

Mid-Semester Active Learning Intervention in Organic Chemistry

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Question: What do you do when “what’s always worked” stops working?

49% of Spring 2012’s section of CHM303 earned a D or F on Exam 2 (before Spring Break). In my tenth semester teaching 303, I had made no changes to pedagogy or materials for several semesters.

Answer: Try something new – fast!

I’m engaged, but are they?

CHM303 is: 7:45 a.m.... notoriously hard class... non-majors.... lots of memorization. Students also draw mechanisms: electron movement in reactions. I provide notes templates and walk them through everything. But...what if they aren’t really “present?”

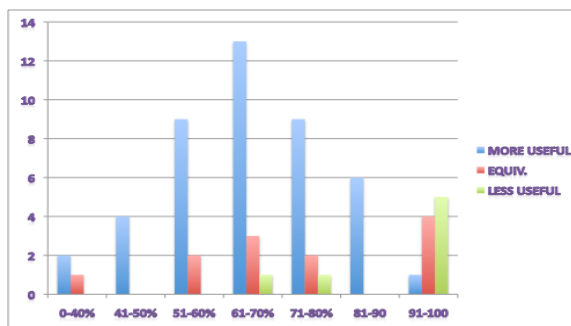
Theory: Accurate, disengaged note-taking may be occurring

Experiment: Stop teaching and start coaching

I threw out my notes template. Instead, we re-worked 2 earlier substitution mechanisms. Then they **worked with a neighbor to PROPOSE a substitution mechanism for a new type of substrate**. They reasoned it out based on the known mechanisms; I wandered, made suggestions, and drew it out at the end. We did 3 lectures this way.

Student reception to the new method?

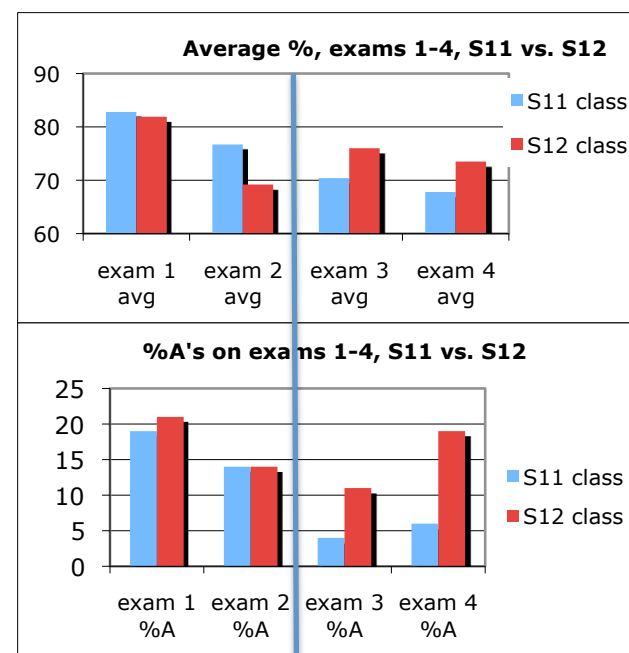
Students most challenged on exam 2 liked the new “lecture” style more than the old – even before they knew whether exam 3 would go better!



Exam 2 score

And the resulting grades?

A turnaround, compared to the prior spring!



New method began