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# Test Development & Item Writing for Teachers of ELLs March 31, 2010

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- Welcome to the webinar on "Test Development and Item Writing for Teachers of ELLs." Today's webinar is hosted by the National Clearinghouse for English Language Acquisition, NCELA, located at the Graduate School of Education and Human Development at The George Washington University, funded through a contract with the U.S. Department of Education's Office of English Language Acquisition.
- NCELA's mission is to provide technical assistance information to state and local educational agencies on issues pertaining to English language learners.
- My name is Kathia Flemens, Ph.D., a Research Associate at NCELA and your Webinar facilitator.





#### **Today our presenters are:**

Ms. Lauren Kennedy, Director of Test Development at Second Language Testing Inc. and Ms. Catherine Casteel, Test Developer and Literacy Specialist at Second Language Testing Inc.

# Test Design for Teachers

**BLUEPRINTS AND ITEM WRITING** 

## **Validity**

- Degree to which a test and the resulting scores are meaningful for an intended purpose.
- Scores will reflect progress toward learning goals when
  - items/tasks are clear to students.
  - test content matches content standards/objectives.
  - items/tasks are represented in the same proportions as in the standards and objectives.

## **Content Validity**

- Degree to which test reflects the content domain.
- Essential to standards-based assessment.
- Content validity can be evaluated comparing the alignment of test tasks to content standards.
- State assessments are based on content standards; ensuring classroom assessments are based on the same standards provides content validity for classroom tests.

# Blueprint

## Organizes and displays the mix of content and tasks

## Example

| Concept  | Knowledge<br>level | Application level | Comprehension<br>Level | Synthesis<br>Level | Total | Percent |
|--|--------------------|-------------------|------------------------|--------------------|-------|---------|
| Student will discriminate the subtraction sign from the addition sign  | 3                  |                   |                        |                    | 3     | 15%     |
| Student will discriminate correctly solved subtraction problems from incorrectly solved subtraction problems |                    |                   | 3                      |                    | 3     | 15%     |
| Student will solve correctly single-<br>digit subtraction problems   |                    | 6                 |                        |                    | 6     | 30%     |
| Student will solve correctly subtraction problems with double-digit numerators and single-digit denominators |                    | 6                 |                        |                    | 6     | 30%     |
| Student will explain their solution process for a double-digit subtraction problem.                          |                    |                   |                        | 2                  | 2     | 10%     |
| Total  | 3                  | 12                | 3                      | 2                  | 20    |         |
| Percent  | 15%                | 60%               | 15%                    | 10%                |       | 100%    |

## **Testing Vocabulary**

- Item a test question
  - Includes stem/prompt and any options
- Stem the stimulus (question, sentence)
  - Open incomplete statement complete statement or question
  - Closed complete statement or question
- Option choices given to test taker to answer the stem
  - Distractor an incorrect answer
  - Key a correct answer
- Prompt item that asks the student to create a constructed response

## Multiple Choice: Good Practices in Writing Test Stems

- Present a single, well defined problem
- Base the item on a standard or objective
- Write the item at the reading level of the students
- Phrase the stem positively, not negatively
- Use language that is clear, simple and precise

## Stems: Clear, Precise Language

#### • Poor:

 In carrying out scientific research, the type of hypothesis which indicates the direction in which the experimenter expects the results to occur once the data has been analyzed is known as a(n) ...

#### • Better:

- Closed
  - ➤ What is a hypothesis that indicates the expected result of a study called?
- Open
  - **▲** A hypothesis that indicates the expected result of a study is called...

## What to Avoid in Writing MC Stems

- Questions that are based on the content of another item.
- Frequency adverbs, such as "Always" and "Never"
- Humor
- Trick questions that intentionally mislead students
- Items that can be answered by the content of another item.

# Writing Multiple-Choice Options

- Make comparable in content, length, & logic
- Include the central idea in the stem, not the options
- Use parallel language
- Logically or numerically order the options
- Avoid "All of the above" and "None of the above"
- Create plausible distractors
- Vary the location of the correct answer
- Present vertically not horizontally
- Research suggests that 3 options are adequate

## MC Options: Avoid Grammatical Clues

- What causes night and day?
  - A. The earth spins on its axis. [correct]
  - B. The earth moved around the sun.
  - C. Clouds have blocked the sun's light.

## MC Options: Avoid Association Clues

## Who are the "Magnificent Seven?"

- A. a pro basketball team
- B. a group of seven fictional Western figures [correct]
- C. a protest music group popular during the 1960s
- D. a set of nutritional foods

Option B includes the word "seven."

## MC Options: Order Numerically

A book sells for \$9.99. If it is discounted 25%, how much does it cost?

## Wrong

- A. \$5.00
- B. \$7.50
- **C.** \$2.50
- D. \$6.66

## Right

- A. \$2.50
- B. \$5.00
- C. \$6.66
- D. \$7.50

# MC Options: Order Logically

# The speaker's tone in the passage can best be described as which of the following?

### Wrong

- A. contemptuous
- B. whimsical
- c. pretentious
- D. satirical

### Right

- A. contemptuous
- B. pretentious
- C. satirical
- D. whimsical

# Good Practices for Essay Prompt Writing

- Topics should be meaningful, relevant and motivating
- Prompt should be written in language that is clear and precise
- Text prompts, which use reading as a basis for writing, may penalize poor readers regardless of their writing ability

# Good Practices for Essay Prompt Writing

- Prompt can be written as a statement or a question
- Specify and define what mental process you want the students to perform
  - Use verbs that define the writing task
- Contextualize the writing
  - Specify audience, purpose, genre, form
- Structure the prompt to minimize subjective interpretations

## Good Practices for Essay Prompt Writing

- Provide complete instructions before the prompt
  - The criteria for grading
  - Describe where they are to write the essay
  - Describe how long the essay should be, or how long a student has to write
  - Include advice on organizing ideas and proofing the essay

# Things to Avoid in Essay Prompt Writing

- Prompts that inadequately specify the task
  - Example: Capital punishment. Discuss.
- Prompts that rely on factual knowledge
- Vague, ambiguous, or non-specific verbs
- Providing a choice of essay questions
  - Students may waste time deciding on an option.
  - Students may start-over, or mis-understand and write to all.
  - Some questions are likely to be harder to answer than others.

# Improving a Test

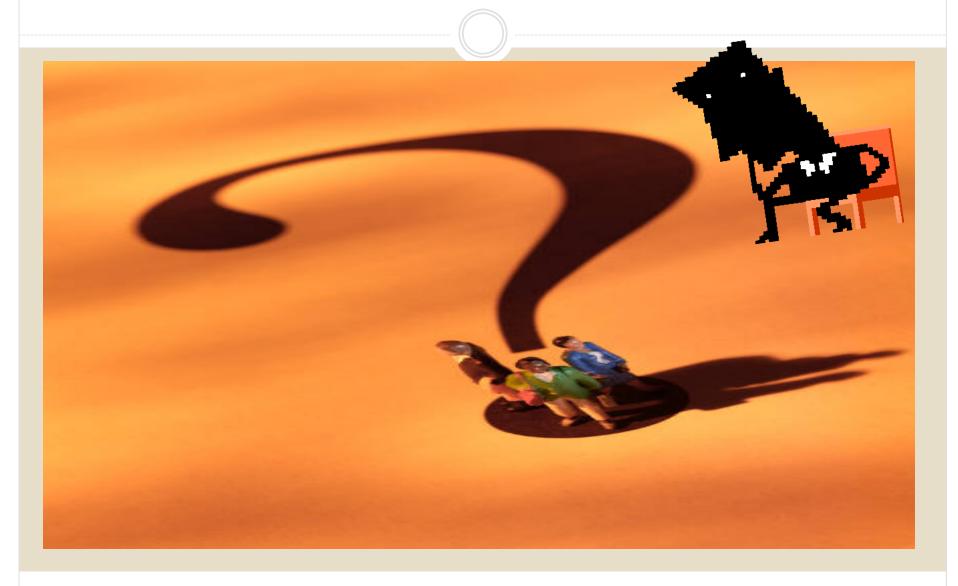
#### Review – before administration

- Review a copy of the test. Evaluate it from a student perspective.
- Check for spelling, grammar, punctuation, capitalization.
- Review the standards/objectives covered.
- Ask a knowledgeable colleague to critically review the test.
- Revise the test based on feedback.
- Have revised version reviewed by someone else.
- Revise & finalize.

#### Review – after administration

- Examine student responses
  - **▼** Identify problematic questions—is the problem due to content or wording of the item or prompt?
    - **▼** If due to content, that material needs to be re-taught.
    - **▼** If due to construction, the item stem, prompt, or options need to be revised.

# Questions?



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 For more information or if you have additional questions regarding today's webinar topic contact:

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