Peer Assessment

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What is Peer Assessment?

- Students evaluating each other's work
- Can be graded or not graded
  - e.g., reading drafts of each other's papers
  - Actually grading other students' work
  - Trade projects and try to "break" the other person/group's code

Potential Benefits

- Bloom: gives students practice in higher-order skills (in this case, Evaluation)
- Students see other students' work and are less likely to feel that everyone else knows the material but they don't
- Gives more ownership of learning and knowledge to students; students can be experts if they apply the right ways of establishing correctness (Perry)

Some Ways to do Peer Assessment

- Students exchange their work and review it. They turn in their work and their reviews. All of it gets graded.

- Students exchange work and they provide feedback. No reviews are turned in for a grade.

- Student work is shown to all. All critique it in a full class discussion.

- Pairs, trios, larger groups.

Calibrated Peer Assessment

- More appropriate for large classes
- Assignment of reviewers is random. Some number of reviewers (e.g. 3 to 5) are assigned. Then the reviews are reviewed. Grades are assigned based on reviews, calibrated by the meta-reviews.

How I do it in Algorithms

- Students work in groups of 3 or 4.
- Half of the groups are given a normal homework problem to solve (1 week).
- I post the solutions of all 5 groups on the course web site.
- <u>All</u> groups critique <u>all</u> the solutions, even the groups that solved the problem (1 week).

How I do it (cont'd)

- A critique consists of a description of the general approach of the solution, a list of major and minor errors, and a score (0 to 10).
- On the day critiques are turned in, we have a discussion about it (30-40 minutes). Usually we can discuss 2 of the 5 provided solutions.
- I grade both the solutions and the critiques.

Other Details

- I provide a guide for how to do peer assessment for the algorithms class.

- I ask students to use the same grading scale as I do for the class.

- When having the discussion, I have an opportunity to explain my grading criteria.

- I switch up the groups half way through the quarter.

Other Effects

- By working in groups, they talk about the material more (commuter campus).
- Students see their work from the professor's point of view.
  - "I can't imagine grading 30 of these things."
- Students seem to pay more attention to details.
- The <u>hope</u> is that students apply the same critical eye to their own work.

Challenges

- Any teaching technique can be done poorly.
- Advice:
  - Make clear why you are doing this
  - Make clear what they are expected to do and when things are due
  - Handle the discussion (if you do it) with care; ask students to have respect for each other's work but also be critical

Discussion

- Do you do anything like this?