Lessons Learned from Teaching Large Classes

Introduction

Teaching large classes can be intimidating, especially for new faculty who may have never taught before. This teaching tip is presented by two faculties in the Department of Agricultural and Applied Economics (AAEC) at Virginia Tech (VT). Both Marchant, a Professor who has taught classes since 1989, and Morgan, an Assistant Professor who is new to academic classroom teaching, are graduates from VT's Center for Instructional Development and Educational Research (CIDER) year-long certificate programs—large class and new faculty-- (http://www.cider.vt.edu/development/). Both teach large AAEC classes, which include students from a variety of majors. Thus, key challenges include teaching logistics for large student numbers, as well as maintaining student interest in course content for non-majors. This teaching tip highlights key lessons learned through these CIDER teaching certificate programs and their own classroom experiences—both general lessons on course design, lesson plans, evaluation and student engagement, as well as specific large class management strategies. The overall goal is to provide teaching tips that readers can immediately use in their large classes.

Procedures

Examples of lessons learned include the following, many of which can be applied to any class size:

General Lessons:

- To take a systematic, strategic approach to teaching. All items should align and be connected: the purpose of the course, learning outcomes and objectives, lesson plans, and assessment. "Instructional Design involves systematically planning, developing, evaluating, and managing the instructional process, based on principles of learning and instruction" (Doolittle, 2015c). For example, each step should build upon one another: the purpose of the course directly relates to learning outcomes and course objectives, which feed into developing lesson plans and ultimately assessment.

- Evaluate based on what the instructor wants students to learn and align with specific course learning objectives. Evaluations should place the greatest weight on the most important learning objectives. Grading should be based on student performance demonstrating knowledge of these learning objectives. The main function of assessment is to improve students' learning (Doolittle, 2015c). However, improved instructor awareness of the individual students' goals for final course grades provides additional motivation for concise communication of course assessments and associated grade weights at the beginning of the term.

- Student engagement amplifies student learning. Learning is based on the ability of students to process course material, e.g., in-class "think-share-pair" or out-of-class group projects (Doolittle, 2013a and 2013b). Group projects that include class presentations/papers or executive summaries serve to meet the skills employers want graduates to possess—team work and communication skills (Crawford, et al. 2011).

- "The single most important variable in promoting long-term retention and transfer is "practice at retrieval" (Halpern and Hakel, 2003)."

- Break up the class session into segments. Use active learning activities during class to reinforce lecture. Employ different physical senses—think/listen/physical movement (Doolittle, 2015a; Halpern and Hakel, 2003; Heppner, 2007). Audience response systems (ARS), or "clickers" are an increasingly popular tool used to deliver curricula and educational content across diverse, heterogeneous audiences while providing instant data on learner understanding. Using ARS data

during a lecture provides the instructors with the opportunity to encourage guided discussions based on "teachable moments" while minimizing the risk of "tangent" or "off-topic" discussions which tend to plague larger audiences and disrupt workshop timetables. (Morgan and Maples, 2015).

- Include activities to create a "sense of community," ownership and accountability, particularly for large classes. Examples include learning students' names, developing a rapport with students, being responsive to student e-mail, talking with students before and after class, out-of-class review sessions and demonstrating support for students (Doolittle, 2015b; Marchant, 2014 and 2007).

Specific Class Management Lessons:

- Always begin class with an engaging and enlightening example that is related to covered material.
- Clearly describe course objectives and schedule of assignments listed in the syllabus that do not change throughout the course.
- Do not offer extra credit or participation points.
- Use a point system for grades (e.g., 1000 total points) so students know their scores throughout the semester.
- Choose graded assignments that motivate students to review their notes and readings.
- Restrict the use of laptops and/or electronics devices in class. Consider creating an "electronic zone" in the back of the room to avoid distracting neighboring students.
- Implement a peer review evaluation system for group projects that affect individual student grades.
- Provide partial class handouts posted prior to class and completed during lecture. This frees up time for more in-class discussion and encourages attendance.

Assessment

By implementing the above strategies, impacts included integrated courses—where assessments were linked to course learning outcomes and weights reflected topic importance; increased student engagement, through in-class exercises as well as out-of-class group projects; and ultimately, enhanced student learning through activities that are designed for students to research and process information that reinforce class concepts.

In closing, please allow us to promote Virginia Tech's teaching conferences sponsored by the Center for Instructional Development and Educational Research: a general teaching conference typically in early February and a large class conference in July (http://www.cider.vt.edu/). We would love to have you attend.

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