Lecturing for Learning

Many lecturers are overly critical of their own performance. Efforts to perfect lecturing techniques can sometimes lead to a counterproductive focus on what the teacher is doing and inadequate consideration of what the students are learning. This session focuses on how to be sure that UNLV students are “getting” what we are teaching in lectures, and how to help students be active learners in a lecture class.

Strategies for active learning in lecture classes:
- Introduce and conclude with Transparent Framework (purpose, task criteria for students’ work)
- Set up awareness of need to know, and desire to know
- Encourage students to practice skills and apply knowledge through class activities, projects
- Invite students’ assessment of their learning:
  - What were the most important points from today’s lecture?
  - What topic or concept remains the least clear to you?
  - What would you like to hear more about?

Publications:
Manzano, Michael, and Christopher Newfield. “Christensen's Disruptive Innovation after the Lepore Critique.” Remaking the University, June 22, 2014.

Links:
- Derek Bruff, Eight Lecturing Basics from Barbara Gross Davis’ Tools for Teaching.
- Instructional Development Services and Resources at UNLV.
- Research and Teaching at UNLV series archive.
- Garr Reynolds, Top Ten Slide Tips.
- Mary Deane Sorcinelli, Peer Review of Teaching: Sorcinelli Observation Guide.
- Carl Wieman Science Education Initiative, Clicker Resources.

Videos of Michael Sandel and Eric Mazur are from Derek Bok Center for Teaching and Learning video series, copyright President and Fellows of Harvard University.
Micro-Lectures for Online/Blended (Hybrid) Courses

General Guidelines:

• Create an introductory video to establish social presence. Provide an overview of the structure of the course, concepts, and the purpose and task criteria of the course or module content.

• Videos should be chunked and organized thematically. State purpose, task and criteria for each micro-lecture.

• Intersperse faculty talking with slides and demonstrations.

• Pre-recorded classroom lectures are not as engaging even if chunked into segments.

• Embed questions for learners to answer to break-up lecture and keep the learner engaged.

• At the end of the micro-lecture include assessment questions to identify if learners understood material, identify any misconceptions, and to find out what particular points students want to learn more about.

• Videos should be less than 9 minutes in length. Videos that are shorter engage students more.

• Transcriptions need to be available for learners.

• Use YouTube video analytics to identify where students are engaged and disengaged.

Publications:


Contact:

If you are or plan to teach an online or blended (hybrid) course please contact the Office of Online Education. (702) 895-0334; online@unlv.edu or Anne Mendenhall, Director of Online Education anne.mendenhall@unlv.edu
Good clicker questions should address a specific learning goal, content goal, skill, or reinforce a specific belief about learning (Beatty et al., 2006).

Questions can (Beatty, 2004):
- assess students’ background, knowledge, or beliefs
- make students aware of others' views or of their own
- locate misconceptions and confusion
- distinguish between related ideas
- show parallels or connections between ideas
- explore or apply ideas in a new context.

Some examples of questions recommended by the literature include:
- given a term or concept, identify the correct definition from a list, and vice versa
- given a graph, match it with the best description or interpretation, and vice versa
- match a method of analysis with an appropriate data set, and vice versa
- questions that link the general to the specific
- questions that share a familiar situation or example with several other questions
- questions that students cannot answer, to motivate discussion and curiosity before introducing a new topic
- questions that require ideas or steps to be sorted into order
- questions that list steps and ask “which one is wrong?”
- questions that apply a familiar idea to a new context.

Several researchers assert that it is useful, and even important, to design questions that produce a wide set of responses or on which some portion of the class makes mistakes (Dufresne et al., 2000; Hake, 2002; Wit, 2003; Beatty, 2004; Brewer, 2004; Johnson and McLeod, 2004; Wilson et al., 2006). Others seem to agree, asserting that exploring those misconceptions can be an important part of steering students toward deeper understanding, not just factual knowledge (Tanner and Allen, 2005). To construct such questions, it is helpful to:
- identify student misconceptions and include them as answers, plausibly phrased
- “shut up and listen” to students to find out how they think, and pay particular attention to wrong answers
- include answers that contain common errors.

A variety of questions is usually deemed useful. While instructors are learning to write questions, often most of their questions consist of factual recall (Brewer, 2004). One set of researchers reports that asking instructors to identify the type of question they are writing can help increase the diversity of questions (Brewer, 2004). Practical suggestions include (Wit, 2003; Beekes, 2006):
- limit the number of answers to five or less, so that question is easy to read and consider
- assess knowledge of jargon separately from concepts to ensure that each is addressed clearly and effectively
- create wrong answers (distractors) that seem logical or plausible to prevent “strategizing” students from easily eliminating wrong answers
- include “I don't know” as an answer choice to prevent guessing
- plan to ask some questions twice to allow peer learning and build emotional investment. (Allow students to answer individually, but do not display the correct answer; then direct students to discuss the question with their peers and answer again.) This approach is advocated by many instructors who have used clickers, including Wilson et al. (2006) and Knight and Wood (2005).