



# Criterion Referenced Testing: Practice Analysis to Score Reporting Using Rasch Measurement

Edited by

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JAM Press is pleased to announce the new book, *Criterion Referenced Testing: Practice Analysis to Score Reporting Using Rasch Measurement*, is available. The book is available in soft cover (\$57, ISBN 978-1-934116-05-3) and hard cover (\$69, ISBN 978-1-934116-04-0). Postage and handling are additional. Information on ordering the book is found on the reverse of this announcement. Information is also available at the *Journal of Applied Measurement* web site ([www.jampress.org](http://www.jampress.org)). Please go to the JAM Press Books page on the website and scroll down to the new books section.

The impetus behind *Criterion-Reference Testing: Practice Analysis to Score Reporting Using Rasch Measurement Models* stems from years of consulting with organizations involved in criterion-reference testing (CRT), specifically those in licensure and certification. When contacted by an organization, one of the first activities we would engage in is a review of their technical reports. In almost every instance, these 'technical' reports were far from adequate. Most failed to address criteria set forth in the Standards for Educational and Psychological Testing (AERA, APA, NCME, 1999). The details (or lack thereof) provided were often so poor that replication of the results was nearly impossible. And when methods were provided, they were often incomplete. Years of these experiences had led us to be incredibly disappointed in the services being provided to many of these organizations.

As a result, both editors, initially independent of each other, set out to put together a book to address what we perceived as a gap between what organizations should expect and what psychometricians should provide when using Rasch models in CRT. Gregory's focus was a book on Rasch based standard setting methods. Everett's goal was a book encompassing applications of Rasch measurement that could be used throughout the test development, analysis, and reporting phases for CRT. The result is this book, covering how Rasch models can be used throughout the CRT process with an emphasis on standard setting methodologies. In addition to the ten chapters on standard setting, this book demonstrates how Rasch models can be used for the analysis of job/practice data; item and rater analysis; differential item functioning; horizontal, vertical, multi-facet, and pre-equating; computer adaptive testing; estimating decision/classification consistency; and score reporting.

Based on our past experiences, we hoped to target three populations with this book. First, we address this volume to the organizations responsible for testing. In many instances these organizations did not know what to expect in a technical report. This book provides these organizations with multiple examples of the *types* of analyses they should expect from their psychometric provider(s) when using Rasch measurement models to support the criteria in the Standards for Educational and Psychological Testing. Second are the psychometric providers. This book will provide guidelines, examples, and ideas on how to apply Rasch based methods to issues found in CRT. Third, are graduate students studying psychometrics. This book could be used in a psychometrics course or in a course specifically devoted to large scale testing in conjunction with more broad-based textbooks covering traditional and IRT applications in CRT.

The titles and authors of the 24 chapters are as follows:

- Applications of Rasch Measurement to Job Analysis Data and the Translation into Content Weights  
*Ning Wang*
- Distractors with Information in Multiple Choice Items: A Rationale Based on the Rasch Model  
*David Andrich and Irene Styles*
- Item and Rater Analysis of Constructed Response Items via the Multi-Faceted Rasch Model  
*Edward W. Wolfe*
- Assessment of Differential Item Functioning  
*Wen-Chung Wang*
- Transitioning from Paper-and-Pencil to Computer-Based Testing: Examining Stability of the Rasch Latent Trait across Gender and Ethnicity  
*Do-Hong Kim and Huynh Huynh*
- Introduction to the Rasch Family of Standard Setting Methods  
*Gregory Ethan Stone*
- Psychometric Aspects of Item Mapping for Criterion-Referenced Interpretation and Bookmark Standard Setting  
*Huynh Huynh*
- Converging on the Tipping Point: A Diagnostic Methodology for Standard Setting  
*John A. Stahl and Kirk A. Becker*
- A Mapmark Method of Standard Setting as Implemented for the National Assessment Governing Board  
*E. Matthew Schulz and Howard C. Mitzel*
- Setting Passing Standards for Licensure and Certification Examinations: An Item Mapping Procedure  
*Ning Wang*
- Standard Setting with Dichotomous and Constructed Response Items: Some Rasch Model Approaches  
*Robert G. MacCann*

- Selecting Cut Scores with a Composite of Item Types: The Construct Mapping Procedure  
*Karen Draney and Mark Wilson*
- Objective Standard-Setting for Judge-Mediated Examinations  
*Gregory Ethan Stone*
- Evaluating the Judgments of Standard-Setting Panelists using Rasch Measurement Theory  
*George Engelhard, Jr.*
- The Mastery Level Judgment Consistency Rate of a Rasch Model Based Standard Setting Method for Classroom Achievement Tests  
*Sun-Geun Baek and In Hee Choi*
- Equating Designs and Procedures Used in Rasch Scaling  
*Gary Skaggs and Edward W. Wolfe*
- Tools for Measuring Academic Growth  
*G. Gage Kingsbury, Martha McCall, and Carl Hauser*
- Developing Examinations that use Equal Raw Scores for Cut Scores  
*Andrew Swanlund and Everett Smith*
- A Comparison between Robust  $z$  and 0.3-Logit Difference Procedures in Assessing Stability of Linking Items for the Rasch Model  
*Huynh Huynh and Anita Rawls*
- Equating of Multi-Facet Tests Across Administrations  
*Mary Lunz and Surintorn Suanthong*
- Computerized Adaptive Testing  
*Ying Cheng and Leslie Keng*
- The ISR: Intelligent Student Reports  
*Ronald Mead*
- Estimation of Decision Consistency Indices for Complex Assessments: Model Based Approaches  
*Matthew Stearns and Richard M. Smith*
- Deriving Proficiency Scales from Performance Indicators Using the Rasch Model  
*Jean-Guy Blais, Michel D. Laurier, and Christian Rousseau*

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