

Constructing Effective Exams

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Make up test items throughout the term. One way to make sure the exam reflects the topics emphasized in the course is to write test questions at the end of each class session and place them on index cards or computer files for later sorting. Software that allows you to create test banks of items and generate exams from the pool is now available.

Ask students to submit test questions. Faculty who use this technique limit the number of items a student can submit and receive credit for. Here is an example (adapted from Buchanan and Rogers, 1990, p. 72):

You can submit up to two questions per exam. Each question must be typed or legibly printed on a separate 5" x 8" card. The correct answer and the source (that is, page of the text, date of lecture, and so on) must be provided for each question. Questions can be of the short-answer, multiple-choice, or essay type.

Students receive a few points of additional credit for each question they submit that is judged appropriate. Not all students will take advantage of this opportunity. You can select or adapt student's test items for the exam. If you have a large lecture class, tell your students that you might not review all items but will draw randomly from the pool until you have enough questions for the exam. (Sources: Buchanan and Rogers, 1990; Fuhrmann and Grasha, 1983)

Develop an inclusive exam. Consider multiple learning styles when creating your exams. Using visual representations, such as graphs or charts to represent the information is way to help students who are visual learners. Remember: Less is more. Students with learning disabilities are commonly discouraged when test pages are too dense/ text heavy; include obvious breaks, use bold type and subheads. If your instructions vary among sections, keep your instructions with the appropriate sections, rather than all directions on the first page of the test.

Consider making your tests cumulative. Cumulative tests require students to review material they have already studied, thus reinforcing what they have learned. Cumulative tests also give students a chance to integrate and synthesize course content. (Sources: Crooks, 1988; Jacobs and Chase, 1992; Svinicki, 1987)

Include a few words of advice and encouragement on the exam. For example, give students advice on how much time to spend on each section or offer a hint at the beginning of an essay question or wish students good luck. (Source: "Exams: Alternative Ideas and Approaches," 1989)

Put some easy items first. Place several questions all your students can answer near the beginning of the exam. Answering easier questions helps students overcome their nervousness and may help them feel confident that they can succeed on the exam. You can also use the first few questions to identify students in serious academic difficulty. (Source: Savitz, 1985)

Challenge your best students. Some instructors like to include at least one very difficult question—though not a trick question or a trivial one—to challenge the interest of the best students. They place that question at or near the end of the exam.

Try out the timing. No purpose is served by creating a test too long for even well-prepared students to finish and review before turning it in. As a rule of thumb, allow about one-half minute per item for true-false tests, one minute per item for multiple-choice tests, two minutes per short-answer requiring a few sentences, ten or fifteen minutes for a limited essay question, and about thirty minutes for a broader essay question. Allow another five or ten minutes for students to review their work, and factor in time to distribute and collect the tests. Another rule of thumb is to allow students about four times as long as it takes you to complete the test. (Source: McKeachie, 1986) These are some general standards; clearly these time guidelines do not apply to all learners.

Give some thought to the layout of the test. Use margins and line spacing that make the test easy to read. If items are worth different numbers of points, indicate the point value next to each item. Group similar types of items, such as all true-false questions, together. Keep in mind that the amount of space you leave for short-answer questions often signifies to the students the length of the answer expected of them. If students are to write on the exam rather than in a blue book, leave space at the top of each page for the student's name (and section, if appropriate).

Prepare new exams each time you teach a course. Though it is time consuming to develop tests, a past exam may not reflect changes in how you have presented the material or which topics you have emphasized in the course. If you do write a new exam, you can make copies of the old exam available to students.

Additional reading from the CTL Library:

Smith T. "Exams as learning experience: one nutty idea after another" in Mezeske, R. J., & Mezeske, B. A. (2007). *Beyond tests and quizzes : creative assessments in the college classroom*. San Francisco: Jossey-Bass: 71-83.

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques : a handbook for college teachers*. San Francisco: Jossey-Bass Publishers: 359-361.

Suskie, L. A. (2004). "Writing a Traditional Test" in *Assessing student learning : a common sense guide*. Bolton, Mass.: Anker Pub. Co.: 165-182.