

Creating Multiple Choice Questions that Target

Higher Order Thinking

Factual Question (FQ)

An FQ only requires that students remember facts correctly. This question tests a student's memory.

Higher Order Thinking (HOT) Question

A HOT question not only requires students to remember but also understand, apply, analyze, and evaluate information correctly. These levels of learning come from Bloom's Revised Taxonomy (BRT). Below are three contexts that allow instructors to create HOT questions.¹

Nota bene: *If you are wanting HOT questions to be part of your teaching, they should not be limited to major tests but be included in discussions, quizzes, and lectures—i.e., anytime you convey information to students and want to assess their abilities to understand, apply, analyze, and evaluate course content.*



The Scenario-based Question

The Scenario-based Question takes factual information and frames it in a hypothetical situation that requires students to apply or estimate what would or should be done in a given scenario.



Figure 1- Image by Nickbar from Pixabay



Figure 2 - Image by Tumisu from Pixabay

The Analysis of Visuals Question

The Analysis of Visuals Question goes beyond asking students to fill in the missing parts of visual aids so that instructors can push students to choose the best explanation or analysis of what the visual means.

¹ Adapted from [“Writing Multiple Choice Questions For Higher Order Thinking”](#) by Connie Malamed.

The Answer + Reason Why Question

This final context has two very distinct parts that can really push students. First of all, there is a correct answer, which in some cases may be factual in nature. Then, there is the reason that's equally important. Because there are two parts, the Answer + Reason Why Question enables instructors to give a minimum of three answer options. There is of course the correct answer plus correct reason and wrong answer options, but there is also the correct answer but wrong reason option. A very robust test question experience, indeed!



Figure 3- Image by Arek Socha from Pixabay

Multiple-Choice Test-Writing Guidelines²

Adapted from “Writing Multiple-Choice Questions That Demand Critical Thinking”³

These general guidelines apply to writing multiple choice questions. However, you also have to write the answer!

Answer Options:

1. Avoid lifting phrases directly from text or lecture. This becomes a simple recall activity for the student. Use new language as frequently as possible.
2. Write the correct answer before writing the distracters. This makes sure you formulate one [clearly] correct answer.
3. Answer options should be similar in length and parallel in grammatical structure.
4. Limit the number of answer options. Research shows that three-choice items are about as effective as four-choice items.
5. Distracter choices must be incorrect, but plausible.
6. To make distracters more plausible, use words that should be familiar to students.
7. Help students see crucial words in the question. For example: “Which of the following is NOT an explicit norm?”
8. Use hyperbole or extreme words rarely. Eg: all, none, never, always, etc.

² This list comes from <https://teach.its.uiowa.edu/>.

³ Peter Airasian, *Assessment in the Classroom*, (New York: McGraw Hill, 1996) 84.