

Learning and Teaching Conference 2012

Abstract 7C

Trying to understand how I doubled the pass rate in a first year course

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Over the last four completed Sessions for a first year service teaching course on physics the pass rate has fluctuated (in rounded figures) 40%, 67%, 38%, 95%. The teaching approach was changed each year too. Since it is reasonably certain that the fluctuation has not been in the quality of the incoming students, and the teacher has not changed, it seems that a winning design has now been found.

This talk describes five explanations of the success, and how well available data supports each. These are:

- 1) "Teacher monitoring": active monitoring of and commenting on each student's work (whether it is handed in, what marks it gains) by the course leader, which may give a student a sense of being "known" and noticed.
- 2) "Self-regulation". All students necessarily manage their attention and effort, but how they do so makes a big difference to their eventual performance (cf. "time on task"). Aspects of the course support this better than previously.
- 3) "2-dimensional feedback": In HE, most feedback gives a student a sense of how they did compared to the other students in the class. In schools, students often get "ipsative" feedback that comments on how this work compares to their own work on previous assignments: an independent dimension of comparison (within-students comparison). This course, unusually, offered a degree of both.
- 4) A careful redesign of the opening section of the course meant that (most) students began with an experience of successful learning, instead of being puzzled and unsuccessful at the first topic. Perhaps early success sets a student's expectations and elicits more successful effort and learning later on.
- 5) In previous years there was typically one student clearly better than the rest. In the most recent year, there were several of these. A single egghead may be dismissed as a model of what is possible, but a group sets a tone in the class of doing well that pulls the rest upwards."

Outcomes

By the end of this presentation attendees will: • Be aware of a dramatic case of

improved student learning outcomes • Engage with ideas about the possible underlying causes