The MAA IP Guide in the Context of Partner Organizations and Departmental Initiatives

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Aspirational Intention of the Guide

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  - Use what is known about ambitious teaching practice
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- CBMS statement on active learning

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  - Mathematicians don't shy away from what is hard

- View of mathematics as accessible to all
  - Hard when our own identity has been formed in a culture of mathematics-as-identifier-of-exclusive

Context

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- National Council of Teachers of Mathematics (NCTM) *Principles to Action*

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- National Council of Teachers of Mathematics (NCTM) *Principles to Action*
- Association of Mathematics Teacher Educators (AMTE) *Standards for Preparing Teachers of Mathematics*

Questions We Asked During Review

- Is the guide written in such a way that the typical user will find it readable and informative?

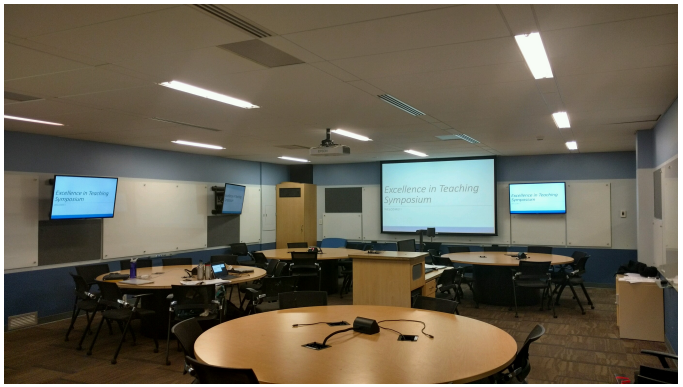
- Is it accessible and usable?

DEPARTMENTAL INITIATIVES

- Excellence in Teaching Symposium
- IP Book Club

Context

- Dept. of Mathematical Sciences
- ~60 Faculty and Teaching Faculty
- ~60 GTAs
  - 20 new GTAs in 2017-2018 AY
  - Sole instructors of courses

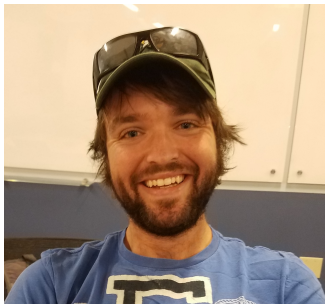


- Course Supervisors and Student Success Coordinators

Excellence in Teaching Symposium

- For GTAs
  - Week-long Orientation Training Session (pre-Fall)
    - Prepare for teaching responsibilities
  - Weekly Teaching Seminars and Workshops (Fall)
    - Teaching methods, strategies, and tools
  - Monthly Teaching Seminars and Workshops (Spring)
    - Advanced topics

- Leadership Team
  - Dr. Jenny Green
  - Elijah Meyer



Excellence in Teaching Symposium

- IP Guide Influence
  - Refined previous seminars and designed new ones
    - Vignettes, practical tips, and research were very useful
  - Primarily used the *Classroom Practices* chapter
    - *Fostering Student Engagement*
  - Dabbled in the *Assessment Practices* chapter
    - *Formative Assessment Strategies*

Excellence in Teaching Symposium

- Building a Classroom Community
  - Included references and provided articles – *"connections between student success and student engagement"*
  - Establishing norms on the first day of class
    - vignettes (videos) and discussion
  - Extends over multiple workshops

Excellence in Teaching Symposium

- Collaborative Learning Strategies
  - Group work has a large role in our courses
  - Facilitating group work is challenging
    - Grouping students
    - Using the whiteboards
    - Strategies to get all students involved (e.g., think-pair-share, paired board work)
    - What they should be doing as students work in groups
  - Provided strategies and practical tips

Excellence in Teaching Symposium

- Responding to Student Contributions
  - How do you listen and respond to students questions in the
    - classroom?
      - » Vignettes (discourse transcripts)
      - » Focus: response strategies and how they open or close a discussion with a student
    - office?
      - » Vignettes (live role play in small groups)
      - » Focus: grading, group work, non verbal and verbal cues

Excellence in Teaching Symposium

- What worked well?
  - Providing research-based evidence → Trust

Past GTA Mindset

"These kinds of teaching / ice breaking / positivity workshops are not useful for making good teachers."

Current GTA Mindset

"I would say I've learned quite a bit about what it means to be an effective teacher. **I didn't know so much research had been done.**"

Excellence in Teaching Symposium

- What worked well?
  - Evolving conceptualizations of active learning

GTAs' Pre-Symposium Thoughts
"This is where someone engages in an **activity**."
"I'm not sure."
"Engagement with the material, which leads me to believe that this is a **student choice** rather than something the instructor can mandate."
"Active learning is learning through guided **activities**."

Excellence in Teaching Symposium

- What worked well?
  - Evolving conceptualizations of active learning.

GTAs' Current Thoughts
"I assumed it had to do with physically engaging students in a lecture but I have learnt that it involves the process of **actively engaging the mind**."
"It **encompasses a lot more** than I thought; e.g. I thought it implied working with other students, by definition."
"It does **not** have to be doing activities."
"To me, it's **student engagement**."

IP Book Club

- Spring 2018 Semester
  - Open to all members of the department
  - Meet monthly
  - Read a section of the IP guide
  - Implement strategies
  - Group discussions

Concluding Thoughts

- IP Guide is useful for improving teaching
  - Provides a variety of strategies to use and practical tips to consider
  - Can adapt ideas/discussion prompts from the IP Guide to align with your audience (e.g., vignettes/transcripts/videos)
  - Encourages instructors to think about their teaching

Thank You

Questions?

References

Association of Mathematics Teacher Educators. (2017). *Standards for Preparing Teachers of Mathematics*. Available online at amte.net/standards

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