Summary: A Proposed Psychometric Scoring Model

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Luecht (2003) argues that to accurately demonstrate that interpretations or decisions based on test scores are justified, test developers should demonstrate alignment between three models: (1) a theoretical construct model; (2) a test development model; and (3) a psychometric scoring model. This presentation focuses on the psychometric scoring model, and argues the following:

1. items are developed in alignment with the theoretical construct and test development models
2. items are trialed and with a sufficient number of examinees from the target population
3. item difficulty parameters are estimated
4. remove or revise items whose difficulty does not cluster with other items of the same level, or whose difficulty overlap with items from other levels.
5. tests are assembled with branching algorithms where students can demonstrate sustained performance at a given level before branching to items of a different level.
6. final scores are reported with both the floor and ceiling ratings.

Overall, test developers should use methods that align with criterion-refenced testing, and avoid commonly used procedures for evaluating norm-referenced tests.