

Mentoring TAs: Lessons Learned from the Physics GTA Development Program

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CETL Engaging Conversations Series

3 September 2014

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Background and Motivation

- **Previous TA training:**

- General TA orientation (pedagogy & policies)
- Weekly “next week’s lab” meetings (content)

➔ **Disconnect!**

- **Problems:**

- TAs’ lack of effective teaching skills
- Overworked TAs (research vs teaching)
- Low TA motivation (“why does this matter anyway?”)



(context: large enrollment intro physics)

CETL 8000 PH, Fall 2013

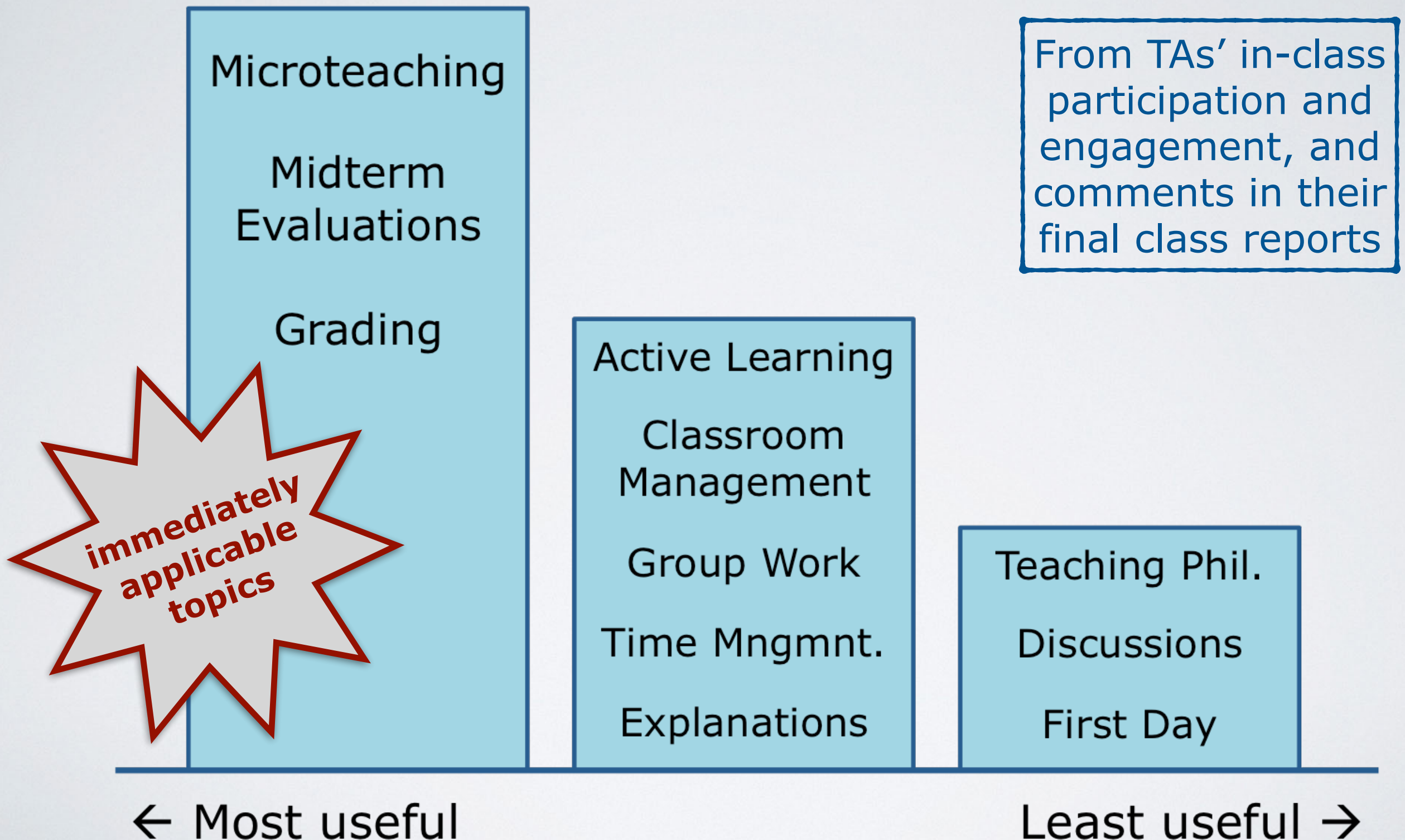


Course Structure

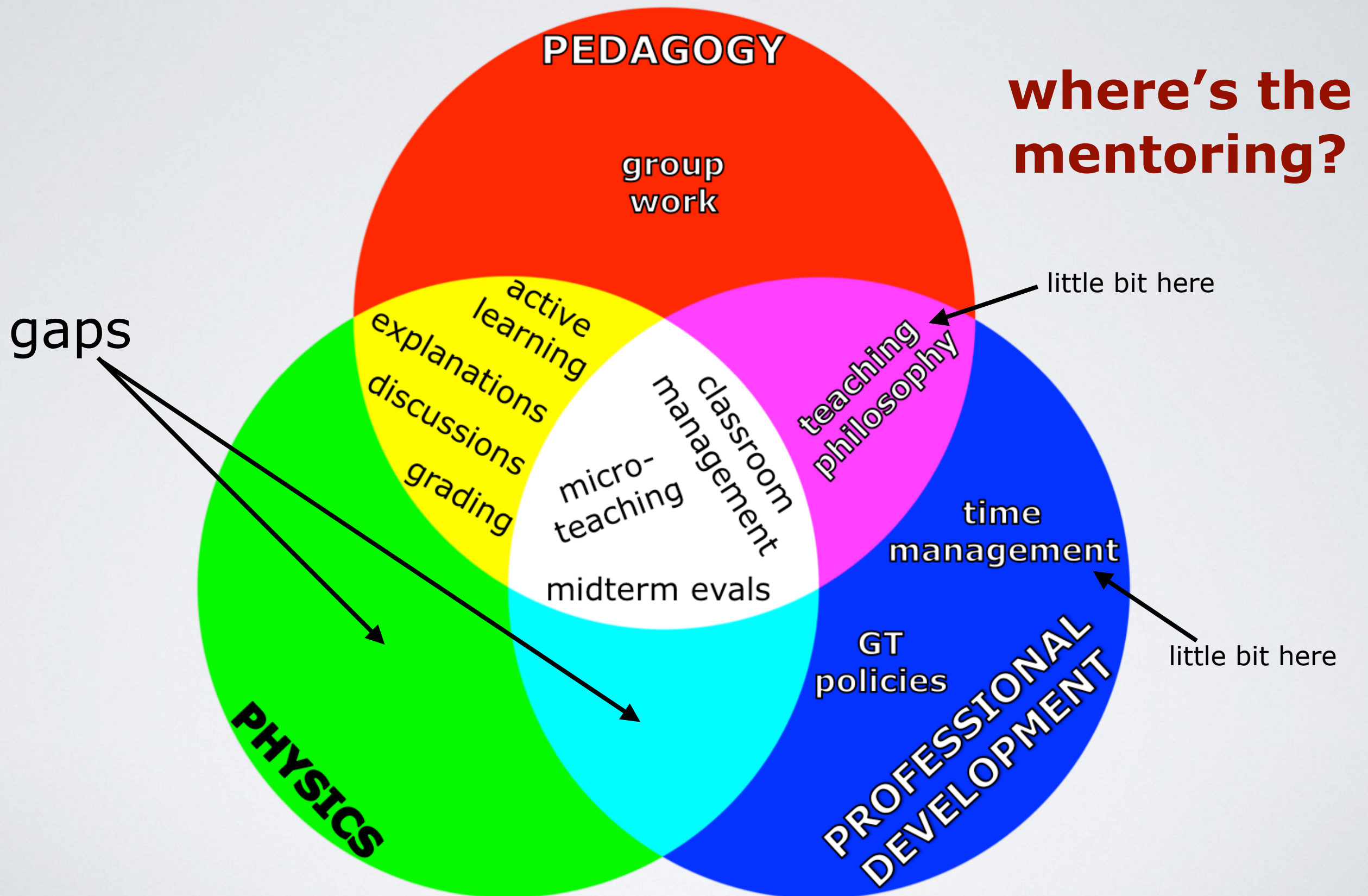
- **JumpStart to Teaching**
 - First Day of Class
 - Active Learning
 - Engaging Explanations
 - GT Policies
 - Time Management
 - Microteaching
 - Classroom Management
- **Semester Meetings**
 - Group Work
 - Grading
 - Leading Discussions
 - Midterm Evaluations
 - Professional Development (teaching philosophy)

Focus on both pedagogy **and** physics content, but **also** include professional development strategies

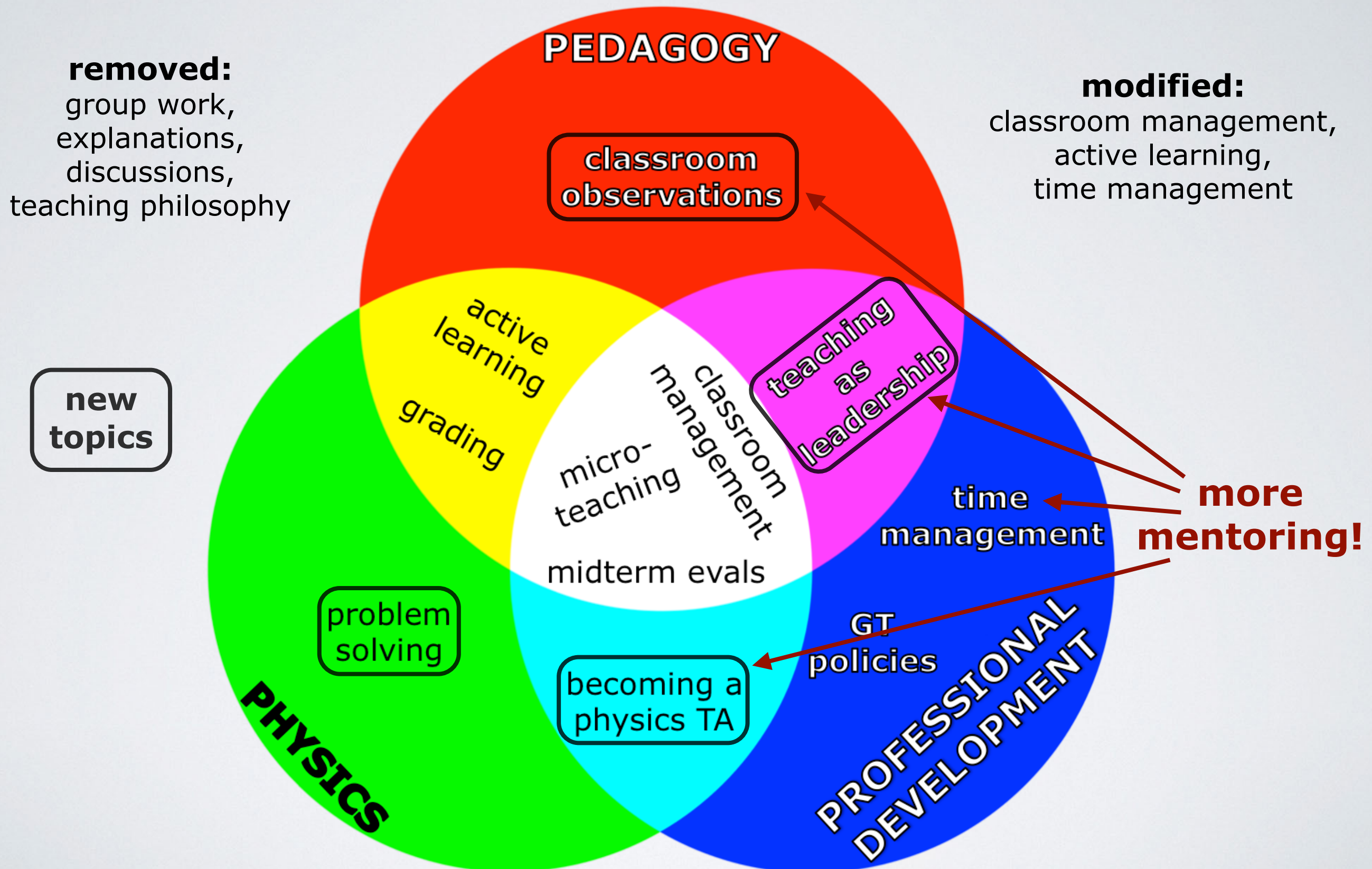
Usefulness of Course Topics



Cycle 1 (pilot): Fall 2013



Cycle 2 (current): Fall 2014



CETL 8000 PH, Fall 2014

Course Structure

- **JumpStart to Teaching**

- Being a TA at Georgia Tech
 - teaching and learning
 - physics TA identity
 - TA duties and responsibilities
 - GT policies
- Teaching Physics
 - active learning in physics
 - explanations and preconceptions
 - problem solving
- Microteaching
- Inside and Outside the Classroom
 - classroom management
 - time management



- **Application Meetings**

- Grading
- Not-So-Candid Camera
- Midterm Evaluations
- Teaching as Leadership

Mentoring TAs



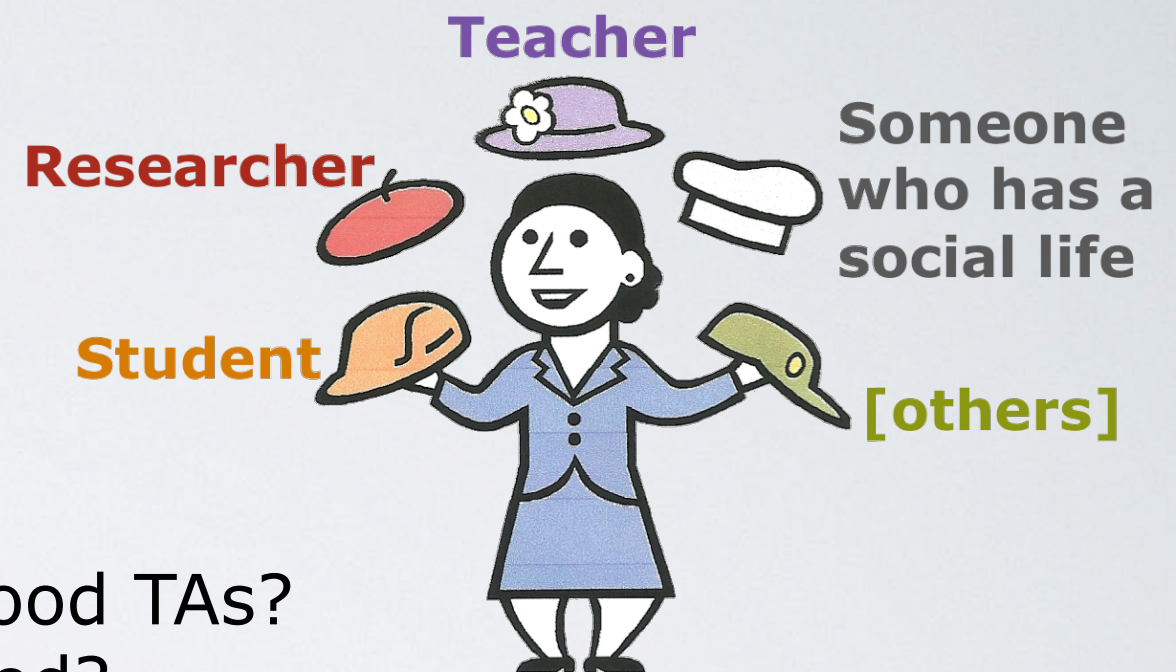
Don't throw them head-first into the deep end and expect them to swim!

- Provide **guidance** in pedagogy, content, and professional development
 - Experienced TAs can help a lot (classroom anecdotes; they know how the labs work, etc)
 - Observe TAs while teaching and give them feedback so they can reflect and improve
 - Show them how their new teaching skills can be relevant to their future career goals

Mentoring Elements (Fall 2014)

• Being a TA at Georgia Tech

- Probe TAs for their ideas on teaching and learning
- Get new TAs to think about their new roles as educators
 - how to juggle many 'hats'?
 - what will motivate them to be good TAs?
 - what kind of support do they need?
- Explicitly state their new duties and responsibilities



• Time Management

- *Where does the time go?*
- Identify essential and important tasks, and eliminate time-sinks
- Short-term and long-term planning
- Setting boundaries on TAing time

THE VICIOUS CYCLE:



Mentoring Elements (Fall 2014)

- **Observations and Feedback**

- Not-So-Candid Camera
 - ▶ new TAs watch videos of old TAs in the classroom, and critically analyze their actions
- Classroom Observations
 - ▶ every new TA is observed while teaching at least once per semester
 - ▶ option to be video recorded is available
 - ▶ mentor provides one-on-one feedback to TA



- **Teaching as Leadership**

- Help TAs identify transferable skills in teaching that can be used beyond the classroom

Lessons Learned

- **Content is Important**

- need to make sure TAs and instructors are on the same page

- **Pedagogy is Important**

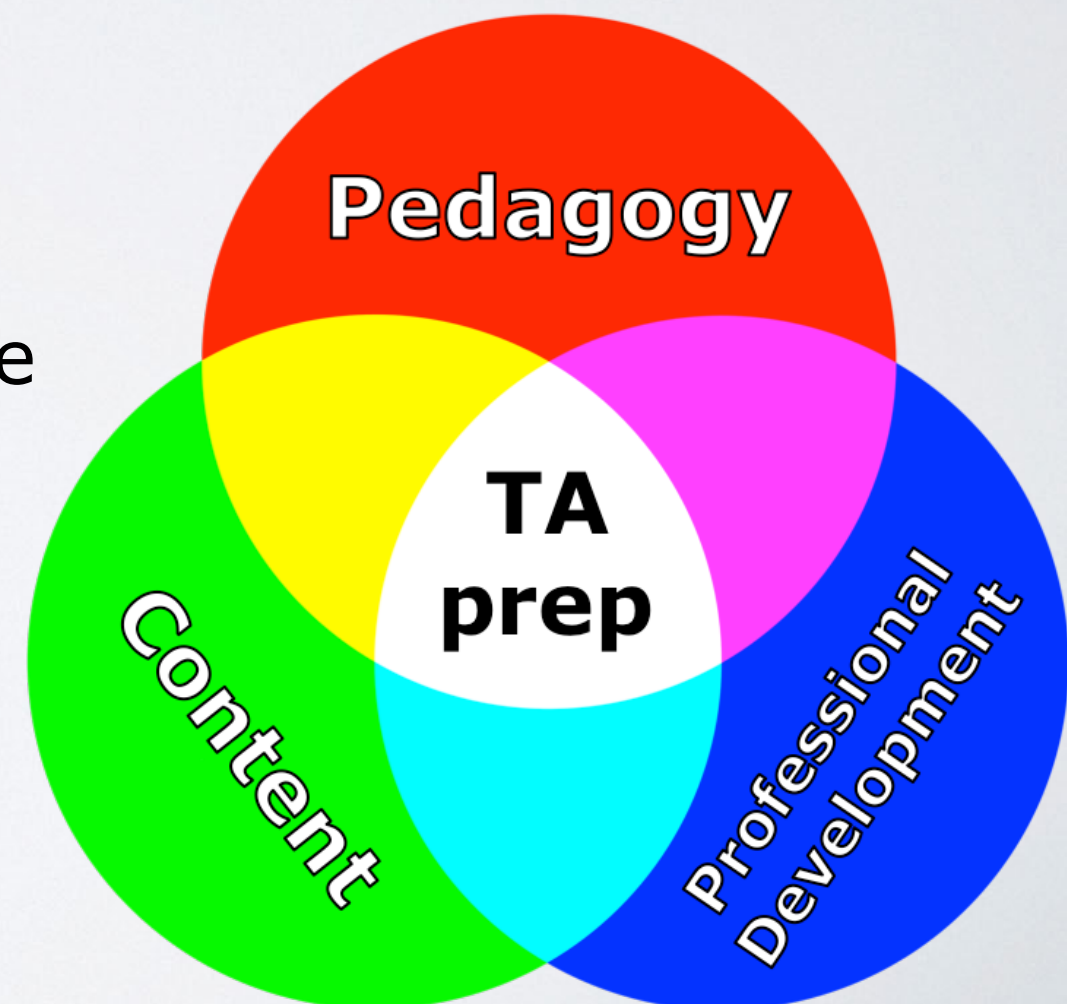
- just because they know the content, doesn't mean they know how to teach it

- **Professional Development is Important**

- better motivation when they can see how teaching helps them achieve their professional goals

- ★ **Mentoring is Important**

- in all three aspects!



What can you do?

- **What do you need your TAs to be able to do?**
 - content knowledge, teaching tasks, administrative tasks...
- **Where do your TAs struggle the most?**
 - insufficient content knowledge
 - managing time and/or setting boundaries
 - difficulty with classroom management
 - low motivation
 - ...?
- **How can you provide mentorship?**
 - be explicit about your expectations
 - guide them through what they need to know and do
 - encourage them to embrace their role as educators, both for the sake of the students and for the benefits to the TAs' future careers
 - give them feedback so they can improve
 - listen to them and provide support where needed, including referring them to more experienced TAs or campus services

