# What can I do to engage students and facilitate learning in a large class?

Teaching hundreds of students in the small classroom can present multiple challenges. Larry Michaelsen (2002) boils this challenge down to two key issues: student passivity and student anonymity. It can be easy for us to attribute the problem of passivity to student laziness, but it's important to consider the messages they have received about their role in a large class setting. In many cases, they may be responding to implicit and explicit cues that tell them their role in the class is to sit quietly and let the instructor speak. In fact, the physical layout of many of our classrooms tells them this! If this is how they see their role, it makes sense that they will be passive. Moreover, when students see themselves as nameless, faceless members of a crowd, they aren't likely to feel that their presence or participation matters. The good news is that it is possible to upend students' expectations (and our own!) about what can be done in a large class when we require them to engage with us, with our content, and with each other.

***Principles to help us design for engagement and student learning in a large class***
- In order to be engaged in the work of our class, students need to feel valued and respected as members of an intellectual community.
- Student thinking needs to be activated at the beginning of and frequently throughout a class period.
- When students have frequent opportunities to work with and talk to each other (and to you!), the classroom begins to feel smaller and more intimate.

***Putting these principles into action***
- **Make an effort to get to know as many of your students as possible.** Large classrooms often feel impersonal and depersonalizing, and students may respond to this feeling of anonymity in a variety of ways. Some of them may stop attending class early in the semester because they don't think anyone cares (or will even notice) whether they come or not. Some will come to class only to sleep or play on electronic devices because they are convinced the teacher can't see what they're doing from the front of the room. Others may come to class with good intentions, but when they aren't directly implicated by what is happening, they will begin to have off-topic conversations with classmates because they don't think anyone can hear them in such a big space. There are several different ways to break this cycle of anonymity and invisibility. One strategy is to ask students to complete a short questionnaire about their interests at the beginning of the semester and offer some kind of brief response. This can help students feel that the instructor knows them, even if it's in a very small way. Some instructors strongly encourage students to come to their office hours and introduce themselves. Many students won't accept this invitation, but it sends a message that you want to know your students as more than faces in a crowd. Finally, when you do engage in the kind of classroom activities that are described below, remind students to state their names before speaking so that you can address them by name and eventually be able to call on them from memory. These are very small steps, and they will work best when they are used in

conjunction with pedagogical strategies that require cognitive as well as social engagement.

- **Start class with student activity, not lecture—and then ask students to repeatedly engage in meaningful learning activities throughout the class period.** Students often come into large classes with the expectation that they will be passive, and if we open class with a lecture, we reinforce that expectation. Moreover, when they walk into class and we immediately start delivering information, students may not have a clear sense of what they should be listening for or why that information should matter to them. Students need to be engaged immediately so that when we do lecture, they can connect the information in our lecture back to their attempts to use the thinking of our disciplines. When we begin the class period by asking students to engage in a meaningful, challenging activity that requires them to use the new skills and ways of thinking they're learning in our course, we give them an authentic reason to listen to what we have to say. Instead of just trying to figure out what they need to know for the test, they are trying to determine how our expertise can help them fill a gap in their understanding that was made visible by the activity we asked them to complete. After students have done an opening activity and you have debriefed their answers with them, they are ready for a short lecture that is followed by another meaningful activity that requires them to engage with the content. This cycle of activity + debrief + mini-lecture that repeats for one or more times during a class period can make a large class more engaging and lead to greater learning, but we need to ensure that we have reliable activity structures that will focus these interactions.

- **Use small groups to help students engage in meaningful, challenging work so that activities are more manageable—and the classroom becomes a community of thinkers.** Even if you can't get to know all your students, having them get to know each other can make a big difference in their experience of a large class. Having them work together in pairs or small groups can also provide important opportunities for them to engage in complex disciplinary tasks that would be too challenging for them to encounter alone. Having students use these small-group interactions as a first step toward broader engagement can be a great way to lead into whole-class discussions. Here are a few reliable structures for designing activities that work well in large classes—sometimes even better than in smaller ones!

### *Examples of activity structures that can work in a large class*
Think-pair-share

This is a foundational activity structure, and one that can work well in any size class. Because its structure is flexible, it is particularly appropriate for large classes.

1. Pose a challenging, meaningful question that relates to a central concept or topic of that day's class. Give students a minute to answer that question on their own (ideally in writing). This "think" step is an important way for students to formulate and commit to their own thinking before they hear from others.
2. Ask students to find a partner (or two) and share their answers to this question. This step gives students an opportunity to test out and rehearse their thinking with a smaller

group of peers before possibly being asked to speak before the entire class. While the small groups are talking, you may circulate around the room to help keep them focused, gauge student engagement, and listen for themes that are starting to emerge.

3. Call students back together. Open the whole-class discussion by calling on one pair (which can be anywhere in the room) to share their response to the question. Notice that you don't wait for volunteers—you can now feel comfortable with calling on individual students because you know that after the first two steps, they should have something to share. You may ask the students some probing questions that require them to interrogate and explain their thinking.

4. Ask for a group that came to a different conclusion to share and explain their response. In addition to asking these students to explain their thinking, point out the contrasts between the different answers and ways of thinking that have emerged.

5. This pattern may repeat until you have heard from several pairs of students and surfaced several different ways of thinking about the original question. After you provide a brief wrap-up of the discussion, you are now ready to use the ideas that have emerged as a lead-in to a brief mini-lecture that clarifies any points of confusion that were raised during the small group or whole class discussions.

Peer Instruction

Peer Instruction is a method developed by Eric Mazur (1997), a physicist at Harvard University. This strategy is similar to think-pair-share, but it is slightly more complex and structured.

1. Pose a challenging, focused question in a closed format (usually multiple choice) and ask students to commit to their own individual answers, either using a clicker to record them or simply writing them down. Students have about a minute to answer this question.

2. Ask students to find a partner and compare their answers. Each student's task in this discussion is to convince their partner that they have the correct answer. Students have about 3-5 minutes for this discussion.

3. Ask students to commit to a new answer: students may have changed their answers, or they may have chosen to stay with their original answers. If you are using clickers, you can see how the distribution of answers is changing as they are registered.

4. After students have recorded their new answers, call on a student to ask what their answer was and way. Notice that you don't wait for volunteers—you can now feel comfortable with calling on individual students because you know that after the first three steps, they should have something to share. You may ask the students some probing questions that require them to interrogate and explain their thinking.

5. Ask for a group that came up with a different answer to share and explain their response. In addition to asking these students to explain their thinking, point out the contrasts between the different answers and ways of thinking that have emerged.

6. This pattern may repeat until you have heard from several students and surfaced several different ways of thinking about the original question. After you provide a brief wrap-up of the discussion, you are now ready to reveal the correct answer. You can use the ideas that have emerged as a lead-in to a brief mini-lecture that clarifies any points of confusion that were raised by students' attempts to answer the question.

4S Tasks

The 4S task format comes from Team-Based Learning (Michaelsen & Sweet 2008), but instructors don't have to be using TBL to take advantage of the benefits of these kinds of tasks. Tasks that conform to this structure have these characteristics:

1. They present students with a ***Significant Problem***, meaning the kinds of important problems that experts in your discipline confront regularly. 4S tasks should present problems that are too challenging for the most capable individual student in the group to solve or respond to on their own.

2. All groups work on the ***Same Problem***, meaning that students have reason to listen to each other groups explain their thinking because they have all tried to solve or respond to the same problem. Group tasks are most effective when they inspire discussion between as well as within groups, and this will only happen if they have a common frame of reference. When students hear that other groups decided differently, given the same question and access to the same information, they will be interested in hearing what those groups have to say about their decision.

3. They ask students to make a ***Specific Choice*** about the disciplinary problem under consideration. Framing the problem/decision as a choice among limited options will raise the stakes and improve students' focus by requiring comparative analysis. The choice format also ensures that students have an easy means of sharing their answers and ensures that they will get immediate, focused feedback, which is an important motivating force.

4. Students are asked to make a ***Simultaneous Report*** of their answers. This is a crucial step because it helps avoid the "I agree" problem, which tends to happen when groups are asked to share answers sequentially. When students have a mechanism (like holding up a card) to report their answer, you and the students get all the data at once and can begin processing it as a whole class—rather than just a series of conversations between the instructor and individual groups. A side benefit is that when students can immediately say whose answers differed from their own, they will be ready to engage in cross-group discussions.

### Resources

- Bruff, D. (2009). *Teaching with classroom response systems: Creating active learning environments.* San Francisco: Jossey-Bass.
- Mazur, E. (1997). *Peer instruction: A user's manual.* Upper Saddle River, N.J.: Prentice Hall.
- Michaelsen, L. (2002). Team learning in large classes. In C. A. Stanley & M. E. Porter (Eds.), *Engaging large classes: Strategies and techniques for college faculty.* (pp. 67 - 83). Bolton, MA: Anker Publishing.
- Michaelsen, L. & Sweet, M. (2008). The essential elements of team-based learning. *New Directions for Teaching and Learning, 116*, 7-27.

If you'd like to learn more about how you can engage students and ensure learning in large classes, please feel free to **request a consultation**.