



## (ing): Moving your Students Toward Mastery

### What It Is

Demonstrating, rather than explaining, the proper use of the skills/thought process you have chosen to focus on in your discussion session.

### Why It's Important

Grounds abstract course material and expectations into specific actions which:

- Expose students to new ways of thinking (especially those common to the field of study).
- Offer beginners structured opportunities to practice new ways of thinking/acting for themselves.
- Clarify what successful performance looks like (which can alleviate perceived subjectivity in grading).

The chart below describes four basic approaches to modeling. None are intrinsically “better” or “worse” than any other, and none stand entirely independently. In fact, these approaches can be arranged to build on one another over the course of the semester to progressively strengthen your students’ command of course content and skills.

Technique	Example	Uses	Advantages	Disadvantages
<p><b>The “Demonstrator”</b></p> <p>This classic approach places you in direct command of your session’s content and skills. Working together with your students, you pose, and then solve, content-based problems as a class, using a visual tool like a chalkboard, whiteboard, or overhead projector.</p>	<p><i>Your calculus students are struggling with problems involving differentiation. Using a chalkboard, white board, or overhead projector, you walk through a short sample set with your students step-by-step, making sure to solicit student responses at each step of the process.</i></p>	<ul style="list-style-type: none"> <li>• Honing student skills on objective tasks, for which there is a defined process, and specific desired outcomes or right answers.</li> <li>• Encouraging “whole class” participation, and class-level collaboration.</li> </ul>	<ul style="list-style-type: none"> <li>• Can often yield clues about the precise areas where your students are struggling. For example, in groups that typically participate willingly, silence generally indicates confusion.</li> </ul>	<ul style="list-style-type: none"> <li>• This is a baseline technique. It establishes only a minimum level of student participation, and should be used sparingly.</li> <li>• Less useful for subjective skills and exercises, such as are often found in liberal arts courses. Other, more advanced modeling approaches generally work better in these learning domains.</li> </ul>
<p><b>The “Preparatory” approach</b></p> <p>This approach identifies both skills and content that will be relevant to upcoming coursework and creates activities in which your students can practice both at the same time, to prepare for exams, homework assignments, reports, etc.</p>	<p><i>Your history students have an essay-based midterm coming up. You design a set of sample questions resembling what your students will see on the exam. You split your discussion section into small groups, and ask each group to outline a response essay to one of your questions on the chalkboard. You ask each group to include an identifiable thesis, supporting evidence, and a strong conclusion. Afterwards, each group critiques the others’ outlines on the bases of both content and essay structure.</i></p>	<ul style="list-style-type: none"> <li>• Use study questions to demonstrate how students can identify important points in a reading assignment.</li> <li>• Use a lecture notes-based quiz to demonstrate how students can improve their note-taking and active-listening skills. (Variation: record a recent lecture, design a difficult quiz on a small section of it, work on note-taking strategies, and then ask students to take new notes as you replay the relevant lecture section. Have students compare their new notes to their original versions).</li> </ul>	<ul style="list-style-type: none"> <li>• Allows the students to learn course content while practicing relevant skills.</li> <li>• Uses the course grade as an incentive, and directly demonstrates the value of your discussion session to the students.</li> <li>• More flexible than the “Demonstrator” approach. Makes use of group work and other forms of student participation.</li> <li>• A mid- to upper-level technique, demanding substantial intellectual and social engagement from your students.</li> </ul>	<ul style="list-style-type: none"> <li>• Less effective in courses that students perceive to be “easy.”</li> </ul>



## Modeling: Moving your Students Toward Mastery

Technique	Example	Uses	Advantages	Disadvantages
<p><b>The “Hindsight” technique</b></p> <p>Among the most powerful modeling techniques, the “hindsight” technique leverages students’ performances on past assignments in the course to demonstrate strategies for future improvement.</p>	<p><i>Your government students did poorly on the midterm that was just handed back. You select brief (1-2 sentence) examples of common mistakes from among the graded exams, and (after altering them substantially to disguise them) put them on the chalkboard or overhead for your students to critique. Then, in a short in-class writing assignment, you ask your students to grade altered examples of both a good and a mediocre essay, and to offer both a grade rationale and feedback on each.</i></p>	<ul style="list-style-type: none"> <li>• Can be used on almost any course assignment, and can apply to nearly any relevant skill.</li> </ul>	<ul style="list-style-type: none"> <li>• Asks students not only to critique self-performance, but also to articulate for themselves ways in which they can improve on future assignments.</li> <li>• As with the “Preparatory” approach, this approach uses course grades as an incentive for student participation.</li> </ul>	<ul style="list-style-type: none"> <li>• Works best with challenging courses, in which students are motivated by the difficulty of the content to alter their learning behavior.</li> </ul>
<p><b>The “Mastery” technique</b></p> <p>This is modeling at the highest level, inviting students to assume the role of instructor. In that role, they get to decide what is worth knowing in your course, and how the skills you have worked on are best applied.</p>	<p><i>With the final in your economics course approaching in two weeks, you break your students into groups and ask them to design a final exam for the course, and to determine all of the elements that an “A” grade exam will contain.</i></p>	<ul style="list-style-type: none"> <li>• Can be used to preview exams in any course.</li> <li>• Can be used to cover any relevant content or course-related skills.</li> <li>• Activities involving this level of thinking should be included in your planning as soon as reasonably possible in the semester.</li> </ul>	<ul style="list-style-type: none"> <li>• By asking the students what material and skills they would test if they were the course instructor, you’re getting them to think about the material from a vantage point of mastery, in which they are able to determine the meaning and relative importance of content for themselves.</li> <li>• Done in a group, these types of activities effectively utilize students as peer instructors, as they work together to establish top-line course themes and takeaways, and determine how best to test for them.</li> </ul>	<ul style="list-style-type: none"> <li>• More effective as you progress deeper into the semester, and the contours and over-arching course structure become clear.</li> </ul>

Notice that in most of these techniques, the TA is NOT doing the actual work of modeling for students. Rather, the **TA is creating situations in which students can model relevant skills and material for themselves and each other**. As students approach a level of mastery over course skills and content, they will begin to critically assess the value and usefulness of the information contained in the course, rather than trying merely to memorize it. Done correctly, modeling doesn’t just produce “A” students—it produces expert students.

