Effective Lecturing

Yale Center for Teaching and Learning
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Instructors can introduce active and participatory components into their lectures, in order to deepen learning and refresh attention span. Active learning components might tie directly to slides, lecture, and/or whole class discussions.

Recommendations

When planning a lecture:

- **Define Learning Outcomes** - What should students know or be able to do at the end of the lecture? Instructors can use the Backward Design process to develop learning outcomes for each lecture. Presenting these learning objectives at the beginning can invite students to understand the flow of a lecture and participate more fully in its success. Instructors can review outcomes at the conclusion, ask students to assess their efforts towards the outcomes, and share points that are still muddy or confusing.

- **Assess Prior Knowledge** - What is the ability and background of the audience (graduate/undergraduate)? Research shows that students learn most effectively when actively building on their prior knowledge frameworks. When planning and beginning a lecture, instructors can ascertain prior knowledge through questions or surveys, and ensure their lecture responds to specific student needs. They can also assess student prior knowledge through clicker questions and other formative assessments, and use this information to modify their lecture as needed.

- **Consider the Room** - If seats are not fixed to the floor, instructors can consider a variety of seating arrangements that naturally improve quantity and quality of interactions among students and instructor.

- **Watch the Time** - How much information can be included within the time allotment? Presenting too much information can be detrimental to student learning, and instructors should design lectures that incorporate questions and discussions into a reasonable spread of material and activities.

When delivering a lecture:

- **Provide a Roadmap** - As with learning outcomes, students appreciate knowing a lecture's proposed direction. By sharing an outline, either within the lecture or written out, instructors can make their presentation structure more transparent. This type of scaffolding supports student learning by helping them conceptualize the connections and causal reasons behind lecture content.

- **Use Active Learning Breaks** - Through one-minute papers, think-pair-share, concept maps, jigsaw discussions, 3D-printed models, and other active learning practices, instructors can break up monologue with moments of digestion and inquiry for students.

- **Make Transitions Obvious** - Instructors can indicate obvious transitions between topics, concepts, or points. Students, being novice learners, may be unaware of when the instructor has shifted to a new topic or point. Instructors can clearly signal these transitionary moments during their lecture by writing an outline on the board and tapping new topics, using obvious transition words, and drawing a developing concept map on the board that visually connects new topics.

- **Use Repetition** - Without becoming rote, repeating phrases or major points can emphasize salient points of a lecture. Long lectures can exceed the attention capacity of most individuals, and repetition of salient points can help students capture important information. Additionally, instructors can consider rephrasing explanations and providing multiple media forms (oral, written, video, closed captioning, aural) to make their lecture more accessible and universally designed for all students.

- **Make Handouts Relevant** - Instructors should ensure that any handouts or slides appropriately correspond to the lecture, and that they refer to handouts or slides during the lecture. Lack of alignment between course materials and the lecture can impede student learning.

- **Break Down Concepts** - Difficult concepts may need to be broken down into several slides, activities, or illustrations in lecture. Students digest new knowledge through "chunking" and interconnecting points, rather than straight memory or total conceptualization, and breaking concepts down can helps students build connections and examples into full concepts. Instructors can utilize audio/visual aids, self- or peer-observation, and formative assessments to ensure presentation at the right speed.

- **Encourage Longhand** - Instructors can encourage students to take notes by hand during lecture. Research suggests that the process of handwriting supports student learning of material.

- **Accessibility Awareness** - Instructors delivering lectures should be aware of student accessibility concerns, and provide dynamic approaches to support students who are auditory-, visual-, or writing- disabled.