

# Interactive Grading

**Educator:** Eric Roberts, Professor, Computer Science

**Context:** Out of class, Introduction to Computer Science

**Keywords:** grading, interviews, homework

**Student Activity Time:** 15-20 minutes per interview

*After each of the course assignments, students met with the teaching assistant to discuss their grade.*

## Introducing the Reflection Activity

Because Introduction to Computer Science is a large lecture with over 700 students, it is challenging to create opportunities to give individual feedback to students and create opportunities for them to reflect. In an Introduction to Computer Science course, first and second year students reflected on their course assignments by meeting with an undergraduate teaching assistant to discuss the assignment and what they learned from the assignment. The purpose of this reflection activity was for students to think about the assignment, think about their learning, prepare for future assignments, and engage professionally with an undergraduate teaching assistant.

At the beginning of the course, the educator informed students that part of their assignment process was to meet with the undergraduate teaching assistant who was the leader of their section to discuss their graded assignments. In each section, the undergraduate teaching assistant coordinated meeting with each individual student to discuss the assignment and the assignment grade. Before these interactive grading sessions, the undergraduate teaching assistant would grade the homework assignment using a “check system” and posted the marked up homework to the online class management system.

Then each undergraduate teaching assistant met individually for about 15-20 minutes with each student in their section to review the homework assignment and the associated grade. These meetings took place for each of the six homework assignments. In these meetings, the undergraduate teaching assistant guided the student through a reflective process about the assignment by asking questions like, how did you feel about the assignment? What might have you done better? You received a check versus a check plus, do you understand why? In these conversations, the undergraduate teaching assistants made clarifications about the grading, helped students recognize where they went wrong, and helped students prepare for succeeding in the next homework assignment.

In terms of outcomes, after participating in these interactive grading sessions, students may learn from the experience of completing the homework assignment, instead of just forgetting about it once it has passed. They may better understand the logic behind their grade. The students may be better prepared for future assignments. They also may be more reflective as they engage in their future assignments.

### Recreating the Reflection Activity

	Description
1	Recruit undergraduate teaching assistants.
2	Have a graduate teaching assistant train and oversee undergraduate teaching assistants.
3	Assign homework to students.
4	Have undergraduate teaching assistants organize and execute interactive grading sessions with undergraduates.

### In the words of the Educator: Tips and Inspiration

*Recruit a diverse group of undergraduate teaching assistants.* I believe it is important that the undergraduate teaching assistants' diversity mirrors the diversity of the student population. This feature is important because if students can relate to undergraduate teaching assistants, they are more likely to use this valuable resource.

*Recruit a strong graduate teaching assistant.* Graduate teaching assistant helps with the structure, training, and coordination of the undergraduate teaching assistants. It is important that the graduate student understands the model and has strong organizational skills.

*Understand that the training for undergraduate teaching assistants is important.* Teacher training for these undergraduate trainers is important! This training is facilitated by a mix of graduate students who were undergraduate section leaders. The training takes place in the first quarter of one's undergraduate teaching assistantship. This is a three-credit course that is front loaded in the first four weeks with teaching content, so the undergraduate teaching assistants are equipped to use these tools throughout the rest of the quarter. Each quarter these students are undergraduate TA's, they get better and better.

*Recognize the amount of work the undergraduate TA's do.* Because the undergraduate TA's are doing a lot of work, it can be challenging to retain them in future quarters. The enrollment in this course has tripled in the last few years, so everyone is working twice as hard or is cutting corners. While undergraduate TA's are usually excited at the beginning, they easily become overworked and other opportunities look more appealing.

*What was the inspiration for the activity?* I've been using interactive grading for a number of years now, even before I came to Stanford.