

FACULTY FOCUS

PREMIUM

Low-Risk Strategies to Promote Active Learning in Large Classes

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Faculty who teach large classes confront the long-existing challenge of making their lectures more engaging and meaningful. In this article, I will share some low-risk strategies to help faculty transform lectures into student-centered learning experiences for enhanced learning outcomes.

These active learning strategies can be easily implemented without significant redesign of the class and without an investment in technology. However, toward the end of the article, I offer a few tech-based strategies for engaging your students.

- **Use skeleton handout.** Provide students with a handout of the day’s lesson, but intentionally omit some key words and phrases from the slides. Students will have to listen closely during class in order to fill in the missing pieces of information.
- **Physical movement.** In a traditional lecture, faculty tend to stand at or behind the podium, interacting with the few students sitting near the front of the room. To engage the whole class, even those students who like to sit in the back, walk around in the classroom from time to time and work to draw in those students sitting on the periphery.
- **Pause and chunk** (Ruhl, Hughes, & Schloss, 1987; Di Vesta & Smith, 1979). Researchers have told us that students have very short attention spans and start to lose focus after 10 to 15 minutes in the lecture. To keep students continuously engaged, it is suggested that you chunk the content into smaller segments. For instance, after lecturing for 15 or 20 minutes, switch gears by involving students in mini learning games/activities during the transitional break.
- **Effective questioning.** Questioning is one of the most common engagement techniques used by faculty in their daily teaching practice, but have you noticed that it doesn’t always produce the intended outcomes? That’s because many don’t give questions the time and attention they deserve—during lesson planning and the class itself. Below are a few questioning tips to consider.
 - Ask meaningful questions. Factual recall questions are fine for getting the class warmed up, but it’s also important to ask questions at the higher levels of Bloom’s revised taxonomy (Krathwohl, 2002). Higher level questions force students to think critically about the content. Questions that have more than one good answer are more likely to lead to interactive discussion.
 - Give “wait time” (Elliot, 1996; Mills, 1995). After you ask a question, wait a few extra seconds before asking for volunteers. By extending the wait time, students have time to process their ideas and produce more thoughtful answers. This is especially beneficial to those who are reluctant to talk in the class. With a few extra seconds to think about and organize the talking points, they will be more confident in their response and more willing to participate.
 - Ask follow-up questions. Too often, after a student answers a question, the teacher explains why it is correct or incorrect and then continues to lecture. Although there is nothing wrong with this practice per se, it does mean we’re throwing away an opportunity to further engage students in higher level thinking. If further discussion is warranted, ask follow-up questions, probe for more information, ask for clarification, request an example, or have students explain the rationale for their answer. Some examples of follow-up questions include: why? what if? how do you know? or what is an example of that?
 - Ask students to comment on or respond to each other’s answers. After a student answers a question, you can ask others in the class whether they agree or disagree with their classmate and explain why. This is a great way to promote peer interaction.
 - Call on those sitting in the back to answer questions. One situation that many of us constantly have to deal with is when nobody volunteers to answer our questions. When

this happens, we call on someone to answer the question, but too often it's those students sitting near the podium who are called on. To engage all students in the class, look to those sitting in the back and give them a chance to participate.

- **Small group activities.** There are many small group activities that can be easily implemented in small and large size lectures to make learning more engaging, active, and interactive. Below are only a few examples.
 - Think-pair-(write)-share (Angelo and Cross, 1993). This is a small group activity in which the faculty asks a question; students think independently about the question; and then turn to their neighbor to share their thoughts. The last step involves having a few pairs to share with the whole class. You can also do think-write-pair-share. Ask students to put down some talking points before sharing with a neighbor.
 - Snowball group. You have students start by pairing with another student to discuss a given topic. Then, ask two nearby pairs to come together to form a bigger group where new perspectives about the topic are shared.
- **The power of writing.** There are various quick, reflective writing activities that can be implemented in the classroom without taking too much lecture time. One that I have consistently employed in my lectures is the “3-2-1” activity (Zygouris-Coe, Wiggins, & Smith, 2004). Before the end of the lecture, ask students to write “three most important things that you have learned today”; “two ideas for application in practice”; and “one more question you still have about the today’s content”. Students can write on a piece of paper to turn in as they’re leaving or post their responses on a collaborative web-based whiteboard.

Tools for engagement

Although the above strategies don't require faculty to use any technology to implement, technology holds huge potential in promoting student engagement and learning in lectures and beyond. Below are a few simple tools to make your lecture more engaging and meaningful.

- **Mobile polling.** Polling is a great way to not only engage students, but also check their understanding of content. Many mobile polling systems such as Polleverywhere and Kahoot! provide unique features that are not available in traditional clickers. This includes alternative types of questions to assess higher level thinking. Students can respond to questions with a cell phone (text message), laptop, or tablet—devices that they already bring to the classroom on a daily basis. This greatly enhances participation levels.
- **Classroom gameplay.** Games are an innovative way to engage students in the class. With web-based tools such as Jeopardylabs and Flipquiz, you can easily create a Jeopardy-style game. To make it more fun, you can divide students into teams and have group competition.
- **iPad in the lecture.** In an effort to enhance their lectures, a few of my colleagues have recently started to use an iPad and the SplashTop Classroom app. This wireless iPad system allows you to present and control your slides using an iPad so that you can walk freely around in the room during presentation. You can also use the built-in annotation tool in the SplashTop Classroom app to make live annotation on the slide while presenting. This helps to bring student attention to the most important concepts and help them follow your presentation. You can even pass your

iPad to a student, asking him or her to answer a question by drawing on your slide. Doceri offers similar capabilities.

There are tons of active learning strategies. Some are easier and don't need significant redesign of the class. Some others (e.g., the flipped classroom) require more planning. In order not to overwhelm yourself and your students, it is wise to start small. Try one or two simple strategies, and then slowly adopt more advanced techniques. In the same way that we encourage students to learn from and with each other, don't forget to exchange your active lecture ideas with colleagues so that you can support each other.

References

Angelo, T. A. & Cross, K.P. (1993). Classroom assessment techniques: A handbook for college teachers (2nd edition). Jossey-Bass.

Di Vesta, F., & Smith, D. (1979). The pausing principle: Increasing the efficiency of memory for ongoing events. *Contemporary Educational Psychology*, 4.

Elliot, D. D. (1996). Promoting critical thinking in the classroom. *Nurse Educator*, 21, 49–52. Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory into practice*, 41(4), 212-218.

Mills J. (1995). Better teaching through provocation. *College Teaching*, 46, 21-25.

Ruhl, K. L., Hughes, C. A., & Schloss, P. J. (1987). Using the pause procedure to enhance lecture recall. *Teacher Education and Special Education*, 10, 14-18.

Zygouris-Coe, V., Wiggins, M.B., & Smith, L.H. (2004). Engaging students with text: The 3-2-1 strategy. *The Reading Teacher*, 58(4), 381–384.

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