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Subject: Teaching Toolbox: Encouraging Student Participation in Large Classes
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Teaching Toolbox: Encouraging Student Participation in Large Classes **by Scott Paulson**

Many large-class instructors lament that few students readily ask or answer questions and that students are reluctant to participate by voicing their opinions, thoughts, or questions. Before diving into strategies to increase participation, it's useful to understand the reasons students don't participate. [Weaver and Qi \(2005\)](#) found several obstacles, three of which seem especially within the instructor's control: the students' perception of the professor as the authority of knowledge, their lack of confidence, and their fear of peer disapproval. With the reasons students may not participate identified, we can explore strategies to overcome them.

○ **Faculty as authority of knowledge:** It is easy, particularly in large classes, for instructors and students to fall into traditional roles where the instructor disseminates knowledge and the students passively absorb it. When students are asked for their input several times per class, and their answers are discussed or questions are answered, the instructor becomes more like a facilitator and the students become more active participants in their own learning. In large classes, however, this can be difficult because there are fewer opportunities to engage. Below are two ([of many](#)) possible strategies to ensure each student participates every class period. (Other techniques for encouraging student participation can be found in previous Toolboxes, such as [this one](#).)

- **Think-pair-share.** When presented with a question, students can be asked to come up with an answer on their own. If the question is amenable to multiple choice, [clickers](#) or free alternatives such as [Mentimeter](#) or [Socrative](#) can help to probe student understanding. Students then discuss their answer and reasoning with a fellow classmate. The instructor can then choose a pair at [random](#) (perhaps using an app such as [Names in a Hat](#)) to share their answers and explanation with the class, which can serve as the launching point for a whole-class discussion. Think-pair-share provides many advantages over "cold calling" on a student, including allowing all students to vocalize a response and letting students rehearse in a low-stakes setting with just one or two peers.
- **Minute Paper.** In closing the class, consider asking the students to write a one- or two-minute answer to a question along the lines of "what important question remains unanswered?" or "what was the most important thing you learned during this class?" Start the following class with a discussion of the most frequent responses.

○ **Student confidence and fear of peer disapproval:** At first blush, it may seem strange to think that the instructor can influence peer perceptions or a student's confidence. However, Weaver and Qi identified that interaction with instructors is positively correlated to both. In this way, instructors can indirectly encourage students to participate in class, and we can group these together when discussing instructional approaches. There are additional benefits to establishing rapport with students as well: [Wilson et al. \(2010\)](#) found a correlation between rapport and student outcomes,

while [Benson et al. \(2005\)](#) demonstrated the effect of rapport on student attitudes. A few strategies can be useful for establishing rapport with students to encourage participation in a large class, especially:

- Take time to **learn the students' names**, then use them. While it may not be possible to know all of the names for very-large enrollment classes, as [Cooper et al. \(2017\)](#) show, even knowing a portion of the students' names can create a perception that is equally valuable.
- Encourage or even require students to **use office hours**. For example, Chris Hughes in the department of Physics and Astronomy required students in his 48-person course to attend (in groups of about 8) one office hour per week.
- **Be affirmative** in your student interactions, whether in the classroom or in office hours. This can be as simple as complimenting insightful comments or questions before responding or inviting further discussion. This approach can help all students feel more comfortable sharing their ideas.

Instructors seeking additional resources may be interested in [Heppner's Teaching the Large College Class: A Guidebook for Instructors with Multitudes \(2007\)](#). Virginia Tech's upcoming [Conference on Teaching Large Classes](#) will provide a convenient forum to share with and learn from other large-class instructors. The Center for Teaching at Vanderbilt University provides some [excellent online resources on this topic](#). And, of course, every semester, the CFI offers [Teaching Analysis Polls \(TAPs\)](#), which are a great resource to get feedback on how your class (large or not) is going.

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