WRITING EFFECTIVE
MULTIPLE-CHOICE QUESTIONS

INTRODUCTION

Multiple-choice questions are used commonly in online courses. They are versatile and efficient, and most course management systems provide a tool that automatically grades this type of question. Multiple-choice tests are reliable, and the higher number of questions a test has, the more reliable it is. For example, in a 25-question test, a student has a 1-out-of-942,651 chance of scoring 70% by guessing alone. These advantages are severely undermined, however, if the questions aren't well written.

Well-written multiple-choice questions can measure given objectives, whereas poorly written questions may confuse students and, therefore, lack validity in their measure of academic achievement.

A CLOSER LOOK

Breaking down the parts of a multiple-choice question will help you construct a well-written question.

<table>
<thead>
<tr>
<th>3. What is chiefly responsible for the increase in the average length of life in the USA during the last fifty years?</th>
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<tr>
<td>distractor — a. Compulsory health and physical education courses in public schools</td>
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<tr>
<td>answer — *b. The reduced death rate among infants and young children</td>
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<tr>
<td>distractor — c. The safety movement, which has greatly reduced the number of deaths from accidents</td>
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<tr>
<td>distractor — d. The substitution of machines for human labor</td>
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The anatomy of a multiple-choice question

The **stem** should be meaningful and present a clear problem. **Alternatives** should be plausible, stated clearly, and free of clues about which response is correct.
WRITING EFFECTIVE MULTIPLE-CHOICE QUESTIONS

Checklist for Reviewing Multiple-Choice Questions

- Does the question test learners’ mastery of key terms and concepts that relate to the learning objective(s)?
- Are the question and alternatives stated clearly and concisely?
- Do the alternatives sound plausible?
- Is there one and only one correct or clearly best answer?
- Has the answer been randomly assigned to A, B, C, or D?
- Are multiple-choice questions an appropriate way to assess mastery of the learning objective?
- Are alternatives plausible, or is it obvious they are incorrect?

EXAMPLE

The learning objective is “Learners will create an effective, asynchronous online course.” In order to create a course, it will be important to acquire knowledge about the development process.

What is the most important part of a course?............unclear (most or single most important), could be subjective

a. Learning objectives.................................................................could be correct
b. Your favorite sports team.....................................................clearly incorrect, no relevance to course design
c. Assessments............................................................................could be correct
d. All of the above.................................................................should be avoided (as should “None of the above”)

Hint: If you typically use all or none of the above as a fourth answer choice, consider using only three answer choices, which research shows results in higher scores and shorter quiz/exam completion times.

Let’s try this again:

What learners achieve as a result of the course are called:..................clear, reinforces teaching of the term

a. Assessments.................................................................incorrect, but related to course design
b. Learning objectives..............................................................correct answer
c. Learning resources............................................................incorrect, but related to course design

ADDITIONAL RESOURCES

- How to Prepare Better Multiple-Choice Test Items: Guidelines for University Faculty by Brigham Young University
- Writing Good Multiple-Choice Test Questions by Vanderbilt University
- 10 Rules for Writing Multiple-Choice Questions by the eLearning Coach