

## EunHee Keum

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### Education

- 2016                      PhD, Quantitative Psychology  
The Ohio State University  
Advisor: Michael C. Edwards, Ph.D.  
Dissertation: *Applying Longitudinal IRT Models to Small Samples for Scale Evaluation*
- 2009                      MA, Psychology  
Sungkyunkwan University, Seoul, Korea  
Advisor: Soon-Mook Lee, Ph.D.  
Thesis: *Testing Scalar Invariance Using Multi-group Analysis in Structural Equation Modeling*
- 2007                      BA, Psychology with a dual major in English Language and Literature  
Sungkyunkwan University  
Advisor: Soon-Mook Lee, Ph.D.  
Thesis: *Validation Study of the Korean Version of JTICI (Junior Temperament and Character Inventory)*

### Professional Experience

- 2016 (July) – Present      Senior Researcher, National Center for Research on Evaluation, Standards, and Student Testing (CRESST), University of California, Los Angeles
- Smarter Balanced Assessment Consortium Project
    - Evaluate and improve the design and delivery of SBAC tests
    - Develop automated assembly of test forms, operational data

analyses, conduct simulations, write technical reports.

- 2015 – 2016 (May) Graduate Research Associate, Department of Psychology, The Ohio State University
- 2013 – 2014 Research Assistant, The College Board Research Project – Exploring simpler alternatives to the three-parameter logistic model for operational use, Department of Psychology, The Ohio State University
- 2007 – 2008 Research Assistant, Development of assessment tools for LG Philips LCD's HRD program, Brain Korea 21 Human Resource Development lab, Sungkyunkwan University
- 2007 Research Assistant, Development of Korean internet addiction inventory, Quantitative Psychology lab, Sungkyunkwan University

### **Teaching Experience**

- 2010 – 2012,  
2014 – 2015 Teaching Assistant: Analysis of Repeated Measures and Longitudinal Data (Grad), Covariance Structure Models (Grad), Fundamental of Factor Analysis (Grad), Psychometrics (Grad), Introductory Statistics for Social Sciences (Undergrad)
- 2015 (Jan 22) Guest lecture, Fundamental of Factor Analysis, Department of Psychology, The Ohio State University
- 2014 (May 28) Guest lecture, Introduction to flexMIRT, Department of Psychology, The Ohio State University
- 2005 Completion of TESOL (Teacher of English to Speakers of Other Languages), Greystone College of Business and Technology, Toronto, Canada

2005 Completion in TYC (Teaching Young Children) program, Western Town College, Toronto, Canada

2003 – 2004 Elementary math teacher, Choikang institute, Yongin, Korea

### **Awards and Appointments**

2017 (June) Staff Appreciation and Recognition Award, University of California, Los Angeles

2014 Graduate Student Conference Travel Award, The Ohio State University

2013 – 2014 The College Board Research Fellowship Award, The College Board

2013 (June) Visiting Scholar, University of Leuven, Belgium

2010 (Summer) Social and Behavioral Science fellowship, The Ohio State University

2009 – 2010 University Fellowship, The Ohio State University

2006, 2007, 2008 (Fall) Academic Excellence Scholarship, Sungkyunkwan University

2002, 2003 (Spring) Academic Commitment Scholarship, Sungkyunkwan University

### **Publications**

2010 Lee, S.M., Keum, E., & Lee, C. A Problem in Multi-Group Analysis: Is the Test of Scalar Invariance Needed or Not? (*Korean*) *Educational Evaluation Research*, 23(2), 391-416

### **Work in Progress**

2014 – 2017 Keum, E., & Edwards, M.C. *Applying Longitudinal IRT Models to Small Samples*. Manuscript in preparation.

Keum, E., & Jeon, M. *Applying IRT models to figural analogy testing data*. Manuscript in preparation.

Keum, E., & Paulus De Boeck. *A new model free mediation approach: Unit-By-Unit (UBU) method*. Manuscript in preparation.

Edwards, M.C., & Keum, E. *Comparing the 2-Parameter Logistic Model and the 3-Parameter Logistic Model for use with Multiple Choice Question*. Unpublished technical report.

Keum, E., & Edwards, M.C. *Minimum detectable change in an item response theory framework*. Unpublished manuscript.

### **Presentations**

2015 (March) Keum, E., & Edwards, M.C. *Applying Longitudinal IRT Models to Small Samples for Scale Evaluation*. Presentation for the Quantitative Psychology Brownbag Seminar at The Ohio State University, Columbus, OH.

2014 (July) Keum, E., & Edwards, M.C. *Exploring simpler alternatives to the 3-parameter logistic model for operational use*. Poster presented at the International Meeting of the Psychometric Society, Madison, WI.

2013 (October) Keum, E., & Paulus De Boeck, *A new model free mediation test Unit-By-Unit (UBU) method*. Presentation for the Quantitative Psychology Brownbag Seminar at The Ohio State University, Columbus, OH.

2012 (December) Keum, E., & Edwards, M.C. *Minimum detectable change in an item response theory framework II*. Presentation for the Quantitative Psychology Brownbag Seminar at The Ohio State University, Columbus, OH.

2012 (October) Edwards, M.C., & Keum, E. *Rethinking reliability: Minimum detectable change in item response models*. Presentation made at the joint ACIPA/CB/LSAC research series. Newtown, PA.

- 2012 (April) Keum, E., & Edwards, M.C. *Minimum detectable change in an item response theory framework*. Presentation for the Quantitative Psychology Brownbag Seminar at The Ohio State University, Columbus, OH.
- 2011 (May) Keum, E. *Conditions when mean structure analysis is required for multi-group comparison in relation with scalar invariance*. Presentation for the Quantitative Psychology Brownbag Seminar at The Ohio State University, Columbus, OH.
- 2010 (May) Bodine, A., & Keum, E. *Reconceptualization of SF-36*. Presentation for the Quantitative Psychology Brownbag Seminar at The Ohio State University, Columbus, OH.

### **Reviewing**

- 2015 Ad-hoc Reviewer – Structural Equation Modeling

### **Technical Skills**

#### Proficiency with the following software packages:

AMOS	BILOG-MG	CEFA	flexMIRT
IRTLRDIF	LISREL	Microsoft Office (with certificate of master)	
Mplus	Multilog	PARSCALE	R
SAS	SPSS	STATA	

#### Proficiency with the following statistical techniques:

Analysis of Variance	Classical Test Theory
Discrete Data Analysis	Descriptive Statistics
Factor Analysis	Item Response Theory
Non-Parametric Methods	Regression
Structural Equation Modeling	