

Joshua T. Goodman

Curriculum Vitae

Academic

James Madison University
Center for Assessment & Research Studies
Department of Graduate Psychology
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Home

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EDUCATION

Ph.D., Educational Measurement **2008**
University of North Carolina-Greensboro

Dissertation: An Examination of the Residual Covariance Structures of Complex Performance Assessments across Scoring and Scaling Methods.

M.S., Educational Research Methodology **2006**
University of North Carolina-Greensboro

B.A., Biological Sciences & Anthropology **1996**
University of Delaware, Newark DE

PROFESSIONAL EXPERIENCE

Assistant Professor/Assistant Assessment Specialist **2008-present**
Department of Graduate Psychology/Center for Assessment and Research Studies
James Madison University (Harrisonburg, VA)

- Teach courses in measurement, statistics, and research Methods
- Mentor graduate students in the doctoral and masters students
- Provide assessment service to academic programs on campus

Psychometric Consultant **2007-present**
Pearson VUE (Chicago, IL)

- Moderated item writing and item review session with subject matter experts on high volume certification/credentialing examination

- Researched and wrote small issue papers for potential and existing clients
- Performed operational psychometric services including, but not limited to, computation and interpretation of classical statistics for item review, Rasch calibrations, and equating

Psychometric Consultant

2007-present

American Institute of Certified Public Accountants (Ewing, NJ)

- Conduct independent research, using real data and simulation studies, on numerous issues deemed of interest by the AICPA research consortium
- Presented results in a published series of research reports
- Presented results to the Psychometric oversight committee and AICPA examination team

Adjunct Instructor

2007-2008

Department of Educational Research Methods

University of North Carolina at Greensboro (Greensboro, NC)

- Teach courses in measurement, statistics, and research Methods

Psychometric Consultant

2007

Measurement, Inc. (Durham, NC)

- Consulted on existing operational psychometric practices for several state sponsored educational programs
- Assisted in psychometric analysis on large scale educational test programs; analyses include, but not limited to, item review with classical statistics, IRT calibration, DIF analysis, & equating.

Intern

2006

American Institute of Certified Public Accountants (Ewing,NJ)

- Conduct independent research, using real data and simulation studies, on numerous issues deemed of interest by the AICPA research consortium
- Presented results in a published series of research reports
- Presented results to the Psychometric oversight committee and AICPA examination team

Research Assistant

2004-2008

Center for Educational Research and Evaluation, UNCG

- Survey and instrument design for educational research, program evaluation, and psychometric projects
- Data collection and statistical analysis (SEM, HLM, growth models, value added modeling) on grant based projects

Teacher

2002-2004

Guilford Day School (Greensboro, NC)

- Taught lower school (1-5), Middle School Science courses (6-8), and Upper School Chemistry courses.

- Developed Individualized Education Plans (IEP) for all of assigned advisees (DGS serves a population of students with moderate to severe learning disabilities and/or AD/HD), and meet with parents and students quarterly to review progress.

Teacher

1998-2002

Andrews High School (High Point, NC)

- Taught honors and standard science courses in Biology , Earth Science, and Physical Science
- Assistant coach of the men and women varsity soccer teams
- Faculty Advisor of the Andrews High School Chess club

GRADUATE LEVEL TEACHING EXPERIENCE

James Madison University

PSYC 401: Independent Study on IRT and CTT Methods

- Spring 2009

PSYC 680: Independent Study on Statistical Programming in R

- Summer 2009

PSYC 816: Classical Test Theory & Generalizability Theory

- Spring 2009

PSYC 825: Doctorial Seminar on Research Methods and Designs

- Summer 2009

PSYC 900: Doctorial Dissertation

- Spring 2009, Summer 2009

University of North Carolina at Greensboro

ERM 617: Statistical Methods in Education

- Summer 2007, Spring 2008, Summer 2008

AWARDS AND RECOGNITIONS

School of Education Teaching Assistant of the Year (Nominee)	2007-2008
Recipient of the Helena Gabriel Houston Scholarship	2006-2008
Outstanding Poster Award, UNCG School of Education Research Symposium	2006

PROFESSIONAL SERVICE

2009-Present	Secretary/Treasurer, AERA Special Interest Group: Educational Statisticians
2008	Service to SACS committee subgroup 3.3.1.1 for 5 th year interim review
2008-Present	Service to James Madison University Faculty Research Council
2008-Present	Faculty Research Council, James Madison University
2008-Present	Assessment and Measurement program committee member, James Madison University
2008-Present	Psychological Sciences program committee member, James Madison University
2008-Present	Ad Hoc manuscript review, Journal of Educational Measurement
2008-Present	Proposal Reviewer, National Council on Measurement in Education
2008-Present	Proposal Reviewer, American Educational Research Association (Division D)
2007	Website Taskforce member, National Council on Measurement in Education
2006-2008	Student Representative, UNCG, Department of Educational Research Methodology
2006-2007	President, UNCG Educational Research Methodology Student Organization

PROFESSIONAL AFFILIATIONS

American Educational Research Association

- Division D (2003-Present)
- Division H (2003-Present)
- Special Interest Group: Educational Statisticians (2005-Present)
- Special Interest Group: Cognition and Assessment (2008-Present)
- Special Interest Group: Rasch Measurement (2005-2008)

National Council on Measurement in Education (2003-Present)

Psychometric Society (2003-Present)

American Evaluation Association (2008-Present)

PUBLICATIONS

Willse, J., & Goodman J., (2008) Comparison of MIMIC and IRT Based Analysis of Subgroup Differences. *Educational and Psychological Measurement*, 68, 587-602

Willse, J., Goodman J., Allen N, & Klaric, J. (2008) "Using Structural Equation modeling to Examine Group Differences In Assessment Booklet Designs with Sparse Data". *Applied Measurement in Education*, 21, 253-272.

MANUSCRIPTS IN PREPARATION

Goodman J., Willse, J., Allen N, & Klaric, J. (Under Review). Identification of Differential Item Functioning for Different Survey Assessment Booklet Designs. *Educational and Psychological Measurement*

Goodman J, Luecht, R.M, & Zhang, Y. *An Examination of the Magnitude of Residual Covariance for Complex Performance Assessments Under Various Scoring and Scaling Methods*. Manuscript in Preparation.

Goodman J, Luecht, R.M. *Residual Covariance Structures of Complex Performance Exercises in Mixed Format Examinations*. Manuscript in Preparation.

TECHNICAL REPORTS

De Jong, J., Becker, K., Bolt, D. & Goodman, J. (October, 2008). *Pearson Test of English Report to the Technical Group*, Pearson VUE Internal Technical Report, (awaiting enumeration). Bloomington, MN.

De Jong, J., Becker, K., Bolt, D. & Goodman, J. (July, 2008). *Pearson Test of English Report to the Technical Group*, Pearson VUE Internal Technical Report, (awaiting enumeration). Bloomington, MN.

De Jong, J., Becker, K., Bolt, D. & Goodman, J. (March, 2008). *Pearson Test of English Report to the Technical Group*, Pearson VUE Internal Technical Report, (awaiting enumeration). Bloomington, MN.

Goodman J. (2008) *The effects of differential scoring and scaling procedures on Pass/Fail Decisions*. AICPA Technical Report, (awaiting enumeration). Ewing, NJ.

Goodman J. (2008) *An examination of the magnitude of conditional covariance for the UCPAE accounting simulations under various scoring and scaling methods* AICPA Technical Report, (awaiting enumeration). Ewing, NJ.

Goodman J., & Luecht, R.M. (2007) *Assessing the Dependencies and Dimensionality of the Simulations on the Uniform Certified Public Accounting Examination*. AICPA Technical Report, W0703. Ewing, NJ.

PRESENTATIONS & POSTERS

- Goodman, J.T., Luecht, R.M. (2009, April) *Residual Covariance Structures of Complex Performance Exercises under Various Scaling and Scoring Methods: A Simulation Study*. Paper presented at the annual meeting of the National Council of Measurement in Education, San Diego, CA.
- Goodman, J.T., Luecht, R.M., Zhang, Y. (2008, March). *An examination of the magnitude of conditional covariance of the complex performance assessments of a large-scale examination under various scoring and scaling methods*. Paper presented at the annual meeting of the National Council of Measurement in Education, New York, NY.
- Goodman, J. T., (2007, October) *Using conditional covariance structures to inform scoring and scaling decisions*. Paper presented at the 23rd annual IRT workshop at the University of Twente, Enschede, Netherlands.
- Ackerman, T., Heafner, T., Goodman, J., & Bartz, D. (2007, April) *Teacher Effect Model for Impacting Student Achievements*. Paper presented at the joint meeting of the American Educational Research Association, Chicago IL.
- Willse, J. T., and Goodman, J. T. (2006, June) *Comparison of MIMIC and IRT Based Analysis of Subgroup Differences*. Paper presented at the annual 2006 International Meeting of the Psychometric Society, Montréal, Ontario.
- Goodman J., Willse, J., Klaric, J., & Allen N. (2006, April). *Identification of Differential Item Functioning for Different Survey Assessment Booklet Designs*. Paper presented at the joint meeting of the American Educational Research Association, San Francisco, CA.
- Willse, J., Goodman J., Allen N., & Klaric, J. (2006, April). *Comparison of the Structure Found for Different Survey Booklets Designs Using Structural Equation Modeling*. Paper presented at the joint meeting of the American Educational Research Association, CA.
- Klaric, J., Goodman J., Willse, J., & Allen N. (2006, April). *Recovery of Item Parameters Estimates From Item Data Generated According to Different Survey Assessment Booklets*. Paper presented at the joint meeting of the American Educational Research Association, CA.
- Goodman, J. (2006, March) *Recovery of DIF Using the Mantel-Haenszel Procedure with Sparse Data Designs*. Poster presented at the 2006 UNCG School of education Research Symposium. Greensboro, NC.
- Goodman, J., & Bartz, D. (October 2005). *Comparing Teacher Perceptions of Content Professional Development Using Online Survey*. Paper presented at the annual meeting of the American Evaluation Association, Toronto, CA.
- Goodman, J., & Bartz, D. (October 2005). *Collecting Data from Sensitive Populations*. Paper presented at the annual meeting of the American Evaluation Association, Toronto, CA

TECHNICAL SKILLS

Psychometric

- IRT modeling for dichotomous and polytomous data, multidimensional IRT modeling, classical test theory, differential item functioning, test equating, model estimation,
- Software proficiencies BILOG, PARSCALE, MULTILOG, WINSTEPS, TESTGRAF, ICL, NOHARM, DETECT, DIMTEST, TESTFACT, POLYEQAUTE

Statistics

- Multivariate analysis, linear and non-linear factor analysis, structural equation modeling, mixed models, nonparametric statistics
- Software proficiencies SPSS, SAS, S-PLUS, R, LISREL, AMOS, Mplus, HLM

Programming language Knowledge

- R, S-PLUS, FORTRAN, Visual Basic

RESEARCH INTERESTS

- Estimation methods and applications of unidimensional and multidimensional item response theory models
- Polytomous item response models
- Assessment Engineering
- Diagnostic Classification Models (Finite Mixture Models and Constrained Latent Class models)
- Applications of Mixture Rasch models
- Issues of fairness and bias in testing
- Validity theory and validation practices in educational and psychological assessment (in particular issues related to impact and consequential validity)