

Guidelines for Writing High-quality Multiple Choice Questions¹

1. All options should be grammatically consistent with the stem and should be parallel in style and form. Non-grammatically correct options provide clues to the students in that they can easily eliminate distracters that are not consistent with the stem.
2. Each MCQ should have a clear focused question. Teachers should avoid using MCQs with unfocused stems which don't ask a clear question or state a clear problem in the sentence completion format.
3. Each MCQ should have the problem in the stem of the question, not in the options. The options should not be a series of true/false statements.
4. The basic format for MCQs is the single best answer. Therefore, ensure that questions have one, and only one, best answer.
5. Avoid gratuitous or unnecessary information in the stem or the options. If a vignette is provided with the MCQ, it should be required to answer the question.
6. Avoid complex, or K-type MCQs. K-type MCQs have a range of correct responses and then ask students to select from a number of possible combinations of these answers. Students can often guess the answer by eliminating one incorrect response and all options containing this response or by selecting the responses which appear most frequently in all of the options.
7. Questions and all options should be written in clear, unambiguous language. Poorly worded or ambiguous questions can confuse even knowledgeable students and cause them to answer incorrectly.
8. Make all distracters plausible. Good plausible distracters are vital to high quality MCQ's. Students who do not know the material increase their chances of guessing the correct option by eliminating implausible distracters.
9. Avoid repeating words in the stem and the correct option. Similar wording allows students to identify the correct option without knowing the material.
10. Avoid providing logical clues in the stem and the correct option that can help the student to identify the correct option without knowing the material. An example of a logical clue is asking students to select the most appropriate pharmaceutical intervention for a problem and only having one or two options which are actually pharmaceutical interventions.
11. Avoid convergence clues in options where there are different combinations of multiple components to the answer. Question writers tend to use the correct answers more frequently across all options and students will identify as correct the answer in which all components appear most frequently.

¹ Originally Prepared by Prof James Ware as part of an Item Writing Workshop.

Guidelines for Writing High-quality Multiple Choice Questions¹

12. All options should be similar in length and amount of detail provided in the option. If one option is longer, includes more detailed information, or it contains more complex language, students can usually correctly assume that this is the correct answer.
13. Arrange MCQ options in alphabetical, chronological, or numerical order. (We assess for chronological and numerical, but not alphabetical order).
14. Options should be worded to avoid the use of absolute terms (e.g., never, always, only, all) as students are taught that there are often no absolute truths in most health science subjects and they can therefore eliminate these distracters.
15. Options should be worded to avoid the use of vague terms (e.g., frequently, occasionally, rarely, usually, commonly) as these terms lack precision and there is seldom agreement on the actual meaning of “often” or “frequently.”
16. Avoid the use of negatives (e.g., not, except, incorrect) in the stem as they poorly assess students’ actual knowledge. If teachers wish to assess contraindications, the questions should be worded clearly to indicate that this is what is being assessed.
17. Avoid the use of “all of the above” as the last option. Students can easily identify if this is the correct answer by simply knowing that at least two of the options are correct and similarly, they can eliminate it by knowing if only one of the options is incorrect.
18. Avoid the use of “none of the above” as the last option as it only measures students’ ability to detect incorrect answers. Furthermore, if “none of the above” is the correct option, the teacher must be certain that there are no exceptions to any of the options that the student may detect.
19. Avoid fill-in-the-blank format whereby a word is omitted in the middle of a sentence and the student must guess the correct word. All options should be placed at the end of the stem.

References:

- a) Susan Case, David Swanson: Item Writing Manual, 1998.
- b) <http://www.nbme.org/publications/item-writing-manual-download.html>
- c) IDEAL CD and Manual. (Contact Prof Kumta or Prof Simon Yip, OES).