

ASM-CUE 2011 Pedagogy Session

Enhanced Learning: Saying More by Saying Less

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Lecturing continues to be the dominant format for delivery of science course content, including microbiology, at the collegiate level. While lectures provide instructor control and transmit information effectively, they do not tend to promote critical thinking yet paradoxically require listener interpretation/processing for effectiveness. Research demonstrates that audience attention and amount of note-taking drops strongly after approximately 15 minutes of continuous lecture, and student recall of lecture material is typically poor. The good news is that pausing during the lecture tends to allow audience attention levels to rebound, and instructor-student and student-student interaction has been shown to enhance recall. This session will discuss and demonstrate tools the presenter has utilized personally that can be incorporated into lecture pauses which 1) actively engage the students, 2) help them process the content more critically, and 3) help the instructor rapidly assess the level of student understanding. The tools will be presented in a series of increasing time requirements, sorted by goals, so participants can select tools according to their instructional needs.

Outline

I. Introduction & Lecture pausing

II. Tools

A. RATS - Rapid Assessment Tool using Signing

B. Visible Quiz

C. Think-Pair-Share

1. Basic method

2. Variations: mini-case study, think-pair-square

D. Two-Minute Essay

E. Concept Mapping

III. Sequenced Writing

IV. Wrap-up

Resources

What the Best College Teachers Do, Ken Bain, Harvard University Press, 2004.

Creating Significant Learning Experiences, L. Dee Fink, Jossey-Bass, 2003.

Engaging Ideas, John C. Bean, Jossey-Bass, 2001.

What's the Use of Lectures, Donald A. Bligh, Jossey-Bass, 2000.

Eberly Center for Teaching Excellence @ Carnegie Mellon

<http://www.cmu.edu/teaching/designteach/teach/instructionalstrategies/lectures.html>

Center for Teaching and Learning @ UC Santa Cruz

<http://ctl.ucsc.edu/resources/tips/tips-active.html>

Center for Research on Learning and Teaching @ University of Michigan

<http://www.crlt.umich.edu/tstrategies/tsllc.php>