

IMPROVING YOUR LECTURING

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Advantages and Disadvantages of the Lecture Method

The "good" lecture

- permits dissemination of unpublished or not readily available material.
- allows the instructor to precisely determine the aims, content, organization, pace and direction of a presentation. In contrast, more student-centered methods, e.g., discussions or laboratories, require the instructor to deal with unanticipated student ideas, questions and comments.
- can be used to arouse interest in a subject.
- can complement and clarify text material.
- complements certain individual learning preferences. Some students depend upon the structure provided by highly teacher-centered methods.
- allows for the gradual development of complex or difficult concepts and theories.
- permits the greatest amount of material to be presented to a group in the least amount of time.

DISADVANTAGES

However, the lecture also

- places students in a passive rather than an active role. Passivity can hinder learning and students' attention may be lost.
 - encourages one-way communication; therefore, the lecturer must make a conscious effort to become aware of student problems and student understanding of content.
 - requires a considerable amount of unguided student time outside of the classroom to achieve understanding and long-term retention of content. In contrast, interactive methods (discussion, problem-solving sessions) allow the instructor to influence students when they are actively working with the material.
 - requires the instructor to have or to learn effective writing, speaking and modeling skills.
 - places the responsibility of organizing and synthesizing content upon the lecturer.
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SUGGESTIONS FOR EFFECTIVE LECTURE

PREPARATION AND DELIVERY

Lecturing refers to both planning and delivering a classroom presentation rather than a formal speech. While both oral presentations have certain elements in common, a classroom lecture places greater emphasis on the importance of presenter-audience (instructor-student) interaction. The following list of suggestions for effective lecture preparation and delivery are arranged under one of the three phases of a lecture--the introduction, the body, and the closing.

- The Beginning of the Lecture
 - The Body of the Lecture
 - The Closing of the Lecture
 - Questions to Consider
 - Delivery-Vocal
 - Delivery-Physical
 - Other
-

THE BEGINNING OF THE LECTURE

- Use an introduction that will catch the listener's interest.

Suggestion: Raise a question to be answered by the end of the lecture.

Example: "By the end of the hour, you should be able to answer the question, 'Are essay test questions better than objective test questions?'"

Suggestion: State an historical or current problem related to the lecture content.

Example: "It was conjectured by Gauss that the number of primes up to any point x was less than a certain smooth easily calculated function of x . This conjecture was supported by extensive numerical evidence. However, in 1914, Littlewood proved that, in fact, the relation becomes false for an infinite sequence of large x 's. Let's take a look at Littlewood's reasoning."

Suggestion: Explain the relationship or relevance of lecture content to laboratory exercises, homework problems, professional career interests, the "real" world, etc.

Example: "Today's lecture is about the cost of living indices, a topic in macroeconomics which should help you understand the recent discussions in Congress related to inflation."

Suggestion: Relate lecture content to previous class material.

Example: "For the past few weeks, Skinner, Osgood and others who take a behaviorist view of language acquisition have occupied our attention. Today, let's look at a different perspective on language acquisition and learning. We'll spend the rest of this week and the next of understanding this view and comparing it with the behaviorist position."

- Provide a brief overview of the lecture's content either verbally, with a handout, or through an outline on the chalkboard.

Example: "In Victorian England the conflict between religion and science was well reflected in the literature of the time. Today we'll look at two poems, 'In Memoriam' and 'Dover Beach,' which illustrate this conflict."

- Tell students how you expect them to use the lecture material.

Example: "Today, I'll offer a specific model of evaluation and illustrate its applicability in several kinds of settings. When you meet in your discussion groups this week, you'll be asked to apply the model as you discuss the Brown vs. the Board of Education decision."

- Define or explain unfamiliar terminology.

Example: "In physics, the term work has a precise technical meaning. The work done by a force F when the object on which it acts moves a distance $[\Delta]s$ [instructor puts a diagram on the board] is defined by $[\Delta]W = F_s[\Delta]s$. It is assumed that F does not change much during the motion through the distance $[\Delta]s$. F_s denotes the component in F in the direction of the motion and can be positive, zero, or negative. Now let's look at this diagram and see how well you understand the definition of work."

THE BODY OF THE LECTURE

Organization

- Allow for some flexibility in the amount of content to be presented in order to respond to student questions and comments.
- Determine the key points to be developed during the class session. When every nuance, detail, or instance of a topic is discussed, or when too many ideas are presented and not well developed, students often lose sight of the main idea.
- Organize material in some logical order. Suggested organizational schemes include:

Cause-Effect: Events are cited and explained by reference to their origins.

Example: One can demonstrate how the continental revolutionary movements of the late 1700's affected British politics at the turn of the century.

Time Sequential: Lecture ideas are arranged chronologically.

Example: A lecturer explaining the steps in a clinical supervision model, talks about the initial steps to be taken, the second steps, and so forth.

Topical: Parallel elements of different discussion topics are focused on successively.

Example: A professor lecturing about the differential features of common diseases in canines and felines speaks about their etiologies, typical histories, predisposing factors...

Problem-Solution: The statement of a problem is followed by alternative solutions.

Example: A lecture on the Cuban missile crisis of 1962 may begin with a statement of the foreign policy problem followed by a presentation of the alternative solutions available to President Kennedy.

Compare-Contrast: A two-sided discussion of a given topic is presented.

Example: A lecture is organized around the advantages and disadvantages of using the lecture method of instruction.

Ascending-Descending: Lecture topics are arranged according to their importance, familiarity, or complexity.

Example: In a lecture introducing students to animal diseases, the diseases of primary importance may be discussed first, followed by discussion of diseases of secondary importance, and concluding with coverage of diseases of tertiary importance.

A chemistry lecture may begin with a definition first of atoms, then elements, next molecules, and finally compounds.

Rule-Example-Rule: A rule is stated, followed by an example; then the rule is restated.

Example: A chemistry lecture may begin with the rule that atoms of unlike charges (anions and cations) are attracted to each other. The rule would then be illustrated using sodium (cation) and chloride (anion) which make common salt (NaCl). The rule that cations and anions are attracted to each other would then be repeated.

Example-Example-Rule: A model or rule is preceded by appropriate examples.

Example: The American, French, and Iranian revolutions are described, followed by discussion on one model of revolutionary development.

- Prepare examples to clarify and emphasize key ideas.
- Provide transitions which show the relationships between key ideas.
- Effectively incorporate audiovisual or support materials. See "Practical Suggestions for Using Visual Instructional Aids: Chalkboard, Slides, Transparencies."
- Throughout the lecture check on student understanding by:

Asking students to answer specific questions.

Example: "Okay now, who can describe in his/her own words the theory of neuron transmission?"

Asking for student questions: State structuring question(s) or cues that help students formulate questions about what they don't understand.

Poor Example: "Any questions?"

Good Example: "Did you have any questions about the application of Kirchoff's rules in problem 6?"

Presenting a problem or situation which requires use of lecture material in order to obtain a solution.

Example: "Over the last few days we have been discussing regression analysis. How can we use this information to predict your final grade in this course when given your midterm scores and the correlation between midterm and final scores?"

Checking on student understanding by watching the class from nonverbal cues of inattention, confusion or misunderstanding...

Example: Look for puzzled expressions, loss of eye contact, talking, clock watching, frantic note taking, and so forth.

THE CLOSING OF THE LECTURE

- Answer any questions raised at the beginning of the lecture.
- Provide closure for the lecture. Suggestions include:

Briefly summarize lecture material and preview what lies ahead.

Example: "Today I have identified five phases of the reflective thinking process. Tomorrow we will see how these phases can be useful for our understanding of human learning."

Relate lecture material to past or future presentations.

Example: "During the next lesson, you will form discussion groups and get some experience applying the evaluation model discussed in class today to the first three case studies in your file."

Ask a student to summarize the lecture's key ideas.

Example: "Who can summarize the key issues developed during today's lecture?"

- Restate what you expect the students to gain from the lecture material.

Example: "As I stated in the introduction, given the appropriate data you should be able to plot the appropriate supply and demand curves."

- Ask for and answer student questions.

THE FOLLOWING QUESTIONS RELATING TO LECTURE DELIVERY SHOULD BE CONSIDERED THROUGHOUT ALL THREE PHASES OF LECTURING:

Delivery-Vocal

Do you:

1. Vary speech rate, volume and pitch? Cue important ideas by slowing down and leaving pauses? (Usually students take notes at less than one-fifth the rate at which most lecturers speak.)
2. Speak to students and not to the blackboard, walls, notes, or floor?
3. Stop writing and talking at intervals to check for student understanding?
4. Enunciate clearly?
5. Let your sense of humor show?
6. Avoid repetition of pet words or phrases (e.g., okay, uh)?

Delivery-Physical

Do you :

1. Establish and maintain eye contact with your students?
2. Use gestures and physical movements which complement your verbal statements and teaching style (e.g., looking at students while asking for student questions)?
3. Avoid using distracting gestures or physical movements (e.g., grooming, pacing)?

Other

Do you:

1. Adjust windows and doors for comfort?
2. Practice in advance with audiovisuals?
3. Set up audiovisual equipment prior to class? Come prepared with an extra bulb for overhead and slide projectors?
4. Set time aside prior to class to review your lecture material?
5. Prior to class, make certain that there is chalk and an eraser in the room?

PRACTICAL SUGGESTIONS FOR USING VISUAL INSTRUCTIONAL AIDS, Chalkboard, Slides, Transparencies

IMPORTANT:

Successful usage augments the presentation; it is not meant to be the presentation. Be able to give the presentation without aids (in case something goes wrong).

PRESENTATION:

Keep visuals:

- Simple - with wording minimal.
- Visible - large enough.
- When reproducing from texts, ENLARGE graphics and printing.
- Easily understood - not too much detail.

- Practice with equipment ahead of time in classroom.

USAGE:

Be alert to:

- Obstructing the audience's view.
- Effective number of visuals for time allotted, (don't overuse).
- Proper timing:
 1. Put on visual materials only when you are ready to talk about them.
 2. Talk to your audience, not to the instructional aid.
 3. Keep aid visible until students have finished taking notes.
 4. Don't talk about additional material until students have completed taking notes from instructional aid.

THREE METHODS FOR ASSESSING LECTURING SKILLS

This section of the booklet presents three methods for collecting feedback on one's lecturing skills. The three methods include videotape self-review, colleague review, and student evaluation of lecturing. A lecturer can use the information gathered from one or more of the methods to identify strengths and weaknesses in his/her lecturing.

- Videotape Self-Review
- Colleague Review
- Student Evaluation of Lecturing

Videotape Self-Review

Suggestions for Viewing Your Videotape

Focus your attention on a few lecture skills which are of particular interest to you and which are important to student learning. Select one or more of the following Rating Guides to focus upon while you view your videotape.

Rating Guides

- Content: Importance and Suitability

- Content: Organization
- Presentation: Style
- Presentation: Clarity
- Questioning Skills
- Establishing and Maintaining Contact with Student

Consider the following questions after viewing your videotape.

- What aspects of your teaching do you like?
- What aspects of your lecturing would you like to change?
- Did you teach what you intended to teach?

Rating Guide

Content: Importance and Suitability

Directions: Respond to each of the statements below by writing next to the statement the number which best expresses your judgment.

1. = Strength
2. = Somewhat of a Problem
3. = A Major Problem
4. = Not Applicable

1. The material presented is generally accepted by colleagues to be worth knowing.
2. The material presented is important for this group of students.
3. The instructor seemed to match the lecture material to the students' backgrounds.
4. The examples used were easily understood by students.
5. When appropriate, a distinction was made between factual material and opinions.
6. Appropriate authorities were cited to support statements.
7. When appropriate, divergent viewpoints were presented.
8. A sufficient amount of material was included in the lecture.

Other Comments:

Rating Guide

Content: Organization

Directions: Respond to each of the statements below by writing next to the statement the number which best expresses your judgment.

1. = Strength
2. = Somewhat of a Problem
3. = A Major Problem
4. = Not Applicable

Introduction:

1. Stated the purpose of the lecture.
2. Presented a brief overview of the lecture content.

3. Stated a problem to be solved or discussed during the lecture.
4. Made explicit the relationship between today's and the previous lecture.

Body of Lecture:

1. Arranged and discussed the content so that the organization/structure was made explicit to the students.
2. Asked questions periodically to determine whether too much or too little information was being presented.
3. Presented examples, illustrations or graphics to clarify abstract and difficult ideas.
4. Explicitly stated the relationships among various ideas in the lecture.
5. Periodically summarized the most important ideas in the lecture.

Conclusion:

1. Solved or otherwise dealt with any problems raised during the lecture.
2. Restated what students were expected to gain from the lecture material.
3. Summarized the main ideas in the lecture.
4. Related the day's lecture to upcoming presentations.

Other Comments:

Rating Guide Presentation: Style

Directions: Respond to each of the statements below by writing next to the statement the number which best expresses your judgment.

1. = Strength
2. = Somewhat of a Problem
3. = A Major Problem
4. = Not Applicable

Introduction:

1. Voice could be easily heard.
2. Voice was raised or lowered for variety and emphasis.
3. Speech was neither too formal nor too casual.
4. Speech fillers, ("okay now," "ahm,") were not distracting.
5. Rate of speech was neither too fast nor too slow.

Non-Verbal Communication:

6. Established and maintained eye contact with the class as lecture began.
7. Listened carefully to students' comments and questions.
8. Wasn't too stiff and formal in appearance.
9. Wasn't too casual in appearance.
10. Facial and body movements were consistent with instructor's intentions. For example, the instructor looked at students while waiting for their responses after asking questions.

Other Comments:

Rating Guide

Presentation: Clarity

Directions: Respond to each of the statements below by writing next to the statement the number which best expresses your judgment.

- 1. = Strength
- 2. = Somewhat of a Problem
- 3. = A Major Problem
- 4. = Not Applicable

- 1. Stated the purpose at the beginning of the lecture.
- 2. Defined new terms, concepts and principles.
- 3. Told the students why certain processes, techniques or formulas were used to solve problems.
- 4. Used relevant examples to explain major ideas.
- 5. Used clear and simple examples.
- 6. Explicitly related new ideas to familiar ones.
- 7. Reiterated definitions of new terms to help students become accustomed to them.
- 8. Provided occasional summaries and restatements of important ideas.
- 9. Used alternate explanations when necessary.
- 10. Slowed the word flow when ideas were complex and difficult.
- 11. Did not often digress from the main topic.
- 12. Talked to the class, not to the board or windows.
- 13. The board work appeared organized and legible.

Other Comments:

Rating Guide

Questioning Skills

Directions: Respond to each of the statements below by writing next to the statement the number which best expresses your judgment.

- 1. = Strength
- 2. = Somewhat of a Problem
- 3. = A Major Problem
- 4. = Not Applicable

- 1. Asked questions to see what the students knew about the lecture topic.
- 2. Addressed questions to individual students as well as the group at large.
- 3. Used rhetorical questions to gain students' attention.
- 4. Paused after all questions to allow students time to think of an answer.
- 5. Encouraged students to answer difficult questions by providing cues or rephrasing.
- 6. When necessary, asked students to clarify their questions.
- 7. Asked probing questions if a student's answer was incomplete or superficial.
- 8. Repeated answers when necessary so the entire class could hear.
- 9. Received students' questions politely and when possible enthusiastically.
- 10. Requested that questions which required time-consuming answers of limited interest be discussed before or after class or during office hours.

Other Comments:

Rating Guide

Establishing and Maintaining Contact with Students

Directions: Respond to each of the statements below by writing next to the statement the number which best expresses your judgment.

1. = Strength
2. = Somewhat of a Problem
3. = A Major Problem
4. = Not Applicable

Establishing Contact:

1. Greeted students with a bit of small talk.
2. Established eye contact with as many students as possible.
3. Set ground rules for student participation and questioning.
4. Used questions to gain student attention.
5. Encouraged student questions.

Maintaining Contact:

6. Maintained eye contact with as many students as possible.
7. Used rhetorical questions to re-engage student attention.
8. Asked questions which allowed the instructor to gauge students' progress.
9. Was able to answer students' questions satisfactorily.
10. Noted and responded to signs of puzzlement, boredom, curiosity, etc.
11. Varied the pace of the lecture to keep students alert.
12. Spoke at a rate which allowed students time to take notes.

Other Comments:

Colleague Review

- [Conducting a Mini-Lecture](#)

Why?

The purpose of teaching to one to three colleagues is to provide you with an opportunity, in an informal atmosphere, to practice some of the suggestions mentioned in this booklet. Your

colleagues can provide you with support and assistance in analyzing and refining your teaching skills.

What is involved?

- Identify a few specific teaching goals or skills you wish to practice or try out. Plan and teach a 20-30 minute lesson to your colleagues.
- Let your colleagues know:
 - The time involved - one half to one hour.
 - What they as students, are to know when the lesson is finished.
 - Upon what aspects of teaching you want them to focus.
 - Which rating sheet(s) above) you wish them to use.
- ConductingaClassroomVideotaping

Why?

The advantages of being videotaped in your own classroom are: that you are closer to reality than the mini-lecture; that of increased time flexibility and convenience (you can review the videotape more than once and at times of your choice); and that you can see yourself as you think your students see you.

What is involved?

The same as for a mini-lecture except that:

- The time involved for colleagues is usually one hour for viewing the tape and one hour for discussion and review.
- Arrangements for videotaping and playback sessions need to be made.

How do your colleagues help?

They help by:

- Discussing your goals or objectives with you.
- Observing your teaching.
- Providing constructive feedback.
- Helping you develop a strategy for making your instruction more effective.

What is in it for your colleagues?

Some of the ideas and approaches you will be reviewing may also be new to one or more of the group. Through active participation and exposure to these concepts, viewers can learn more about teaching.

How can it be arranged?

You can make arrangements yourself, or you can call members of the Course Development Division who will help you make the arrangements and recommend colleagues who will be willing to review your mini-lecture, or videotape.

Student Evaluation of Lecturing

There are many ways of collecting information from students that can help you assess and improve your lecturing as the semester progresses. Several are listed below. Try them, modify them, or use them to generate a similar idea of your own. These evaluations may be used anytime during the semester.

- Ask for student volunteers (3-6) to meet with you during the week to review the lecture and to transmit comments from other students. Membership can be rotated over the semester among all who wish to volunteer.
- Ask two or three students to meet with you after class and review the notes they took that day. Look for spots where they may have been confused, and check to see that major points are accurately perceived. This activity can be particularly helpful for instructors who have received information from other evaluations that their organization of lecture material is weak, or that they do not explain things clearly.
- Some faculty are not inclined to discuss their lecturing with students, yet want to know their perceptions. Members of the Course Development Division can interview an entire class and transmit the resulting information to the instructor. The class interview takes about thirty minutes and can be done anytime during the semester. This method has been especially well received by instructors and students.
- Let your students know that you are interested in getting feedback about your lecturing. Place a "suggestions" box in the classroom.
- Ask a faculty development consultant to interview a few students outside of class or to meet with volunteers after class in order to provide you with accurate information about your lectures. This can be an ongoing activity.
- Another way of collecting student evaluations of lecturing is described by McKeachie .

Using Student Lecture Committees

"One method I have used to increase the students' feeling of participation in the lecture, while keeping the lectures most closely related to student needs, was to choose a student lecture committee. Lecture notes were dittoed a week in advance; then a student committee was chosen from volunteers to read over the next week's assignment and lectures. The members of the committee also interviewed other members of the class to obtain their reactions to past lectures. The members of the committee then met me to suggest revisions of the forthcoming lectures. Since they could cloak their criticisms by saying 'Some of the students I interviewed said...,' they were usually quite frank.

"Some of the special techniques favored by such lecture committees are:

- Placing a brief outline on the blackboard during the lecture. (Perhaps students pay more attention to an outline they copy than to one given to them ready printed.)
- Summarizing important points at the end of the lecture.
- Using demonstrations or movies to break up the lecture.
- Breaking the lecture group into small buzz sessions to discuss particular problems. This technique seems to secure much greater student acceptance of some lecture materials. I've broken lecture sections of 500 students into groups of six. These groups discuss a problem for ten minutes, after which I call upon some of the groups to report. After each idea or suggestions, other groups which had the same idea are asked to raise their hands so that they too are involved and rewarded. The main points of the reports are placed on the blackboard and I then try to incorporate them into the lecture or at least discuss the problems involved."

SUGGESTIONS FOR INTERPRETING COLLECTED ASSESSMENTS OF LECTURING

At times, colleague and student comments are difficult to understand; for example, sometimes one comment seems to contradict another. By using some of the suggestions which follow, you may be able to make good use of the information which is available.

If a comment doesn't make sense to you, or if two comments seem to cancel each other, ask one person or ask a group of students to explain in more detail what may have been meant. If the semester is over, wait until several weeks of a new semester have passed; then ask the current students if the original comment is still pertinent and what it means to them. Ask for one or two examples.

Group the comments by topic, for example, lecture organization, or exams, or communication skills, or group the comments so that you can readily see your lecturing strengths and weaknesses.

Decide which topics seem worth further consideration at this time. It is often useful to check, whenever possible, with whomever made the original comments to see if your lecture improvement plans are related to their comments.

Sometimes several comments indicate a particular pattern of strength or a pattern which hinders lecture effectiveness. A few patterns commonly mentioned as needing improvement are listed below; they are accompanied by suggestions which may encourage you to develop your own plan of action.

Pattern: LACK OF CONTACT WITH STUDENTS

Suggestions:

Make a point of stopping after parts of the lecture and finding out if students are understanding what you want them to understand.

Prior to the lecture, prepare 1-3 questions that you can ask at designated points in the lecture. The questions should require more than a "yes" or "no" answer. Get responses from more than one student. Student responses can indicate to you the level of class understanding.

Pattern: WEAK EXPLANATIONS

Suggestions:

Be prepared to provide definitions for all new or technical terms.

Prior to the lecture, prepare examples to illustrate major ideas. Be ready to clearly state why the example is illustrative. Point out the key parts of the example. Also, prepare alternative examples or non-examples to use when the originals appear to be unclear. In certain cases, one example may be adequate.

Pattern: QUESTIONING PROBLEMS

Suggestion:

Prepare key questions in advance. A long pause following a questions may indicate a lack of student understanding of the question or content. If students don't answer a question, ask them to tell you why.

Pattern: WAVERING STUDENT ATTENTION

Suggestion:

Two or three times during an hour lecture, arrange situations where students have to actively participate: ask questions students have to answer; ask students to solve part of a problem; ask students to relate what you've said to something....

Main Source:

<http://www4.gvsu.edu/ftlc/lectureskills.htm>

Let's Work Together to Ensure Academic Excellence

Office of Faculty and Instructional Development

Tel: 44034033

Email: ofid@qu.edu.qa