

## ***Matching Teaching Methods with Student Learning Outcomes***

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## ***Participant Learning Outcomes***

By the end of this workshop, you will be able to select, adapt, and design teaching methods/learning experiences that, according to research, are among the most effective means to help students reach the learning outcomes for them. You will also be able to judge the selection, adaptation, and design of other faculty.

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“...the residue of knowledge and the habits of mind students take away for college are likely to be determined less by *which* courses they take than by *how well* they are taught. Yet reports on the curriculum are bereft of any extended discussion of whether current teaching methods are well suited to the educational goals being pursued and, if they are not, how they might be improved.”

--Derek Bok, *Our Underachieving Colleges*, 2006, p. 49, “The Neglect of Pedagogy”

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## ***The Model of the “Perfect Fit” in Course (and Curriculum) Design***

**Appropriate Assessment of Students’ Performance on Outcomes** *(the measurement of progress to the ends)*



**Teaching Methods/Learning Experiences to Help Students Meet Outcomes** *(the means to the ends)*



**Student Learning Outcomes**  
*(the foundation, the ends)*

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## ***What Are Good Learning Outcomes?***

- Statements of what your students should ***be able to do*** by end of unit or course.
- “Performances” that you can ***observe*** and ***set standards for*** so you can ***assess*** them—***active verbs***
- ***Not*** internal states of mind: “know,” “learn,” “feel,” “understand,” “appreciate”

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## ***How do you help students achieve your outcomes?***

Activities & Assignments (in-class, homework)  
= ***Their*** Learning Experiences  
= ***Your*** Teaching Methods

***Choose the best tools (means) for the job (ends).***

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## ***Rule for Choosing a Tool***

- Tool should give students ***practice*** in the performance(s) specified in one or more learning outcomes – practice as close as possible to how student performances will be ***assessed*** for a grade.

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## ***Types of “Tools”***

- **“Formats”** = type of course  
E.g.: Lecture/Discussion, Lecture/Lab, Laboratory, Seminar, Discussion/Skill-activity
- **“Major Methods”**  
E.g.: Lecture, Interactive Lecture, Discussion, Case Method, PBL, Cooperative Learning, Simulation
- **“Teaching Moves”** (mini-methods)  
Ways you explain material, short in-class student activities and exercises, interactive lecture breaks

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## ***Formats – Who makes those decisions?***

***Teaching Moves*** vs. ***Major Methods***

— Less More +

***Time & Commitment  
Continuum***

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## ***Matching “Tools” to Outcomes***

- **“Formats”**

See table “Group ratings for each combination of ‘teaching approach’ and ‘objective’ (outcome) are shown below”

- **“Major Methods”**

See table “Which Methods for Which Outcomes?”

- **“Teaching Moves”**

See “Teaching Moves for Six Learning Outcomes”

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## ***Interactive Lecture***

- Lecture with “*student-active*” *breaks* = short student activities (2-10 minutes) every 12-20 minutes during lecture

(“Active learning class”)

- Better for learning and retention, given short attention span for passive activities, class attendance, and your student ratings

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## ***Aims of Student-Active Breaks***

- Students *practice* the performances in your learning outcomes.
- Students *apply/use* content you’ve been lecturing about, so they learn it better.
- You *diagnose* their understanding (*classroom assessment*).

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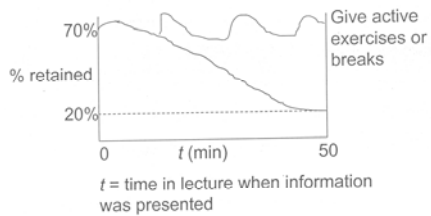
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Experimental study: Gave 50-minute lecture, tested immediately afterwards. Results:



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### ***Possible Student-Active Breaks***

- Lecture note review, fill in, elaboration
- Above in pairs
- Periodic writing of most important point(s), with pair sharing
- Multiple choice question (conceptual)
- Problem to solve (indiv, pair, group)
- Quick case study (indiv, pair, group)
- Discuss open-ended question (pair, group)

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- Worksheet/exercise (indiv, pair, group)
- Concept map, graphic organizer, matrix of lecture material (indiv, pair, group)
- Question for future test (indiv, pair, group)
- One-sentence (or longer) summary of lecture
- “Muddiest point”
- Reaction/reflection paragraph
- Discussion board posting (w/laptops)

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### ***Teach in Multiple Media for:***

1. Different learning styles
2. Repetition in multi-modalities – most effective reinforcement
3. Higher student engagement
  - Visuals and models
  - Speech/sound and stories
  - Experience and examples
  - Written words

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### ***Make Students Do the Readings***

Hold them accountable for the readings when they are due with:

- ***Homework handed in***
- ***Daily quizzes***
- ***In-class exercises and activities***
- ***Oral presentations or recitation***

Grade on “good faith effort” 1/0,  $\sqrt{}/0$ , or  $\sqrt{+}/\sqrt{}/0$ .

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“...faculties have take the principle of academic freedom and stretched well beyond its original meaning to gain immunity from interference with how their courses should be taught....teaching methods have become the personal prerogative of the instructor rather than a subject appropriate for collective deliberation. The result is to shield from faculty review one of the most important ingredients in undergraduate education.

-- Bok, 2006, p. 49

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**CAUTION!**

Bok's argument  
raises critical  
questions.

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- To what extent should a department, college, or institution influence the faculty's choice of teaching methods to ensure that they use the most effective ones for their student learning outcomes?*

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- Some of best teaching methods for helping students acquire high-level thinking skills are known to lower student ratings of instructors. Students complain of insufficient structure, too much work and "self-teaching," and undue grade anxiety. But college budgets are tight and retention is highly valued. How can we resolve the tension between student **satisfaction** and student **learning**?*

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