

Quick Guide *to Better Tests*

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General suggestions for developing tests

- ✓ List the important concepts, principles, and skills you want students to master, then write items that measure these.
 - ✓ Don't try to write an exam in one sitting. One idea: after every class, write two or three items that relate to that class session.
 - ✓ Write items that students can't answer just by memorizing information; exam questions should measure ability to apply content to new settings, to analyze, evaluate, etc.
 - ✓ Use homework or in-class activities to give students practice at responding to items like those you will use on the exam.
 - ✓ Ask a colleague (or BEST) to review an exam for clarity before you finalize it.
 - ✓ Recognize that essay tests are relatively easy to write, but take a long time to grade. Good multiple-choice tests, on the other hand, can be scored quickly, but take much longer to write.
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Multiple choice items

- ✓ Present items in a new context, rather than using exactly the language from the text or class.
- ✓ Use item “templates” to help vary the format and cognitive level of items. E.g.,
 - Which of the following is the best definition of concept X?
 - Which of the following is the best label for this description?
 - Which of the following possible examples best exemplifies this concept or principle?
 - Which of the following features best distinguishes this concept from related concepts?
 - Given this scenario, which of the following is the best course of action?
 - Given this scenario, which of the following is the most likely consequence?

Over...

Essay items

- ✓ Avoid using essay items to test for only factual knowledge, since multiple-choice items can do this more reliably and efficiently.
- ✓ Structure and focus questions clearly, so students know what you expect. Present a specific problem, such as
 - Compare and contrast X and Y in regard to Z
 - Present arguments for or against some issue
 - Describe an application of a rule or principle
 - Evaluate a scenario in light of given criteria
 - Predict an outcome or draw inferences from given data
- ✓ Several shorter questions are usually better than fewer longer questions.

Over...

Multiple choice items (contd.)

- ✓ After administering the exam, use BEST's item analysis program to help identify items that didn't work as you intended.
- ✓ Guidelines for writing good items:
 - The item "stem" (the part that appears before the answer options) should present a problem, should generally contain a verb, and should include any words that would otherwise be repeated in each answer option.
 - Avoid stems that reveal the answer to another item.
 - Avoid negatives ("not", "never") in the stem, but if necessary, call attention to them by underlining or bolding.
 - "Distracters" (the incorrect answer options) should be wrong, but plausible.
 - Use common student errors as distracters.
 - Avoid using "all of the above" and "none of the above" as answer options.
 - Make the correct answer option about the same length as the distracters.
 - Avoid unintended verbal clues as to the right answer; e.g., words in the stem repeated in the correct answer, but not in the distracters, or grammatical clues, where only the correct answer makes grammatical sense with the stem.
 - The correct answer option should occur in each "position" (i.e., A, B, C, or D) about the same number of times, but avoid a repeating pattern.

Essay items (contd.)

- ✓ Guidelines for grading essays more reliably:
 - Before grading, list the main points you expect a good answer to cover.
 - Decide in advance how you will handle factors such as spelling and grammar, and apply the rules consistently.
 - Before grading, read through a few sample student answers to get a general idea of the quality level.
 - To counteract the "halo" effect, try to grade answers without knowing the student's identity.
 - Grade one question for all students before going on to the next question.
 - If possible, read each answer twice, shuffling the order the second time through.
 - Reshuffle the papers after completing each item.
 - Sort papers into "high," "medium," and "low" stacks before assigning final grades.
 - Write comments so that students understand why answers were good or poor.
 - If multiple graders are used, have a "norming" session.

Sources: Haladyna, T. M. (1994) *Developing and Validating Multiple-Choice Test Items*. Hillsdale, NJ: Erlbaum.
Hopkins, K. D. (1998) *Educational and Psychological Measurement and Evaluation*. Boston: Allyn and Bacon.
Jacobs, L. C. and Chase, C. I. (1992) *Developing and Using Tests Effectively*. San Francisco: Jossey-Bass.