What elements of GTA development do GTAs find most useful?

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AAPT Summer 2017 Meeting (24 July 2017)
Physics GTA Preparation

- Integration of pedagogy, physics, and professional development
- Established in 2013; prepared 92 grad students to date
- Major goals:
  - Help GTAs develop and apply learner-centered teaching practices
  - Give/receive feedback
  - Manage classroom dynamics
  - Identify transferable skills useful for future career
Increases GTA Self-Confidence and Learner-Centered Teaching

“How prepared do you feel for your first GTA assignment at Georgia Tech?”

Approaches to Teaching Inventory (ATI) pre/post

Number of responses (fall 2016)

<table>
<thead>
<tr>
<th>self-reported preparedness</th>
<th>before orientation</th>
<th>after orientation</th>
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Number of responses

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<tr>
<th>mean score</th>
<th>ITTF (pre)</th>
<th>ITTF (post)</th>
<th>CCSF (pre)</th>
<th>CCSF (post)</th>
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N = 50
Improves Teaching Effectiveness of First-Time GTAs

- End-of-semester student evaluations
  - 2011-2012: No GTA Prep
  - 2013-2015: GTA Prep
What elements do GTAs consider the most useful?

- **2013 and 2014**: GTAs asked to identify top 3 most useful course topics

<table>
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<th>Rank</th>
<th>2013</th>
<th>2014</th>
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<tr>
<td>1</td>
<td>Microteaching</td>
<td>Microteaching / Midterm Evaluations</td>
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<tr>
<td>2</td>
<td>Grading</td>
<td>Classroom Management</td>
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<tr>
<td>3</td>
<td>Midterm Evaluations</td>
<td>Teaching Videos</td>
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</table>
What elements do GTAs consider the most useful?

- **2015 and 2016**: five-point Likert survey to evaluate usefulness of topics
What elements do GTAs consider the most useful?
What elements do GTAs consider the most useful?

[Bar chart with mean likert rating (2016) for different elements such as Intro & Policies, Teaching, Class Mgmt, Micro-teaching, Lab Sim, Grading, Midterm Evals, Tchng & Rsch, Teaching Videos, Workload, Survey, Class Obs, and Exp TA Obs. The elements are ranked with stars indicating their top three preferences: Lab Sim (2), Micro-teaching (1), and Class Obs (3).]
What elements do GTAs consider the most useful?

- **2015 and 2016:** five-point Likert survey to evaluate usefulness of topics
GTAs Prefer Practical Activities

- **Microteaching** consistently rated most useful course topic
- Also Midterm Evaluations, Classroom Observations
- More information: PERC Poster
- Assessing a GTA Professional Development Program

### Assessing a GTA Professional Development Program

#### Emily Alicea-Muñoz, Joan Espar Masip, Carol Subiño Sullivan, Michael F. Schatz

**Methods**

- **Classroom Observations**
- **Midterm Evaluations**
- **Student Evaluations**
- **Final Surveys**
- **Orientation Surveys**
- **Microteaching**
- **ATI Pre/Post Evaluation**

#### Results

- **Microteaching** is considered the most useful course topic.
- Students consistently rate **Classroom Observations** and **Midterm Evaluations** as useful.
- **Student Evaluations** and **Final Surveys** show positive feedback on the course.

#### Discussion

The course effectively improves GTAs' self-confidence for teaching course content and determines development strategies.

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**References**