Mechanics VCP Session 8 (August 15, 2013)

Session Notes and Chat Notes

What are your plans for the fall? What are you teaching and what innovations do you expect to implement?

- Carissa: honors section of statics, will try some flipping and is also taking some clicker training
- Joan: teaching civils in statics and intro to engineering; developing concept questions for use in class
- Matthew: statics, hoping to engage his students more via active learning
- Christine: partial flipping, focus on development of materials and resources to use for future flipping
- Jenny: Iowa state lecturer, SOM in fall, 3rd semester doing it, tried flipping in the spring and it was too time consuming, this term backing away from full flipping and doing something that works for both instructors and students-- had tried in the spring to go without a textbook, but students wanted a text with a fixed notation and vocabulary
- Ken: flipping classroom this fall (statics)
- Mousa: statics and SoM, 70 students, think-pair-share and other active learning
- CY: statics, dynamics, project course; will use group problem solving and the big project in the project course, maybe some concepts questions
- Anna: statics, large online presence with classroom capture and flipping and things; she will teach 340 students entirely flipping (3 sections + 1 completely online only + 1 synchronously linked to students at another institution)
- Rick: dynamics, had used peer instruction in the past and will continue, will be a little more open ended in assignments, will add some visualization/animation components; wants to do a better job assessing student learning; will flip his controls course in the spring
- Scott: structural mechanics in the fall, group problem solving and more hands-on demos
- Steve: SoM (22 students) + 4 other different classes; wants to do more peer grading and peer tutoring, use physical models and demos
- Taher: statics, senior design, and concrete; peer instruction and more project activities
- Jon: mechanics of solids (one class, 9 sections, he teaches one of the 9), all students take same exams, HW, etc.; can be hard to implement changes b/c need to keep the uniformity across sections; more demos and more group problem solving w peer support/instruction component

Ideas to explain changes in approach/pedagogy to students:

- Anna: direct approach, simply telling them that this is how the class is executed.

- Rick: connect the idea of active, collaborative learning to career pathways and the importance of teamwork in engineering.
- Taher: explain the connection between mastering mechanics and professional success by citing the PE exam and its requirements

Chat room notes:

Anna Howard   12:41 PM

Question: when you are facing a crew of students whose main purpose is to survive the class rather than learn the material, do you find that telling them the learning is better is not very motivating?

Rick Hill   12:43 PM

I provide students handouts, but keep them incomplete to encourage them to stay involved

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Ed Berger   12:46 PM

Anna--I do have a sub-population of students in that category. I'm not sure it really motivates them, because they don't have the intrinsic motivation that's so important to productive learning. But Brian is right about finding other ways (i.e. to encourage networking within the student population) to get them to buy in.

mousa gargari   12:46 PM

Open-book or closed-book exams which one do you prefer?

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Ed Berger   12:48 PM

Mousa--I like closed, but I give students a small formula sheet (that I compose) and I give it to them in advance of the exam so that they know what's on the sheet. They can then take whatever necessary steps to prepare.

Anna Howard   12:59 PM

Mousa: I teach Statics and in general I figure that the students need to actually know this stuff without having to look it up as they get to further classes.

Michael   1:00 PM

Make sure that you go back to the Adobe Connect so that the users are familiar with it.

Anna Howard (response to discussion about posting concept questions) 1:01 PM

How many questions would you like us to post?

Brian Self   1:02 PM

The more the better (I do realize there are time constraints)! Eventually it would be wonderful to have a huge repository that everyone can share.