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Teaching Large Classes – Best Practices

Below are a series of recommendations put forth by participants at a faculty seminar on "Teaching Large Classes," held at the Sheridan Center in January 2005. These recommendations are organized around the following eight major issues which often plague instructors of large classes: (1) surviving a "bad" TA, (2) grading uniformity, (3) providing individualized/personalized attention to students, (4) determining the appropriate "level" at which to introduce/present material, (5) dealing with students who do not understand the material (6) fostering class participation and discussion, (7) assessing the appropriate role of technology, and (8) the "value-added" for students in attending lectures. If you have further contributions to this list of best practices for teaching large classes, please send them to Sheridan_Center@brown.edu.

Surviving a "bad" TA

Catch TA problems early.

Make visiting TA-led sections routine; offer useful feedback soon after the visit; provide the feedback privately to the TA.

Have the "problem" TA visit the sections of other TAs to get ideas on how to be more effective.

Reduce the negative impact of a poor TA by rotating the grading and section assignments among the TAs.

When possible, preselect graduate TAs (this may be a touchy issue) or supplement teaching staff with undergraduate TAs who you are familiar with and know will do a great job.

Sometimes graduate TAs are assigned to courses because THEY need the training rather than because they would be the best TA for that course.

Grading uniformity (when dealing with graduate/undergraduate TAs and graders)

Use a grading rubric.

Provide examples of appropriate point or grade assignments to all TAs.

Before turning the TAs loose to grade papers, circulate a sample of papers and have each TA grade them independently using the rubric. Devote a TA meeting to discussing and resolving differences in grading on that sample.

Personally review very low and very high grades before papers or exams are returned.

Providing individualized/personalized attention to students in large classes

Learn students' names insofar as possible, and call on students in class by name.

Make sure to stop lecturing 2-3 times per class meeting and ask for questions or comments. Stand there for as long as it takes (even if silence gets embarrassing for everyone) until you get a question. The next time the questions will start coming right away.

Try to read the faces of the students – it's often very easy to tell who understands and who doesn't. Ask a student who looks confused to articulate a question that will help make the ideas clearer.

Have a 3-4 minute break midway through a class (this is easier in 80 minute classes). Often students will come up front and have questions about material just covered, which may indicate a fundamental misunderstanding that other students might share. You can start off the second half of the class by posing these questions and providing answers.

Take opportunities to get feedback (even in survey form) on how the course is going and what the problems are.

Reply to all emails within 24-hours (12-hours is better).

Send emails to everyone in the class from time to time to give them important information. (WebCT is very useful in this regard.)

Write notes on everyone's first (and 2nd) exams when returning them - congratulations to people who did well, offers of help to those who did poorly, and for the latter follow up with an email invitation to come in and talk and get help with more effective study strategies.

Determining the appropriate "level" at which to introduce/present material

Aim lectures at the middle 50% of the class.

Provide enrichment activities and materials to maintain the interest of the top 25%.

Keep close tabs on the bottom 25%.

Supplementary material can be made available through an on-line discussion board or course website.

Keeping in mind where most of the class is, provide different levels to the same story - big picture, intermediate picture and detailed picture. Some of the class will not follow you into the more detailed topic but they will have most of the story and the key "take home" messages from the detailed material. Students struggling with the most difficult aspects can pick it up at sections, office hours, or additional reading. Create exam questions that mimic this multilevel approach and allow all students to demonstrate their level of understanding – make some questions more straightforward and include others that push the limits of student knowledge.

Use the on-line discussion/bulletin board as a forum for discussion of advanced topics. Post interesting, more advanced additional material that ties into the course material. Be involved yourself and get TAs to help liven it up. This may be a great way to focus the efforts of a TA that is having trouble in the classroom.

Dealing with students who do not understand the material

Advise these students to form (small) study groups where they actively discuss the material; provide a room in your building to be used as a `drop-in' room, which is less intimidating than a professor's office.

Advise these students to get a tutor (maybe suggest someone yourself - perhaps an undergraduate TA).

Provide (optional) study questions for the students to `practice' discussing with one another and writing out answers to.

Fostering class participation and discussion in large classes

(See entry on taking a break to field questions – listed under "Providing individualized/personalized attention" above)

Encourage the use of a class discussion/bulletin board by checking it often, and by responding promptly to student questions and concerns.

Assessing the appropriate role of technology

Technology is good for some things and not for others. What it's good for will depend on the course subject-matter.

Remember that lecture material should be presented at a "real time" rate – the rate at which students can process the information and take reasonable notes.

Remember that taking thoughtful notes has an educational value – students are more likely to understand and remember information if they've gone through the step of summarizing it (not transcribing it verbatim and not just passively reading along through a set of slide printouts) in their notebooks. So make sure that the pacing allows for this process.

Technology is really good for mass communication (posting or sending out announcements), contacting students and having them contact you, and for making some kinds of content available.

Technology is really good for making course-related resources from the Web available to your students.

Technology can be good for handling the details of a large course that would otherwise occupy altogether too much time during the class meetings (e.g., collecting and returning homework and papers, posting test score distributions, making announcements, etc.).

Technology tools are essential to doing meaningful work in many fields. Students ought to be introduced to and taught to use discipline-specific software.

Simulations and demonstrations, available as software tools or on websites, provide important additional ways for visual learners to engage with difficult material. Using technology is a way to support different learning styles.

Be judicious in your use of PowerPoint. Do not use PowerPoint as a projected-textbook, e.g. as putting finished information in front of students. Especially never project PowerPoint text - use it to show visuals that cannot be drawn on the board. Always think about use of PowerPoint in terms of the course goals and desired outcomes: what you want the students to be able to 'do' themselves at the end of the course: just to 'recognize' (identify) different features, or to be able to analyze, think critically, and sketch relations themselves?

In large classes, many students will be seated far from the board at the front of the room. Writing clearly on chalkboards and even overheads can be difficult. A drawing tablet or

tablet PC allows you to write on your PowerPoint slides with a stylus pen to annotate or allows you to simply use the computer projection system as a big, bright, multicolored whiteboard for hand-written notes and diagrams.

The "value-added" for students in attending lectures

Have in-class pair-share questions and pair or small group activities.

Don't post on the course website every word you utter, but do post copies of handouts, diagrams, etc.

Give paper handouts of things that are too complicated to copy from the board or projection screen. Never make the handouts self-explanatory - instead leave plenty of white space to allow students to annotate and take notes based on the lecture.

Don't post important announcements right away on the course website unless there is some critical time-dependency (which there almost never is). Students who come to class have the advantage of knowing about these things sooner than those who don't attend.

Give regular low-stakes quizzes starting in the second week of the semester. This helps students tell whether they are "getting it" or not; it also helps the instructor know whether the class is "getting it." Students who score poorly are directed to come to office hours (the instructor's or the TAs') every week until the first exam to go over the lecture material and work on homework.

Do all these things and make it very clear to students from day one that they will be missing info if they do not attend lecture – put this in the syllabus, and announce it on day one.

Put past exams on WebCT. Tell students to look at these exams to familiarize themselves with the format, the level of detail, amount of questions, etc. Students can self-test if the content from year to year is similar enough. It is also important to post exams for all because there is always a subset of students who will have them from previous years.