

## P-1: Create or obtain assessments

### Write items so that they reveal what students truly know

When an assessment is well-written, the way students perform will accurately reflect what they actually know and are able to do - in other words, a well-written assessment reveals "true mastery"

### What does this mean and look like?

	Assessment Items That Reveal True Mastery	Assessment Items that <i>Don't</i> Reveal True Mastery
What's their impact?	Students who have mastered a learning goal will almost always get the aligned question correct	Students who have mastered a learning goal may be prevented from showing they understand
	Students who have not mastered a learning goal will almost always get the aligned question incorrect	Students who don't understand may be aided or enabled by the test to show mastery
	The assessment gives valid data that shows exactly where students are at and what needs to be done next to meet student needs	The assessment gives misleading data that prevents teachers from accurately knowing where students are at and from making the right instructional choices.
What do they look like?	<b>Don't give away answers</b>	<b>Give away answers</b>
	Someone who studies building design is called a(n) _____.	Someone who studies architecture is called an _____.
	Only use one of the questions to the right on the same assessment.	<ol style="list-style-type: none"> <li>1) Is helium a solid, liquid or gas?</li> <li>2) List the three phases of matter.</li> </ol>
	<b>Are focused - prevent unwanted answers</b>	<b>Are vague - permit unwanted answers</b>
	What is the pen name of the author of <i>Huckleberry Finn</i> ?	The author of <i>Huckleberry Finn</i> was _____. (answer could be "a man," "criticizing slavery," etc.)
New Orleans is at the mouth of the _____ River.	Where is New Orleans located? _____	

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<b>Test one idea at a time</b>	<b>Test multiple ideas at once</b>
Tobacco was the chief crop of colonial Virginia. T or F Virginia was Britain's first colony in America? T or F	Tobacco was the chief crop of Virginia, the first British colony in America. T or F
<b>Have good “distractors” – plausible incorrect answer choices</b>	<b>Have poor “distractors” – some answer choices are obviously incorrect</b>
The country directly west of Spain is: (a) Italy, (b) France, (c) Switzerland, (d) Portugal.  <i>For more examples, see the below section on “Guidance for Writing Questions that Reveal True Mastery”</i>	The country directly west of Spain is: (a) Rome, (b) Antarctica, (c) Brazil, (d) Portugal.  <i>For more examples, see the below section on “Guidance for Writing Questions that Reveal True Mastery”</i>
<b>Avoid posing questions in the negative</b>	<b>Pose questions in the negative</b>
What should you avoid doing to make your writing clear for your reader?	What mistakes should you not make if you don't want your reader to become confused by your writing?
<b>Avoids cultural bias</b>	<b>May unintentionally show cultural bias</b>
Something that is wholesome or beneficial is: (a) bizarre (b) nourishing (c) feeble (d) skimpy	Mr. Jones ate a _____ breakfast of oatmeal, sausage links and a croissant with marmalade. (a) bizarre (b) nourishing (c) feeble (d) skimpy

<sup>1</sup> Adapted from Nitko, Anthony. *Educational Assessment of Students*. New York: Prentice Hall, 2003.

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### How do I write questions that reveal true mastery?

Use these guidelines as you design your assessment items.

#### Writing 'stems'<sup>1</sup> (the introductory statement or question in an assessment item)

Guideline	Poor Example	Better Example
<b>Stems should be clear, simple and present only a single problem. Leave out unnecessary details.</b>	There are several types of objective and non-objective assessments. An essay assessment is especially useful because...	An advantage of an essay assessment is...
<b>Avoid negative language in the stem. If you must use negative language, be sure to underline, capitalize or otherwise emphasize it.</b>	Which of the following is not a cause of the American Revolution?	Which of the following is NOT a cause of the American Revolution?
<b>Make the stem more robust than the answer choices by including more of the wording at the stem-level.</b>	A percentile score: a. indicates the percentage of items answered correctly. b. indicates the percentage of correct answers divided by the percentage of wrong answers. c. indicates the percentage of people who scored at or above a given raw score.	A percentile score indicates the percentage of: a. items answered correctly. b. correct answers divided by the percentage of wrong answers. <b>c. people who scored at or above a given raw score.</b>

#### Writing 'distractors' (alternative answer choices) for multiple choice items

Guideline	Poor Example	Better Example
<b>Do not provide alternatives that demand extremely fine discrimination among answer choices.</b>	The percentage of area in a normal curve falling between +1 and -1 standard deviations is about: a. 66% b. 67% c. 68% d. 69%	The percentage of area in a normal curve falling between +1 and -1 standard deviations is about: a. 14% b. 33% <b>c. 68%</b> d. 95%
<b>Alternatives should parallel the grammar of the stem so that answers can't be eliminated due to grammar.</b>	An early step in the scientific process is creating a theory to investigate. This is also known as a: a. result b. hypothesis c. design d. test and retest	An early step in the scientific process is creating a theory to investigate. We call this stage: a. result b. <b>hypothesis</b> c. design d. test and retest

<sup>1</sup> Adapted from Woolfolk, A. (2001). Educational psychology, 8<sup>th</sup> edition. Boston: Allyn Bacon.

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<p><b>Avoid categorical words like <i>always, never, all, only</i> unless they can appear consistently in all alternatives.</b></p>	<p>The volume of a regular 3-D solid is:</p> <ol style="list-style-type: none"> <li>never equal to the area</li> <li>always very close in value to the area of the solid's face</li> <li>sometimes determined by the area of a face of the solid</li> </ol>	<p>Which of the following statements about the volume of a regular 3-D solid would most often be true?</p> <ol style="list-style-type: none"> <li>it equals the area</li> <li>it will be very close to the area of the solid's face</li> <li><b>it is determined by using the area of a face of the solid.</b></li> </ol>
<p><b>Don't use two distractors that have the same meaning. If only one answer is right, and two answers are the same, they must be wrong.</b></p>	<p>In the sentence, <u>expedition</u> means the same, or about the same as:</p> <ol style="list-style-type: none"> <li>tradition</li> <li>meeting</li> <li>custom</li> <li>journey</li> </ol>	<p>In the sentence, <u>expedition</u> means the same, or about the same as:</p> <ol style="list-style-type: none"> <li>tradition</li> <li>meeting</li> <li>tribute</li> <li><b>journey</b></li> </ol>
<p><b>Make sure all distractors are plausible and relevant!</b></p>	<p>People everywhere have unlimited wants and limited resources. James and Heidi are people who live in different countries. Which of the following must be true:</p> <ol style="list-style-type: none"> <li>James and Heidi have unlimited wants and limited resources</li> <li>James lives on the Moon and Heidi lives in Austria</li> <li>Heidi is a young girl</li> </ol>	<p>People everywhere have unlimited wants and limited resources. James and Heidi are people who live in different countries. Which of the following must be true:</p> <ol style="list-style-type: none"> <li><b>James and Heidi have unlimited wants and limited resources</b></li> <li>James and Heidi can have all their material wants fulfilled</li> <li>James and Heidi must produce all the goods that they consume</li> </ol>
<ul style="list-style-type: none"> <li><b>Avoid using the exact wording from the textbook or a lecture.</b></li> <li><b>Avoid overuse of <i>all of the above, none of the above.</i></b></li> <li><b>Vary the position of the correct response.</b></li> </ul>		

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### Writing Non-Objective Item Prompts

Guideline	Poor Example	Better Example
<b>Make the prompt clear and concise and reveal the criteria used to judge answers. Break the question down so specific criteria can be judged.</b>	Discuss the causes of the American Revolution.	a. List two reasons the colonists felt they should break away from England. Do you think those reasons were good? Why or why not? b. List two reasons the English wanted to keep the colonies. Do you think those were good reasons? Why or why not?
<b>Make sure your question elicits higher-level thinking from students. <i>If not, consider using objective-item tests.</i></b>	Why were Iroquois longhouses made of wood?	Do you think an Iroquois longhouse is more like an apartment building or a one-family house in our culture? Why?

**When writing multiple choice questions, use the multiple choice template** (included in the Tools section) to help develop challenging answer alternatives that accurately assess student knowledge