

## Gave tests, projects, etc. that covered the most important points of the course

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### Why this Teaching Method Matters

While it seems intuitive and essential to give tests and projects that cover the most important aspects of the course, it is often the case that teacher-made tests and other assigned work miss the mark, and thereby miss the opportunity to not just measure learning, but also to contribute to it. There may be two reasons for this problem: 1) technical measurement errors and/or 2) lack of communication between teacher and students.

With respect to measurement issues, the first criterion that must be addressed is face validity. You should ensure that the tests and projects assess clearly-defined course objectives and ask students to display knowledge, skills, or attitudes that are connected to important aspects of what was taught. A second criterion to address is construct validity, ensuring that tests and projects actually require students to demonstrate the skills and knowledge you want them to learn. For example, testing critical thinking with exams that only require simple recall would not have construct validity, because critical thinking requires more than recall.

Communication issues may also detract from the ability of a test or project to measure and contribute to learning. There may be a basic misunderstanding between teacher and students about the purpose and structure of tests and projects, about the course, and, more broadly, about teaching and learning themselves. The phrase “cover the most important points in your essay” may be interpreted differently by teacher and students. A

solution to resolving these types of misunderstandings lies in a dialogue with your students about two things. First, you might discuss what the most important points are, or more broadly, the most important intellectual and personal development toward which the course aims as you assign work or create a test. Second, you might discuss with students the role that is played in your course by tests and projects. Some research (1) suggests that student learning will improve if students have a deeper understanding of the value and importance of the work they are asked to do. If students see tests and assignments as learning tools, rather than threats or busy work, they will see more value in both of these activities as well as the course as a whole.

This teaching method correlates strongly with Item #3 (“Scheduled course work [class activities, tests, projects] in ways which encouraged students to stay up-to-date in their work”), Item #4 (“Demonstrated the importance and significance of the subject matter”), Item #6 (“Made it clear how each topic fit into the course”), and Item #10 (“Explained course material clearly and concisely”). As well, Item #12 supports research that emphasizes the importance of setting objectives at many levels of Bloom’s taxonomy (2). These relationships reinforce the importance of organization, clarity, and matching instruction with course objectives and assessment strategies, all of which correlate strongly with student learning, student ratings, and student persistence (3, 4).

### Applying this Teaching Method in the Classroom

To give tests and projects that cover the most important points of the course means to create coherence and alignment between goals and assessment, and to make that transparent to the student. You can start by articu-

lating, in the words of the “best college teachers” whom Ken Bain (5) studied, “What kind of intellectual and personal development do I want my students to enjoy in this class, and what evidence might I collect about the

nature and progress of their development?” (p. 153). Write your answer as goals that appear in your syllabus, and in language that invites students to learn, and not merely to comply with regulations. For example, course goals from different disciplines might read: “Students will be able to apply economic principles to real-life situations,” or “follow the ethical principles of the field as they conduct animal research,” or “write an argument that states a position on a debatable point, support the point with appropriate evidence, and answer counter-arguments.” Be sure as you develop goals that you can prioritize them, and can explain to students the relative importance of course goals. This will help you focus your assessments and activities on the aspects you most want them to learn, or to engage in.

As you develop assessments or projects, refer back to the goals in the syllabus and try a “verb match,” using verbs from the goals (“apply economic principles,” “follow ethical principles,” “support your point”) to shape assessment or project expectations. Ask a colleague to review your goals and assessments for coherence, and integrate teaching, learning, and assessment activities for best results (6).

To ensure that you and your students have a shared understanding of the role of test and projects as both learning and assessment goals, refer to Fink (7) and Walvoord and Anderson (8), who show how to structure projects and tests, as well as classes, labs, or clinics, and reading assignments, to create the flow of the learning process. To illustrate this process for your students, try including in the syllabus a flow chart or a matrix that links each aspect of the course back to the overall learning goals.

Help your students internalize these linkages by asking them to restate the goals, and linkages to assessments and projects at different points during the course. For example, ask students on the first or second day to write anonymously what they expect to learn in the course, and why they took it. Report back during the next class what was written, which goals can be fulfilled in the course, and which cannot. A few weeks into the course, ask again for them to write anonymously in class what they believe are the most important learning goals of the class, and how the course readings, class activities, labs or clinics, test, and projects have helped them achieve those goals so far, and what suggestions they might have for future course assignments and assessments. You might even give them a goals-activities matrix, in which the goals are left blank for them to fill in, and a choice of yes/no or a Lickert-type scale appears in each cell for them to indicate whether or not or how well course goals are met with assessments and assignments like readings, in-class activities, assignments, and the like. While

it’s not necessary to follow all of your students’ recommendations, you should at least acknowledge their ideas and explain why you can or cannot do what they suggest, and be frank about their evaluation of how you are doing in providing the scaffolding for them to achieve course goals.

At other times during the course, as students are preparing for an upcoming assignment or assessment, you might have them undertake a one-minute writing activity in class, during which they describe what they think will be covered, and how that relates to course goals, both of which will focus their learning, and better prepare them for the assessment or assignment.

On assignment sheets and at the beginning of test or exams, you can again reiterate the learning goals of the course, and explain how the assignment or assessment will address them. Some faculty require students to write a one-paragraph “foreword” to major exams and projects, in which the student explains why he or she believes the faculty member is using this exam or project, and what the student has learned from it. To ensure the smooth functioning of your students’ reflections on assessments, you might give an early “dry run” test or project that counts little or that can be revised for a new grade, so that students can experience and reflect on the assessment process early in the course, without a huge penalty for mistakes and misconceptions. After this early test or project, again ask students to write anonymously about how the experience contributed to their learning. Summarize their answers and give your own response.

## Applying this Teaching Method Online

Teaching online provides access to tools that can facilitate giving tests and projects that cover the most important aspects of a course. Consider using hyperlinks to connect an assignment or even questions in a quiz to course goals, by linking to those goals in the online syllabus. Similarly, you can add tags or other meta-data to a file, page, or section of the course to do the same.

Ask students to reflect on connections between assignments and course goals before submitting assignments, perhaps through a simple multiple choice question that lists course goals and asks students to identify which one or ones were fulfilled in the activity. Alternatively, have your students contribute a post to a blog or other discussion forum for a more open-ended reflection. You can then respond to student reflections with comments on how goals align with tests and projects, and how you

will improve that alignment if needed.

Electronic portfolios offer a way for students to both reflect on course goals, and to collect evidence of their progress toward meeting them. You can request that students structure their e-portfolios according to the goals in the syllabus, with each section mapping to a discrete course goal. As the semester progresses, students can add evidence—essays, summaries or evaluations of readings, assessments, multi-media creations—to different sections to reflect how their learning relates to each of those goals. A benefit of e-portfolios is the ability to “map” digitally (and without the need for duplication) a discrete assessment or assignment to one or more goals. E-portfolio sections can include a self-reflective foreword written by the student that evaluates his or her learning vis-à-vis each of the course goals.

While you may structure your online learning environment by the content covered in units or during particular time periods (weeks, course meetings), you can also provide an interactive mind map that organizes readings, assignments, labs or clinics, essays, projects or assessments according to course goals. Much as a time-structured syllabus might link to those activities serially, a mind-map can provide a different conceptual linkage between the course materials, activities, and goals while linking to the same digital content. Providing both as overlays to the course allows a more traditional conceptualization of the course as developing over time, as well as a conceptualization of the course as meeting a set of interrelated learning goals.

## Assessing this Teaching Method

Whether you are teaching face-to-face, a hybrid course, or online, ensuring that your assessments align with the most important aspects of the course is vital to student learning. First, as you prepare an assessment, review course goals, even using verbs from them in your questions or assignment instructions as appropriate. Second, list what content you have covered during the period of time you wish to assess learning, and review your test or assignment instructions to make sure that, in addition to relating directly to course goals, they relate directly to the content covered. Because this matching activity takes little time, ask a colleague to do the same for you, requesting that he or she consider the two validity issues noted above by answering the questions: is there a direct match between the content and the tests, and do the tests ask for performance that accurately reflects the objectives? Seeking student input is also important. In fact, some assessments can be created with students as partners. Asking students what they think would be the best way to demonstrate their learning is helpful in at least two direct ways. It helps you create assessments and assignments in which students have an interest (because they suggested them). It may also help you create enough valid assessments for students to be able choose those that are most beneficial to their own learning. More important, though, is the fact that students must understand what learning is intended before they can suggest ways to demonstrate their learning. That understanding may be just as important as the tests or projects themselves.

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IDEA Paper No. 17: Improving Essay Tests, Cashin

IDEA Paper No. 18: Matching Instructional Objectives, Subject Matter, Tests, and Score Interpretations, Hanna and Cashin

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