10 Golden Rules for Writing Multiple Choice Questions

by Elizabeth Armstrong Moore

In a classical multiple choice question, a student should choose a correct answer among several (optimally 5) answers. Multiple choice questions consist of three obligatory parts:

1. the question (“body of the question”)
2. the correct answer (“the key of the question”)
3. several incorrect alternatives (the so called “distracters”) and optional (and especially valuable in self-assessment)
4. feedback comment on the student’s answer.

Example of a multiple choice question

In which of the periods of the cardiac cycle are all the valves closed: (body)
A. diastasis (distracter)
B. isovolume relaxation (key)
C. at the beginning of the T-wave in EKG (distracter)
D. during a significant fall of ventricular volume (distracter)
E. during atrium contraction (distracter)

Writing a good exam question with multiple answers is a skill that usually comes with experience (often bitter). Feedback gathered through analysis of student answers (“item analysis”) is very important for the author(s) of the test. There are several rules we can follow to improve the quality of this type of written examination.

1. Examine only the important facts
   Make sure that every question examines only the important knowledge. Avoid detailed questions - each question has to be relevant for the previously set instructional goals of the course.

2. Use simple language
   Use simple language, taking care of spelling and grammar. Spelling and grammar mistakes (unless you are testing spelling or grammar) only confuse students. Remember that you are examining knowledge about your subject and not language skills.

3. Make the questions brief and clear
   Clear the text of the body of the question from all superfluous words and irrelevant content. It helps students to understand exactly what is expected of them. It is desirable to formulate a question in such way that the main part of the text is in the body of the question, without being repeated in the answers.

4. Form the questions correctly
   Be careful that the formulation of the question does not (indirectly) hide the key to the correct answer. Student (adept at solving tests) will be able to recognize it easily and will find the right answer because of the word combination, grammar etc, and not because of their real knowledge.

5. Take into consideration the independence of questions!
   Be careful not to repeat content and terms related to the same theme, since the answer to one question can become the key to solving another.

6. Offer uniform answers!
   All offered answers should be unified, clear and realistic. For example, unlikely realisation of an answer
or uneven text quantity of different answers can point to the right answer. Such a question does not test real knowledge. The position of the key should be random. If the answers are numbers, they should be listed in an ascending order.

7. Avoid asking negative questions!
If you use negative questions, negation must be emphasized by using CAPITAL letters, e.g. “Which of the following IS NOT correct...” or “All of the following statements are true, EXCEPT....”

8. Avoid distracters in the form of “All the answers are correct” or “None of the answers is correct!”
Teachers use these statements most frequently when they run out of ideas for distracters. Students, knowing what is behind such questions, are rarely misled by it. Therefore, if you do use such statements, sometimes see them as the key answer. Furthermore, if a student recognizes that there are two correct answers (out of 5 options), they will be able to conclude that the key answer is the statement “all the answers are correct,” without knowing the accuracy of the other distracters.

9. Distracters must be significantly different from the right answer (key)
Distracters which only slightly differ from the key answer are bad distracters. Good or strong distracters are statements which themselves seem correct, but are not the correct answer to a particular question.

10. Offer an appropriate number of distracters
The greater the number of distracters, the lesser the possibility that a student could guess the right answer (key). In higher education tests questions with 5 answers are used most often (1 key + 4 distracters). That means that a student is 20 percent likely to guess the right answer.

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