

# Enhancing Multiple-Choice Questions

## Strategies to Increase Cognition

## Research to Improve Questioning

A

### Ranking Multiple-Choice Responses

- Rank responses from 'correct' to 'somewhat correct' to 'most incorrect'
- Provide written explanation for ranking
- Discuss and debate rankings among peers

B

### Interacting with All Responses

- Use available responses to complete the following inquiries:
  - Why might someone choose this incorrect answer?
  - Rewrite the question to make this answer the correct response.
  - Provide a memory aid or illustration related to this response.

C

### Confidence Weighted Multiple Choice Format

- Select either the correct answer, indicating complete confidence or
- an intermediary point between two answers indicating uncertainty.

- **Avoid complex item types or answering procedures**

- Can allow for strategic guessing
- Difficult to construct
- May confuse learner

- **Create Items that Require the Engagement of Specific Cognitive Processes**

- Only address specific content
- Assess single cognitive process (Define, Explain, Synthesize, etc.)

- **Avoid 'All of the Above' and 'None of the Above'**

- Reduces discriminability among items
- Increases likelihood of clueing

- **Use Three Plausible Response Options**

- Best balance between psychometric quality and efficiency of administration
- Avoids the negative suggestions effect

Butler, A. C. Multiple-Choice Testing in Education: Are the Best Practices for Assessment Also Good for Learning? *Journal of Applied Research in Memory and Cognition* (2017)



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