

Techniques For Teaching Large Classes

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Large classes are generally harder to teach effectively than small classes. The number that qualifies a class as large is not clearly defined, but most believe that a class of more than 100 qualifies. The idea that small classes automatically solve communication problems between students and teachers is false. Most students will agree that a large class with a good teacher is certainly better than a small class with an ineffective one.

Having taught as many as 325 students in one class, I have discovered a variety of instructional strategies for making large classes work reasonably well. Many of the ideas I will share are common practices to experienced educators. My intention is that these ideas will prove helpful to those with less experience.

Pre-First Day

- (1) Plan a first-day activity. Nothing is more frustrating to a student than to feel “left out” or at least “in the dark” at the first class meeting. In a class where intimidation due to size is already a factor, spending the first class pouring over a syllabus is probably not an effective means of engaging the class. Having them scan the syllabus in groups of 2 or 3 and prepare questions about what they did not understand is one means of involving them in the process. Definitely have some activity planned for the first day other than just discussing the syllabus.
- (2) Course packs prepared ahead of time make class participation and interaction more feasible. Also, for large classes (and for small ones!) course packs reduce the “busy work” of students trying to transcribe every word a teacher utters. Course packs also relay a message to students that the instructor is interested in their success since the course pack took time and effort to prepare.
- (3) Order the textbook well ahead of time. Students (and you) have enough stress to deal with; neither needs the extra stress caused by such issues as “do I need the book for the first assignment—it’s not in yet.”
- (4) Provide instructional objectives in the syllabus so they will know what is expected of them. Instead of just listing the topics to be covered, give students concrete statements of the skills they will be expected to possess by the end of the course such as calculate, explain, design, etc. These objectives help the students prepare to meet the instructor’s expectations because they now know what is expected and the objectives also keep the teacher on track with both content and testing.

First Day

Not enough can be said about the first day in any size class. Certainly the often heard statement, “the first impression is sometimes the most lasting”, is applicable here. Students in large classes are expecting a more impersonal environment because of the size alone. Teachers can improve the communication between them and their students from the beginning by using some means of actively involving the class the first day.

- (1) Ice breaker activities are possible in any size class. Of course the physical layout of the room and number of students affect the type of activity to be used, and the teacher’s comfort level with such activities must be considered. One simple example of an ice breaker that can be used with any size class is to have students form teams of 3-4 where they are sitting, ask for the member of the team whose home is the farthest away to identify themselves, and declare that person to be the recorder for some activity that involves their talking to each other for 5 or so minutes. For chemistry I would let them take the recorder’s full name and see how many symbols for elements they could find in the name. Many variations can be made on this idea. I always have some sort of prize for the winning team.
- (2) An important means of personalizing any size class is to request of meaningful personal information from each student. This survey could include the usual name, address, etc. information but then include questions such as “what do you expect from me as a teacher, what can I expect from you as a student, why are you taking this course, tell me some information about yourself that is unique or that you consider interesting, etc.” I frequently use this as their first homework assignment.
- (3) When I collect this assignment, I provide a list of what I expect of them as students and what they can expect of me. I also give them a brief “who I am” autobiography including some glimpses into my personal and professional life. Again, this personalizing of large classes does improve communication, and I believe overall performance even though I have no actual data to support this assumption. Most importantly, I DO READ every one of their responses and will make mention in class of some of the interesting information I find. I do not mention names, but rather I make a general reference to something like having a large number of musicians, people who have traveled somewhere special, etc. and may ask those who share these experiences to raise their hand.
- (4) Post and advertise office hours that are varied enough to meet diverse student time schedules as much as possible. Also provide time by appointment if needed.
- (5) Your comments to the class the first day are vital in creating a positive atmosphere for success. Statements about failure rates, etc. are counter-productive and certainly intimidating. A positive statement such as, “All of you technically could receive an A because I do not curve grades” does not say you are an easy teacher or that the class is not important. Teacher expectations play a major role in student success.

Teaching Techniques and Strategies

A basic premise here is that all teachers understand the great diversity of learning styles and personal preferences for receiving and processing information in each class. Trying new approaches is a concern to some teachers, but evidence supports that once the initial time investment is made, the improved results in class performance and appreciation for the learning of the material translate into improved personal satisfaction about the teaching you have done.

- (1) Teamwork is more than a buzz word in industry: it is now a way of life. Using teams of 3-4 to work homework assignments, prepare laboratory reports, and complete papers from which to make presentations is an excellent technique for any size class. Teams should NOT be allowed to form randomly. The teacher should at least obtain some basic information such as the student's time commitments and assign the teams based on availability of time. I use personality preference inventories as another means of grouping in teams. As much as possible, a team should not have one member of a certain group such as one female, one minority, etc. In large classes the roles of the team members and governance of the individuals must be clearly delineated. An effective way to improve performance is to offer incentives to teams when all their members reach a certain goal on a particular assignment or test..
- (2) Consider using a team test for one test in the grading period. A two member team is probably preferred. During the team test, I have not observed one member totally relying on the other. Test scores are somewhat higher, but the standard deviation is much lower than on individual testing. This is not a surprise when the team concept for improving performance in industry is applied to education as well.
- (3) Using a variety of teaching methods to reach the diverse learning styles in the class is a necessity. The work done by Dr. Richard Felder in learning styles^{1,2} strongly supports this. Planning a "multi-media" approach to teaching does not mean to imply an electronic blitz necessarily, although using as much technology as possible is desired. Reaching different learning styles means using techniques to reach visual as well as verbal, reflective as well as active, and the whole range of learning styles. Although at first this is a time-consuming development, the outcome is an enriched course for students and teachers.
- (4) Using email, bulletin boards, and list serves is an excellent means of increasing communication between students with each other as well as with the teacher. In some cases, teaching assistants could be available to answer questions electronically. The warning is to not forget that all students may not have easy access to computers. Teachers tend to assume all students are in close proximity of computers because the teacher is.
- (5) Extra tutoring sessions are a big plus for large classes. This may be accomplished by teaching assistants or through formal tutoring programs offered on the campus. An excellent and performance-enhancing idea is for the teacher to offer tutorials at least before a test. Students see this as more interest in their success as well as just a nice thing for a teacher to do.
- (6) Thorough study guides for tests should be prepared at least a week in advance. Learning is improved when students are guided in what is important to know. This is crucial in the entry level classes because as teachers, we may forget that students may not be able to decide what

is important and how to learn this material. The idea that “knowing more about less is really knowing more” is one that could be examined by all of us who teach.

- (7) CHECK ATTENDANCE!! Even though it may not affect their grade, it sends a message of expectation and accountability. If possible, a teaching assistant can do this for you. In some of our departments, graduate students are routinely assigned to help with this. If possible, rearrange the seating chart at mid-semester to provide the chance for students to interact with someone new. One use of attendance is to allow a student to drop their lowest test scores, replace it with the final exam grade if it is higher, or at least reduce the percentage the lowest test scores counts in their total grade IF attendance meets a set minimal number of absences. If you choose this approach, be sure it is clearly explained in the syllabus. If you have teaching assistants or other support, have someone contact a student after 2 or 3 absences. Of course the best approach to insuring good attendance is to have a class that is stimulating and worthwhile. However, my experience with the first year students indicates that more than this is needed for many of them.
- (8) Learn enough names or use your seating chart to address students in class, not to embarrass them. To include a student by name is both a surprise to the student and a way to make the entire class feel more included. (This also serves as an effective ALARM CLOCK!!!!)
- (9) Give student 3-4 minutes at the end of class to respond to questions like what did you understand best today, least today, what else do you want to know about..., etc. You could have your class divided into groups with a team leader for the group to turn in comments from that group. This activity shows the teacher what needs to be further clarified or what was done well and can increase the students’ confidence in your interest in their learning.

Teaching large or small classes is demanding on a teacher. The approach used must be one with which you are comfortable. The importance of providing variety and structure in large classes, especially those consisting of largely first year students, is evident when one considers the background from which most of them have come. High schools often monitor attendance and performance very closely, even calling parents when either begins to decline. Students arrive in college in that mind set and fail to make the transition. Personalizing a large class as much as possible will help improve communication between the teacher and the class. Team work is a success in my classes because I manage the overall team concept with them. The comments and evaluations from my students are very supportive of the need for more orchestrated team work in college

References

1. R.M. Felder, “Matters of Style,” *ASEE Prism*, 6(4), 18-23 (1996).
2. R.M. Felder, “Reaching the Second Tier: Learning and Teaching Styles in College Science Education,” *J. College Science Teaching*, 23(5), 286-290 (1993).