

Effective Teaching When Class Size Grows

May 01, 2007

Class sizes seem to increase every year, through the combining of course sections into a few large sections or through class size creep, from 18 students to 25 or even 30. Whether adding a few students, or moving from 30 to 200, faculty must reconsider individual meetings with students, term papers with multiple drafts, and other time-intensive practices. As soon as you feel that you can no longer teach the course the way it has been taught in the past, it is time for reflection.

Faculty responses to increased class sizes often resemble Kubler-Ross's (1969) stages of grief and loss: denial ("There is no way to increase the size of this class and maintain academic integrity!"); anger ("I can't believe they did this, administrators don't care about students or faculty!"); bargaining ("If I teach 20 percent more students without additional compensation, what do I get in return?"); depression ("How am I ever going to teach this class in a meaningful way again?"); and finally acceptance ("OK, my class is larger. How do I deal with the hordes?").

Getting through these stages can be traumatic; however, class size is not the major deterrent to positive learning environments. In fact, perception of what constitutes an acceptable class size is relative. A teacher of 150 students would love to teach the class with only 50 students, whereas someone who has just been told her class is moving from 20 to 50 may experience an overwhelming feeling of dread. The number of students is important, but the attitude of the teacher in dealing with the class size makes the difference.

When class size increases, teachers can do many things to enhance students' learning opportunities. One way is to use Chickering and Gamson's (1991) seven principles for good practice in undergraduate education as a guide:

- Encourage student-faculty contact
- Encourage cooperation and reciprocity among students
- Encourage active learning
- Give prompt feedback
- Emphasize time on task
- Communicate high expectations
- Respect diverse talents and ways of learning

Incorporating these practices into your course may be difficult for any size class, but most faculty, even if they have no knowledge of these seven principles, quickly note that increases in class size negatively impact one or more of these areas. "I can no longer get to know my students, students feel like they are just a number, it is impossible to do anything but lecture, and it takes too long to provide feedback on tests and papers," faculty complain. The following tips for how to teach well when class size increases address five of these principles (Chickering & Gamson, 1991).

Student-Faculty Contact

Learn Students' Names and Something About Your Students

Small classes allow teachers to learn students' names relatively quickly, a primary method to developing contact with them. Faculty often state that as class sizes increase it becomes impossible to learn students' names and to get to know them. Do not give up. There are wonderful methods available to learn student names. To find some, type "learning student names" into any search engine.

Most faculty can learn all student names for classes of 40 to 50. Determine how many you can learn and try for that number, regardless of the class size. I once taught 200 students and, because I could not learn everyone's name, I did not try to learn any. A wise colleague reminded me that I usually learn all names for classes of 50 and that learning one-quarter of the names in class was certainly better than a few. In the end, I learned the names of close to half, which positively changed the classroom atmosphere. I was able to quiet disruptive students by calling on them by name, and students were stunned that I expended the effort to learn their name in such a large class.

Student anonymity is a problem in many contexts so learn as much as you can about as many students as possible. When students feel like a face in the crowd, it is easier for them to be disruptive, argue about trivia, arrive late or leave early, miss class, and disengage. A good way to get to know students is to arrive at class early; use five minutes to get your material ready and then spend five to 10 minutes talking to students before class begins. As students tend to sit in the same area for each class, focus your discussion with a group in different areas each class period.

Civility

With larger classes a wider variety of disruptive behaviors have a better chance of emerging (often a function of the number of students attending class). Cover ground rules the first day and ask the class, what they expect of you in maintaining classroom civility. Then discuss what you expect of them. In adjusting to a larger class some policies work and others fail. Learn from your mistakes and move on. In a class of 150, the odds are good that a cell phone will ring unless you start each class with a quick statement to turn ringers off. I have used statements such as, "the cabin doors are now closed, please turn off and stow cell phones and other electronic devices until we have reached our destination." Keep good humor and remind the students immediately if they engage in behavior that is distracting or disruptive.

Especially problematic as class size grows are students getting ready to leave before the class officially ends, distracting both to the teacher and other students. This packing up can be avoided if you state at the beginning of the course, and when the behavior occurs, that this is rude behavior and that you will end on time.

Student Feedback

The best information regarding how well the new, larger course is going is to periodically ask your students and have them write short feedback statements at the end of class (Angelo & Cross, 1993). Ask them to write on one topic at a time, such as the extent to which they struggled with any specific aspect of the class, or material they felt was covered in too much detail. Give the students only one or two minutes to write. Then, and this is most important, during the next class discuss two or three issues they brought up. Students will write if they feel you use what they write. The good news is that you do not have to read all comments. In a class of 150, select 50 or so and look for themes to discuss briefly in the

next class. You demonstrate that you care about their opinions, which is particularly impressive in a large class.

Cooperation and Reciprocity Among Students

It is important to create a collegial feel, even when the class appears to be a large mob. Have students get into groups of four on the first day and learn at least one thing about everyone in the group. Following 10 minutes of discussion, call on a few individuals and have them introduce the three other people in their group. Tell your class you will increase expectations by one name every week (i.e., in the second week they should be able to introduce four, and in the third, five). I often start class by calling on two students to see if they can introduce the requested number of classmates. I use small bags of chips, candy bars, and fruit as reinforcers that lighten the mood and make it a bit safer for shy students to introduce themselves to classmates.

Students knowing students has benefits. They can email each other for missed course material and announcements, have better discussions when participating in active learning techniques, and tend to be more respectful of one another. For additional feedback, assign short writing assignments and have students proofread for each other. You could give an assignment and ask the students to put their name at the top of the first page. They then list the name of the first reviewer and the second reviewer. Good reviews mean fewer grammatical errors and perhaps better coverage of the material, which helps you to read the papers faster. You even could give reviewers points for a job well done, and when final papers are full of errors, reviewers could be marked down. This allows for more writing, even as the number of students increases.

Active Learning

Concept Tests

The most common comment faculty make as class size increases reflects a sense of change (the class used to be smaller and by implication better) and hopelessness: “The only way I will be able to teach the class is by lecturing.” Although it is difficult to coordinate group projects in large classes, several ways exist to get students actively engaged. One of the most common is “concept tests,” developed by Mazur (reviewed by Crouch & Mazur, 2001). The instructor presents a “mini-lecture” of about 15 minutes. A multiple-choice question is then presented on a projector for the class. The instructor then asks students “How many think ‘a’ is the correct answer, how many ‘b,’” and so on. If most students answer correctly, move to the next block of material. If many students get the question incorrect (the cutoff is up to you), ask the students to “convince your neighbor of your answer.” Then, after a period of one to two minutes, again ask which answer is correct. Most students will get it correct following peer discussion. If they still struggle, a short lecture can address the correct answer and why the alternatives are incorrect. A lot of learning and collaboration can take place in five minutes. This procedure brings much energy to the classroom with students discussing various aspects of the test question and content.

Problem-Based Learning

An instructor also can bring problem-based learning to a class of any size. Present a “real world” problem that students must use course material to solve and allow students to work together in teams of two or three to arrive at a possible solution.

Pair-Share

In a think/write pair-share exercise, the instructor presents a prompt that stimulates thinking or requires

integration or application of course material, and requests students to work individually either by thinking or writing for one minute. Do not merely ask students to list something or recreate a simple fact. After a minute, ask students to “pair” with someone and discuss possible responses. Then, call on students to see what answer or solution the “pair” identified.

Not all students will participate, but not all are participating during a small seminar or lecture either. As long as a great majority participates, there is no harm in a few sitting quietly during the activity. A teacher can get to know those quiet students better by asking them what they think of the material.

Prompt Feedback: Grading Rubrics Can Help

Providing prompt feedback is perhaps the most challenging aspect of larger classes. Teachers need to assess their level of commitment; what they can do well; and, if they decide to keep assignments that are time intensive in grading, find mechanisms to speed up the process. Essay responses on examinations and term papers seem impossible when classes grow too large. It may not be possible to grade 200 long term papers at the end of the semester. Although I agree the task is difficult, do not discount all writing for large classes. I recently taught a section of introductory psychology with 200 students with five examinations containing four one-half page essay responses per exam. Using a scoring rubric, it took only four to five hours to grade the essays.

Grading rubrics (Stevens & Levi, 2005; or type “grading rubrics” into an Internet search engine) speed up grading and increase both the reliability and validity for both papers and essay responses on exams. A rubric is a scoring template for written responses. To construct one, identify the three to five most important aspects of the written work to be graded. For a brief review of a research article, they might be: summary of major points, description of methods, major conclusions drawn by the author, and overall response by the student. Each of these four areas is allocated a number of points based on importance. Simply read the paper, allocate points for each area, and total the points. Use of rubrics reduces the amount of writing you need to include, reduces bias as a result of one especially strong or weak aspect of the writing, and, by giving the rubric to the students at the time of the assignment, provides structure and guidance, reducing uncertainty. And better papers equal faster grading. A positive additional outcome is that grade grievances tend to decrease.

Respecting Diverse Talents and Ways of Learning

Do More Than Lecture

Incorporate active learning into the class. The standard lecture method works well for auditory learners and linear thinkers. To assist in the learning for others, consider including visuals and class discussions. With overhead projectors and increasing numbers of “mediated classrooms,” it is easier to do so. Visual models, short video clips, and other stimulus materials are commonly found on the Web. Most textbook publishers also include multimedia suggestions from the Web tied to your course text.

Discussion

Perhaps the most challenging aspect of increased class size is handling discussions well. Teachers need good facilitation techniques to keep the conversation going, minimize personal attacks, and keep students involved and on task. I have seen many wonderful discussions in large sections (see Stanley & Porter, 2002); it simply takes a keen eye and practice. Watch the discussion as you would with any class, but keep in mind that with larger classes comes more variability, and, therefore, very different viewpoints.

Conclusion

Having your class size increase is a challenge, but then so is teaching in general. Overall, the most important consideration is to stop and think about what is possible and not possible, something we should do in all classes. If your class sizes jump, the discouragement you feel is natural, but you can do more than lecture. You can assess student learning in many ways besides multiple-choice exams, and maintain interpersonal interactions with students in an atmosphere where everyone feels part of the group. Hold onto your standards and teaching goals. Seek out and talk to colleagues about what they do in their classes. Ask two or three who have taught a class the size you have just been given to offer tips for handling the hordes. Take advantage of the many resources on this topic. Keep in mind that although a larger class means potentially more work, it also means more opportunities to meet and get to know students, and to touch their lives. ?

References and Recommended Readings

- Angelo, T.A., & Cross, K.P. (1993). *Classroom assessment techniques: A handbook for college teachers* (2nd ed.). San Francisco: Jossey-Bass.
- Crouch, C.H., & Mazur, E. (2001). Peer instruction: Ten years of experience and results. *American Journal of Physics*, 69, 970-977.
- Chickering, A.W., & Gamson, Z.F. (1991). Applying the seven principles for good practice in undergraduate education. *New Directions for Teaching and Learning*. Number 47, Fall. San Francisco: Jossey-Bass.
- Kubler-Ross, E. (1969). *On death and dying*. New York: MacMillan.
- Stanley, C.A., & Porter, M.E. (2002). *Engaging large classes: Strategies and techniques for college faculty*. Bolton, MA: Anchor.
- Stevens, D.D., & Levi, A.J. (2005). *Introduction to rubrics: An assessment tool to save grading time, convey effective feedback and promote student learning*. Sterling, VA. Stylus.