Delivering Powerful Lectures

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Overview

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• Objectives; Opportunities
• Conveying the information
• Student learning outcomes
• Student preparation
• Effective presentation of content material
• Linking the lecture to discussion groups or lab sessions
• Enhanced lecture formats
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Quotes that give lectures a bad name

• *The first duty of a lecturer: to hand you after an hour's discourse a nugget of pure truth to wrap up between the pages of your notebooks, and keep on the mantelpiece forever.*” – Virginia Woolf

• “College is a place where a professor's lecture notes go straight to the students' lecture notes, without passing through the brains of either” – Mark Twain

• “Some people talk in their sleep. Lecturers talk while other people sleep” – Albert Camus

• “My lecture was a complete success, but the audience was a failure” – Anon

Why Lectures?

• The term “lecture” can encompass a range of styles, approaches and formats

• Lectures are a most effective option, as part of a class period, if they have several objectives that aim to:
  – Motivate and challenge students
  – Give them insights
  – Focus on student learning
When to Lecture?

Is most successful as a “bookend approach”

For example:
- At beginning of class: Presentation of topics to be discussed
- 10-12 minute lecture followed by in-class assignments (individual or group projects) best suited to work on a specific problem or question (builds understanding) -
- short discussion of results of assignments
- Short lecture to summarize and highlight key issues, concepts, or ideas.

Introduces active and collaborative learning

Objectives of the Lecture

• To arouse student curiosity and motivation to learn
• To model an approach to specific styles of thinking: e.g., problem solving, case studies
• To give a skillfully assembled background knowledge summary that is not otherwise available
• To adapt very complex, sophisticated, or theoretical knowledge to one’s students’ level and needs in a way unavailable in any other source
Objectives of the Lecture

- To present a particular organization of the material, one that clarifies the structure of the textbook or the course or that helps students organize the readings.
- To add your personal viewpoint on the material, including your own related research.
- To present up-to-date material that is not yet available in printed form.

Opportunities of the Lecture Format

• Efficient way to convey and prioritize information about the subject in a condensed format
• Provides a suitable framework for further study
• In a research university, provides a link between research at the forefront of knowledge and teaching
• Newer approaches to teaching and learning (such as active learning) can be embedded in the lecture format so that the learning outcomes of students are significantly improved
Conveying the information

- **Pacing (time for processing)**
  - the average number of items that can be held in short-term memory is 7 (±2) [Miller, 1956]

- **Attention span**: about 15 minutes (Healy, 1991)

- **Information**:
  - structured in a logical fashion
  - Demonstrably meaningful to students (importance of context to learning)

- **Content**: 2 or 3 key concepts or points

- **Focus of instructor**: intended learning outcomes
Learning outcomes linked to forms of learning

- Surface learning: focus on memorization of words, formulae, and theories rather than building relationships and connections
  - Characterized by:
    - Excessive amount of course material
    - Assessment methods that emphasize recall
    - Poor or little feedback on progress
Learning outcomes linked to forms of learning

• Deep learning: ability to organize understanding in a coherent whole rather than a set of disassociated facts
  – Encouraged by
  • A choice over content and study methods
  • Teaching methods that build on existing knowledge and experience
  • Active involvement by students in their learning
  • Long-term engagement (by both student and instructor) with the subject
Learning outcomes linked to forms of learning

• Strategic learning: adopting whichever approach will maximize the grade
  – Surface approach if exams reward memorization of disparate facts
  – Deep approach: Holistic understanding of key ideas and how these apply in different circumstances if assignments are carefully designed
Student preparation for a lecture

• Preparatory work by students helps them to see the relevance of the lecture -
  - Search web for relevant background information (recent debates and issues [e.g., environmental groups, trade disputes]);
  - Revisit relevant theory covered in earlier lectures (e.g., revise relevant parts of a theory)
    • quick quiz at start of lecture
  - Ask students to identify a set number of issues relevant to the topic (contextualizes the material and its relevance)
    • Post answers to a discussion board
  - Assign related readings (e.g., recent articles)
    • quick quiz at start of lecture

• In all above cases clear guidance must be given about what is required
Effective presentation

Five issues

1. Aims and learning objectives
   - Stated clearly at the beginning of the lecture

2. Overview and clarity of structure
   - A lecture map: to outline the structure of the lecture in terms of main topics, issues, and theory.

3. Use of examples; reasonable pace
   - Examples: Judiciously selected: to tie theory to reality; relating concepts to the concrete
   - Pace: vary the tempo and nature of the material.
     - What do you want students to do? (listen, complete a diagram or proof, respond to questions, express a point of view, role play….)
Effective presentation

4. In-class quizzes at the beginning (or end) of a topic: true/false listings, multiple-choice
   - Active participation: allows students to check on their understanding and learn from their mistakes

5. Diversity in methods of presentation
   - Graphs, diagrams, equations, models, case studies
     - Give students partially complete proof or diagram for them to complete (time to reflect and focus on key point)
     - Present an incomplete model: students fill in the next step individually or with a neighbor
     - Provide incomplete lists (advantages/disadvantages) for students to complete
     - Present a case study for brief analysis and discussion of key issue
Effective presentation

5. Diversity in methods of presentation (Cont’d)
   – PowerPoint Presentations
   – Videos
   – Weblogs (“blogs”)
   – Electronic discussion boards (Blackboard, WebCT)
   – Chat rooms
   – Public response systems (“Clickers”)
Linking the lecture to discussion groups or to lab sessions

Careful integration of the two is important

Questions to address:

• How much time should students spend on follow-up study after the lecture before coming to the discussion or lab?

• Will you refer back to material or activities in previous discussions?
  – Advantage: gives students a greater understanding of how course is structured
Linking the lecture to discussion groups or to lab sessions

• Do the discussion’s issues/questions directly relate to the material covered in the lecture?
  – Decide whether the lecture material needs reinforcing through discussion questions or whether the discussion should be used for follow-up work

• If short activities are included in lecture (completing proofs, brief case studies, etc.) can more creative activities be undertaken in discussions? (debates, role play, mock interviews, in-depth analyses of key policies)

• Is some of the time in discussion or lab sessions used to allow students to ask about points they did not understand in the lectures?
Enhanced Lecture Formats

“Guided Lecture”

• Goal: to help students synthesize lecture material and develop their note-taking skills
  – Lecture objectives given in advance of the session.
  – 20-30 minute lecture (students take NO notes)
  – 5 minutes: Students record what they can recall
  – 15 minutes: Groups (dyads or triads) discuss instructor-provided question(s) related to lecture, and, in the process, complete their notes
  – Instructor is available: (questions for clarification are encouraged)
• Study guides, well-designed questions, pre- and post-session mini-tests are part of the process
Enhanced Lecture Formats

“Feedback Lecture”

- Goal: Increase student participation in the learning process
  - In addition to the assigned readings a supplementary study guide provide students with learning objectives, pre- and post-tests, and, in some cases, an outline of the lecture notes.
  - Before class students work on study questions
  - In class two 20-minute mini-lectures are separated by a study session
    - Students form dyads or triads and discuss the questions provided by the instructor or the study guide
- 88% of students surveyed indicated that they preferred this format over the standard lecture (Bonwell and Eison, 1991)
- Requires extensive planning and preparation
“Lecture with Periodic Pauses”

- Goal: Improve comprehension and retention of the lecture material
  - 12-15 minute lecture
  - 2-minute Pause: students work in pairs - review, discuss, revise their notes
  - Repeat this pattern 3 times
  - Last 3 minutes of class: “Write everything you can recall from the lecture”

- Experiment: “treatment” and “control” groups in two different courses over two semesters

- Results: on a 65-item multiple-choice quiz given 13 days after the last lecture, comprehension and retention of the lecture material was consistently much better, in some cases up to 2 letter grades (Bonwell and Eison, 1991).
Assessing student learning

• Lecture may be tested directly:
  – The discussion following the lecture could begin with an objective test, a short essay, a problem, a case study

• Lecture could be directly relevant to an examination or an assignment

• Student lecture notes could be assessed
  – Clear grading criteria are given
  – Students read and provide written comments on each other’s notes: this commentary is then assessed by instructor and feedback is provided [advantage: peer review, reflection on the process of note-taking]
Assessing student learning

• Depending on class size each student could be asked to provide a reflective commentary on each lecture which would be electronically distributed to other students and formally assessed.

  Advantages:
  – encourages students’ reflective approach to the lectures
  – Helps develop writing and critical skills
  – Provides useful feedback to instructor
  – Creates a community of learners
Evaluating your lectures

• Standard student evaluations (questions relate to clarity, pace, and relevance)
  Disadvantages:
  In most cases questions focus on instructor as “performer” not on student learning outcomes

• Self evaluations: judged against criteria
  – Reflections on what you are planning to do or have done in terms of student learning objectives
Evaluating your lectures

Reflective questions to ask before the lecture:

• What do I want my students to get from the lecture?
• How will the lecture achieve this objective?
• Will I cover the right amount of material, given the abilities, experience, and motivation of the students?
• Are there better ways of organizing the material?
Evaluating your lectures

Reflective questions (cont’d)

• Are the examples appropriate?

• Are the visual aids clear and the right length? How could they be improved?

• What activities for students are planned? What do I want students to gain from these activities?

• How will the materials that I provide to students complement the lecture? Will they encourage or discourage attention or attendance?
Evaluating your lectures

Feedback during the lecture

• Public response System (“clickers”): could be used for multiple-choice questions - instant display of students’ choice or “vote”

• One-minute paper
  – One or two short questions about specific aspects of the lecture
Evaluating your lectures

Feedback after the lecture - supports students’ learning

• Invite comments about the lecture via the electronic discussion board
  – Students are asked to identify topics they have not understood, questions they’d like to ask, discussions to which they would like to contribute
  – A section on Blackboard devoted purely to general feedback on the lectures
  – Create a FAQ section where you post the answers (eliminates repetitive questions)

• Invite a colleague to visit your class
In short…

The lecture:
1. Is only one among many pedagogical tools.
2. Introduces active and collaborative learning
3. Has, as pedagogical objectives:
   - Motivate and challenge students
   - Give them insights
   - Focus on student learning
4. Gives a skillfully assembled background knowledge summary that is not otherwise available
5. Adapt very complex, sophisticated, or theoretical knowledge to students’ level and needs in a way unavailable in any other source
6. Requires a diversity in methods of presentation

Assessment of student learning is linked to student assignments and student notes

Self-evaluation and reflection on learning outcomes is an ongoing process
Bibliography


Bibliography


http://www.economics.ltsn.ac.uk/handbook/lectures