10 Strategies for Engaging Learners in Large Lecture Classes

This document outlines 10 strategies for engaging learners in your large lecture courses. This is not a how-to document; we simply describe some of the types of activities and strategies that may be useful in your course.

Strategy #1: Ask Questions Using an Audience Response System *The basics:* Audience Response Systems (sometimes called a student response system or SRS) allow instructors to poll students on free response, true/false, and multiple-choice questions. Instructors can integrate polling questions into the flow of their face-to-face meetings to re-engage learners. Research findings in this area suggest that it is beneficial to integrate ARSs into classroom lectures for their enhancement of classroom interaction and participation (Harris & Zeng, 2010).

Variations on the Strategy: Polling questions might be multiple choice or free response (depending on the tool), and may be used to gauge learners' understanding of an important concept, to ask for opinions on a controversial question, or even simply to take attendance.

Student Response System Tools to use to employ this strategy:
- ∉ [Poll Everywhere](#)
- ∉ [D2L Brightspace quizzing features](#)

Strategy #2: Flip Your Classroom
The basics: Instructors pre-record lectures and then use face-to-face time to employ active learning strategies including (but not limited to) answering questions, providing guidance, having students work on problems in teams, and/or asking students to present materials to peers. The flipped approach to lecture capture use is studied in Day and Foley's (2006) research where they state that by using web lectures to present lecture material before class, more in-class time can be spent engaging students with hands-on learning activities. The results of their study show that flipping the classroom with Web lectures improve student performance.

Variations on the Strategy: Pre-recorded lectures can be recorded using any number of MNSU or cloud-based services (see below) and then uploaded to a D2L course for student review. Videos can be sprinkled with mastery questions or even sequenced in D2L with questions or entire quizzes to ensure that everyone comes to class ready to participate. Other strategies discussed in this paper can be used to

encourage more active, engaged learners during class.

Lecture Capture Tools to Use to Employ this Strategy:
- MediaSpace
- HD Lecture Capture Studio

Strategy #3: Employ Problem-based Learning Strategies

The basics: Problem-based learning is steeped in the idea of authentic assessment -- the instructor provides a real-world problem to learners at the outset, and then provides them expert guidance in helping to solve that problem. Through discovery and trial and error, learners will begin to intuit the principles behind expert thought in a domain.

Variations on the Strategy: Its generally believed that authentic, real-world problems are optimal for this approach. Perhaps consider having learners work together to identify their own problems that they would like to try to solve, within certain pre-defined parameters. Have students work in teams, and perhaps work online during lectures to try to draw connections between what you're discussing in the lecture and the problem they are working on. For complex problems, you may wish to scaffold the process, particularly early on, providing some of the information that learners would need to find the answer.

Online Knowledge Base Tools to Use to Employ this Strategy
- Group Discussion Boards in D2L Brightspace
- OneDrive

Strategy #4: Use Think, Pair, Share and/or Peer Instruction Models

The basics: Think, Pair, Share (Lyman, 1987) and Peer Instruction (Mazur and Hilborn, 1997) are similar pedagogical strategies in which instructors pose a mastery challenge question to learners. Learners first commit to an answer -- either by using a student response system (see above) or just on paper. Then they pair up -- "turn to their neighbor and talk" -- and explain why they thought their answer was correct. The group then comes back together, and learners are asked to recommit, either changing their initial response or holding fast. The larger group may share/discuss the outcomes of their paired meetings.

Variations on the Strategy: It might be possible to form groups larger than a dyad, but we recommend keeping the groups small (four or fewer) if at all possible. Instructors sometimes choose to require their groups to resubmit their group answer together after their small-group interaction. One note is that popular wrong answers tend to become more popular after the small group discussions; if you are using a polling system and you notice a popular wrong answer, we recommend letting the groups know that the most popular answer is incorrect before they discuss so they don't spend time convincing each other of the tenacity of the incorrect answer.

Student Response Tools to Use to Employ this Strategy
- ∉ [Poll Everywhere](#)
- ∉ [D2L Brightspace quizzing features](#)
- ∉ Pen and paper

Strategy #5: Apply Interactive Case-based Learning Strategies
The basics: Similar to problem-based learning, case-based learning emphasizes the idea that consideration of real-world cases allows learners to bounce theory off of practice and appreciate the nuance of application. There are many ways to use cases effectively to engage learners, but overall the idea is to continue to connect the principles the instructor wants to teach back to a real-world example or examples.

Variations on the Strategy: Instructors may choose to structure an entire lecture around a single case that demonstrates the idea, building up the case over the course of their face-to-face meeting. Mastery check questions can be interspersed into the lecture, either using student response systems, think, pair, share, or just by posing a question on a PowerPoint slide and asking learners to take a moment to reflect. Some instructors choose to use multiple cases to demonstrate a single point or to add increasing levels of complexity to a scenario.

Tools to Use to Employ this Method
- ● PowerPoint
- ● Student Response Systems (see above)

Strategy #6: Make the F2F Meeting Responsive Using Just-in-Time Teaching Methods
The basics: Just-in-Time Teaching (JiTT) is a method used to engaged learners in sense-making before they come to class.Learners are asked to do pre-class activities (complete a reading assignment, watch a lecture, etc.) and then to answer questions about the material. The instructor then scans student responses (even in very large courses this can be relatively easy) and adjusts in-class time to address questions, misunderstandings, and problem areas. The point isn't to read each response in detail, but rather to try to scan and find broad trends of challenge areas that will allow the instructor to focus f2f time more effectively.

Variations on the Strategy: The types of questions asked can range from content specific questions to more general questions, such as "What was the most difficult or interesting thing from your pre-class work?" Consider calling out individual students who pose particularly thoughtful or insightful questions as a means of validating their responses and encouraging quality participation. Create a rubric for a "good" response and spot-check grade students to ensure that responses are thoughtful and that students aren't simply phoning it in. Students can post their responses to a blog, to a wiki, or to a discussion board in D2L. Polleverywhere could also be used in free-text mode to allow instructors to see both individual

responses and the aggregate word cloud. Arts and humanities instructors might use this approach to gather reactions to art or literary pieces as a means of launching discussion during class. Google Forms could also be used to allow learners to fill out a form before class which will then populate into a spreadsheet for the instructor.

Response System Tools to Use to Employ this Method
- ∉ [Poll Everywhere](#)
- ∉ [D2L Brightspace quizzing features](#)

Strategy #7: Allow/Encourage Learners to Debate a Point in the Back Channel
The basics: According to Aagard, Bown, Olesova, (2010) in addition to having an official front *channel, the class can have the back channel*, the unofficial channel, consisting of interactions among the audience, or perhaps with those outside the class. The "back channel" refers to a dialogue that occurs online while a speaker is presenting. This is becoming increasingly common at major conferences. Consider posing a question or a series of questions to your students at the start of a course meeting and encouraging them to discuss it in the back channel as you proceed. Twitter is a natural fit for this, but a blog or Polleverywhere could also be used.

Variations on the Strategy: Instructors may choose to have these conversations be more or less directed - - that is, students might be encouraged to simply post ideas or responses to the lecture, or they might be directed to respond to a series of prompts. Think about allowing learners to post here for all or part of a participation grade. Consider incentivizing responding directly to a peer's question or statement to encourage more dialogic behavior. If using Twitter, use a course hashtag (#yourcoursename, for example) to help drive the responses into an aggregate feed.

Response Tools Used to Employ this Method:
- ∉ [Poll Everywhere](#)
- ∉ [D2L Brightspace discussions features](#)

Strategy #8: Google Jockey
The basics: Google Jockeying is having students working online during class to find and curate a knowledge base of support materials about the topic you are discussing. Students can use Google, library resources, or other online mechanisms to find and contribute to a wiki knowledge base about the topic. This directs student use of technology to something more productive than email and Facebook and helps to create a lasting resource of additional materials that the class can use ongoing.

Variations on the Strategy: Encourage students to work in small groups or teams, and have them both take notes together on the lecture and find supplemental/supporting materials to post. Have them submit their group pages and provide the team with the best page extra credit. Share the notes pages (or

perhaps just the best notes page) with the rest of the class as a study guide/resource.

Knowledge Base Tools to Use to Employ this Strategy:
- Office365
- OneDrive

Strategy #9: Lecture Scavenger Hunt/Course Quiz/Game

The basics: Provide students with a scaffolded set of ideas or concepts to look for during your course lectures. These might take the form of a quiz, a "scavenger hunt", or even a bingo game. Avoid focusing on trivial facts, when possible, looking instead to have students apply the ideas and concepts you want to enforce during the lecture or learning activity.

Variations on the Strategy: Consider the key ideas and concepts you want students to walk away with from your f2f meeting and try to find ways to encourage them to apply those ideas toward the scavenger hunt. This can help them focus and listen to your lecture, keeping a cognitive ear out (so to speak) for those items that you are really trying to emphasize.

Engagement Tools to Use to Employ this Strategy:
- Pen and paper
- ∉ D2L Brightspace quizzing features

Strategy #10: Pepper Your Lectures with Active Learning Mastery Challenges

The basics: There are limits to human attention; in online learning we often discuss "chunking" lectures into 10 - 15 minute segments so students don't lose focus. Consider having students "stretch" their cognitive legs once every 10 - 15 minutes by introducing an active learning mastery challenge related to the content that you've just discussed. The point of this approach is to get them to do something active with their brains and to express it with their bodies -- even if that is just by typing or writing it down on a piece of paper. Don't just pose a question and assume they are thinking about it; they need to commit to the thought process somehow.

Variations on the Strategy: There are numerous ways to get students thinking about and applying the course material at regular intervals. Ask them to work in teams to Google Jockey a specific topic -- make it a "race" to find an answer from a credible source on the Internet. Pose an application question using an SRS system. Pose an application question and have them work it out on paper and submit it. Use a think, pair, share approach with no technology at all. Have them leave their seats and come to a white board or SmartBoard, alone or in groups, and work out a problem, with or without help from the audience. Have them add a comment to a blog post. Have them take a simple mastery quiz in D2L Brightspace.

Tools to Use to Employ this Strategy:

- Student Response Systems (see above)
- ∉ [D2L Brightspace quizzing features](#)
- ∉ Pen and paper

References

Aagard, H., Bowen, K., & Olesova, L. (2010). Hotseat: Opening the backchannel in large lectures.*EDUCAUSE Quarterly*, *33*(3)

Day, J., & Foley, J. (2006). Evaluating web lectures: a case study from HCI. Paper presented at the Conference on Human Factors in Computing Systems, Montreal, Quebec, Canada.

Harris, S. T., & Zeng, X. (2010). Using an audience response system (ars) in a face-to-face and distance education cpt/hcpcs coding course. *Perspectives in health information management*, *7*,

Lyman, F., (1987). Think-Pair-Share: An expanding teaching technique: *MAA-CIE Cooperative News*, v. 1, p. 1-2.

Mazur, E. & Hilborn, R.C., 1997. Peer instruction: A user's manual. *Physics Today*, 50, p.68