

From: Teaching Toolbox - Center For Faculty Innovation <TEACHING-TOOLBOX@LISTSERV.JMU.EDU> **On Behalf Of** Center for Faculty Innovation
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Subject: Teaching Toolbox: Stop the Lecture! The Importance of a Purposeful Pause

Stop the Lecture! The Importance of a Purposeful Pause
by Lori Gano-Overway

My social psychology professor, [Chuck Green](#), was a grand lecturer. He imparted knowledge about the field by sharing content, telling stories, and prompting us to think deeply through well-targeted questions. He ignited my interest in psychology. My experiences in his class showed me that well-structured and well-delivered lectures can be enjoyable, thought-provoking, and filled with learning opportunities. While I am personally a proponent of using multiple teaching methods that are determined by the course content, teaching conditions, philosophical underpinnings, etc., it is worth pausing to consider ways to improve the lecture, which is one teaching strategy in my, well, toolbox.

What is a well-structured lecture and what are the limits of lecturing? [Researchers](#) have found that traditional lectures, defined by students passively listening to an instructor imparting knowledge, do not advance student learning as well as active learning strategies. With this and [other research](#) conducted over the last decade, faculty are thinking creatively and critically about how to structure lectures, when and when not to use them, and how to incorporate active learning. When pondering how to structure lectures that promote learning for all students, one important concept to consider is cognitive load.

[John Sweller \(2011\)](#) described the concept of cognitive load theory. Building on the [information processing model of memory](#), he contended that, as individuals process information, they can take too much information into their working memory. This cognitive overload can then prevent information from being processed into long-term memory, which affects the learning process. According to [Oliver Lovell's \(2020\) book offering ways to apply cognitive load theory](#), the role of the instructor is to limit extraneous load (e.g., attention distractors) and maximize intrinsic load (i.e., where core learning is taking place within memory systems). While there are many ways to manage cognitive load in teaching practice, the following strategies highlight the importance of a purposeful pause during any type of lecture.

- **Pause between written and spoken words.** A well-organized lecture and [well-designed PowerPoint slides](#) can assist students in processing information during class. However, presenting written information on the slide while also talking about it can overload students' working memory. Students—people, really—can't read and listen well at the same time. Plus, [people learn and process differently](#). Therefore, before you talk about what is on a slide, pause to give students time to read and process the written content. For example, an instructor could read the written content silently and then pause the same amount of time after reading it allowing students to read, process, and take notes on the written content (maybe using [guided notes](#)). Then the instructor can elaborate on the succinct statement presented on the slide.

Doing so can reduce cognitive load and is a good reminder to students that [multitasking](#) is not really possible.

- **Pause and check in on the speed of the lecture.** Even when instructors have prompted students to complete the reading, provided a [pre-lecture reading assessment](#), or developed a guide to new vocabulary that would be introduced in the lecture, new and/or complex information can create extra load on working memory. When this information is presented too quickly, it can create cognitive overload where students fail to process some or all of the information. Therefore, it can be helpful for faculty to pause the lecture and check in with students to see if the information is being presented too fast (or too slow) for them to process (e.g., a quick thumbs up/down or polling software response). Faculty can also take a few well-timed moments of silence to provide students thinking time following the presentation of complex information during a lecture and/or time to catch up on note taking.
- **Pause to promote retention of information.** Consider [segmenting lectures](#) into smaller chunks (10-15 minutes) to limit cognitive overload and provide opportunities for [retrieval practice and elaboration](#) to aid storage to long-term memory. Here are a few examples:
 - Pause for a quick knowledge test using [polling software](#) to promote recall and provide insight into comprehension on the topics presented.
 - Use the [pause procedure](#) by stopping for a couple of minutes to have students review their notes, highlight major points, and identify points in need of clarification. They could also pause and share their notes with a classmate.
 - Pause after making a major point and invite students to turn to a neighbor to discuss how they would [translate it](#) using common speech or share it via social media.
- **Pause to encourage deeper processing of the information.** Lectures can be paused while students engage in an activity learning strategy to further support and deepen learning of the course content. There are many [engagement techniques](#) that could be used based on the student learning outcomes and course considerations (e.g., time constraints, [classroom space](#), number of students). The strategies chosen can be quick and easy (e.g., like [think-pair-share](#)), a bit more elaborate (e.g., develop [a case study](#)), or require an overhaul of lecturing practice to embrace [interactive lecturing](#).

I have found that taking a purposeful pause in my interactive lectures has helped students seek clarification on points discussed in class, encouraged student questions, prompted meaningful application to their own lives, and created a positive learning environment. Researchers continue to support the [active lecture](#) as having a variety of positive student outcomes and we also have some guidance on crafting good pauses. Gail Rice (2018), in "[Hitting Pause: 65 Lecture Breaks to Refresh and Reinforce Learning](#)," emphasized that good pauses are characterized by an intention to: 1) create a psychological safe environment, 2) meet a specific learning purpose, 3) personalize content to the student's life, and 4) be surprising and unpredictable. We can even use pauses at the [beginning](#) or [end](#) of a lecture. Therefore, as you plan your next lecture, I hope you will take a moment for a purposeful pause to optimize cognitive load and support student learning in your classes.

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