

Physics and Astronomy TA Training 2007

Mya Warren, Sandy Martinuk, Joss Ives
CWSEI End of Year Event

Overview

- Workshop Goals
- Content and Methodology
- Mentor TA program
- Assessment
- Summary

www.physics.ubc.ca/~phas_ta

Course Goals

- Practical
 - TAs should be able to use what they learn in the workshop in their own teaching
 - Opportunities to practice their skills
- Active Learning
 - TAs should be actively involved in creating their new knowledge
 - Discussions, small group activities

Content

- Introduction and Motivation
- Instructional Tools and Techniques
- Assessment
- Diversity and Conflict Resolution

Introduction and Motivation

- Teaching and Learning
 - TAs shared their positive and negative learning experiences
 - Learner centered teaching philosophy
- Physics Education Research
 - Carl Wieman presentation
 - Homework: Knight. *Five Easy Lessons: Strategies for Successful Physics Teaching.*

Instructional Tools and Techniques

- Lesson Plans
 - TAs created a lesson plan for an example Physics 101 lab
- Problem-Solving
 - Problem solving method activity
- Interactive Engagement
 - Socratic questioning videos
 - Working with groups

Assessment

- Student assessment
 - Marking exercise
 - Create a marking rubric for fairness, consistency, and efficiency
- TA assessment
 - Presented techniques of formative evaluation

Diversity and Conflict Resolution

- Know your students
 - Presented TAs with the demographics for Physics 100 and 101
 - How do we overcome a language barrier?
 - How do we motivate students who are not physics majors?
- International TA presentation
- Diversity and gender conflict case studies

Mentor TAs

- Mentor TAs went through the workshop at the same time as the new grads
- Each mentor has 4-5 new grads
- Observe their new grads at least twice
 - Encourage reflection on teaching
 - Encourage practice with Socratic questioning
- Also act as “course assistants”

Assessment of the TA Training

- Periodic questionnaires and formative evaluation during the workshop
- End of workshop evaluations were excellent
- End of semester evaluation indicated where there was room for improvement
 - More practice
 - Better harmonization between workshop and teaching assignments
- Other ways of evaluation?

Summary

- What worked
 - Mandatory is OK
 - Practical focus, clearly defined duties
 - Post-workshop and **post-semester** assessment
- Needs improvement
 - Opportunities to practice during workshop
 - Follow-up during semester
 - Teaching meetings