

Lecture Method of Teaching

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This document discusses the lecture method of teaching. We start by listing situations in which lectures work well. Then we elaborate upon the four factors crucial for delivering effective lectures: planning the lecture, structuring the lecture, incorporating active learning and interactivity in the lecture and delivering the lecture. Lastly, we explore the question of whether the lecture method of teaching is still relevant.

This article is meant for educators who want to enrich their lectures by making them more structured and interactive while also improving their style of delivering the lecture.

Introduction

Lecture method of teaching is one of the most popular and longstanding teaching methods. They can motivate, amuse and incite their audience. They work best when used in conjunction with suitable learning objectives, such as¹:

- Imparting information which adds to or improves reading material assigned to students
- Explaining challenging concepts
- Clarifying misunderstandings or doubts
- Building or keeping interest in a novel topic
- Integrating knowledge across an array of topics
- Convincing the audience

Although lectures are well suited to some learning situations, they are not ideal to others. The following table summarizes learning situations where lectures are and are not suitable.

The Effectiveness (and ineffectiveness) of Lecture	
Situations where lectures are good	Situations where lectures are not so good
Presenting current information	Fostering active learning
Summarizing material from multiple sources	Stimulating higher order learning
Focusing material on a particular area of interest	Engaging learners
Relaying key concepts, principles and ideas	Developing learners' skills
Building interest	Exploring attitudes or values
Source: Making Lectures more Active, Center for Teaching and Learning, Indiana University	

Furthermore, the following four factors are crucial for delivering an effective lecture:

- Planning the lecture
- Structuring the lecture
- Incorporating active learning and interactivity in the lecture
- Delivering the lecture

In the rest of this article, we will elaborate on these four factors.

Planning the Lecture

Lectures are appropriate for introducing new material, recapping information, altering information to the experience and interests of a set of students, and converging on crucial ideas or principles. Students learn better if new information is linked to what they already know. Thus, the lecture should

¹ <https://www.cmu.edu/teaching/design/teach/design/instructionalstrategies/lectures.html>

serve as a connector between the new content and the existing knowledge base of the students. So, spend time with the students and make enquiries about what they already know. Think about what you want students to understand rather than what you need to cover. In subsequent lectures, start by summarizing material covered previously and show how new content connects to it. Use illustrations related to the learners' backgrounds. Make sure to tie important information together in your summary². Remember that a good lecture fits into the students' overall learning framework, builds upon previously taught concepts, and then broadens their thinking in new directions³.

Your plans must make use of various elements which you can control in the classroom⁴:

- **Visual Message:** Make sure that your board plan, slide deck or other teaching aids complement your verbal message. Images can serve as metaphors to make your words more memorable.
- **Physical Presence:** You must leverage your physical presence to connect with the students.
- **Verbal Message:** What you say or present in class is an important part of your session. You must ensure that the verbal message complements what you want to convey to the students.
- **Student Notes:** Assure learners that you will share your slide deck or classroom material after the class so that they can engage with the material rather than be busy taking notes.
- **What students think:** Consider how you can help students comprehend the material in class.
- **What students say and do:** A typical lecture assigns a passive role to the students. If you include activities that will actively engage students in learning, you can control their activities in class.

Structuring the Lecture

There are certain basic aspects that enhance the effectiveness of a lecture. For instance, if you begin your lecture with an introduction or a visual representation, it will help the learners process the information better. Similarly, if you use **signposts** and **transition phrases** such as 'OK, we've covered one scenario, let's explore alternatives now' or 'Eyes on me now, this is important,' or 'This is a key takeaway from today's lecture,' they will signal challenging and counterintuitive points to the students. Similarly, employing a variety of **examples**, using periodic **summaries** and providing a succinct **conclusion** contribute to the effectiveness of a lecture⁵.

Further, these guidelines can help you structure an effective lecture⁶:

- **Delineate the problem:** At the start of the lecture define the problem that your lecture will solve. This will motivate the students to engage actively with your explanations. Probe the student's prior knowledge and ask them to take a go at the answer. Even rookies will gain as they will pay more attention to discover the gaps in their knowledge.
- **Talk about the wrong approaches:** Sometimes providing a wrong answer helps the students funnel down to the right answer and appreciate why it is the right.
- **Provide alternative methods** for resolving the problem which you have laid out. Help the students develop intuitions as to various ways to approach the problem.
- **Expose the data:** Students grasp concepts better if they have a chance to manipulate data and tease out underlying patterns for themselves. Give them access to the data which forms the basis for your teaching.

² <https://citl.illinois.edu/citl-101/teaching-learning/resources/teaching-in-specific-contexts/lecture-based-classes>

³ https://facultydev.med.brown.edu/sites/g/files/dprerj596/files/Lecturing%20in%20the%20Preclerkship%20Curriculum.Guide_.2018.pdf

⁴ <https://cft.vanderbilt.edu/guides-sub-pages/lecturing/>

⁵ <https://www.cmu.edu/teaching/designteach/design/instructionalstrategies/lectures.html>

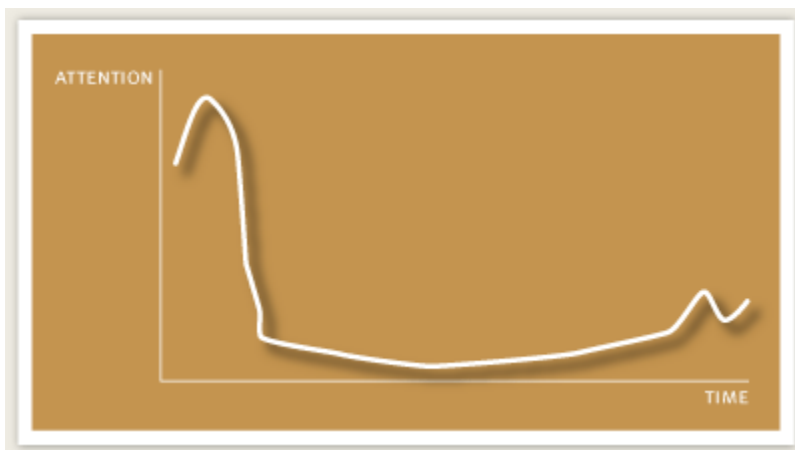
⁶ <https://bokcenter.harvard.edu/lecturing>

- **Deconstruct your expert ‘moves’:** Show the students how you arrived at your conclusions.
- **Allow students to journey on the ‘wrong’ path:** There is merit in allowing students to make incorrect assumptions and logical leaps down a path that leads them to a place where they realize that they had taken an incorrect approach.
- **Obey the ‘Rule of Three’:** Research indicates that students are more likely to remember information when it is presented in groups of three. Try not to go beyond ‘three big concepts’ in a lecture. It will do nothing but overload students with information.

Incorporating Active Learning and Interactivity in the Lecture

Active Learning

Research indicates that only 20 - 40 percent of the main ideas of a lecture find their way to student notes⁷. Moreover, learners can recall less than 10 percent of the material after three weeks of the lecture if they do not review lecture notes. Additionally, attention levels of students vary during the lecture, according to the following graph⁸. From being high during the initial few minutes of the lecture, attention level drops precipitously and stays flat until the end, when it rises again with some variation.



This implies that you need to intermittently catch and orient students’ attention. While structural cues such as signposts, transition phrases, periodic summaries, etc. work in this regard, you must use techniques to ensure that students are actively engaged in their studies. After all, students do not always learn well from a ‘sage on the stage’. They learn better if they engage actively in their learning. A few techniques to include active learning in your class are⁹:

Starting of the class

- **Form groups** and give students time to talk about material or work out questions to be discussed during the lecture.
- Ask students to **brainstorm** on an open-ended question. Write student responses on the board and refer to them during the lecture.
- Gather **questions** from students in the beginning of the class or ask them to email questions ahead of the class. Collate the questions and point out any questions being answered while you lecture.

⁷ Kiewra, Kenneth A. (2002). "How classroom teachers can help students learn and teach them how to learn." Theory into Practice, 41 (2), 71-80.

⁸ Bligh, D. (2001) What’s the Use of Lectures? San Francisco: Jossey-Bass.

⁹ <https://citl.illinois.edu/citl-101/teaching-learning/resources/teaching-in-specific-contexts/lecture-based-classes>

Middle of the class

- Enrol a few learners to become specialists on important topics throughout the semester. These **student experts** can be responsible for the part of the lecture where their topic is presented.
- State the main idea under discussion in the form of a binary question and **take a vote** from the students as to whether they agree or disagree. This can be followed by a discussion.

End of the class

- Ask students to write a '**one-minute paper**' reviewing key points or the most ambiguous aspects of the class. You can use this information as feedback.
- Every few lectures, cut your lecture short and do not present any new ideas. Use this time to hold an **informal discussion** with the students

Interactive Lectures

Most students have an attention span of 15-20 minutes. Lecturers must intersperse activities in the lecture to break the monotony and restart the attention clock¹⁰. Middendorf and Kalish describe several techniques for 'breaking up lectures' in their article '[The 'Change-up' in Lectures](#)'. Some of the strategies are listed below:

- **Write a question:** Instead of asking students if they have any questions, ask them to write a question or two based on the lecture so far and then answer those questions
- **Think-pair-share:** Pose a problem and let students think of the answer. Pair the students and ask them to discuss their answer among themselves and then share it with the class
- **Classroom Response Systems or clickers:** Have learners use clickers to answer multiple choice questions (MCQs) during the lecture. Adjust your teaching decisions based on students' response.
- **Deflect a question:** Ignore your instinct to launch into an answer when a student poses a question. Deflect the question back to the students. Ask them if anyone wants to take a go at it. Chances are, someone will ask you to repeat the question and then the entire class will be thinking of the solution. This strategy helps to engage more students than the one who asked the question¹¹.

Look through this document '[Tips for Teachers: Twenty Ways to Make Lectures More Participatory](#)' for more ideas.

Delivering the Lecture

'Lecturing is not simply a matter of standing in front of a class and reciting what you know. The classroom lecture is a special form of communication in which voice, gesture, movement, facial expression, and eye contact can either complement or detract from the content. No matter what your topic, your delivery and manner of speaking immeasurably influence your students' attentiveness and learning.'

- Barbara Gross Davis¹²

¹⁰ <https://cft.vanderbilt.edu/guides-sub-pages/lecturing/>

¹¹ https://facultydev.med.brown.edu/sites/g/files/dprerj596/files/Lecturing%20in%20the%20Preclerkship%20Curriculum.Guide_.2018.pdf

¹² Davis, B. G. (2009). *Tools for teaching*. John Wiley & Sons.

Your style of delivering the lecture has a significant impact on how students respond to your lecture. Simple things like wearing formal attire to project authority and confidence (at least in business school settings), using hand gestures to strengthen the point you are making and making eye contact with the students to gauge their expression for 'understanding, confusion or boredom' make a difference in how lectures are perceived¹³. Additionally, working on your classroom presence and using effective slide design for lectures can improve your delivery of lectures.

Classroom Presence

A dynamic lecturer can catch the interest of the students by their mere presence. McGlynn (2001)¹⁴ suggests some techniques to improve your classroom presence:

- Open your classroom session with an interesting image, an exciting story or a personal anecdote.
- State a question that is at the crux of the material you will be presenting.
- Quote actual illustrations that are students can relate to.
- Display passion.
- Speak with energy and use voice modulations and inflections effectively.
- Make use of the physical space in the classroom by moving around to connect with all lecture attendees.

Effective Slide Design for Lectures¹⁵

Shun complexity. A large font size (at least 20-point) and limited number of bullet points (4-6) per slide will ensure that only key points make an appearance in the presentation. Cluttered and wordy slides hog students' attention and lead them to reading the content instead of listening to you. Ensure that there is a title on each slide as it helps orient students. Remove unnecessary words and use short phrases in place of long sentences. The remaining material should be delivered vocally or as a handout.

Embrace optics. Use of appropriate images with key points helps to attract student attention. Connecting the text with an image helps students process information differently and retain it for a longer duration. Use different designs on different slides to avoid monotony. It is a good practice to label images. It will help students when they go through the presentation for review at a later date. Avoid using complex tables in your slides. Use a simplified version by reconstructing the information that you want to highlight.

Reduce cognitive load. Make it easy for the students to process new information. To reduce cognitive load, remove all extra information from your slides. Examples include content meant for handouts, superfluous phrasing, random images and other space fillers which do not contribute to the subject.

When you switch to a new slide, students' attention is riveted to it. While they are engaged in reading the points on the slide or looking at the image, they cannot focus on what you are saying. At a given moment, an average person can use either their visual capacity or auditory capacity to the fullest. So, your best strategy would be to allow the students a moment to process the content on the slide before you start talking.

Is the Lecture Method of Teaching Still Relevant?

In recent years the lecture method of teaching has come under severe criticism, with a few critics predicting its extinction as standard classroom practice in the near future. In its traditional form, the

¹³ <https://www.cmu.edu/teaching/design/teach/design/instructionalstrategies/lectures.html>

¹⁴ McGlynn, A. P. (2001). *Successful beginnings for college teaching*. Madison, WI: Atwood Publishing.

¹⁵ https://facultydev.med.brown.edu/sites/g/files/dprerj596/files/Lecturing%20in%20the%20Preclerkship%20Curriculum.Guide_.2018.pdf

lecture method of teaching epitomizes the (much maligned) teacher-centered pedagogy which, in words of Eric Mazur, involves ‘transferring the instructor’s lecture notes to students’ notebooks without passing through the brains of either’¹⁶. Does this imply that the lecture method of teaching has outlived its usefulness? Perhaps not.

In the age of ‘technological fragmentation’, a lecture allows you to gather all students for a shared experience in a face-to-face setting. With the help of real time polling apps, clickers and other methods of engaging students actively in the lecture, it can be a learning opportunity for both the lecturer and the students.

Conclusion

The lecture method of teaching is a longstanding pedagogical tool in a teacher’s arsenal. As discussed in this article, it has its shortcomings. However, with some planning and effort it can be used to grab and direct student’s attention as well as to give them opportunities to review and apply the lessons.

¹⁶ <https://harvardmagazine.com/2012/03/twilight-of-the-lecture>