# *Teaching by Lecture*

You must excuse the occasional unstifled yawn among students. You see, by the time they complete four years of college they will have endured almost 2000 hours of classroom instruction. Without question, most of that time will have been spent listening to lectures.

Educators' preference for lecturing is not surprising given three facts: Most of us were taught that way, a lecture appears easy to prepare and present, and lectures are widely accepted by students and peers. But since so much time is spent lecturing to our students, let's look at some of the pros and cons of this popular teaching method. The guidelines here are loosely based on recommendations by Eble[1] and suggest how we might approach the planning and delivery of a lecture.

- ***Use the lecture format appropriately.*** Lectures are excellent for transmitting large amounts of information to groups large and small and for imparting information not otherwise readily available, such as recently discovered facts or original theories. A competent speaker also can use the lecture to stimulate listeners and give insight as to how processes work. But the lecture is a poor place to present abstract, intricately detailed or complex information to students.

Also, lectures generally are not effective in teaching application of information, in developing problem-solving skills or in changing attitudes. These areas are best addressed during a discussion or demonstration so that students can question the instructor and see for themselves how the facts fit together. Supporting information might be distributed as part of an illustrated handout for students to refer to during class.

Speaking of handouts, some instructors believe it is the student's responsibility to take notes during class and therefore do not provide a handout. But research[2] shows that note taking during class actually may interfere with retention of knowledge. In fact, it appears that giving students a guide that outlines the material about to be covered and stresses key concepts and phrases tends to improve test scores.

The main problem with a lecture is it assumes that all students learn at the same rate. Because this is not the case, many students are alternately bored or bewildered. This can be partially overcome if the instructor regularly checks student comprehension during the class.

• ***Teach only as much as can fit comfortably into the time allotted.*** Some instructors are determined to "teach it all." They usually can be identified by their slides and overhead transparencies consisting of photocopied pages of books, their voluminous multipage handouts and their cries of "I just need a few more minutes…" at the end of every class. These instructors are shouldering the entire responsibility for what students learn. But we can never "teach it all"; in fact, I suspect it would be undesirable to do so even if we could, for it would leave no room for students' personal discovery and growth.

Instead, instructors need to identify two or, at the most, three important points in each lecture, carefully supporting each with illustrations and examples. Presenting manageable amounts of information gives students time to assimilate the data and fit it into what they already know and understand about the subject.

• ***Every lecture should have a beginning and an ending.*** This is important. Although it would be nice if students arrived in class ready to take notes, this rarely is the case. Remember that they have a life apart from the classroom. There may have been an incident in the clinic that has everyone excited, or students may be talking about a movie they saw the previous night. The clever instructor bridges the gap between the outside world and the classroom by focusing students' attention on the material to be discussed.

Also, every lecturer should remind students of what they already have learned, what they are about to learn today and, at the conclusion of the lecture, what they will learn next time. This helps students understand how the current material related to what went before and what will follow. The beginning and end of class also is a good time to tie up loose ends, answer questions and correct misconceptions.

• ***Don't be a bore.*** Vary your voice, gestures and physical movements to stimulate the audience and reinforce what you are saying.

Why is this important? Research indicates that students' attention begins to wander within 15 to 20 minutes of the beginning of a lecture.[2] If they aren't listening, they aren't learning.

But, you say, paying attention to voice, gestures and physical movement strikes you as being theatrical. Well, perhaps it is. In two fascinating studies by Ware et al,[3,4] researchers looked at the relationship between style of presentation and student learning as measured by performance on an objective test. The "Doctor Fox Effect," named after the persona created by the researchers, demonstrates that an instructor's style of presentation affects how well students remember facts.

Here's how it worked. A trained Hollywood actor was coached to deliver a lecture to several groups of students. Two factors were varied: lecture content (high, medium, low) and lecturer seduction (high or low). The authors used the term "seduction" to refer to personal characteristics such as charisma, enthusiasm, expressiveness, friendliness, humor and personality. The results? Students who heard the high seduction presentation remembered more of the lecture content. Not surprisingly, the students who attended the high seduction lecture gave a more favorable rating of the instructor than did the low seduction group. So the next time you hear a colleague say, "I just present the material; it's up to the students to learn it," remind them to be enthusiastic and charming in the process.

- ***Know your subject well, but teach it like you just learned it.*** Have you ever had the experience of listening to an extremely competent professional talk about his field of expertise? The kind where you're certain he knows what he's talking about, but you're equally certain you don't know what he's talking about? Or have students ever told you that they know a certain instructor is smart, but that sometimes she talks over the students' heads? The problem may be that the instructor is "too competent" to teach well. How can this be?

According to unpublished data from N. Whitman, learners pass through four levels of competency: unconscious incompetence (the learner is unaware that he cannot do a task), conscious incompetence (the learner is aware of the task, but cannot do it), conscious compe-

tence (the learner is able to think through a task step-by-step and do it), and unconscious competence (the learner can do the task without thinking about intermediate steps).

Most professionals-turned-instructors have reached this last stage. But to be effective in presenting a lecture, instructors have to go back to being "consciously competent" by recalling what knowledge they had when they first learned the material and what explanations and information are required to successfully grasp a topic. This is why students sometimes do so well at teaching other students: as students, they are, or are becoming, consciously competent. They know the right vocabulary to use for explanations; they remember what problems they had in comprehending the material; and they can consciously describe the steps involved in arriving at a solution.

• ***Provide frequent opportunities for questions.*** Remember, students' attention begins to wander about 15 minutes into a lecture. This is an ideal time, then, to change the pace of the class by pausing and reflecting on what has just been covered and asking questions. But this is a time not just for students to question the instructor, but also for the instructor to question the students.

When talking directly to a person, it's easy to see if he follows what you're saying by his facial expression and verbal comments. But as the size of the audience grows, it becomes increasingly difficult to confirm that students are actively following and comprehending the material. To overcome this problem, ask students to discuss key concepts in their own words. This is the time to clear up misconceptions and factual errors; if students don't understand the preliminary information, it's unlikely that they will understand whatever follows. Questioning during a lecture also can be used to promote individual thinking among students and to encourage them to evaluate what they have heard.

Of course, there are many methods of presenting information other than a lecture. But when a lecture is the best choice, following these guidelines will help your students get the most out of their time in class.

## References

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