Two Approaches to Computer Adaptive Language Proficiency Testing

A Preface to Evaluating Computer Adaptive Language Tests

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Two Approaches to CA Language Proficiency Testing

HOW we produce language:

1. Latent Trait.
    a. Trait: A Characteristic.
    b. Latent: Present, but not visible.

HOW WELL we produce language:

1. Criterion Referenced.
    a. Behavior: A manner of acting.
    b. Observable: Visible, measurable.

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HOW we produce language:

1. Latent Trait.
   a. Trait: A Characteristic.
   b. Latent: Present, but not visible.
2. Unidimensional construct.
   a. Hypothesized.
   b. Focus is on having a wide range of difficulty.

HOW WELL we produce language:

1. Criterion Referenced.
   a. Behavior: A manner of acting.
   b. Observable: Visible, measurable.
2. Multidimensional stages.
   a. Defined by TCA expectations.
   b. Design includes all TCA aspects: purpose, task, text type, topic.

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HOW we produce language:

1. Latent Trait.
   a. Trait: A Characteristic.
   b. Latent: Present, but not visible.
2. Unidimensional construct.
   a. Hypothesized.
   b. Items are to have a range of difficulty.
3. Scoring.
   a. Proceeds item by item.
   b. Produces a single total or logit score.
   c. This score in compensatory.

HOW WELL we produce language:

1. Criterion Referenced.
   a. Behavior: A manner of acting.
   b. Observable: Visible, measurable.
2. Multidimensional construct(s).
   a. Defined by TCA expectations.
   b. Focus includes all aspects: purpose, task, text type, topic.
3. Scoring.
   a. Proceeds by level or stage.
   b. Produces a score for each level.
   c. These scores are non-compensatory.

Two Approaches to CA Language Proficiency Testing

HOW we produce language:

4. Branching logic.
   a. All items are combined into one dimension: difficulty.
   b. Branching is determined by the response to each item.
   c. Branching continues until the test taker's ability aligns with the item's difficulty.

HOW WELL we produce language:

4. Branching logic.
   a. Items are retained in separate non-overlapping difficulty clusters.
   b. Branching is determined by the pattern of responses at each level.
   c. Branching proceeds level-by-level until the ceiling of the test taker's ability is reached.

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HOW we produce language:

4. Branching logic.
   a. All items are combined into one dimension: difficulty.
   b. Branching is determined by the response to each item.
   c. Branching continues until the test taker's ability aligns with the item's difficulty.
5. Turning scores into level ratings.
   a. Must use a judgement-based process to decide on the best cut scores between levels.
   b. Must prove judgments are accurate.

HOW WELL we produce language:

4. Branching logic.
   a. Items are retained in separate non-overlapping difficulty clusters.
   b. Branching is determined by the pattern of responses at each level.
   c. Branching proceeds level-by-level until the ceiling of the test taker's ability is reached.
5. Turning scores into level ratings.
   a. No cut scores between levels are needed.
   b. Floor and ceiling ratings are based on the highest sustained level and progress at the next higher level.

Two Approaches to CA Language Proficiency Testing

For discussion in groups:

- Which approach is more commonly used?
- Which approach is commonly taught in statistics classes?
- Which approach best maintains alignment across these three components of computer adaptive language proficiency tests?
  - The theoretical construct model.
  - The test development model.
  - The psychometric scoring model.
- Which approach is more work?
- Which approach is more accurate?