Scholarly Teaching
Doing What Works!

Dynamic Lecturing in Synchronous Online Lectures

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Technology tools such as Zoom make it easy for faculty to conduct live teaching sessions in an online environment. There are several research-based strategies that faculty can incorporate into their online lectures that will increase learning. The 7 lecture enhancement strategies shared by Harrington & Zakrajsek (2017) can be easily adapted to online lectures.

1. Activating Prior Knowledge

Why?

We learn best when we can connect what we are learning to what we have already learned. Having that information readily available increases learning.

How?

- Begin by reminding students of key concepts discussed previously that will relate to new content.
- Begin with a Dusting off the Cobwebs breakout discussion where students are placed in groups of 2-4 and are asked to recall what was discussed during the last class or in the last online discussion. Each group can report out one important concept via chat.

2. Capture Attention and Emphasize Important Points

Why?

It is difficult to learn when you aren't paying attention. Attention will naturally fluctuate during a class and it can be more difficult for students to attend during online versus in-person lectures. Novice learners also have difficulty identifying the most important concepts. Capturing attention and helping students differentiate the important from the less important will help them focus and learn.

How?

- Determine the 3 big ideas (or most important points) of each lecture. Share these with students at the beginning of the lecture.
- Intentionally use a strategy to capture student attention before each big idea is introduced. For example, share an interesting statistic, meme, or story, use a gesture if you are using a webcam, talk more loudly or enthusiastically, use a different color for the slide introducing the topic or simply say this is big idea #1!

3. Effective Multi-Media

Why?

Research shows that students learn more when multi-media is developed using research-based principles and ineffective media can decrease learning. Images are especially helpful because our memory for images is better than our memory for words. When you have slides that have too many words and you are talking, it results in reduced learning because attention is split between reading and listening.

How?

- Use a relevant image, chart, or SmartArt on the slide and then discuss it
- If you want to share more content (bulleted lists, for example), share this as a handout. Students will appreciate this resource. You can also create a version of your slides with bullets for you if that helps you stay organized but showing it during the lecture isn't helpful.

4. Elaboration through Examples

Why?

Sharing examples helps students understand the real-world value of the content. This increases both motivation and learning.

How?

- Share examples through stories.
- You can also share your screen during synchronous lectures and show examples available on websites.
- Consider asking students to also identify an example- they can do this independently and share their example via chat or use a breakout room for a brief discussion.

5. Reflection Opportunities

Why?

There is strong research evidence that shows students learn much more when given an opportunity to pause and reflect during lectures. Students need processing time.

How?

- Pause for one-three minutes for students to summarize what they have learned or for students to share what isn't clear to them. Students can submit their summaries via chat, a tweet, in a discussion board, or later as a mini assignment.
- Use breakout rooms so that students can discuss what they have learned with a few classmates. If screen sharing is available, they can also share and compare their electronic notes or summaries and discuss what they think is most important. Breakout rooms can also be used to have students work together on an example related to the content just learned.
- Pause and ask students to share what they think was the most important point just discussed via chat or a tweet.

6. Retrieval Practice

Why?
Research has shown that testing is a powerful learning tool. Retrieval is an important part of the memory process and the more students retrieve information just learned, the more likely this information will find a home in long-term memory.

How?

- A simple way to do this is to ask a question on a slide and have students type their answers in chat. Please note that these are intended to be ungraded activities.
- A more advanced option is to use polling tools which are often available in synchronous lecturing platforms, but if not, you can use other tools such as Poll Everywhere. This approach allows you to see the statistics on each question and display it to the class.
- You could also give quiz questions after the lecture in the online testing tool in your LMS. Because testing is a learning tool, consider unlimited attempts and encouraging students to work collaboratively.

7. Questioning for Critical Thinking

Why?
Getting students to think more deeply about the content being learned in a lecture increases learning. Questions are an excellent way to facilitate high-level thinking.

How?

- After lecturing on the key concepts, pose a question and have students discuss and respond to the question using breakout rooms or chat.
- You could also have small groups of students identify the questions and then you can answer them, or you can assign different groups different student-generated questions to discuss.

- Online discussions can follow the lecture. At the start of each lecture, you can then summarize and reflect on the discussion from the prior week (activating prior knowledge) and then set up a new question at the end of each lecture.

Harrington, C. & Zakrajsek, T. (2017). *Dynamic lecturing: Research-based strategies to enhance lecture effectiveness.* Stylus Publishing.

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