
Digital Module 15: Accessibility of Educational Assessments

Leanne R. Ketterlin-Geller, Brooke Istas, Robyn K. Pinilla, and Ann Marie Wernick
Southern Methodist University

Available in the ITEMS Portal at <https://ncme.elevate.commpartners.com>

Module Overview

In this digital ITEMS module, Dr. Ketterlin Geller and her colleagues provide an introduction to accessibility of educational assessments. They discuss the legal basis for accessibility in K-12 and higher education organizations and describe two key factors that interact to influence accessibility of educational assessments: (1) test and item design features and (2) examinee characteristics. They highlight the outcome of this interaction in various situated examples and discuss the role accessibility plays in evaluating test validity as well as the principles of universal design during test development and test accommodations during operational deployment. The module includes an interview with Dr. Martha Thurlow, an expert in accessibility, who provides an important perspective on the past, present, and future of accessibility for educational assessments. The module is designed to be relevant for students, test developers, and users of educational tests in K-12 and higher education settings. It contains audio-narrated slides, interactive activities, and quizzes as well as curated resources and a glossary.

Keywords: Accessibility, accommodations, examinee characteristics, fairness, higher education, K-12 education, item design, legal guidelines, test development, universal design

Prerequisite and Related Knowledge

This ITEMS module assumes no prior knowledge of accessibility of educational assessments. However, it would be helpful to review Chapter 3 from the Standards for Educational and Psychological Testing (AERA, APA, & NCME, 2014) and have a basic understanding of the following concepts:

- Fairness in testing, including the components that define fairness
- Construct irrelevant variance (CIV), including sources of CIV and the impact of CIV on the validity of test score interpretations and uses
- Test accommodations, modifications, and universal design for assessment

In addition, *Digital Module 09: Sociocognitive Assessment for Diverse Populations* provides some useful supplementary information. This module and others are available for free in the ITEMS portal.

Learning Objectives

Upon completion of this ITEMS module, learners should be able to:

- Describe accessibility of educational assessments
- Explain the impact of inaccessible assessments on the validity of the interpretations and uses of test scores
- Identify the impact of test and item design features and examinees' personal characteristics on the accessibility of assessments
- Explain the role test accommodations and universal design for assessment play in enhancing accessibility
- Apply their understanding of accessibility to situated examples

Module Structure

The digital module is divided into the following sections, which can be reviewed sequentially or independently [*approximate completion times in parentheses*].

- Module Overview [*5 Minutes*]
- Section 1: Experiencing Accessibility [*10 Minutes*]
- Section 2: Understanding Accessibility of Educational Assessments [*30 Minutes*]
- Section 3: Accessibility across Platforms [*20 Minutes*]
- Section 4: Legal Basis for Accessibility [*10 Minutes*]
- Section 5: Interview with Dr. Martha Thurlow [*20 Minutes*]
- Section 6: Quizzes [*10 Minutes*]

In the portal site, you can also find a video version of the core content as well as a handout with all core slides along with other materials.

Module Components

This ITEMS module includes the following components, which are delivered within a web-delivered unified design shell that is compatible across platforms (i.e., laptops, desktops, tablets, cell phones) and was created with modern course development software (*Articulate 360*):

- integrated content slides that provide a structured walk-through of the content
- interactive activities and quiz questions with formative feedback
- glossary of key terms
- supplementary digital resources

Additional materials may be added over time so check back periodically!

Instructors

Leanne Ketterlin Geller, *Professor at Southern Methodist University*



Leanne is a professor at Southern Methodist University, specializing in applied measurement and assessment. She holds the Texas Instruments Endowed Chair in Education and directs the center on Research in Mathematics Education. Her scholarship focuses on supporting all students in mathematics education through application of instructional leadership principles and practices. She has served as Principal Investigator for federally and state funded research grants to develop and implement formative assessment procedures and valid decision-making systems for students with diverse needs in the general education curriculum. She has published numerous articles and book chapters, and presented original research findings at local, national, and international conferences, and serves on the editorial boards for the *International Journal of Testing* and *Assessment for Effective Intervention*. She works closely with teachers and administrators to support their application of measurement and assessment principles in school-based decision making. Dr. Ketterlin-Geller was a high school science teacher and trained as a K-12 administrator.

Brooke Ista, *Southern Methodist University*



Brooke is a Graduate Research Assistant and doctoral student at the Simmons School of Education and Human Development at Southern Methodist University. Her research interests center on adult learners perceptions of mathematics. Brooke is also a consultant, an adult education mathematics subject matter expert, and Cowley College Mathematics Faculty. She is recognized nationally for her knowledge of mathematics and mathematical instructional strategies. She has given several presentations at state and national conferences on enhancing mathematical instruction, understanding higher level mathematical content, teaching math at a distance, and on-line instruction; always willing to share her learning with others. She is also the Subject Matter Expert (SME) for the LINC (Literacy Information and Communication System) Math and Numeracy and Science Community of Practice; also a reviewer for the Math/Numeracy and Science online resource collection that is a part of the Basic Skills Collection.

Robyn K. Pinilla, *Southern Methodist University*



Robyn is a Ph.D. student and Graduate Research Assistant in Research in Mathematics Education at the Simmons School of Education and Human Development at Southern Methodist University. Her specific research interests are in early childhood spatial reasoning and problem solving, and equity and access within assessment for all students. She served as an elementary school assistant principal and early childhood Special Education teacher prior to beginning her Ph.D. studies. In this work, she developed an assets-based approach to first celebrate student and teacher success before triangulating their current development with next steps and targeted objectives. This informal application of the curriculum, instruction, and assessment framework prepared her to begin her doctoral studies under the advisement of Dr. Leanne Ketterlin-Geller. She continues advocating for authentic and practical instruction and assessment that is accessible to all through research and local, state, and national collaborations.

Ann Marie Wernick, *Southern Methodist University*



Ann Marie is a Graduate Research Assistant and doctoral student at the Simmons School of Education and Human Development at Southern Methodist University. Her research interests focus on teacher induction, coaching models, practice-based teacher education, teacher evaluation systems, and mixed-reality simulations. Before her time at SMU, Ann Marie earned her M.Ed. from the University of Notre Dame, where she served as an ACE Fellow. She then spent the next seven years as a classroom teacher and instructional coach. During that time, she taught middle school English Language Arts and History in public, private, and parochial schools

both in the United States and abroad. In each of these settings, she gained valuable experience mentoring and coaching novice teachers, which fostered her interest in teacher induction and pre-service teacher coaching in both alternative certification and traditional teacher preparation programs.

Instructional Designers

André A. Rupp, *Mindful Measurement*



André is the co-author and co-editor of two award-winning interdisciplinary books entitled *Diagnostic Measurement: Theory, Methods, and Applications* (2010) and *The Handbook of Cognition and Assessment: Frameworks, Methodologies, and Applications* (2016) and has just published the *Handbook of Automated Scoring: Theory into Practice* (2020). His research synthesis- and framework-oriented work has appeared in a wide variety of prestigious peer-reviewed journals. Among other things, he is passionate about improving processes for interdisciplinary collaborations during the development and implementation of scoring solutions for digitally-delivered assessments. Consequently, he is very excited to serve as the associate editor / lead

instructional designer of the ITEMS portal for NCME whose mission is to provide free digital resources to support self-directed learning and professional development.

Xi Lu, *Doctoral Candidate at Florida State University*



Xi is a doctoral candidate in the Instructional Systems and Learning Technologies program at Florida State University. Her current research interest focuses on designing and developing optimal learning supports to facilitate STEM learning in digital interactive environments. She also works as a research assistant with Dr. Val Shute on an NSF project targeted at designing various learning supports for a 2D physics game called *Physics Playground* to help middle school kids learn physics. Before coming to FSU, Xi taught Chinese for six years in Monterey Bay, California.

This is the pre-peer reviewed version of the following article: Ketterlin-Geller, L. R., Istas, B., Pinilla, R. K., & Wernick, A. M. (2020). Accessibility of educational assessments (ITEMS Digital Module 15). Educational Measurement: Issues and Practice, 39(2). It has been published in final form at <https://onlinelibrary.wiley.com/journal/17453992>. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Use of Self-Archived Versions.
