

John T. Willse
Associate Professor
Department of Educational Research Methodology
University of North Carolina at Greensboro
246 School of Education Building
1300 Spring Garden Street
Greensboro, NC 27412
Phone: 336-334-3435
jtwillse@uncg.edu

Education

Doctor of Psychology, Assessment and Measurement, James Madison University (2002)

Master of Arts, General Psychology, James Madison University (1999)

Bachelor of Arts, Psychology, University of Virginia (1997)

Professional Experience

Associate Chair, Department of Educational Research Methodology, University of North Carolina at Greensboro (2015 - Present)

Director, Office of Assessment, Evaluation, and Research Services, University of North Carolina at Greensboro (2015 - Present)

Interim Director, Center for Educational Research and Evaluation, University of North Carolina at Greensboro (2010 - 2011)

Associate Professor, Department of Educational Research Methodology, University of North Carolina at Greensboro (2010 - Present).

Assistant Professor, Department of Educational Research Methodology, University of North Carolina at Greensboro (2004 - 2010).

Director of Academic Assessment, Office of the Provost, University of North Carolina at Greensboro (2003 - 2004).

Adjunct, Department of Educational Research Methodology, University of North Carolina at Greensboro (2002 - 2004).

Research Associate, Office of Institutional Research, University of North Carolina at Greensboro (2001 - 2004).

Academic Assessment Specialist, Office of the Provost. University of North Carolina at Greensboro (2002 - 2003).

*Some positions listed above were held concurrently.

Graduate Level Courses Taught

- Educational Measurement and Evaluation
- Foundations of Educational Measurement
- Intermediate Statistical Methods
- Statistical Methods in Education
- Methods of Educational Research
- Design and Analysis of Educational Experiments
- Multivariate Statistical Analyses
- Structural Equation Modeling
- Statistical Programming in R

Publications (bolded name indicates student co-author)

Refereed Articles

Luo, X. & Willse, J. T. (2015). A Dual-purpose Rasch Model with Joint Maximum Likelihood Estimation. *Journal of Applied Measurement*, 15.

Daniel, L. W., Borders, L. D., & Willse, J. T. (2015). The Role of Supervisors' and Supervisees' Mindfulness in Clinical Supervision. *Counselor Education and Supervision*, 54, 221-232.

Reese F. R., Myers, J. E., Lewis, T. F., & Willse, J. T. (2015). Construction and Initial Validation of the Reese EcoWellness Inventory, *International; Journal for the Advancement of Counselling*, doi:10.1007/s10447-014-9232-1

Dallas, A & Willse J. T. (2014). Survey Analysis with Mixture Rasch Models. *Journal of Applied Measurement*, 15, 394-404.

Kemer, G., Borders, L. D., Willse, J. T. (2014). Cognitions of Expert Supervisors in Academe: A Concept Mapping Approach. *Counselor Education and Supervision*, 53, 2-18.

Edmunds, J. A., Willse, J. T., Arshavsky, N., & **Dallas, A.** (2013). Mandated engagement: The impact of Early College High Schools. *Teacher's College Record*, 115, p. - <http://www.tcrecord.org> ID Number: 17044.

Shu, Z., Henson, R. A., & Willse, J. T. (2013). Using Neural Network Analysis to define an efficient method of DINA model estimation for small sample sizes. *Journal of Classification*, 30, 173-194.

Edmunds, J.A., Bernstein, L., Unlu, F., Glennie, E., Willse, J., Smith, A. & Arshavsky, N. (2012). Expanding the start of the college pipeline: Ninth grade findings from an experimental study of the impact of the early college high school model. *Journal of Research on Educational Effectiveness*, 5:2, 136-159.

Smith, R. M. & Willse, J. T. (2012). Influences on Municipal Annexation Methodology: An Intra-State Analysis of Annexation Activity in North Carolina, 2000 - 2010. *State and Local Government Review*, 44, 185-195.

Goodman, J. T., Willse, J. T., Allen, N., & **Klaric, J.** (2011). Identification of differential item functioning in assessment booklet designs with structural missing data. *Educational and Psychological Measurement*, 71, 80-94.

Marty, M. C., Henning, J. M., & Willse, J. T. (2011). Students Provide Accurate, But Not Always Detailed, Feedback to a Peer Performing an Orthopedic Assessment Skill. *The Internet Journal of Allied Health Sciences and Practice*, 9(1), 1-7.

Myers, J. E., Willse, J. T., & Villalba, J. A. (2011). Promoting self-esteem in adolescents: The influence of wellness factors. *Journal of Counseling and Development*, 89, 28-36.

Willse, J. T. (2011). Mixture Rasch Models with Joint Maximum Likelihood Estimation. *Educational and Psychological Measurement*, 71, 5-19.

Edmunds, J.; Bernstein, L.; Glennie, E.; Willse, J.; Arshavsky, N.; Unlu, F.; Bartz, D.; Silberman, **T.**; **Scales, W.D.** & **Dallas, A.** (2010). Preparing students for college: the implementation and impact of the Early College High School model. *Peabody Journal of Education*, 85:3, 348.

Kalcounis-Rueppell M. C., Petric R, Briggs J. R., Carney C, Marshall M. M., Willse, J. T., Rueppell, O., Ribble, D. O., & Crossland, J. P. (2010). Differences in Ultrasonic Vocalizations between Wild and Laboratory California Mice (*Peromyscus californicus*). *PLoS ONE*, 5(4): e9705. doi:10.1371/journal.pone.0009705

Marty, M. C., Henning, J. M., & Willse J. T. (2010). Accuracy and reliability of peer assessment of athletic training psychomotor laboratory skills. *Journal of Athletic Training*, 45, 609-614.

Wester, K. L., Willse, J. T., & Davis, M. S. (2010). Psychological climate, stress, and research integrity among research counselor educator: A preliminary study. *Counselor Education and Supervision*, 50, 39-55.

Winterstein, B. P., Willse, J. T., Kwapil, T. R., Silvia, P. J. (2010). Assessment of score dependability of the Wisconsin Schizotypy Scales using generalizability analysis. *Journal of Psychopathology and Behavioral Assessment*, 32, 575-585.

Henson, R. A., Templin, J. L., & Willse, J. T. (2009). Defining a family of cognitive diagnosis models using log-linear models with latent variables. *Psychometrika*, 74, 191-210.

Silvia, P. J., **Beate, P. W.**, Willse, J. T., **Barona, C. M.**, **Cram, J. T.**, **Hess, K. I.**, **Martinez, J. L.**, **Richard, C. A.** (2008). Assessing creativity with divergent thinking task:

exploring the reliability and validity of new subjective scoring methods. *Psychology of Aesthetics, Creativity, and the Arts*, 2, 68-85.

Silvia, P. J., **Beate, P. W.**, Willse, J. T. (2008). Rejoinder: The madness to our method: Some thoughts on divergent thinking. *Psychology of Aesthetics, Creativity, and the Arts*, 2, 109-114.

Wester, K. L., Willse, J. T., & Davis, M. S. (2008). Responsible conduct of research measure: the initial development and pilot study. *Accountability in Research*, 15, 87-104.

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

Willse, J. T., **Goodman, J. T.**, 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.

Sivo, S. A., Fan, X. , Witta, E. L., & Willse, J. T. (2006). The search for optimal cutoff properties: Fit index criteria in structural equation modeling. *Journal of Experimental Education*, 74 (3), 267-288.

Invited/Edited Publications

Willse, J. T., (2010). Test Review of the Wechsler Individual Achievement Test – Third Edition. In R. A. Spies, J. F. Carlson, & K. F. Geisinger (Ed.) *The Eighteenth Mental Measurements Yearbook*. Lincoln, NE: Buros Institute of Mental Measurements.

Willse, J. T. (2010). Classical Test Theory. In N. J. Salkind (Ed.) *Encyclopedia of Research Design*. Thousand Oaks: Sage.

Fulcher, K.H., Anderson, R., & Willse, J.T. (2009). Advanced tools in assessment: It's not your grandfather's assessment, Part V. *Netresults*.

Fulcher, K.H., Anderson, R., & Willse, J.T. (2009). Advanced tools in assessment: It's not your grandfather's assessment, Part VI. *Netresults*.

Willse, J. T. (2009). *mixRasch: Mixture Rasch Models with JMLE*.
URL <http://CRAN.R-project.org/package=mixRasch>. Version 0.1.

Willse, J. T. (2008). Cover visual displaying latent class analysis results. *Educational Measurement: Issues and Practice*, 19(2), cover.

Willse, J. T. & **Shu, Z.** (2008). *CTT: Classical Test Theory Functions*.
URL <http://CRAN.R-project.org/package=CTT>. Version 1.0.

Fulcher, K. H. & Willse, J. T. (2007). Value-added: changing back to basics. *Assessment Update*, 19, 10-12.

Willse, J. T., (2005). Test Review of the BarON Emotional Quotient Inventory: Short Development Edition. In B. S. Plake & J. C. Impara (Ed.) *The Sixteenth Mental Measurements Yearbook*. Lincoln, NE: Buros Institute of Mental Measurements.

Willse, J. T., (2005). Test Review of the Word Identification and Spelling Test. In B. S. Plake & J. C. Impara (Ed.) *The Sixteenth Mental Measurements Yearbook*. Lincoln, NE: Buros Institute of Mental Measurements.

Presentations (bolded name indicates student co-author)

International

Willse, J. T., Henson, R. A., & Templin, J. L. (2007). Nonparametric skills assessment: Cognitive diagnosis with few assumptions. Presented at the 23rd Workshop on Item Response Theory, Enschede, The Netherlands.

Willse, J. T., Henson, R. A., & Templin, J. L. (2007). A nonparametric alternative for analyzing test data and developing profiles of skill mastery. Presented at the International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Greensboro, NC.

Willse, J.T. & **Goodman, J. T.**, (2006, June). Comparison of MIMIC and IRT Based Analyses of Subgroup Differences. Presented at Psychometric Society Meeting, Montreal, Canada.

National

McCoy, T. P., Willse, J. T. (2015). The Effects of Mixture-induced Local Dependence on Diagnostic Classification. Presented at the National Council on Measurement in Education annual meeting, Chicago, ILL.

Willse, J. T., **Rollins, J.** & **Qunbar, S.** (2015). Rasch Model Parameter Recovery with a Conditional Pseudo-Likelihood. Presented at the National Council on Measurement in Education annual meeting, Chicago, ILL.

Rollins, J. & Willse, J. T. (2015). Application of Principal Components Pairwise Estimation to Bootstrapped Data. Presented at the Eastern Educational Research Association annual meeting, Sarasota, FL.

McCoy, T. P., Willse, J. T. (2014). Accuracy of Neural Network versus Nonparametric Approaches in Diagnostic Classification. Presented at the National Council on Measurement in Education annual meeting, Philadelphia, PA.

Rollins, J. & Willse, J. T. (2014). Parameter Recovery of the Rasch Model Using Principal Components Pairwise Estimation. Presented at the Northeastern Educational Research Association annual meeting, Trumbull, CT.

Samonte, K. M. & Willse, J. T. (2014). Examining the Effect of Different Estimators on the Efficacy of Confirmatory Mixture Models in DIF Detection. Presented at the National Council on Measurement in Education annual meeting, Philadelphia, PA.

Samonte, K. M., Willse, J. T., & Penfield, R. (2014). Examining the Accuracy of Confirmatory Mixture Models in DIF Detection. Presented at the Northeastern Educational Research Association annual meeting, Trumbull, CT.

Willse, J. T., Lou, X., & Kim, D. (2014). Examining the Efficacy of the Rach Model with Subdimensions under Different Subdimension Conditions. Presented at the Northeastern Educational Research Association annual meeting, Trumbull, CT.

McCoy, T. P., Willse, J. T., Jones, E. D., Letvak, S. (2013). Ridge or Re-estimate? Improper Solutions in Ordinal Confirmatory Factor Analysis (CFA) of Polychoric Correlations: A Case Study. Presented at the National Council on Measurement in Education annual meeting. San Francisco, California.

Willse, J. T., Ackerman, T. A., & Luecht, R. M. (2012). An Overview of ca-MST: From Panel Configurations to Test Assembly. Presented at the National Council on Measurement in Education annual meeting. Vancouver, BC, Canada.

Willse, J. T. & Dallas, A. (2012). Survey Analysis with Mixture Rasch Models. Presented at the American Educational Research Association annual meeting. Vancouver, BC, Canada.

Willse, J. T., Fulcher, K. H., & DeMars, C. E. (2012). Confirmatory Mixture Rasch Analysis for Understanding and Improvement of an Information Seeking Skills Test. Presented at the National Council on Measurement in Education annual meeting. Vancouver, BC, Canada.

Willse, J. T. (2011). Confirmatory Mixture Rasch Models. Presented at the American Educational Research Association annual meeting. New Orleans, Louisiana.

Willse, J. T. (2011). Confirmatory Mixture Rasch Models for Diagnostic Classification. Presented at the National Council on Measurement in Education annual meeting. New Orleans, Louisiana.

Shu, Z., Henson, R. A., & Willse, J. T. (2010). Using Neural Network Analysis to Define an Efficient Method of DINA Model Estimation for Small Sample Sizes. Presented at the American Educational Research Association annual meeting. Denver, Colorado.

Shu, Z., Willse, J. T., & Henson, R. A. (2010). Implication of Grain-Size Misspecification of Q Matrix in DCMs. Presented at the American Educational Research Association annual meeting. Denver, Colorado.

Willse, J. T. & **Dallas, A.** (2010). Impact of the Early-College High School Model on Students' Attitudes, Behavior, and Engagement. Presented at the American Educational Research Association annual meeting. Denver, Colorado.

Edmunds, J., Arshavsky, N., Bernstein, L., Unlu, F., Glennie, E., Willse, J. T., & **Dallas, A.** (2009). Study of the Efficacy of the Learn and Earn Early College High School Model. Presented at the Annual IES Research Conference. Washington, DC.

Marty, M. C., Henning, J. M., & Willse J. T. (2009). Students are Reliable Assessing a Peer Performing an Athletic Training Psychomotor Skill. Presented at the National Athletic Trainers' Association Educators' Conference, National Harbor, MD.

Willse, J. T. (2009). Retrofitting Cognitive Diagnostic Models to Large Scale Tests: Problems with Dimensionality. Presented at the National Council on Measurement in Education annual meeting. San Diego, California.

Willse, J. T. (2009). Mixture Rasch Models with Joint Maximum Likelihood Estimation. Presented at the American Educational Research Association annual meeting. San Diego, California.

Henson, R. A., Templin, J., **Burke, M.**, & Willse, J. T. (2008). Estimation of the log-linear model with latent classes for the purpose of cognitive diagnosis. Presented at the National Council on Measurement in Education annual meeting. New York, New York.

Fulcher, K. H. & Willse, J. T. (2008). Misconceptions of assessment. Presented at NC State Undergraduate Assessment Symposium. Cary, North Carolina.

Marty, M. C., Henning, J. M., & Willse, J. T. (2008). Peer assessment: students helping students learn. Paper presented at the Teaching and Learning Conference; March 19, 2008; San Juan, Puerto Rico.

Marty, M. C., Henning, J. M., & Willse, J. T. (2008). Students are reliable at assessing a peer performing an athletic training psychomotor skill. Paper presented at the National Athletic Trainers' Association Annual Meeting; St. Louis, MO.

Scales, W. D. & Willse, J. T. (2008). Creation of a student survey for evaluation of early college high schools. Presented at the American Educational Research Association annual meeting, New York, New York.

Willse, J. T. (2008). Consistency of content expert Q-matrix development. Presented at the American Educational Research Association annual meeting, New York, New York.

Willse, J. T., Henson, R. A., & Templin, J. (2008). K-Means with Latent Class Refinement: Cognitive Diagnosis with Few Assumptions. Presented at the National Council on Measurement in Education annual meeting, New York, New York.

Willse, J. T. & Luecht, R. M. (2008). Empirical Validity and Efficiency Studies with PROMIS Scale Items. Presented at The Second PROMIS Conference: Bethesda, Maryland.

Willse, J. T., Henson, R. A., & Templin, J. L. (2007). Using sumscores or IRT in place of cognitive diagnostic models: Can more familiar models do the job? Presented at (joint mtg) American Educational Research Association / National Council on Measurement in Education , Chicago, Illinois.

Willse, J. T. (2007). Using MIMIC Models to Describe the Performance of Fit Indices. Presented at (joint mtg) American Educational Research Association / National Council on Measurement in Education , Chicago, Illinois.

Goodman, J.T., Willse, J., Allen, N., & **Klaric, J.,** (2006). Identification of Differential Item Functioning for Different Survey Assessment Booklet Designs, Presented at (joint mtg) American Educational Research Association / National Council on Measurement in Education , San Francisco, California.

Klaric, J., Goodman, J., Willse, J., & Allen, N., (2006). Recovery of Item Parameter Estimates From Item Data Generated According to Different Survey Assessment Booklet Designs, Presented at (joint mtg) American Educational Research Association / National Council on Measurement in Education , San Francisco, California

Willse, J.T., **Goodman, J.,** Allen, N., & **Klaric, J.,** (2006). Comparison of the Structure Found for Different Survey Assessment Booklet Designs Using Structural Equation Modeling. Presented at (joint mtg) American Educational Research Association / National Council on Measurement in Education , San Francisco, California.

Willse, J. T. & Sivo, S. A. (2001). Cutoff Criteria for Fit Indexes in Structural Equation Modeling: The Need for Cross-Fitting Structural Models when Performing Monte Carlo Studies, American Educational Research Association, Seattle, Washington

Haley, K. A. & Willse, J. T. (2001). Rater Effects in Writing Assessment. American Educational Research Association, Seattle, Washington.

Regional

Marty, M. C., Henning J. M., & Willse J. T. Athletic Training Students Provide Accurate, But Not Always Corrective, Feedback to a Peer Performing a Laboratory Skill. Presented at the Fairfax County Teacher Researcher Conference, Fairfax, VA.

Moore, D., Willse, J., & Fulcher, K. H. (2000). Planning Your Assessment Program. Student Success Conference, Markers and Milestones: Measuring Student Success in Virginia, Harrisonburg, Virginia.

Willse, J. T. & Anderson, R. (1999). Oral Communications Assessment, Annual Fall Meeting of the Virginia Assessment Group, Williamsburg, Virginia.

Research Grants and Contracts

Development of an Early Mathematics Performance Diagnostic for Young Deaf and Hard-of-Hearing Children. (Under review, \$1.6m). Co-Investigator with Principal Investigator Claudia Pagliaro. DOED Institute of Education Sciences (IES). 2015-2019.

Dimensionality and Population Invariance Studies for New Patient-Reported Outcome Measures Used in the PROMIS Project. (\$83,279, Principal Investigator with Co-Investigator

Ric Luecht). Subcontract with the Duke Clinical Research Institute for *Validating and Extending the PROMIS Sexual Function Measure for Clinical Research*. Primary funding from National Institutes of Health (NIH). 2009-2013.

Analysis and Verification of Test Equatings for Nevada's K-12 Assessment Program. (\$78,000, Principal Investigator). Measured Progress, Inc. 2011-2013.

Analysis and Verification of Test Equatings for Nevada's K-12 Assessment Program. (\$24,000, Principal Investigator). Measured Progress, Inc. 2010.

Analysis and Verification of Test Equatings for Nevada's K-12 Assessment Program. (\$24,000, Principal Investigator). Measured Progress, Inc. 2009.

Analysis and Verification of Test Equatings for Nevada's K-12 Assessment Program. (\$21,000, Principal Investigator). Measured Progress, Inc. 2008.

Award for travel to present at the 23rd Annual Item Response Theory Workshop at the University of Twente, Enschede, The Netherlands. (\$500). UNCG International Travel Fund. 2007.

Analysis and Verification of Test Equatings for Nevada K-12 Assessment Program. (\$20,000, Principal Investigator). Measured Progress. 2007.

ABCTE Item Bank Calibration Project. (\$9487.50, Co-Investigator with Robert Henson). American Board for Certification of Teacher Excellence. 2006.

Study of the Efficacy of North Carolina's Learn and Earn Early College High School (ECHS) Model. (\$2.8 million, .125 FTE Member of research team; Julie Edmunds, Project Director). Institute of Education Sciences. 2006.

Analysis and Verification of Test Equatings for Nevada K-12 Assessment Program. (\$18,000, Principal Investigator). Measured Progress. 2006.

Verification of Measured Progress Equating of Nevada Test Data. (\$18,000, Principal Investigator). Measured Progress. 2005.

Achieving Accurate Results for Diverse Learners: Accommodations and Access Enhanced Item Formats for English Language Learners and Students with Disabilities. (\$1 million, Consultant for 3 days; Theresa Siskind, Project Director). U.S. Department of Education. 2005.

Grants, Not Funded

Duke University-UNCG MURDOCK Subcontract. (\$242,630, Principal Investigator with Co-Investigator Ric Luecht). Subcontract with the Duke Clinical Research Institute for *Assessing*

Patient-Reported Outcomes to Enhance Large-Scale Biomarker Research. Primary funding from National Institutes of Health (NIH). 2009.

Developments of a Student Survey of Mathematics Instruction and Learning Environment. (\$499,977, Co-Investigator with Nina Arshavsky, Principal Investigator). William T. Grant Foundation. 2009.

Multilevel Influences on the Likelihood of Departing from RCR. (\$244,125 Co-Investigator with Jane Myers; Kelly Wester, Principal Investigator). Revision and resubmission to Health and Human Services (HHS) Grant. 2006.

Structural Equation Modeling with NAEP Mathematics Item-Level Data. (\$71,423, Principal Investigator). NAEP Secondary Analysis Grant, US Department of Education. 2005

Multilevel Influences on the Likelihood of Departing from RCR. (\$279,000, Co-Investigator with Jane Myers; Kelly Wester, Principal Investigator). Health and Human Services (HHS) Grant. 2005.

Professional Service

University Service

- University Fellowship Selection Committee (2014)
- Strategic Intelligence Subcommittee for Enrollment Management (2013)
- Student Learning Enhancement Committee (2010-2012)
- 1.3 (Retention) Implementation Team (2010)
- Research Policies Committee (2009-2012)
- UNCG SACS-COC 5-Year Review, Ad hoc Committee (2009-2010)
- Assessment Task Force (2005-2006)
- General Education Review Taskforce (2005-2006)
- SACS: Assisted with the preparation of the Spring 2005 SACS Second Monitoring report (2004-2005)
- Measuring Student Achievement Assessment Project: Contributed to design of assessment, performed all analyses, and co-authored final report; Presented findings at the UNCG Assessment Summit and to the Faculty Senate (2004-2005)

ERM and School of Education Service

- SOE Faculty Council (2014-2016)
- ERM Faculty Search Committee, Chair (2014-2015)
- ERM Faculty Search Committee (2012-2013)
- ERM Assessment Coordinator (2012-ongoing)
- ERM Website Coordinator (2012-ongoing)
- SOE Academic Program Review Committee (2011-2012)
- SOE Promotion and Tenure Committee (2009-ongoing)

- Access and Equity Committee (2009-2011)
- CUI (Higher Education) Faculty Search Committee (2006-2007)
- ELC Faculty Search Committee, two positions (2006-2007)
- CED Faculty Search Committee (2005-2006)
- School of Education Executive Council: Elected as a junior member (2005-2006)
- School of Education RARE Committee (2004-2005)
- School of Education Research Assignments Committee (2004-2005)
- School of Education Scholarship Committee (2004-ongoing)

Professional Service and Organizational Leadership

- Website Content Editor, National Council on Measurement in Education (NCME, 2011-2013)
- Co-chair, Program Committee for the National Council on Measurement in Education (NCME) 2010 Annual Meeting
- Member of Editorial Board (2012-2015)
 - *Research and Practice in Assessment*,
<http://www.virginiaassessment.org/RPAJournal.php>
- Membership
 - National Council on Measurement in Education (NCME)
 - American Educational Research Association (AERA)
 - Division D – Measurement and Research Methodology (member)
 - Educational Statisticians Special Interest Group (member)
 - Structural Equation Modeling Special Interest Group (member)