throughout the Department

Departmental Outcomes

Cumulative effects from 2018/2019:

- **Instructor Training**
 - New readings and vignettes in IBL training
 - Increased emphasis on inclusive teaching in new instructor training program.
- **Conference and Seminar Talks**
 - MIT's *Electronic Seminar on Mathematics Education*, Dec 2018
 - Contributed paper, Joint Math Meeting, Jan 2019
- **Programmatic Evolution**
 - Mastery assessment project in Math 105. (w/ FCI, NI/NI grant, facilities/infrastructure support)
 - New attention in Math 105/115/116 exam writing to ensure entry points for all students.

Individual Outcomes

Synergy with other activities around inclusive teaching

- LEO IT PDF (Invited speaker for LCIT November 2019)
- Participant attended *Workshop on Equity in Mathematics Education* at PCMI in summer 2019 (1 of 10 selected to attend)
- Attendance at CRLT May 2019 Inclusive Teaching Series

Some personal changes attributed to LCIT participation

"I added several inclusion-oriented activities to my math 412 class. The first was an "asset map" where students talk about their strengths and how that helps their ability to be a mathematician (and team member). I am also having them present on a mathematician with whom they identify, with the goals of both broadening the narrative of who is or can be a mathematician, and inviting them to see themselves reflected in the math community. I created/borrowed/adapted these activities with "Inventing the Mathematician" on my mind." – Post-Doc (Math)

"Attention to growth mindset, conscious effort to combat implicit bias, being intentional about making group work inclusive, switch to include mastery grading elements in my courses." – Graduate Student (Math)

"I've made some very specific changes, like having a discussion early in the semester where the students help me to set up classroom norms, making sure to give students time to think in class instead of jumping to the "pair" part of think-pair-share, and using exit slips on a regular basis to learn more about what students got out of class and what they still want to know. But I've also just made some general changes in how I think about my responsibilities towards and interactions with the students, in ways that are more focused on doing what's right for their individual situations." – Lecturer IV (Math)

"I'm using more ungraded formative feedback; I'm publicly assigning competence more than before; I'm ever more aware of my own white privilege and my own implicit biases; I'm rethinking structure in my courses to be more flexible and personalized to students needs; I'm trying out different kinds of assessment that are less high-stakes; I'm using a pre-term survey to learn more about my students as people and also give them a chance to tell me about factors that might influence their ability to participate in class; I'm attending ever more to my classroom climate and laying some very intentional foundations at the start of term about the importance of making mistakes in math and supporting each others' learning." – Lecturer IV (Math)

Resources

Schedule and readings

www.math.lsa.umich.edu/~gla_rose/dept/teaching/lcit.html

Books

- Hottinger, Sara N... *Inventing the Mathematician: Gender, Race, and Our Cultural Understanding of Mathematics*. State University of New York Press, 2016.
- Boaler, Jo., *Mathematical Mindsets: Unleashing Students' Potential through Creative Math, Inspiring Messages, and Innovative Teaching*. Jossey-Bass & Pfeiffer Imprints, 2016.
- Steele, Claude. *Whistling Vivaldi: And Other Clues to How Stereotypes Affect Us*. W.W. Norton & Company, 2010.