Meeting the Challenges of Larger Classes

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Many faculty members at the University of Toronto are confronting the challenge of teaching larger classes than before. This document offers suggestions from some of our colleagues here who have already been there and done that with success. It also points out some useful resources-both on the web and in print-which provide more detailed advice and analysis.

It should not be assumed that the suggestions will work for everybody. An instructor who feels uncomfortable with or unsure about a particular teaching technique may well communicate that discomfort and undermine its effectiveness. Some classes may react unpredictably to some of these suggestions, too. If there is one message that this document communicates, it should be this: **all characteristics of a teaching performance or style are magnified in a large class setting**. Fumbling with notes or struggling with equipment may be accommodated as charming eccentricities in a small class where the instructor's engaging personality and deep understanding emerge in personal interactions; but they may be interpreted as rank incompetence and time-wasting from the back rows of the large class. A well-timed moment of humour in a small class may get a gentle chuckle, but it could bring a huge class together in a tension-releasing gale of laughter.

Tips for Teaching Large Classes

1 **Make sure that the lecture rewards students for being present.** If the experience of the lecture itself offers little to supplement the text of the lecture, or written notes, or Power Point slides mounted on a course website, then students may not see the point of coming. Enhance the affective side of teaching and learning. This may entail more of a planned effort to reveal your personal side than in a small class, where this can happen more casually and naturally through classroom exchanges and discussion.

Introduce personal anecdotes as illustrations of concepts or models. A crisp, stripped-down, business-like style reinforces the sense of distance and alienation that often draws complaints from students in very large classes. Human touches, delivered in natural language, help reduce that distance.

The lecturer can model the skills that students need to develop, whether it be critical debate, writing up an experiment, mathematical analysis, reading aloud of Old English poetry, or the development of an archaeological interpretation. Again taking students through an analytical or interpretative process in natural language and in a personal way makes it worth their while to be present.

Do not hide enthusiasm for the subject matter. If you have none, then the course or lecture needs rethinking. Stage your lecture to give yourself natural breaks in order to avoid overtaxing your delight.

Consider the lecture as a staged performance. This means projecting well, staying alert, using the space fully to your advantage, using humour to relax tension and bring the class together, being aware of your own body language, connecting with the audience to monitor their reactions (good and persistent eye contact), and so on. Be aware that an air of casual ease can be readily interpreted as disengagement or boredom. The use of such techniques as natural breaks (for media presentation, say) may be important to make this possible.

2 **The first class is far more important in a large class than it is in a small class**. First impressions cannot be monitored and adjusted easily when there are hundreds of students before you; only a few students will experience any personal touch.

The first class should include a demonstration lecture on course material, rather than being simply an organizational affair.

Try one or two techniques that give the students an opportunity to get to know each other. This should be specific and short (exchanging names and interests, coming up with an example of a course concept at work) so that the class may resume quickly afterwards.

Be upbeat and positive (variants of the "Look left, look right, one of you will not pass this course" routine are stale and set a cynical tone that suggests the instructor does not like students).

Mention it if the course has changed in response to class feedback last time, and say how. This will show that the instructor responds to student concerns.

If you obtain e-mail addresses from the students, send out an e-mail to all of them as soon as you can and solicit a reply. The earlier a sense of personal contact can be estabalished the better. Caution: only offer e-mail contact to the class, if you are sure that you can deliver.

3 **Vary the rhythm of the class.** Most researchers agree that it is difficult to keep one's attention focused for more than about 15-20 minutes. One way to cope with loss of focused attention among your listeners is by breaking the rhythm of the class every 15 minutes or so. In small classes this can be done quickly by simply engaging in classroom discussion. That is more difficult with large classes.

Occasional spot use of instructional media, but only if rehearsed and delivered smoothly, is effective. Extensive use without a break may run into the same problem of attention flagging.

Having all students undertake an individual task—writing out a very short summary of part of the lecture, or a short list of examples of a concept at work, or a statement of individual expectations or goals for the course if it's the first class (These can be submitted to the instructor or e-mailed later- or simply maintained for the student's own use.)

Be wary of small group time-outs in very large classes. The larger the class, the more unwieldy some teaching techniques become. Breaking the rhythm of a very large class with small group discussions and other time-out activities can take a lot longer to wind up so that the lecture may resume.

4 **Devising and grading assignments with extra clarity**. It is critical that all assignments be clearly described, that the criteria for evaluation be spelled out, and that models of good responses be provided where possible. It should be assumed that no further communication with most individual students will be possible once the assignment has gone out. If e-mail communication can be handled, then responses to individual queries could be sent out to all, but that is really no substitute for clear topics, instructions, and models in the first place. Nothing can undo the good work you have been doing in your lectures and classroom management more quickly and thoroughly than a spreading sense that assignments are being graded arbitrarily or unfairly because they were not clearly understood.

5 **Accommodating diversity.** In small classes, challenges of cross-cultural communication and linguistic diversity may be identified and dealt with as they arise. This can be extremely difficult in larger classes. But the chances of such challenges arising for students are much greater and all the more frustrating when communication of any kind with the professor is infrequent and often from a distance through e-mail or third parties such as TAs.

Some useful hints on accommodating linguistic diversity in lectures may be found at: *www.utoronto.ca/writing/facesl.html*. Some of these suggestions are useful in efforts to accommodate diversity of ethnocultural origin or disability, too. It should be noted that not all of the suggestions are suitable for large classes.

Non-native speakers of English who are encountering difficulties may be directed to the following website for various forms of assistance: *www.utoronto.ca/writing/eslhelp.html*

To find out more about accommodation for students with disabilities, a good starting point may be *www.sa.utoronto.ca/details.php?wcid=42* where a broad discussion of accommodation policy can be found with a series of links to U of T resources and a video may be downloaded for use with RealPlayer. The video, entitled "Well Worth It," outlines accommodation strategies and resources for faculty members, but again it will be necessary to proceed with caution within a large class.

6 **Rethinking tests and examinations**. The challenges of devising valid and reliable machine-gradable multiple-choice tests and of finding supplements or alternatives for them are too great to be handled here. If multiple-choice tests are being used, it is a good idea to allay students' concerns by referring them to resources or workshops on mastering multiple-choice tests. The following website to which students in BIO150Y are referred may be worth a visit: *www.cquest.utoronto.ca/zoo/bio150y/tips/testtips.htm.*

Several instructors make the case for more in-class mini-tests more often than in smaller classes. This increases the regularity of feedback, spaces out the burden of grading, and maintains interest and momentum.

7 **Two-way communication**. In large classes it is more difficult to gage the effectiveness of a class for the students in general. Tests and assignments do provide one channel for two-way communication, but time constraints restrict their usefulness on both sides.

Minute reports. Index cards are handed out in each class and, for one minute, each student writes down the most important thing learned in the class that day, and the most burning question they want to have answered. If the cards are signed, they can be used as an attendance check, too. The results will allow you to make adjustments in the next lecture, clarify a few points in that class or through a class e-mail, provide individual answers in a few cases, and demonstrate that large numbers do not stand in the way of two-way communication. It also keeps down the crowd at the instructor's desk when the class is over, where half of the students waiting leave without ever asking their question. It also means that students who are not bold enough to ask a question in front of a whole class can still find a way to get an answer.

Focus groups. In one class with over 1000 students, the instructor meets occasionally for about an hour, with a different group of some 15 students or so, randomly chosen. The setting is neutral and the atmosphere is relaxed: doughnuts may be provided, complaints can be heard and dealt with, participants can discover what others are thinking and they can even get to know each other and the instructor.

Student Management Teams. These bear comparison with "quality circles" used in industry, and bring together a fixed group of four students or so from one class who play a management role in relation to that class, meeting weekly away from the classroom and the professor's office. Every other week the professor may join them. They record the results of their informal dialogues about the class and ways it can work better, and collaborate with the professor on ways to put these into effect.

8 Teaching Assistants as integral members of the teaching team.
Large classes may have one or more professors who present lectures and many graduate student Teaching Assistants who lead tutorials and labs. Effective supervision and management of Teaching Assistants is important to ensure that students across tutorial and lab sections each receive a similarly high quality learning experience. Ways of doing this include: clearly defining expectations, discussions of effective pedagogy and instructional methods for the discipline, training sessions on mastering course content and delivery, regular communication, and encouraging initiatives that foster a teaching team where TAs are integral members. The University of Toronto Teaching Assistant Training Programme is a resource centre run by TAs for both new and experienced TAs. For more information about this program, go to *www.utoronto.ca//tatp/index.html*.

9 Logistical challenges. Big classes need a great deal of time and care to run smoothly.

Course co-ordinator. Assignment of students to tutorial sections, the management of written work submission, the recording and communicating of grades, are such gargantuan tasks that the possibility of error is magnified remarkably. Some departments provide extra administrative support for very large courses-academic and/or administratrative staff who undertake these tasks on a full-time basis. That person can also act as an e-mail manager, maintain a course website or operate a listserv related to the course if those functions are designed with the course priorities in mind, and respective responsibilities are clearly delineated.

On-line assignment grades. Several courses with large enrolments at the University of Toronto make use of the STudent Online Resource Management software (STORM), developed here and first made available in 1997. The administration handbook is available online at *http://www.utoronto.ca/divenv/storm/images/index.html.* It sets up a database of grades for all assignments and tests in a course, allowing differentiated access for administrators, TAs, and students. It provides students with an effective way to check their grades as they will be calculated to form the final grade for the course. Students have a much earlier opportunity to challenge errors, and can also see how the various grades are adding up.

10 **Course Websites**. Course websites play an important role in large classes, as this is often the most efficient means for making course announcements and disseminating materials. A course website might include an announcements page; course syllabus, including specific information on where to go for help with course material; links to lecture, lab, and tutorial materials, such as PowerPoint lecture presentations saved as PDF files; links to websites of relevance to the course material; past tests; and individual student marks on course assignments and tests. The Resource Centre for Academic Technology (RCAT) can help you set up a course website (*rcat.utoronto.ca/*).

Sample course website for large courses:

BIO150Y: *www.cquest.utoronto.ca/zoo/bio150y/*
PSY100Y: *www.psych.utoronto.ca/%7Epsy100/*
BIO250Y: *www.cquest.utoronto.ca/botany/bio250y/*
ENG202Y: *ots.utoronto.ca/users/English_202Y/*

11 **Online Learning Communities.** Many students are active online, using chat rooms to communicate with friends and surfing the web. Providing a message board (chat room) from the course website is an excellent way to encourage students within your course to communicate with each other outside of class, that is, to participate in an online learning community. Students want to chat not only about course material, but also about general topics not related to the course, so setting up a message board that permits multiple forums is ideal (such as lectures, labs, tutorials, general chat, programs of study, etc.). The use of multiple forums also makes it easier for you to know how students are responding to your lectures. Students who actively use the board can be asked to take on the responsibility of moderators (moving messages to the correct forum, deleting inappropriate messages, etc.). The Resource Centre for Academic Technology (RCAT) can help you select a message board (*rcat.utoronto.ca*).

When establishing an online message board instructors need to decide if they will enter the board themselves and answer questions from students, an activity that can be very time-consuming. Having "virtual office hours" or "electronic tutorials" allows students to extend the office hours of their pro-fessors and TAs: students submit queries to the message board, the instructor replies, and then anyone else in the course can read the question and the answer. Chat rooms for large classes also function effectively as student-to-student boards, where students asks questions and their fellow students answer them. A message board with multiple forums allows the instructor to establish which forum s/he will be engaged in, if any, and which will be for only student-to-student discussion. Some courses restrict access to their chat rooms to only currently-enrolled students; others require students to login or can be used by anyone with web access.

Sample online message boards:

BIO150Y:
http://www.cquest.utoronto.ca/cgi-bio150/ubb/ultimatebb.cgi
[login name: guest | password: biology]
BIO250Y:
http://www.cquest.utoronto.ca/botany/bio250y/tutorials/index.html
Physics, UTM (Virtual Office Hours):
http://www.utm.utoronto.ca/~w3phy/Registration/RQAS_index.html

Bibliography

Allan J. Gedalof. *Teaching Large Classes*. Society for Teaching and Learning in Higher Education (STLHE) Green Guide Number 1. Halifax: Office of Instructional Development and Technology at Dalhousie University, 1998. 56 pages.

Excellent short introduction to preparing for large classes and on delivering lectures. It does not address issues of evaluation of instructional technology. It does have a two-page bibliography of its own on pages 53-54.

A Selected Bibliography for Teaching Large Classes was posted by Pennsylvania State University's Center for Excellence in Learning and Teaching in 1996 and may be found at *www.psu.edu/celt/large-class/lcbib.html*.

Guide for Instructors of First-Year Courses in Arts and Science, Faculty of Arts and Science, University of Toronto, 2000. *http://www.artsandscience.utoronto.ca/guide/*. Sections include: The first class, Before the first term test or the first assignment is due, After the first assignment is returned, First-year students at risk, Tips of particular relevance to large first-year classes, Tips of particular relevance to small first-year classes, Personal issues, Student service offices at University of Toronto.

Resources on the Web (highly selective)

Center for Teaching Excellence at the University of Maryland
http://www.inform.umd.edu/cte/lcn/

The site combines links to three useful resources: The Large Classes Teaching Guide, The Large Classes Newsletter, and Teaching Large Classes Links, giving quick access to other websites on the same topic. This University of Maryland website was developed as part of the campus initiative in Continuous Quality Improvement launched by their Vice-President of Academic Affairs. It was last updated in September, 2000, and the five issues of the Newsletter are all dated 1996.

The Large Classes Teaching Guide, *www.inform.umd.edu/CTE/large/index.html*, is worth a look. The contents are as follows: 1. Introduction, 2. Approaching the Teaching of Large Classes, 3. Establishing Ground Rules, 4. Personalizing the Large Class, 5. Lecturing, 6. Discussions, 7. Collaborative/Cooperative Learning, 8. Writing in Lectures, 9. Giving Students Feedback, 10. Improving Teaching through Student Feedback, 11. Involving TAs, Resources, Appendices: A. Seven Principles of Good Teaching, B. One-Minute Paper, C. Mid-Point Student Feedback Form

Professor Richard Lee's Links
University of Arkansas

40 Links developed by Richard Lee, Associate Professor of Philosophy at the University of Arkansas, whose last site update (as of December 2002) was November 2002. It's at http://comp.uark.edu/~rlee/teach/large.html. These links provide a good selection of materials posted on the websites of the Teaching and Faculty Support Center at Arkansas (http://www.uark.edu/misc/tfscinfo/TFSC.html) as well as several other universities, particularly Penn State (see below). A lot of what you will find is briefly described in commonsense language. Note that a few of the links failed when we last tried them.

Pennsylvania State University
Center for Excellence in Learning and Teaching: Forum on Large Classes

The Penn State site has a forum on large classes with many interesting contributions: *www.psu.edu/celt/largeclass/forum.shtml.* Among these we recommend one on feedback techniques that instructors may find helpful in large classes: *www.psu.edu/celt/midsemester.html.*

A Selected Bibliography for Teaching Large Classes was posted in 1996 and may be found at *www.psu.edu/celt/largeclass/lcbib.html.*

University of California
Office of Instructional Consultation: Teaching and Learning
www.id.ucsb.edu/IC/Resources/Teaching/LargeClass.html

Contents page includes Establishing Rapport, Logistics and Management, Large Classes Teaching Guide, Ideas for Teaching Large Classes, Discussion in Large Classes Settings, Active Learning in Large Classes. This page begins with a somewhat different set of links to other university sites.

The Office of Teaching Effectiveness at the
University of Colorado at Denver
www.cudenver.edu/OTE/nn/smt/preface_handbook01.pdf

Worth a look for its detailed description of Student Management teams.

Syracuse University Center for Support of Teaching and Learning
cstl.syr.edu/cstl/T-L/Lg_cls.htm.

The "Topics for Teachers: Teaching Large Classes" web page is a quick and easy read with the following subheadings: Physical Layout, Preparation, Student Involvement, Lecture Ideas and Variations, Tips for Teaching Large Classes.