



Writing Multiple Choice Test Questions

Writing multiple choice questions may at first glance seem a relatively simple process. You ask a question, and then give one correct answer and a number of incorrect answers. While that is the basic process, there are a number of “rules” that make this type of assessment more effective and the results more reflective of the knowledge acquisition of the test taker. Here are ten rules for writing excellent multiple choice questions.

- 1. The questions should reflect the learning objectives of the course.** The questions should serve to measure if the learner has acquired the knowledge and skills that are the main focus of the course.
- 2. Questions can be written to assess different levels of achievement.** It is occasionally desirable to test if learners can recall specific facts. More often, assessing the learner's ability to apply the knowledge to reach a conclusion, make a prediction, or select a course of action, is of greater value. As a general rule, all test items should require the application of knowledge. Following is an example of the difference.

Knowledge Recall Item Question:

What area is supplied with blood by the posterior inferior cerebellar artery?

Application of Knowledge Question:

A 62-year-old man develops left-sided limb ataxia, Horner's syndrome, nystagmus, and loss of appreciation of facial pain and temperature sensations. What artery is most likely to be occluded?

- 3. The distractors should be plausible.** The incorrect choices should be relevant and related to the test question topic.
- 4. Keep the answer choices approximately the same length.** Avoid making the correct answer the longest or shortest of the answer options. Also, try to keep all the answers grammatically similar.
- 5. Vary the position of the correct answer.** Avoid having the correct choice in the same answer location.

- 6. Try not to use negative questions.** A learner's ability to select the one incorrect answer does not necessarily indicate they know the correct answer.

Example of a negative question:

Which of the following areas is NOT supplied with blood by the posterior inferior cerebellar artery?

- 7. Avoid copying phrases directly from the text.** Using a phrase or sentence as it appears in the course material only reflects the learner's ability to recall and not synthesize.
- 8. Do not provide clues from one question to the next.** Keep the questions independent from one another so the answer to one question is not contained in another question.
- 9. Avoid giving clues such as linking the stem to the answer.** Test-wise students will know the correct answer based on clues rather than knowledge.

Example:

The primary goal of the study was to provide *an* _____. (In this case, the students might choose any answer that begins with a vowel.)

- 10. Items are more effective if presented as a question rather than as an incomplete statement.**

Example:

Oxygen is transported in the bloodstream bound to the protein _____ (poor)

What is the protein that binds oxygen for transport in the bloodstream? (better)

Bibliography and Resources

- (1) Virginia Commonwealth University | Center for Teaching Excellence
<http://www.vcu.edu/cte>
- (2) University of Bridgeport | Center for Excellence in Learning and Teaching
<http://www.bridgeport.edu/facultyandstaff/celt>
- (3) Brigham Young University | Faculty Center
<http://testing.byu.edu/info/handbooks/14%20Rules%20for%20Writing%20Multiple-Choice%20Questions.pdf>
- (4) The University of Texas at Austin | Instructional Assessment Resources
<http://www.utexas.edu/academic/ctl/assessment/iar/students/plan/method/exams-mchoice-write.php>
- (5) Constructing Written Test Questions For the Basic and Clinical Sciences,
Contributing Authors Susan M. Case, PhD and David B. Swanson, PhD,
http://www.nbme.org/PDF/ItemWriting_2003/2003IWGwhole.pdf