

Ruben Castaneda, PhD

Psychological Sciences
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EDUCATION *Doctoral Candidate in Quantitative Psychology,* August 2012 - May 2017
University of California, Merced, CA

Bachelor of Arts, Psychology August 2005 - May 2010
California State University, Fresno, CA

RESEARCH INTERESTS *Item Response Theory*
Person Fit Statistics
Structural Equation Modeling
Latent Class Analysis
Growth Mixture Modeling
Hierarchical Linear Modeling

CONSULTING AND RESEARCH EXPERIENCE *Psychometrician* April 2019 - Present
College Board, Chicago, IL

- Conducted in-depth psychometric analyses, including differential item functioning (DIF) evaluations across multiple regional test forms (e.g., Panama, Mexico, and Puerto Rico), ensuring fairness and validity in assessments for diverse populations.
- Played a key role in the calibration and anchoring of test items across forms using tools like Winsteps, refining processes for accurate and consistent measurement in high-stakes assessments.
- Introduced and implemented efficient methodologies for test form assembly, significantly reducing manual effort through automated workflows and advanced psychometric techniques.
- Engaged with cross-functional teams to deliver technical insights on psychometric methods, bridging the gap between research, data analysis, and actionable solutions in educational measurement.

Psychometrician June 2017 - April 2019
National Board of Osteopathic Medical Examiners, Chicago, IL

- Validated and approved quality control measures, ensuring time sensitive delivery of reports to client organizations.
- Cooperated in research that supported COMLEX examinations.
- Collaborate with multiple research associates seeking studies that expand the operational and product range.
- Created and developed plans to meet and exceed objectives and expectations.

Ph.D. Research Aug 2012 - 2017
University of California, Merced, CA

- Developed a confirmatory method for assessing local item dependence.
- Designed method for assessing metacognition integrated in an academic test.
- Conducted Meta-analyses to identify best method for assessing meta-cognition.

VASE Research Aug 2012 - May 2013
University of California, Merced, CA

- Analyzed VASE tests for differential item functioning.
- Assessed VASE tests for violations of local item dependence & dimensionality.
- Linked multiple tests forms and produced test scores for multiple school districts for both administrator and parent consumption.

Research Assistant 2010 - 2012
Fresno County SELPA & California State University, Fresno, CA

- Performed various analysis using SAS to identify factors that produce favorable behavioral outcomes in elementary school students.
- Presented results in the First Annual DPELFS Faculty Research Colloquium, Fresno, CA.

Research Assistant 2010 - 2012
Psychometrics Lab, California State University, Fresno, CA

- Identified proper factor structure of the Connor-Davidson Resilience Scale (2001) on a migrant population of elementary school students.
- Results were used by Fresno County Office of Education to identify low resilience students and provide additional mentoring and support.

Research Assistant 2009 - 2010
Anger and Emotion Lab, California State University, Fresno, CA

- Conducted research identifying the validity of using agent descriptions in identifying different models of anger.
- Coded videos for facial cues in order to identify anger type emotions.

Research Assistant 2008 - 2010
Clinical Psychology Lab, California State University, Fresno, CA

- Entered data from interviews to be used for assessing depression.
- Conducted literature reviews on assessing depression.

Research Assistant 2008 - 2009
Developmental Lab, California State University, Fresno, CA

- Study the effects of appearance on adults' attributions of children's competence.
- Created 3D models to mimic different aspects of appearance.
- Conducted literature review on attribution of competence.

CONFERENCE PRESENTATIONS Castaneda, R., Zhang, Q. (2017, October). Diagnostic Automated Item Generation. Presented at National Board of Osteopathic Examiners Research Advisory Forum on Innovative item types and Assessments. Presentation.

Hiebert, E., Castaneda, R. (2017, July). An Analysis of the Features of Words That Influence Vocabulary Difficulty. Presented at the American Educational Research Association (AERA). Presentation.

Castaneda, R., Zelinsky, N., Turitz, M. (2016, July). Person-Fit Statistics with Model Misspecification: A Monte Carlo Study. Presented at the Annual International Measurement and Psychometrics Society Conference, July 25th. 2016. Asheville, North Carolina. Poster.

Castaneda, R., Liu, Y., Zelinsky, N., Vevea, J., Scott, J., & Flinspach, S. (2016, May). Modeling and Linking Speeded Tests: An Application with the VASE Vocabulary Tests. Presented at the Annual Modern Modeling Methods Conference, May 25th. 2016. Mansfield, Connecticut. Poster.

Castaneda, R. (2015, May). Assessing the Performance of Single Item Longitudinal Models over Varying Conditions. Presented at the Annual Modern Modeling Methods Conference, May 19th. 2015. Mansfield, Connecticut. Poster.

Castaneda, R., & Vevea L. J. (2015, March). Detecting local item dependence using a random effects meta-analytic model. Presented at the 3rd Annual Psychology Symposium. 2015 March, 3; 2014; Merced, CA. Oral Presentation.

Castaneda, R., Vevea L. J., Flinspach S. L., & Scott, J. A (2014, May). Using a vocabulary measure as a diagnostic tool for knowledge monitoring. Poster session presented at American Psychological society 26th Annual Convention; 2014 May 25; San Francisco, CA. Poster.

Castaneda, R. (2014, May). Turning a measure of vocabulary depth into a diagnostic instrument for metacognitive-monitoring. Poster session presented at American Psychological society 26th Annual Convention; 2014 May 26; San Francisco, CA. Poster.

Castaneda, R. (2014, May). The relationship between knowledge-monitoring and test performance: A meta-analysis. Poster session presented at American Psychological society 26th Annual Convention; 2014 May 25; San Francisco, CA. Poster.

Flinspach, S.L., Castaneda, R., Vevea, J.L., & Scott, J.A. (2014). Exploring bilingual students' performance overall and on cognate words in a large-scale multidimensional vocabulary test. Annual meeting of the American Educational Research Association. Philadelphia, PA. Paper Presentation.

MANUSCRIPTS

Castaneda, R., Felt, J. M., Depaoli, S., & Tiemensma, J. (2017). Identifying "Atypical" Responses in the Cushing's Quality of Life (CushingQoL) Questionnaire: Using Person Fit Statistics to Detect Outliers. *Frontiers in Psychology*, 8, 863.

Hiebert, E., Scott, J., Castaneda, R. & Spichtig, A (2019- In press). An Analysis of the Features of Words That Influence Vocabulary Development. *Education Sciences*.

Immekus, J., & Castaneda, R. (in prep). Assessing the Reliability and Utility of Bifactor Models. [Target Journal: *Psych Methods*]

PROFESSIONAL AFFILIATIONS

American Educational Research Association (AERA)

American Psychological Association (APA)
Association for Psychological Science (APS)
National Council on Measurement in Education (NCME)
International Measurement and Psychometric Society (IMPS)

SOFTWARE

Programming Languages: Python, R, SAS.
Statistical Software: MPLUS, IRTPRO, Excel, OpenBugs, JAGS.

Languages

Spanish: Fluent.
English: Fluent.