

Guidelines for writing multiple choice questions

Writing the question or unfinished statement (the stem)

- The question should be written in the simplest, clearest and unambiguous way, to avoid confusion.
- The question should be meaningful without having to read all the options first. Where the question does not make sense until all the alternatives have been read, they become in effect a collection of true-false statements in multiple choice form. This is shown in the example below:

Example

Poor

Adelaide is:

- north of Darwin
- south of Darwin
- east of Darwin
- west of Darwin

Better

The location of Adelaide compared to Darwin is:

- north
- south
- east
- west

- Put as much of the necessary wording as possible in the question, rather than in the alternatives. Watch for redundant words in the alternatives.
- The stem of the multiple choice question should be free of irrelevant material; i.e. it should contain only material essential for answering the question.
- Where possible, state the stem in positive rather than negative terms. The use of negatives can confuse students and lead to sentences that are difficult to interpret. If negatives can't be avoided, highlight the negative in the stem of the question (e.g. in italics). In particular, avoid *double negatives*.

Example

Poor

Which one of the following is not a safe driving practice on icy roads?

- accelerating slowly
- jamming on the brakes
- holding the wheel firmly
- slowing down gradually

Better

All the following are safe driving practices on icy roads EXCEPT:

- accelerating slowly
- jamming on the brakes
- holding the wheel firmly
- slowing down gradually

Source: Gronlund & Linn, 1990, p.180

- Avoid giving clues to the correct response in the stem.

Writing the incorrect answer options (the distractors)

- Writing plausible distractors is one of the most difficult aspects in composing questions. Don't include responses that are obviously wrong. The alternatives should be plausible and attractive to the uninformed.

Tips for incorrect answer options (distractors):

- Statements based on common student errors and misconceptions often make strong distractors.
- True statements that do not answer the question often make good distractors.
- Absolute statements (e.g. 'never', 'always', 'all') are best avoided as students will rule them out.
- Keep the distractors sufficiently different to the key (correct) response in substance, and not just clever or subtle wording.
- Ensure that the alternatives are independent and mutually exclusive.
- Avoid absurd, jokey and idiosyncratic distractors – they are easily spotted.
- Make each distractor grammatically similar to the correct response, as well as consistent with the stem.

Writing the correct response

- Correct responses don't necessarily have to be absolute truths – students can be asked to select the best answer or the one 'which is most likely'.
- Avoid giving a clue by having the correct response noticeably different in terms of either:
 - length
 - grammar/syntax being more highly qualified than the distractors
 - being the only one to match the stem in the number of factors required.

Other pointers about alternatives

- Avoid using the alternative 'all the above' and use 'none of the above' with caution.
 - 'All of the above' makes it possible to answer the question on the basis of partial information – if there is only one correct answer, and a student notes that two alternatives are correct, 'All the above' must be the answer. Similarly, a student can detect 'All the above' as a wrong answer if he/she recognises another alternative as incorrect.
 - 'None of the above'—when used as the right answer in a correct answer type item—tends to measure nothing more than the ability to detect wrong answers (with no guarantee that a student knows a correct response to the question).
- In terms of arranging the responses:
 - present them in a logical (e.g. numerical) order if one exists
- Avoid giving clues to the answers of other test questions either in the alternatives provided or in the stem.

Final piece of advice

Above all, have a colleague or two trial your suggested questions.

Adapted from Rees, K 1996. *Writing Multiple Choice Questions*, Deakin Australia, Deakin University. With permission of the author.

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