Teaching Philosophies and Strategies

Lisa Nagaoka
Traits of a good teacher

- Enthusiastic
- Engaging
- Knowledgeable
- Patient
- Respectful
- Fair
- Approachable
- Understanding
- Organized
- Has high expectations
Roles of a TA

- Apprentice
- Employee
- Representative
# Developmental Stages of TAs

<table>
<thead>
<tr>
<th>Concerns</th>
<th>Senior Learner</th>
<th>Colleague-in-Training</th>
<th>Junior Colleague</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disciplinary Discourse in Class</td>
<td>Presocialized</td>
<td>Socialized</td>
<td>Postsocialized</td>
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<td></td>
<td>How will students like me?</td>
<td>How do I lecture, lead discussions?</td>
<td>Make complex ideas clear and without the use of jargon</td>
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<td>Give simplistic explanations</td>
<td>Talk like insiders, use technical language</td>
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<tr>
<td>Approach to Authority</td>
<td>Dependent</td>
<td>Independent or Counterdependent</td>
<td>Interdependent/collegial</td>
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<td>Rely on supervisor (course head)</td>
<td>Stand on own ideas—defiant at times</td>
<td>Begin to relate to faculty as partners in meeting instructional challenges</td>
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<tr>
<td>Approach to Students</td>
<td>Engaged/vulnerable; student as friend, victim or enemy</td>
<td>Detached; student as experimental subject</td>
<td>Engaged/professional; Student as client</td>
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<td></td>
<td>“Love” students, expect admiration, or are hurt, or angry, and personalize interactions</td>
<td>Disengage or distance themselves from students—Becoming analytical about learning relationships</td>
<td>Understand student/instructor relationships &amp; the collaborative effort required for student learning to occur</td>
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</tbody>
</table>
Content

What do students need to know?

Pedagogy

How do I teach students effectively?

Senior Learner → Colleague in Training → Junior Colleague
Teaching science to non-majors

• Improve science literacy

• Build critical thinking and problem solving

• Develop understanding of the role of science in society
Teaching science to non-majors

• Science literacy
  – Science as a way of thinking
  – Uses empirical data to evaluate possible explanations
Teaching science to non-majors

• Critical thinking and problem solving
  – Using information to support an argument or solve a problem
  – Evaluating data quality
Teaching science to non-majors

• Understanding the role of science in society
  – Important for economic, social, environmental issues
Teaching science to non-majors

• Challenges
  – Checklist mentality
  – Math and science phobia
  – Focused on right answers rather than process of inquiry
  – Not comfortable with ambiguity
First day

• Set the stage for the learning environment you want
  – Introduce yourself and the class
  – Challenge and set expectations
  – Model interactions