

Tips for Building Quality Selected Response Items

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Writing a Good Question

Item writers must be mindful of technical conventions to observe (AERA/APA/NCME, 1999). Some of the more important ones have been outlined for ready reference in this section. Item specifications are used to assure uniformity of item development. It is necessary to have several, usually at least five, items to measure student proficiency on each standard. By first developing item specifications writers are more able to write items that are similar and have greater likelihood of fitting accurately into the constructed test. Since most of the items that will be developed for the item bank will be multiple choice, examples of item specifications will be shown in that part of this section of the guide.

Things to Consider - Generally

- It is imperative that the item writers be content experts. The item must focus the attention of the examinee on the principle or construct upon which the item is based. (Academic Technology Services, Michigan State University. n/d). Well-written items will permit an analysis of test results that reveal strength of student knowledge as well as the misperceptions that lead to an incorrect answer choice. High level content knowledge of item writers is the best assurance that these criteria are met.
- Before you begin, meet as a group to determine formatting rules. This will ensure consistency of style, format, text, and graphics within items and subject areas.
- Group like item types together. Respondents should be able to answer items of one type without shifting back and forth from one type of task to another. Grouping also makes it easier for administration directions to be clear and specific.
- Make sure the question you're writing matches the standard or skill description. Keep the correct answer and the distractors about the same length, or if the distractors and answers are in two different forms, use pairs of similar items.
- Be aware of obvious giveaways like having the correct answer be a positive statement and the distractors negative statements, having the correct answer be clearly longer or shorter than the distractors, or having the correct answer be a whole number when the distractors are fractions.
- Include as much information in the question as possible so the answers don't have to repeat information.
- Avoid long sentences as answer choices. Use full word names when possible (miles, inches, etc.).
- Questions should be at an appropriate reading level for the grade level for which they are written.
- Questions topics should be relevant to the grade level and contain appropriate content.
- Avoid writing questions/passages about people who are still living.
- Make sure all answers are plausible mistakes for the given grade level and skill. The goal isn't to trick learners; it's to present foils that are plausible to learners who haven't learned the material.

- Items shouldn't contain any offensive material.
- Go to: <http://www.babycenter.com/babyname/> for a good list of names to use in questions.
- Use lots of space between instructions and questions.
- Use plenty of space around graphics. A good rule is to use a double return between all instructions and questions and before and after a graphic in a question.
- It's a good idea to bring attention to words that could cause the reader to misunderstand a question such as not, best, most likely, least, etc. Avoid using trademarked names such as Kleenex, Adidas, Jell-O (or jello), Toyota, etc.
- Use: <http://www.ascendcorp.com/about/trademarks/> to see if a word is trademarked. This site has lists of trademarked words arranged alphabetically. Wikipedia also is an excellent source for searching trademark information.

Design Tips

- Relevant graphics are extremely helpful; use them whenever possible.
- Unclear graphics can hinder learning through distraction, disruption, and/or seduction.
- Put corresponding words and graphics together.
- Be consistent with style, format, text, graphics, etc. Avoid adding extraneous words.
- Use vocabulary that is consistent with the intended grade level of the item.

Specific Tips for Selected Response Items

Selected Response items consist of a stem that defines the question and answer options from which the correct answer is selected. It is helpful for item writers to review a checklist of item qualities to assist in keeping on track as items are written.

- If the stem is a question, start it with an interrogative word.
- Do not force the stem into the form of a direct question if an incomplete statement is more appropriate.
- Clearly define the question.
- Include as much of the item as possible in the stem leaving less for answer options.
- Avoid leaving blanks for completion in the beginning or middle.
- Use clear and simple language.
- If the item is measuring vocabulary, the highest level of language used in the stem should be below that considered appropriate for the grade or performance level being tested.
- Avoid negatives or double negatives; if a negative is used clearly emphasize it (e.g. capitalize all letters of the negative word).
- There should be only one correct answer to an item.
- Options should be grammatically consistent with the stem.
- Options should be parallel in form.
- Distractors or foils should be plausible and attractive to the examinee who does not know the correct answer.
- Write at least three distractors for every question. Do not force a fourth or fifth choice into an item which logically can have only three choices.
- Make all options independent of each other. Choices should be in logical order unless the order reveals the answer.
- Numerical responses should be from smallest to largest number, or the reverse.
- Single-word answers should be alphabetized unless there is logic for another order, such as months of the year.
- Lengthy responses should be arranged in order of their length.
- Choices that are identical with names of things on a graph should be ordered as they are on the graph.
- Options should be independent and mutually exclusive.
- Symbols used to identify alternatives should be used in a way that they cannot be confused with the content of the responses.

- If choices are letters, identify the alternatives with numerals, and vice versa.
- Avoid the options *all of the above* and *none of the above*.
- Avoid slang correct options.

Bias Guidelines

- Avoid ethnic bias such as referring to various races or nationalities engaging in stereotypical activities.
- Avoid continuing any stereotype.
- Avoid gender stereotyping (females cooking, females cleaning).
- Use common ethnic names in lower grade levels instead of more difficult ones so names don't provide unnecessary distraction or add to the difficulty of an item.

Selected Response Items Specification

Each multiple choice item should be written to specifications that can assure parallel item development as well as consistent item quality. Item specifications are —roadmaps to developing similar items. An example of an item specification is shown on the next slide. The item is accompanied by the stimulus and response attributes. Teachers can write several items at the same level of difficulty and that assess similar math skills. The example was written by a team of teachers assigned to write math assessments suitable for placing students in a curriculum and monitoring their progress. Note that the specifications can be used to guide analysis during a cognitive lab session.

<p>Problem 1:</p> $\begin{array}{r} 50,526 \\ -35,287 \\ \hline \end{array}$ <p>A. 15,239 B. 85,813 C. 15,339 D. 34,239</p>	<p>Stimulus Attributes</p> <ol style="list-style-type: none"> Subtraction problem written vertically Only base 10 whole numbers will be used Problem involves regrouping 4 times Subtracting ten thousands from ten thousands (the minuend has zeros in the tens and hundreds place) The minuend is larger than the subtrahend. Only one correct answer is larger than the subtrahend. Answer choices will be below. <p>Response Attributes</p> <ol style="list-style-type: none"> Four answers will be presented, one of which is accurate. Solution A is correct. Solution B is inaccurate because it is the sum of the two numbers and not the difference. Solution C is inaccurate because of borrowing errors in the hundreds place. Solution D is inaccurate because of borrowing error in the thousands place.
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Categories	Items Not Present	Descriptions of key criteria missed

Source: Three Facets of Formative Assessment: How to Revolutionize (and actually use locally developed tests). Dan Mason et al. Santa Clara County Office of Education