Chapter 12 – Examination of the Psychometric Qualities of the Model Cornerstone Assessments

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ABSTRACT

The purpose of this chapter is to provide the results of the data analysis for the following MCAs: Second Grade: Create, Perform, Respond; Fifth Grade: Perform, Respond; Eighth Grade: Create; Composition/Theory: Create, Respond, Perform (proficient); Ensemble: Perform (Intermediate & Proficient); and Harmonizing Instruments: Create (proficient). The research questions that guided this chapter include: (a) What is the overall psychometric quality (e.g., validity and reliability) of each of the model cornerstone assessments? (b) How well do the criteria fit the measurement model and how do they vary in difficulty? (c) How does the rating scale structure of each model cornerstone assessment vary across individual criterion? The Multifaceted Rasch Partial Credit measurement model was used to convert raw score observed data to unidimensional, linear measures. Included in the measurement models for each respective MCA were the following facets: (a) persons (i.e., student work achievement), (b) raters (i.e., scorer severity), (c) scoring-type (i.e., peer-score versus self-score severity), and items (i.e., criteria). The analyses for each MCA include: (a) summary statistics, (b) calibration of student work, (c) calibration of scorers, (d) calibration of scoring-type, (e) calibration of traits, (f) calibration of criteria, (g) rating scale level diagnostics, and (h) inter-adjacent level discriminations. Suggestions for the improvement and use of the MCAs are discussed.