THE INTERACTIVE LECTURE

Turning Lecture Into an Active Learning Experience

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Instructional Development Series
Teaching and Learning Center
Workshop Agenda

• 1. Mini Lecture: “Lecture as a Learning Tool”
• 2. Modeling Student Active Breaks
LECTURE AND ITS ALTERNATIVES

Matching Learning Outcomes to Teaching Methods
Where Lecture Is The Right Teaching Tool

- Modeling a problem solving or thinking approach before asking students to try it themselves
- Quick background information
- Information not available in text at appropriate level
- Adding your own viewpoint
- Clarifying or organizing material

Try to avoid
Lecture that duplicates the material from reading or other class materials
Where Lecture Falls Short

• Examining and/or changing attitudes and values
• Critical thinking and problem solving skills
• Open minded exploration of ambiguous material
• Mastery of performance technique or technical procedure
• Improvement of communication
• Personal and social adjustment

(Bligh 2000; Bonwell and Edison, 1991; Hake, 1998; Jones-Wilson, 2005; Canfield, 2002)
What is Active Learning?

• **Active learning** refers to techniques where students do more than simply listen to a lecture. Students are **DOING** something including discovering, processing, and applying information. Active learning "derives from two basic assumptions: (1) that learning is by nature an active endeavor and (2) that different people learn in different ways" (Meyers and Jones, 1993)
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Attention Span Limits


• Five minutes “settling in” in which students were fairly attentive
• Attentiveness extending another five to ten minutes
• After 15 minutes students become progressively bored, restless, and confused
• Bligh reconfirmed data using heart rates
• Medical Students showed similar patterns
Forgetting Curve

• 62 Percent recall of material just presented
• 45 Percent recall three to four days later
• 24 percent recall eight weeks later

(Menges, 1988)
Student Breaks and Retention

Study compared control group which received nonstop lecture to a treatment group hearing the same lecture with pauses (every 15-18 min.) to permit students to compare and rework notes. Both groups used “free-recall quizzes” at end of lecture and took same 65 item multiple choice test 12 days later:

- Treatment group performance better on both quizzes and test
- 17 percentage points difference in performance between the control and treatment groups, two trials over two semesters (Ruhl, Hughes, and Schloss, 1987)
- Need to sacrifice 12 percent of lecture content for two minute breaks (Nilson, 2010)
Student Active Breaks

• Brief controlled breaks in which students engage with material and each other
• Allowing students to remain engaged in the lecture
• Create an active learning environment in the contexts of a lecture based class
• Opens up lecture as an appropriate tool for any type of learning outcome in Bloom’s Taxonomy
General Tips on Student Active Breaks

• Brief! 2-10 Minutes
• Strictly enforce time limits and structure of task
• Interacting with the material (and each other)
• Ad hoc grouping
MODELING STUDENT ACTIVE BREAKS

10 Strategies You Can Use Tomorrow
1. Pair and Compare

- Students pair off with their neighbors and compare lecture notes
- Students fill in any material that they have missed
2. Pair, Compare and Ask

- Same as previous, but students write down questions as part of their notes.
- Students pair off and try to answer each others questions.
- Instructor fields remaining ones
3. Periodic Free Recall

• After a brief lecture students put away their notes.
• Without their notes students write down the two are three central points of your lecture as well as any questions they might have.
• Can be done as part of a pair-share, or individually
4. Listen-Recall- Ask

- Do not allow note taking during lecture
- After lecture students write down major points and questions
- Leave plenty of blank space
- Pair and compare with partners
5. Think- Pair-Share

- Give students a question and ask them to quietly think (or jot down) a solution
- Have them discuss their response with their neighbors
- Have pairs share their conclusions with the class.
Think-Pair-Share Example

• **Statement**: Content demands in my discipline limit the amount of active learning strategies (such as student active breaks) I can use in my classroom.

• Agree or disagree with the statement on a scale of 1-5 (1 being strongly disagree, 5 being strongly agree)

• Give reasons for your opinion

• Share results with partner. Discuss answers, try to come to consensus

• Share with whole group
6. Composing a Test Question

- Students form ad hoc groups and create multiple choice or short answer test questions.
- Individuals write questions for homework and group decides on best questions
- Use student submissions on exams (with tweaking if needed)
7. Group Graphic

- Students in groups or alone create a mind map, graphic organizer, flowchart from your lecture content.
- You might want to collect these, as such graphics provide valuable insight into student interpretation of material and/or allow students to use them on exams.

Example: Use a graphic or chart to describe how you use lecture as compared to other learning tools in your own classroom.
8. Quick Case Study

- Brief case study (1-4 paragraphs) that requires them to apply your lecture content to a realistic situation.
- Specific questions or standard: “Problem? Remedy? Prevention?” case study format.

**Example:** What would be a very quick case study I could have used to have you engage with the content I delivered in my “lecture about lecture”?
9. Solving a Multiple Choice Problem

- Conceptual rather than factual questions
- Survey the class: Clickers, Hands, Flashcards
- Partner Conferences
- Resurvey
- Wiffiti
10. Finish Sentence Starter

When planning what teaching methods to use, an instructor should____________________.

Student Active breaks allow for the kind of learning that lecture alone cannot provide, because____________________.
Other Student Active Breaks

- Correct the Error
- Reorder the Steps
- Application/Discussion Groups
- Reflection Paragraphs
- Paraphrase an Idea