

Mechanics VCP Session 4 (April 25, 2013)

Breakout Session and Chat Notes

Breakout Session 1: Let's compare homework practices.

Group 1

- Steve: by sections in the text - about 8 problems weekly; collect (yes or no grading) - 10% total grade for HW. Time issues in grading. Collected with exam; Goes over key HW problems in class. Balance between doing it and solutions manual. To help them on quizzes and exams.
- Christine: Has tried different approaches; online HW systems - not too happy; will go back to weekly quizzes
- Depends on class sizes:
- Matthew: about 50 students; weekly HW. 10 total sets. Very similar problems to exam problems. Gets them from a variety of sources. Takes at least one problems similar to HW.
- Quizzes, Has a grader. (detailed grading)
- Common problem: solutions manual
- Going over HW problems in class. Encourage attendance..

Group 2

- Homework assigned
 - one hw per chapter (12 homeworks per 14 week session, around 5-9 problems per set) (56 students in a class)
 - 4-8 homework problems per set (similar time of effort per set) 10-12 sets per 16 week session (65 students in a class)
 - 5 problems per week, 14 weeks (90 students in a class)
- Homework graded
 - on paper, graded by TAs (stresses engineering recording and attention to detail, required format)
 - online with mastering software for Solid Mechanics, all by hand in Statics
 - 5 graded by TA (online quizzes before that to demonstrate techniques before doing homework, 25 topics per 14 week sessions)
- Process or numerical answers:
 - both
- Homework Problems for in-class problem sessions:
 - sometimes in groups, sometimes taken up and given bonus points for future tests
 - never graded, sometimes
 - students are working on homework-type problems, but they would be different than homework problems.

Group 3

- Joan- In statics- every class, in Mechanics of Solids - every week, doesn't do HW during class, gives answers not solutions, allow students to work together.
- Barb- weekly HW assigned weekly, even if there is an exam, TA study sessions, TA grades HW process and ans including units, sig figs, sketches
- doesn't do HW during class, gives answers not solutions, builds comraderie when students work together on HW, 15% of grade
- Mazen - HW every two weeks, no grades since it could be a group effort, exam problems similar, solution posted on BB, not dealt with in class.
- Brian - Connect problem before lecture

Group 4

- Homeworks could be assignmened on weekly basis. Also, they could be assigned for each chapter of the textbook.
- Online homework assignments are not totally safe from cheating and should be handled crefully and given proper weights for grading purpose.
- Emphasis should be placed on the process of soultion and the reason behind numerical errors.
- Problems similar to homework problems are used in classroom sessions.

Group 5

- A mix of hard-copy homework and online homework.
- Some frustrations with online homework.
- A homework graded by format only yields a much better product if the students are concerned with a clear process. Decreases paperwork and frustrations with messy, unclear work.
- Approximately 2-3 problems assigned per lecture with varied due dates (Carisa's due every class period and Ken's by chapter)

Chat Window Activity

(discussion about small group work and peer feedback and clickers...)

Anna Howard: Students working in small groups means that you get peer feedback without having it be a big deal. A gentleman drawing an FBD who gets reaction forces incorrect at a pin gets a gentle reminder on the spot by a peer. Very low stakes.

Anna Howard: I liked the notion that "Formative" is feedback while there's still time to change but "summative" is after the end of the topic.

Ed Davis: Some forms of assesment are hard to get students to participate in without a grade at stake. i.e. they do not care and thus you get meaningless results.

Ed Davis: I dissagree when I use clickers with no grade I get less than a third of class even participating.

Matthew Jensen: one thing I did with the clicker questions is make it a participation grade. As long as they answer they get credit, but I didn;t care how they answered

Anna Howard: I give one quiz with the clickers every day which is graded and 2-4 others which are graded on participation. In general people seem to take it seriously.

Christine Masters: I also use clicker responses to 'grade' participation but do not use data on right or wrong answers

Rick Hill: I think sometimes students don't respond if they don't know the answer, but that doesn't mean they aren't trying

Christine Masters: I agree they won't even bother to bring hte clicker to class if the lack of any response has not bearing on their grade

Anna Howard: One thing you might try: include a choice at the end of the multiple choice of "I really don't understand what you're asking me."

Anna Howard: Both And. Not either or

Caris: I'm not currently using clickers but I verbally polled my class the other day how they feel about them and received very loud groans. I am still very curious but it seems that maybe they have had a previous bad experience

Caris: I appreciate this discussion and feedback

Anna Howard: Research shows that how you use the clickers really does change how the students feel about clickers.

Anna Howard: If you're using them for really stretching the concepts and giving credit, students don't mind. Students hate buying something for which they get no perceived benefit except for attendance.

Caris: true. thanks!

(discussion about online homework platforms...)

Joan Dann: Connect vs Mastering? any opinions?

Rick Hill: how much do these online systems cost?

Anna Howard: A lot of textbooks include online problem sets of some sort. Mastering Engineering, etc.

Rick Hill: Do they verify somehow that you've adopted that book?

Rick Hill: I currently don't use a textbook

Joan Dann: Students register when they buy the text

Rick Hill: ahhh

Joan Dann: You can buy it separately though.

Edward Berger: I've not used Connect, but I do use Mastering quite a bit. I have somewhat mixed feelings but on balance I like it.

(general discussion about concept questions, people, research...)

Edward Berger: Mike Prince from Bucknell...

(and about why it's important to explain to students what you are doing--some of them do not exactly appreciate your perturbing their environment...)

Anna Howard: Definitely not. Not at all appreciative, even if their grades go up.

Anna Howard: But the resistance can be over come.

Edward Berger: Diffusion of INnovation, Rogers

Anna Howard: Nametags actually do help.

Edward Berger: Anna--nice idea! I have a colleague who has students sit in the same seat every day so that he can make a map of the class and use students' names.

(discussion about generating concept-type questions...)

Edward Berger: Great idea to generate questions based upon misconceptions among your students.

Edward Berger: A great benefit of frequent and diverse assessments--ABET!

Edward Berger: Paul Steif: statics concept inventory.

Anna Howard: That is such a common frustration for me, Barbara. "I'm not even sure what they're confused about." It's one of my bigger frustrations with water pressure.

Ed Davis: They are not sure what they are confused about either.

Edward Berger: Another great idea--bring physical demos to illustrate strains and deformations.

(discussion about ranking tasks...)

Edward Berger: Ranking tasks in physics: http://www.amazon.com/Ranking-Task-Exercises-Physics-Student/dp/013144851X/ref=sr_1_1?ie=UTF8&qid=1366915975&sr=8-1&keywords=ranking+tasks

(link to Diffusion of Innovations book...)

Edward Berger: Diffusion of Innovations: http://www.amazon.com/Diffusion-Innovations-5th-Everett-Rogers/dp/0743222091/ref=sr_1_1?s=books&ie=UTF8&qid=1366916011&sr=1-1&keywords=diffusion+of+innovations

(Christine linking to her useful ipad software...)

Edward Berger: Christine--what's the name of that software?

Christine Masters: Doceri