

**NSF Material and Energy Balance (MEB) Virtual Community of Practice (VCP) – 2013
Individual Project Summary**

Name: Mike Benton

University: LSU

Number of semesters you have taught the MEB course: 6

Summary of your fall implementation activity:

I attempted to change my class on two fronts. One I used Sapling learning. This enabled students to get unique homework questions in real-time and with instant feedback. The homework correlated with the sections we were covering in class with Felder and Rousseau so the students were able to immediately apply what they had seen/practiced in class. Second, I made preliminary steps toward flipping the classroom. I spent more time on example problems this semester and allowing students to work together on the problems in class. This enabled the students to get more feedback from me in class on difficult problems.

What worked well? Feel free to share qualitative and quantitative assessment results, if any, to describe student performance.

Both worked fairly well based on informal feedback I have received from students (I won't get course evals back for a couple of months). The students liked Sapling problems because there was a lot of explanation and they could work the problems on their own timetable. They appreciated having more examples in class. My course grades were actually about 1.5 points lower on average than they were last semester.

What could have been improved?

The grading on the Sapling problems was tedious at times. A small sign error or rounding error often resulted in the students failing a quiz, since they are graded by computer and errors early in a problem often propagated.

My class had two sections with about 90 students each. Our desks were mounted to the floor in stadium style seating. That made it hard to work on problems in groups.

I didn't have any true TAs that could come to class and help give feedback for the students while they were working problems. It is hard for me to give good mentoring to 90 students at once during a 50 minute class.

What would you do differently next time?

I will use Sapling more qualitatively due to the difficulty in grading some assignments. I will do my best to find a classroom with multiple seating arrangements so we can move desks around. I will attempt to do more lecturing offline (LSU has cool software like Kaltura to help with that) so we can devote more class time to group problems.