

Can You Train Large Numbers of Undergrads to be Effective TAs? An Online Training Module Approach

How can you efficiently and effectively train TAs at scale? How does this training impact TAs' grading and feedback skills?



Project Design

Challenge:

- Many units at CMU and elsewhere staff large numbers of undergrad TAs
- Training large numbers of TAs is logistically challenging

Goal:

Create online training modules focused on effective grading and feedback that could be adapted at scale in departments across campus

Modules:

- Three modules on Online Learning Initiative (OLI) platform
 - Module 1: Grading and Feedback
 - Module 2: Characteristics of Effective Feedback
 - Module 3: Rubrics and Efficiency Strategies
- Students learned about effective grading practices and were given authentic opportunities to practice applying these practices (see Figures)
- Designed to take 1.5 hours to complete

Project Evaluation

Students who completed the modules performed better on post-test



Students start with more skills in some areas than others



Pre-Test Score by Component Skill (Both Groups)

After completing the modules, students improved but still struggled with complex skills

Post-Test Scores by Component Skill and Group



Study Design:

- Computer Science (CS) used as a test case
- Group 1 ("Modules," 145): Pre-test, training modules, post-test
- Group 2 ("No Modules," 75): Pre-test, post-test
- Pilot sample (18 students: 6 control, 12 treatment) presented here

Pre- and Post-tests:

- Included conceptual questions about evidence-based practices
- Students completed authentic grading tasks



Lessons Learned

Designing the Training

- Platform and approach can be easily adapted
- Transferable for quantitative and qualitative disciplines
- Disciplinary examples require time to develop, but activities transferable

Impact on TAs' Grading and Feedback Skills

- Initial findings suggest that online modules can increase TAs' skills
- Areas where TAs struggled suggests skills to target in future modules

Considerations for Implementing with Population of TAs

- (+) Allows for targeted PD around skills TAs struggle with
- Can be used to train a large number of TAs
- Requires significant time and resources to develop (-)





We would like to acknowledge Charlie Garrod and the Computer Science Department for their support