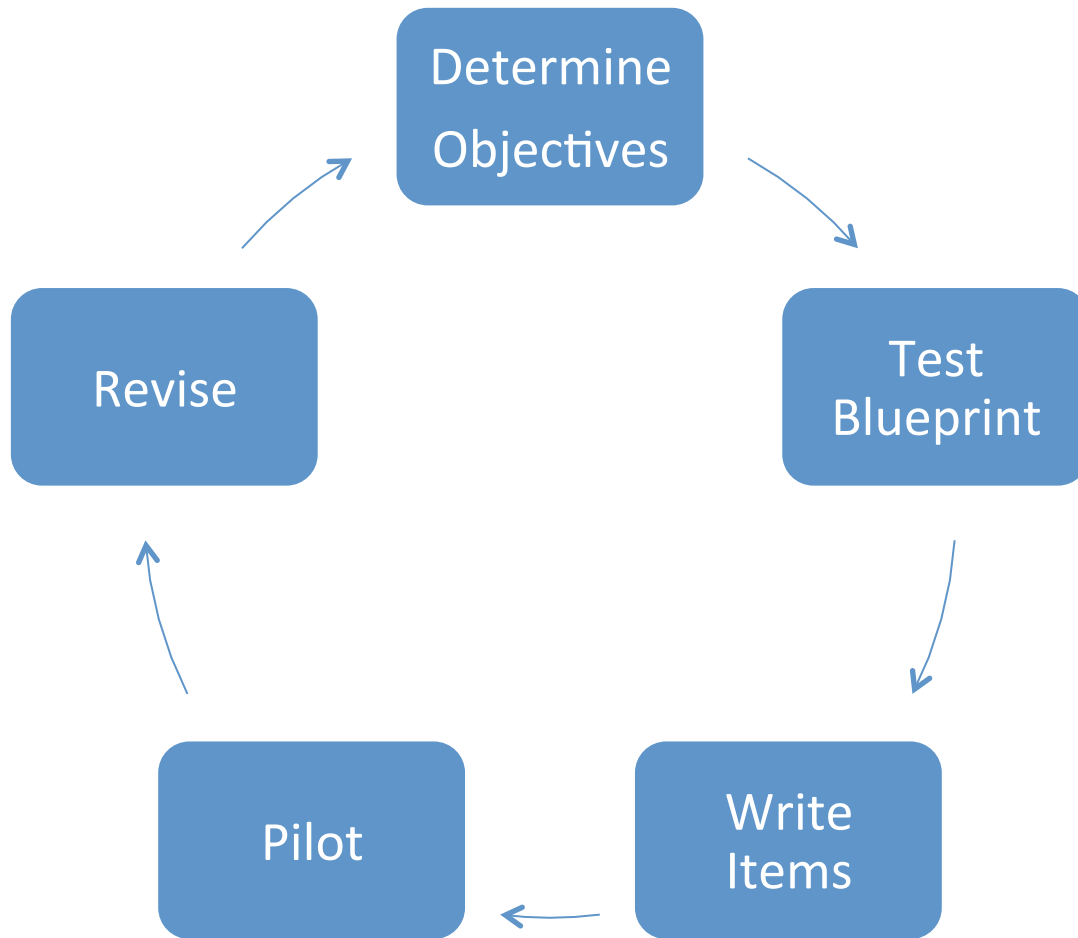




Writing Multiple Choice Items

This presentation is based on one given by Kelli Samonte, JMU CARS, Summer 2012. The mistakes herein are Kathy's not Kelli's.

Creating Assessment Instruments



Learning Objectives

- *Lead* the assessment process
 - Clear goals/objectives make it easier to **create instruments**, analyze data, and report results
- Serve as guides for students in learning
- Communicate the intentions of the course to faculty, future students, administrators, parents

Example Objectives

- After completing this workshop, participants will be able to:
 - Identify the four steps in creating multiple choice exams
 - Identify the different parts of a multiple choice item
 - Distinguish between good and bad multiple choice items
 - Create effective multiple choice items

Test Blueprint

- A **test blueprint** is a table of specifications that weights each objective according to how important it is or how much time is spent covering that objective

Developing a Test Blueprint

- List objectives in a table
- Choose number of total test items (test length)
- Designate number of items per objective
 - Consider proportion of total test
 - Base on importance of objectives
 - Should relate to amount of class time spent teaching the objective
 - Often assign one point per item

Test Blueprint

C1 Information Literacy Objective	Items	# of Items	% of Test
1: Recognize that information is available in a variety of forms including but not limited to text, images and visual media	1048, 172, 173, 209, 1005, 1042, 1056	7	18%
2: Determine when information is needed and find it effectively using a variety of reference sources	1, 6, 8, 109, 110, 111, 205, 1003, 211, 120, 156, 159, 160, 162, 1009, 1016, 1017	17	46%
3: Evaluate the quality of information	40, 43, 131, 221, 1037	5	14%
4: Use information effectively for a purpose	229, 1050, 1053, 53	4	11%
5: Employ appropriate technologies to create an information-based product			
6: Use information ethically and legally	129, 157, 228, 1001	4	11%

Multiple-Choice Item Terminology

- Multiple choice items have a **stem**, **options**, **correct answer**, and **distractors**
- For the bread, cereal, rice and pasta group, the food pyramid recommends (**stem**)

**O
p
t
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o
n
s**

- a. 2-3 daily servings (**distractor**)
- b. 3-5 daily servings (**distractor**)
- c. 4-6 daily servings (**distractor**)
- d. **6-11 daily servings (correct answer)**

Basic Style and Format Tips

- Avoid excess words – be succinct!
- Use specific, appropriate vocabulary
- Avoid bias (age, ethnicity, gender, disabilities)
- Write stems and options in third person
- Underline and **bold** negative or other important words
- **Have others review your items!**
- **Proofread, proofread, proofread!**

Tips for Writing the Stem

- Keep the stem as short as possible
- Place the main idea of the question in the stem, not the item options
- Don't provide clues to correct answer in stem (e.g., grammatical clues)
- Don't use negative stems too frequently
- Avoid “double-barreled” items

Tips for Writing Response Options

- Develop as many effective options as possible, but three are sufficient (Rodriguez, 2005)
- Vary the location of the correct answer when feasible, or put options in logical order (e.g. chronological, numerical)
- Keep options independent
- Keep options similar - format & length

More Tips for Writing the Options

- Use “all of the above” and “none of the above” sparingly!
- Don’t use “always” or “never”
- Don’t give clues to the right answer
- Make distractors plausible

**multiple choice question:
which of the below makes you confused?**

- [1] all of the above**
- [3] those below the below**
- [2] those above the below**
- [5] those above the above**
- [4] all of the none.**



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Practice

What is wrong with this stem?

True or False:

Pablo Picasso is considered a founder of the impression and cubist movements?

Revised

- Break this item into two parts

True or False: Picasso was a founder of modern impressionism.

True or False: Picasso was a founder of the cubist movement.

How can this item be revised?

During what age period is thumb-sucking likely to produce the greatest psychological trauma?

- A. Infancy
- B. Preschool period
- C. Before Adolescence
- D. During Adolescence
- E. After Adolescence

New and Improved Version

During what age period is thumb-sucking likely to produce the greatest psychological trauma?

- A. Birth to 2 years old
- B. 2 years to 5 years old
- C. 5 years to 12 years old
- D. 12 years to 20 years old
- E. 20 years of age or older

Another One. . .

Albert Einstein was a:

- A. Anthropologist
- B. Astronomer
- C. Chemist
- D. Mathematician

Better Version. . .

Who was Albert Einstein?

- A. An anthropologist
- B. An astronomer
- C. A chemist
- D. A mathematician

And another. . .

World War II was:

- A. The result of the failure of the League of Nations
- B. Horrible
- C. Fought in Europe, Asia and Africa
- D. Fought during the period of 1939-1945

The Improved Version

In which of these time periods was World War II fought?

- A. 1914-1917
- B. 1929-1934
- C. 1939-1945
- D. 1951-1955
- E. 1961-1969

Your Turn

- Choose an objective
- Select content from this objective for which you would like to generate an item
- Create item stem
- Create response option with correct answer
- Create distractors

References

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