**Effective Lectures**

Lecture—a period of continuous exposition by the instructor—is one of many distinct in-class learning activities an instructor can use. As with any leaning activity, the decision to lecture should result from a careful consideration of the instructor’s strengths, the students’ capabilities, the nature of the course material, environmental factors, and learning objectives.

**Advantages of Lecture**

Lectures can efficiently disseminate foundational knowledge

Instructors can use lectures to help students easily acquire knowledge of terms, basic facts, and simple concepts. Lectures are as effective, but not more effective, than other methods in transmitting simple information (Bligh, 2000).

Lectures make students feel comfortable

The lecture method may match students’ expectations of student and teacher roles. Students sometimes have an initial resistance to “active” learning, which may suggest greater comfort with the familiar lecture style. Such resistance is often related to students’ preference for authoritative rather than discursive instruction and may be greater with men and less experienced students (Owens, et al., 2017). Interestingly, more experienced students in large classes may prefer and expect lectures, presumably due to their previous experience in large classes (Messineo et al., 2007). At the same time, some studies demonstrate the general “unpopularity” of lectures among students, especially compared with discussion (Bligh, 2000).

Lectures provide control and consistency

Since lectures are a monologue, the content and pace are completely controlled by the speaker. This may be an advantage when crucial information needs to be delivered. Additionally, the lecture method is relatively unaffected by changes in class size; learning is consistent in small or large lecture classes. Similarly, variations in room configuration, furniture, etc., tend not to affect lectures, provided the lecturer does not rely heavily on technology.

Lectures can demonstrate academic skills, methods, and dispositions

Lecturing can be a way to model attitudes and behaviors the instructor values, such as careful weighing of evidence, presentation of argument and counterargument, and demonstration of how the subject has personal meaning.

**Limitations of Lecture**

Lectures risk losing students’ attention

The research on students’ “attention spans” is conflicting, partly because there is no agreed-upon definition of “attention span” or its indicators, and partly because so many variables affect attention that fully controlled experiments are impossible. But research is clear that unchanged visual, physical, auditory stimuli have a negative effect on attention, as does putting too many demands on working memory. Studies place lapse in attention anywhere from five to eighteen minutes from the beginning of a lecture (if the “settling in” phase of the first minute is disregarded), although somewhat paradoxically, the maximum level of concentration may be 10-15 minutes into the lecture. By whatever measure, studies commonly find that attention lapses occur with increasing frequency throughout a lecture. The primary effect of attention loss is on what students will note rather than their recall abilities (Wilson and Korn, 2007).

Lectures do not generally stimulate higher-order thinking (see [Bloom's Taxonomy](https://www.baylor.edu/atl/doc.php/290827.pdf))

Bligh argues that discussion is better than lecture at promoting thought, affecting attitudes and behavior, and generating enthusiasm for a subject. Unless a student already has a disposition toward “deep” learning, he or she will require something beyond a lecture to process information. (Many studies, it should be noted, are not able to discern whether it is the lecture method itself, versus simply *poor lectures*,that explain these results.)

Lectures may discourage questioning

This is related to higher-order thinking, as questioning is part critical analysis and evaluation. More fundamentally, without opportunities to ask questions, students’ misunderstandings may not be corrected. Relatedly, without interaction with the teacher, students may miss positive feedback, which can increase student motivation and effort. Additionally, students rate lectures highly when there is free communication between student and teacher (Sekhri, 2012).

Lectures may present too much information, irrelevant information, and too quickly

Instructors may assume that students learn information at the rate instructors deliver it. This may lead to speaking too fast and giving too much information. Studies show that students learn less than half of what a lecturer says, and, to a point, students learn more when presented with less information. Higher-order thinking is especially impaired by overly fast lectures (Bligh, 2000). Lecturers must also be aware of the possibility of imposing “extraneous cognitive load,” that is, engaging greater amounts of working memory than are needed for the specific learning objective. This can slow learning and impede understanding. For example, a lecturer may increase cognitive load for students when using more than one challenging or unfamiliar term to explain a concept or using two forms of representation (e.g., text and diagram) in which neither form is self-contained or fully intelligible on its own (Chandler and Sweller, 1991).

Lectures may ignore the social dimension of learning

Traditional lectures tend not to take advantage of the fundamentally social nature of learning. People learn—and especially develop dispositions—in social contexts, and their thinking is refined by submitting their thoughts to others and receiving feedback. Greater social interaction in a classroom can also increase motivation to learn, create higher standards of achievement, and increase student retention (Astin, 2003; Brufee, 1999).

**Lecture Tools**

Visuals

Visual tools can enhance lectures. Some concepts are more easily conveyed or understood in visual form. Visual presentation can also break the monotony of a lecture, potentially regaining students’ attention. Presentation slide technology, like PowerPoint or Prezi, is common, although it should be used carefully. For such technology to be beneficial, do not talk while students are reading, and do not fill slides with too much text or unnecessary graphics or animation, which can be distracting and overwhelming. Another reason not to supply too much text is that students learn more when they must conceptualize and write it themselves, a process called “encoding” (Bligh, 2000). A chalk board or white board can also be helpful, provided handwriting is legible, organization is clear, and you do not talk while you are writing. Some suggest, when using a board, to create an organizational chart or outline on one side (which remains unedited through the lecture) while writing terms, definitions, and points to stress on the other side.

Lecture Guidance Documents (Handouts)

Lectures can be easier for students to understand and follow if they have a handout that contains the outline of the lecture or a set of “partial notes,” that is, a handout that contains key terms or definitions missing for students to fill in.

**Lectures Worth Listening To…**

Are Organized

Present information in a logical, clearly stated structure (chronology, thematically, problem and solution, thesis and evidence, etc.). Use verbal signposts (e.g., “the second point is…”), appropriate repetition, and summaries. Balance general information with specific examples. To reinforce coherence, relate new information to existing information.

Are Delivered with Authenticity

Know your material well enough to present it with minimal notes. This communicates to students that the material is important enough for you to have internalized and assures students that you will be able to answer their questions (i.e., that you know more than is in your notes). More practically, this allows you to make eye contact with students, walk the room, and be attentive to students’ reactions. Students are more receptive—and may learn more—when lecturers “humanize” themselves, that is, they seem at ease, are energetic (but not nervous), and use colloquial speech, self-disclosure, and humor when appropriate (Bligh, 2000).

Are Accompanied by Guidance and Opportunity for Note-Taking,

The benefit of a lecture is inseparable from the ability to create useful notes. Consider offering a brief in-class discussion or handout on note-taking (For example, this [handout](https://www.purdue.edu/asc/resources/pdfs/ASC_Handouts_ImprovingNotetaking.pdf) from Purdue University). Be sure your lecture is paced for students’ note-taking. Pause after each main point, and immediately repeat important definitions or lists. Note-taking can also be an opportunity to encourage higher-level thinking by, for instance, asking students to record questions in their notes as they arise during the lecture or giving time for students to summarize a series of points before moving on. Finally, encourage students to review their notes after each class, rather than seeing them only as a tool for exam preparation.

Invite questions

From the first lecture, establish that you expect questions, will give plenty of time for them, and will answer them thoughtfully and respectfully. Students are more likely to ask questions if the lecturer pauses and solicits questions not just at the end of the class session, but throughout, especially when dealing with complex issues and before moving on to new topics. The way questions are solicited is also important. For instance, “are there any questions?” is less likely to get a response than “what questions do you have?” and when the instructor does not move on until at least one question has been asked (often one question will spark another). Better still is when an instructor poses specific but open-ended questions to students.

Solicit and Act on Feedback

Lecturing is a skill that can be continually improved. One way to do this is to gather feedback on your lectures that can help evaluate your performance. This may include recording your lecture to view later, being observed by a colleague (contact atl@baylor.edu to schedule a teaching observation), or receiving student feedback. Student ratings at the end of a course can be helpful for future courses, but don’t overlook opportunities to improve during a course. Consider regular “[fast feedback](https://baylor.app.box.com/file/282854374297)” forms, completed by students after each class, at the end the week, or with each exam. You can also become more reflective about your teaching by intentionally observing student behavior, requesting to view students’ notes (to see how well students’ notes reflect the lecture), and simply noting “what worked” and “what didn’t work” immediately after each lecture.

**Interactive Lectures**

Aside from inviting questions during lecture, instructors can do many things in combination with lecture that increase student participation, improve recall, and exercise higher-order thinking. Consider these [Twenty Ways to Make Lectures More Participatory](https://www.baylor.edu/atl/doc.php/306013.pdf), all of which have been used in very large as well as small sections.

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