

W. Holmes Finch
Assistant Professor
Department of Educational Psychology
Ball State University
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Education

Ph.D. Educational Psychology and Research, University of South Carolina, 2002

Major area: Statistics and measurement

Dissertation: Comparison of the performance of NOHARM and conditional covariance methods of dimensionality assessment: Type I, power and item dimension clustering

M.Ed. Educational Research, University of South Carolina, 1990

Major area: Statistics and measurement

B.A. History (Magna cum laude), University of South Carolina, 1987

Professional experience:

August, 2008-Present, Associate Professor, Department of Educational Psychology, Ball State University – Teach courses in statistics, measurement and research methodology.

August, 2003-2008, Assistant Professor, Department of Educational Psychology, Ball State University – Teach courses in statistics, measurement and research methodology.

September, 2002-August, 2003, Statistician, Early Alliance Project, Department of Psychology, USC – Provided statistical analysis services to principal investigators and graduate assistants working on the Early Alliance Project.

June, 2002-September, 2002, Consultant, Arcadia Analytics – Conducted statistical analyses of product sales data using time series analysis, including standard ARIMA models, as well as nonparametric models.

August, 1990-June, 2002, Manager, Statistical Laboratory, Department of Statistics, USC - Provided statistical consulting services within the university and, under contract, to state agencies and local industries.

September, 1989-August, 1990, Research Analyst in the South Carolina State Department of Education - Designed studies to evaluate programs created by the Education Improvement Act, conducted secondary analysis of statistical data and standardized test scores associated with these programs, wrote reports of these studies.

Professional Affiliations

American Educational Research Association (1999-present)
Educational Statisticians SIG of AERA (1999-present)
Structural Equation Modeling SIG of AERA (2004-present)
National Council of Measurement in Education (2000-present)
Psychometric Society (2001-present)
American Statistical Association (1995-present)
Institute of Mathematical Statistics (2004-present)
Affiliate, Purdue University Psychometric Investigation Laboratory (2005-present)
American Psychological Association, Division 5 (2004-present)
Midwestern Psychological Association (2006-present)
Indiana Academy of Science (2005-present)

Professional Recognition & Awards

Recipient of the American Psychological Association, Division 5 Anne Anastasi Early Career Award (2009).

Outstanding Junior Faculty Award, Ball State University (2007).

Outstanding Teaching Award, Teachers' College, Ball State University (2007).

Employee of the Year Award, College of Science and Mathematics, University of South Carolina (2001).

Publications

Publications in refereed journals

In Press

- Finch, W.H., Davis, A.S., & Dean, R.S. (in press) Factor invariance assessment of the Dean Woodcock Sensory Motor Battery for patients with ADHD versus non-clinical subjects. *Educational and Psychological Measurement*.
- Finch, W.H. (in press). Imputation methods for missing categorical questionnaire data: A comparison of methods. *Journal of Data Science*.
- Finch, W.H. & French, B.F. (in press). Comparing factor loadings in exploratory factor analysis: A new randomization test. *Journal of Modern Applied Statistical Methods*.
- Finch, W.H. (in press). Identification of variables associated with group separation in Descriptive Discriminant Analysis: Comparison of methods for interpreting Structure Coefficients. *Journal of Experimental Education*.
- Finch, W.H. & French, B.F. (in press). Using Exploratory Factor Analysis for Locating

- Invariant Referents in Factor Invariance Studies. *Journal of Modern and Applied Statistical Methods*.
- Finch, W.H. (in press). Item parameter estimation for the MIRT model: Accuracy, bias and precision of four factor analysis based models. *Applied Psychological Measurement*.
- Fletcher, K.L., Cross, J.R., Tanney, A.L., Schneider, M., & Finch, W.H. (in press). Predicting language development in children at-risk: The effects of quality and frequency of caregiver reading. *Early Education and Development*.
- Finch, W.H. & Laking, T.L. (in press). Comparison of parametric and exact test MANOVA in the presence of small samples and violations of assumptions. *Methodology*
- Finch, W.H., Barton, K.E. & Meyer, J.P. (in press). Differential Item Functioning Analysis for accommodated versus Non-accommodated students. *Educational Assessment*.

Year 2008

- Finch, W.H. & Laking, T. (2008). Evaluation of the use of standardized weights for interpreting results from a descriptive discriminant analysis. *Multiple Linear Regression Viewpoints*, 34(1), 19-34.
- Finch, W.H. & French, B.F. (2008). Anomalous Type I error rates for identifying one type of DIF in the presence of the other. *Educational and Psychological Measurement*, 68(5), 742-759.
- Finch, W.H. (2008). Estimation of Item Response Theory Parameters Values in the Presence of Missing Data. *Journal of Educational Measurement*, 45, 225-246.
- Finch, H. & Monahan, P. (2008). A Bootstrap Generalization of Modified Parallel Analysis for IRT Dimensionality Assessment. *Applied Measurement in Education*, 21, 119-140.
- French, B.F. & Finch, W.H. (2008). Multi-group confirmatory factor analysis: Locating the invariant referent. *Structural Equation Modeling*, 15(1), 96-113.
- Finch, W.H., Stage, K.A. & Monahan, P. (2008). Comparison of Factor Simplicity Indices for Dichotomous Data: DETECT R, Bentler's Simplicity Index and the Loading Simplicity Index. *Applied Measurement in Education*, 21, 41-64.
- Bazett-Jones, D.M., Finch, W.H., and Dugan, E.L. (2008). Comparing the Effects of Different Whole-Body Vibration Intensities on Counter-Movement Jump Performance. *Journal of Sports Science and Medicine*, 7, 144-150.

Year 2007

- Monahan, P., Stump, T., Finch, H., & Hambleton, R.K. (2007). Bias of exploratory and cross-validated DETECT index under unidimensionality. *Applied Psychological Measurement, 31*(6), 483-503.
- Lapsley, D.K., Finch, W.H. & Baker-Boudissa, M. (2007). A longitudinal assessment of academic achievement in Indiana charter elementary schools. *Charter School Review, 1*(2), 3-16.
- Finch, W.H. & French, B.F. Detection of crossing differential item functioning: A comparison of four methods. *Educational and Psychological Measurement, 67*(4), 565-582.
- Finch, H. and Habing, B. Performance of DIMTEST- and NOHARM- based statistics for testing unidimensionality. *Applied Psychological Measurement, 31*(4), 292-307.
- Finch, H. & Schneider, M.K. Classification Accuracy of Neural Networks vs. Discriminant Analysis, Logistic Regression and Classification and Regression Trees: Three and Five Groups cases. *Methodology, 3*(2), 47-57.
- Finch, W.H. Performance of the Roy-Bargmann Stepdown procedure as a follow up to a significant MANOVA. *Multiple Linear Regression Viewpoints, 33*(1), 12-22.
- Sanders, S., McIntosh, D.E., Dunham, M., Rothlisberg, B. & Finch, W.H. (2007). Joint confirmatory factor analysis of the Differential Ability Scales and the Woodcock-Johnson Tests of Cognitive Abilities-Third Edition. *Psychology in the Schools, 44*, 119-138.
- Year 2006**
- Davis, A. S., Finch, W. H., Trinkle, J., & Dean, R. S. (2006). Classification and regression tree analysis of a neurologically impaired and normal sample using sensory-motor tasks. *International Journal of Neuroscience, 117*, 11-23.
- Davis, A. S., Finch, W. H., Dean, R. S., & Woodcock, R. W. (2006). Cortical and subcortical constructs of the Dean-Woodcock Sensory Motor Battery: A construct validity study. *International Journal of Neuroscience, 116*, 1-15.
- French, B.F. & Finch, W.H. (2006) Confirmatory Factor Analytic Procedures for the Determination of Measurement Invariance. *Structural Equation Modeling, 13*, 378-402.
- Speirs Neumeister, K. and Finch, H. (2006) Perfectionism in Gifted Students: Relational precursors and influences on achievement motivation. *Gifted Child Quarterly, 50*(3), 238-251.

Finch, H. & Schneider, M.K. (2006). Misclassification rates for four methods of group classification: Impact of predictor distribution, covariance inequality, effect size, sample size and group. *Educational and Psychological Measurement*, 66(2), 240-257.

Robertson, T.H. & Finch, W.H. (2006). Assessment of Large General Education Astronomy Classes using Student Evaluations. *Astronomy Education Review*, 4(2), 1-25.

Finch, H. (2006). Comparison of the Performance of Varimax and Promax Rotations: Factor Structure Recovery for Dichotomous Items. *Journal of Educational Measurement*, 43(1), 39-52.

Year 2005

Habing, B., Finch, H. and Roberts, J. (2005) A Q3 Statistic for Unfolding Item Response Theory Models. *Applied Psychological Measurement*, 29(6), 457-471.

Finch, H. (2005). The MIMIC model as a method for detecting DIF: Comparison with Mantel-Haenszel, SIBTEST and the IRT Likelihood Ratio. *Applied Psychological Measurement*, 29(4), 278-295.

Finch, H. and Habing, B. (2005). Comparison of NOHARM and DETECT: Counting Dimensions and Allocating Items, *Journal of Educational Measurement*, 42(2), 149-170.

Finch, H. (2005) Comparison of the Performance of Nonparametric and Parametric MANOVA under Violations of the Assumptions of Normality and Homogeneity of Variance. *Methodology*, 1, 27-38.

Finch, H. (2005) Comparison of Distance Measures in Cluster Analysis with Dichotomous Data. *Journal of Data Science*, 3, 85-100.

Year 2004

Krivitski, E., McIntosh, D.E., Rothlisberg, B. and Finch, H. (2004) Profile Analysis of Deaf Children using the Universal Nonverbal Intelligence Test. *Journal of Psychoeducational Assessment*, 22, 338-350.

Years 1999-2002

Holmes, G.R., Wright, H., Yakano, Y., Galeazzi, A., Franceschina, E., Finch, H. and Brown, M., (2002). Comparison of Italian and American Early Adolescents' Responses to the Social Support Behavioral Inventory (SSBI). *Psicoterapia Cognitiva e Comportamentale*, v8, n.1.

Rhoades, D.R., McFarland, K. W. Finch, H. and Johnson, A.O. (2001). Speaking and Interruptions During Primary Care Office Visits. *Family Medicine*, v. 33, no.7, pp. 528-532, July/August.

McFarland, K., Rhoades, D.R., Campbell, J. and Finch, H. (2001). Meaning of Illness and Health Outcomes in Type I Diabetes. *Endocrine Practice*, v7, no. 4, July/August.

Harvey, A.L., Gerard, W.C., Rice, G.F. and Finch, H. (1999). Actual versus Perceived EMS Response Time. *Prehospital Emergency Care*, vol.3, number 1, January/March.

Test Reviews

In press

Davis, A. S., & Finch, W. H. (in press). Review of Western Aphasia Battery-Revised. In K. F. Geisinger, R. A. Spies, J. F. Carlson, & B. S. Plake (Eds.), *The Eighteenth Mental measurements Yearbook*. Lincoln, NE: Buros Institute of Mental Measurements.

Davis, A. S., & Finch, W. H. (in press). Review of Differential Ability Scales-Second Edition. In K. F. Geisinger, R. A. Spies, J. F. Carlson, & B. S. Plake (Eds.), *The Eighteenth Mental measurements Yearbook*. Lincoln, NE: Buros Institute of Mental Measurements.

Year 2007

Davis, A. S., & Finch, W. H. (2007). [Review of the BRIGANCE □Diagnostic Inventory of Early Development--II.] In K. F. Geisinger, □R. A. Spies, J. F. Carlson, & B. S. Plake (Eds.), *The seventeenth □mental measurements yearbook* (pp. 157-161). Lincoln, NE: Buros □Institute of Mental Measurements.

Davis, A. S., & Finch, W. H. (2007). [Review of The Rivermead □Behavioural Memory Test—Extended Version.] In K. F. Geisinger, R. A. □Spies, J. F. Carlson, & B. S. Plake (Eds.), *The seventeenth mental □measurements yearbook* (pp. 722-725). Lincoln, NE: Buros Institute □of Mental Measurements.

Year 2005

Davis, A. S., & Finch, H. (2005). Review of Children's Color Trails Test. In B. S. Plake, J. C. Impara, & R. A. Spies (Eds.), *16th Buros Mental Measurement Yearbook*. Lincoln, NE: Buros Institute of Mental Measurements.

Davis, A. S., & Finch, H. (2005). Review of Ruff Neurobehavioral Inventory. In B. S. Plake, J. C. Impara, & R. A. Spies (Eds.), *16th Buros Mental Measurement Yearbook*. Lincoln, NE: Buros Institute of Mental Measurements.

Book chapters

Year 2007

Finch, W.H. & Davis, A.S. (2007). Action research. In A.M. Bursztyrn (Ed.), *The Praeger Handbook of Special Education* (pp. 175-176). Westport, CT: Praeger.

Finch, W.H. & Davis, A.S. (2007). Quantitative research. In A.M. Bursztyrn (Ed.), *The Praeger Handbook of Special Education* (pp. 184-186). Westport, CT: Praeger.

Festschrift

Year 2007

Finch, H. & Jameson, M.M. (2007). Prior statistics coursework and student expectations of a graduate statistics class. In *Festschrift in honor of Mir Masoom Ali* (pp. 185-189). Muncie, IN: Ball State University.

Nonrefereed publications

Finch, H. Client Perceived Pitfalls in Statistical Consulting: An Ethnographic Study. *The Statistical Consultant*, vol.18, number 1, Spring 2001.

Finch, H. Client Expectations in a University Statistical Consulting Lab, *The Statistical Consultant*, vol. 16, number 3, Winter 1999.

Presentations at Professional Meetings

Year 2009

French, B.F., Smith, B. & Finch, H. (2009). Measurement Sensitivity for Randomized Control Trials: When Differential Item Functioning is a Good Thing. Paper accepted for presentation at the annual meeting of the American Educational Research Association, San Diego, CA, April.

French, B.F. & Finch, H. (2009). Hierarchical logistic regression: Accounting for multilevel data in DIF detection. Paper accepted for presentation at the annual meeting of the National Council for Measurement in Education, San Diego, CA, April.

Finch, H. & French, B.F. (2009). Estimation of MIMIC model parameters with multilevel data. Paper accepted for presentation at the annual meeting of the American Educational Research Association, San Diego, CA, April.

Slonaker, A. R., Mucherah, W. M., & Finch, W. H. (2009). School Psychologists' Training in Neuropsychological Assessment. Poster accepted for presentation at the annual meeting of the International Neuropsychological Society, Atlanta, GA, February.

Year 2008

- Williams, K., Huffman, L. & Finch, H. (2008). Investigating the influence of parental factors on the postsecondary educational attainment aspirations of rural middle and high school students. Paper presented at the Hawaii International Conference on Education. Honolulu, HI, January.
- French, B.F. & Finch, W.H. (2008). When Under the Influence of Non-invariant Factor Loadings, Does Computation Method of the Factor Score Matter? Paper presented at the Annual meeting of the American Educational Research Association. New York, NY, March.
- Finch, W.H. & French, B.F. (2008). Using a Hierarchical MIMIC Model for Uniform DIF Assessment in the Presence of Nested Data. Paper presented at the Annual meeting of the National Council for Measurement in Education. New York, NY, March.
- French, B.F. & Finch, W.H. (2008). Model Misspecification and Invariance Testing Via Confirmatory Factor Analytic Procedures. Paper presented at the Annual meeting of the American Educational Research Association. New York, NY, March.
- Finch, W.H., Lapsley, D.K. & Baker, M.E. (2008). Predictors of Student Mobility and Retention in Indiana Charter Schools: 2003 to 2006. Paper presented at the Annual meeting of the American Educational Research Association. New York, NY, March.
- Jameson, M.E., Finch, W.H. (2008). Latent Markov chain analysis of the development of item responses in an authentic mathematics assessment. Poster presented at the Annual meeting of the Association of Psychological Science. Chicago, IL, May.
- Finch, W.H., French, B.F., & Trotter, J.S. (2008). Missing data and dimensionality assessment for item response data: A Monte Carlo comparison of methods. Paper presented at the Fordham Council on Applied Psychometrics. Fordham University, New York, NY, June.
- Finch, W.H. & French, B.F. (2008). Comparison of MANOVA and a structural equation modeling method for comparing observed score group means on multiple dependent variables: A simulation study. Paper presented at the Annual meeting of the Psychometric Society, Durham, NH, June.
- Finch, W.H. & French, B.F. (2008). Multigroup Confirmatory Factor Analysis: Parameter Bias and Noninvariant Referents. Paper presented at the Joint Statistical Meetings, Denver, CO, August.
- Finch, W.H. & Laking, T.L. (2008). Evaluation of methods for interpreting results from

- a discriminant analysis. Poster presented at the Annual meeting of the Midwestern Psychological Association, Chicago, IL, May.
- Pierson, E.E. & Finch, W.H. (2008). P_{rep} : Not your daddy's p-value. Poster presented at the Annual meeting of the Midwestern Psychological Association, Chicago, IL, May.
- Davis, A. S., Finch, W. H., Boseck, J., & Dean, R. S. (2008). *Classification and Regression Tree Analysis of Cognitive Processing Abilities in the Differentiation of ADHD Subtypes*. Poster to be presented at the 28th Annual Meeting of the National Academy of Neuropsychology, New York, NY, October.
- Finch, W.H. & MarGraff, M. (2008). Imputation of Categorical Missing Data: A comparison of Multivariate Normal and Multinomial Methods. Midwestern Sas Users Group, Indianapolis, IN, October.
- Finch, W.H., Lapsley, D.K. & Baker-Boudissa, M.E. (2008). Teacher Influence on Student Achievement and the "Negative New School Transition Effect" in Indiana Charter Schools. Conference on Teacher Effects, Notre Dame University, November.
- Bronk, K. C., Finch, H., & Tasneem, N. (2008). Purpose, Hope, and Life Satisfaction among Adolescents. Paper presented at the annual meeting of the Association for Moral Education, Notre Dame University, November.

Year 2007

- Cross, J.R., Cross, T.L. & Finch, W.H. (2007). Influence of social dominance orientation and right-wing authoritarianism in gifted education. Poster presented at the National Association for Gifted Children Annual Convention, Minneapolis, MN, November 7-11, 2007.
- Davis, A.S., Finch, W.H., Dean, R., Hiller, & Hall, J. The Factor Invariance of the Dean-Woodcock Sensory-Motor Battery for Patients with ADHD. National Academy of Neuropsychology. Scottsdale, AZ, November, 14-18.
- Davis, A. S., Finch, W. H., Williams, R. N., Gupta, A. S., Randolph, C., Pass, L. A., & Whited, A. R. (2007). Classification and regression tree analysis of neurocognitive functioning in patients with and without multiple sclerosis. Poster presented at the 21st Annual Meeting of the Consortium of Multiple Sclerosis Centers, Washington, D.C..
- Davis, A. S., Finch, W. H., Williams, R. N., Gupta, A. S., Randolph, C., Whited, A. R., & Pass, L. A. (2007). Evaluating the Neurocognitive Differences in Patients with and without Multiple Sclerosis. Poster presented at the 21st Annual Meeting of the Consortium of Multiple Sclerosis Centers, Washington, D.C..

- Finch, W.H. & French, B.F. (2007). Comparing factor loadings in exploratory factor analysis: A new randomization test. Paper presented at the Joint statistical meetings. Salt Lake City, UT, August 2-6.
- Finch, W.H. & French, B.F. (2007). Student Achievement and Adequate Yearly Progress within the Indiana Charter School System. Poster presented at the conference on Contemporary issues in high stakes testing. Lincoln, NE, May 15-16.
- Finch, W.H. & Laking, T.L. (2007). Comparison of parametric and exact test MANOVA in the presence of small samples and violations of assumptions. Paper presented at the Annual meeting of the Midwestern Psychological Association, Chicago, IL, May 2-4.
- Finch, W.H. & French, B.F. (2007). Using Exploratory Factor Analysis for Locating Invariant Referents in Factor Invariance Studies. Paper presented at the Annual meeting of the American Educational Research Association, Chicago, IL.
- Finch, W.H. (2007). Item parameter estimation for the MIRT model: Accuracy, bias and precision of four factor analysis based models. Paper presented at the Annual meeting of the National Council for Measurement in Education, Chicago, IL.
- Finch, W.H. (2007). Interpreting structure coefficients in discriminant analysis: A comparison of several methods. Paper presented at the Annual meeting of the American Educational Research Association, Chicago, IL.
- Jameson, M. & Finch, W.H. (2007). The Development and Validation of the Statistics Anxiety Measure. Paper presented at the Annual meeting of the American Educational Research Association, Chicago, IL.

Year 2006

- Finch, W.H. & Lee, T, -M. (2006). The relationship between prior statistics course work and student expectations for a graduate statistics course. Paper presented at the 122nd annual meeting of the Indiana Academy of Science, Muncie, IN.
- Davis, A. S., Shunk, A.W., Finch, W. H., Dean, R. S., & Woodcock, R. W. (2006). Confirmatory Factor Analysis of the CHC Theory for Individuals with TBI. Poster presented at the 26th Annual Conference of the National Academy of Neuropsychology, San Antonio, TX.
- Davis, A. S., Shunk, A.W., Finch, W. H., Dean, R. S., & Woodcock, R. W. (2006). Confirmatory Factor Analysis of the CHC Theory for Individuals with ADHD. Poster presented at the 26th Annual Conference of the National Academy of Neuropsychology, San Antonio, TX.
- Finch, W.H. (2006). Comparison of M-estimator and non-robust Roy-Bargmann stepdown follow-up to a significant MANOVA. Paper presented at the Joint

Statistical Meetings, Seattle, WA.

- Davis, A. S., Pass, L. A., Finch, W. H., Dean, R. S., & Woodcock, R. W. (2006). The Relationship between Sensory-Motor Skills and Achievement in Children with ADHD. Poster presented at the 113th Annual Convention of the American Psychological Association, New Orleans, LA.
- Davis, A. S., Pass, L. A., Finch, W. H., Dean, R. S., & Woodcock, R. W. (2006). The Relationship between Sensory-Motor Skills and Cognitive Processing in ADHD. Poster presented at the 113th Annual Convention of the American Psychological Association, New Orleans, LA.
- French, B.F. & Finch, W.H. (2006). Locating the Invariant \square Referent \square in Multi-Group Confirmatory Factor Analysis. Paper presented at the International Meeting of the Psychometric Society, June 13-16.
- Finch, W.H. & French, B.F. (2006). Type I error rate for one type \square of DIF detection in the presence of the other type: A Monte Carlo study. Paper presented at the International Meeting of the Psychometric Society, June 13-16.
- Finch, W.H. & French, B.F. (2006). Detection of crossing differential item functioning: A comparison of four methods. Paper presented at the annual meeting of the National Council on Measurement in Education, April 9-11.
- Finch, W.H., Barton, K. & Meyer, J.P. (2006). Differential item function analysis for accommodated versus not accommodated students. Paper presented at the annual meeting of the American Educational Research Association, April 8-12.
- Speirs Neumeister, K. and Finch, W.H. (2006) Perfectionism in Gifted Students: Relational precursors and influences on achievement motivation. Paper presented at the annual meeting of the American Educational Research Association, April 8-12.
- Davis, A. S., Finch, W. H., Dean, R. S., & Woodcock, R. W. (2006). The canonical relationship between sensory-motor skills and academic achievement in children with ADHD. Poster presented at the 34th Annual Meeting of the International Neuropsychological Society, Boston, MA.

Year 2005

- Stage, K.A., Davis, A.S., Finch, W.H., Trinkle, J.M., & Dean, R. (2005). Predicting cognitive processing abilities using construction tasks from a neurologically impaired sample. Poster presented at the annual convention of the National Academy of Neuropsychology, Tampa, FL.

Stage, K.A., Davis, A.S., Finch, W.H., Trinkle, J.M., & Dean, R.S. (2005). Classification and Regression Tree Analysis of Individuals with ADHD. Poster presented at the annual meeting of the National Academy of Neuropsychology, Tampa, FL.

Davis, A.S., Finch, W.H., Dean, R.S. & Woodcock, R.W. (2005). Confirmatory Factor Analysis of CHC theory with a neurologically impaired sample. Poster presented at the annual meeting of the American Psychological Association, Washington, DC.

Stage, K., Finch, W.H. & Robertson, T. (2005). Gender differences in satisfaction with a university Astronomy course: Application of differential item functioning. Paper presented at the annual meeting of the Indiana Academy of Science, Saint Mary of the Woods College, IN, October, 7.

Schneider, M.K. & Finch, W.H. (2005). Suggested Sample-Size-to-Variable Ratios for Discriminant Analysis. Paper presented at the annual Joint Statistical Meetings of the American Statistical Association, August 7-11.

Finch, H., Stage, K. & Monahan, P. (2005). Comparison of the performance of simple structure indices: The DETECT r-ratio, Bentler's Simplicity Index and the Loading Simplicity Index. Paper presented at the annual Joint Statistical Meetings of the American Statistical Association, Minneapolis, MN, August 7-11.

Noggle, C.A., Dean, R. & Finch, W.H. (2005). Differential diagnosis of dementia and depression using the Dean-Woodcock. Poster presented at the annual meeting of the American Psychological Association, Washington, DC.

Perkins, A., Monahan, P., Finch, H., Chorney, C.M., Stump, T. & Hambleton, R.K. (2005). Bias of exploratory and cross-validated DETECT index under null hypothesis of unidimensionality. Paper presented at the annual convention of the American Education Research Association, Montreal, QC, April 11-15.

Finch, W.H. and Schneider, M.K. (2005). Performance of five methods of group membership prediction: 3 and 5 groups cases. Paper presented at the annual convention of the American Education Research Association, Montreal, QC, April 11-15.

Finch, W.H. and Monahan, P. (2005). Dimensionality assessment: Comparison of bootstrap Modified Parallel Analysis with Parallel Analysis and DETECT. Paper presented at the annual convention of the National Council for Measurement in Education, Montreal, QC, April 11-18.

Davis, A. S., Finch, W. H., & Dean, R. S. (2005). The canonical

relationship between sensory-motor functioning and cognitive processing. Poster presented at the 37th Annual Convention of the National Association of School Psychologists, Atlanta, GA, March 21-25.

Davis, A. S., Finch, W. H., & Dean, R. S. (2005). Constructs underlying the Dean-Woodcock Sensory Motor System. Poster presented at the 37th Annual Convention of the National Association of School Psychologists, Atlanta, GA, March 21-25.

Davis, A. S., Trinkle, J. M., Finch, W. H., & Dean, R. S. (2005). Classification and regression tree analysis of the Dean-Woodcock Sensory-Motor Battery with neurologically impaired and normal individuals. Poster presented at the 33rd Annual Convention of the International Neuropsychological Society, St. Louis, MO.

Year 2004

Noggle, C.A., Davis, A.S., Reese,,T., Finch, H. and Dean, R.S. (2004). The Construct Validity of the Dean-Woodcock Sensory Motor Battery with a Neurologically Impaired Sample. Poster presented at the Annual Convention of the National Academy of Neuropsychology.

Reese, T.R., Davis, A.S., Trinkle, J.M., Finch, H. and Dean, R.S. (2004). The Canonical Relationship Between Sensory-Motor Functioning and Achievement. Poster presented at the Annual Conference of the National Academy of Neuropsychology.

Trinkle, J., Davis, A. S., Noggle, C. A., Finch, W. H., & Dean, R. S. (2004). Evaluating the construct validity of the Dean-Woodcock Sensory Motor Battery. Poster presented at the Annual Conference of the National Academy of Neuropsychology, Seattle, WA.

Finch, W.H. (2004). Comparison of the performance of rotation methods for IRT based factor analysis. Paper presentation at the Joint Statistical Meetings of the American Statistical Association, August 8-12.

Finch, W.H. and Habing, B. (2004). NOHARM goodness of fit statistic anomalies. Paper presented at the National Council for Measurement in Education meetings, San Diego, CA, April 13-15.

Barton, K. and Finch, W.H. (2004). Testing assumptions of unidimensionality across groups of students with disabilities, with accommodations and English language

- learners. Poster presented at the National Council for Measurement in Education meetings, San Diego, CA, April 13-15.
- Finch, W.H. and Schneider, M.K. (2004). A comparison of the predictive accuracy of Classification and Regression Trees with Discriminant Analysis and Logistic Regression. Poster presented at the American Educational Research Association meetings, San Diego, CA, April 12-16.
- Davis, A. S., Finch, W. H., and Dean, R. S. (2004). The canonical relationship between sensory-motor functioning and cognitive processing. Poster presented at the 37th Annual Convention of the National Association of School Psychologists, Atlanta, GA.
- Davis, A. S., Finch, W. H., and Dean, R. S. (2004). Constructs underlying the Dean-Woodcock Sensory Motor System. Poster presented at the 37th Annual Convention of the National Association of School Psychologists, Atlanta, GA.

Year 2003

- Dixon, F, Hanchon, T., Finch, W.H. and Lapsley, D.K. (2003). Perfectionism in Gifted Adolescents: Teachers' Perspectives. Paper presented at the annual meeting of the National Association of Gifted Children, Indianapolis, IN.
- Schneider, M.K. and Finch, W.H. (2003). Using Multiple Linear Regression in counseling research: A guided tour. Poster presented at the Southern Association of Counselor Education Schools Conference, Chattanooga, TN.
- Finch, W.H. (2003). Fear and loathing in the Statlab: Lessons learned from listening to clients. Presentation at the Joint Statistical Meetings of the American Statistical Association, San Francisco, CA, August 3-7.
- Finch, W.H., Habing, B. and Huynh, H. (2003). Comparison of NOHARM and Conditional Covariance Methods of Dimensionality Assessment. Poster presented at the American Educational Research Association meetings, Chicago, IL, April 21-25.
- Finch, W.H. (2003). Comparison of Performance of Nonparametric and Parametric MANOVA under a Variety of Conditions. Paper presented at the American Educational Research Association meetings, Chicago, IL, April 21-25.
- Finch, W.H., Habing, B. and Huynh H.H. (2003). Comparison of NOHARM and DETECT: Counting Dimensions and Allocating Items. Paper presented at the National Council for Measurement in Education meetings, Chicago, IL, April 22-24.

Year 2002

- Finch, W.H. (2002). Distance consulting in a university setting: Two case studies. Paper presented at the American Statistical Association Joint Meetings,

New York, NY, August 11-15.

Finch, W.H., Habing, B., Roberts, J., and Nandakumar, R. (2002). A Q3 Statistic for Unfolding Item Response Theory Models. Paper presented at the American Educational Research Association meetings, New Orleans, LA, April 1-5.

Shelton, A., Kaczmarek, M., Finch, W.H., DesChamps, M., Silk, D. (2002). Comparison of Prehospital Providers and Medical Control Physicians' Opinion of DNR Care. Paper presented at the Society for Emergency Medicine, Atlanta, GA.

Years 1997- 2001

Horger III, E.O., Finch, W.H. and Vincent, V.E. (2001). A Single Physician's Experience with 4600 Genetic Amniocenteses. Paper presented at the annual meeting of the South Atlantic Association of Obstetricians and Gynecologists, Myrtle Beach, SC.

Finch, W.H. (2000). Clients Telling Their Stories: An Ethnographic Analysis of First Meetings Between Statistical Consultants and Their Clients. Joint Meetings of the American Statistical Association, Indianapolis, IN.

Huynh, H. and Finch, W.H. (2000). Robust/resistant statistical procedures with applications to multiple regression analysis and analysis of variance". Professional development and training, American Educational Research Association, New Orleans, LA.

Finch, W.H. and Huynh H. (2000). Comparison of Similarity Measures in Cluster Analysis with Binary Data. Presentation at the American Educational Research Association annual meetings, New Orleans, LA.

Parnell, M., Kilmann, P., Finch, W.H., Carranza, L. and Blumenstiel, B. (2000). Personal and interpersonal characteristics linked with adult attachment patterns. Poster presentation, Southeastern Psychological Association annual meeting, Savannah, GA.

Finch, W.H. (1999). A Qualitative Analysis of Client Expectations in a Statistical Computing Laboratory. Joint Meetings of the American Statistical Association, Baltimore, MD.

Kelly-Lewis, J. and Finch, W.H. (1999). The Construction of an Instrument to Measure African American Adolescent Females' Perception of Pregnancy Risk. Poster presentation, American Academy of Natural Family Planning, Boston, MA.

Grego, J. and Finch, W.H. (1997). Improvements in the Quality of Consulting in a Statistical Laboratory. South Carolina Statewide Quality Conference, Myrtle Beach, SC.

Finch, H. (1997). The Use of SAS to Construct Horvitz-Thompson Type Estimators for Safety Belt Compliance. Annual meeting of the SouthEast SAS Users Group annual meeting, Jacksonville, FL.

Grants and evaluation projects

Comparative Public School Funding: Policies that produce equity and investments that lead to student achievement (2008). The Walton Foundation. \$252,080.

The influence of psychological orientation on practice in gifted education (2007). Joseph and Marcella Hollis Fund. \$1,500.

Indiana General Supervision Enhancement Grant (2006-2007). Dr. Larry Smith, Elementary Education. Served as the statistical consultant to the project, providing advice on sample selection, data analysis and data management.

Evaluation (2005-2006). South Carolina State Department of Education. Conducted a dimensionality assessment of the statewide mathematics proficiency test for 8th graders.

Evaluation (2005-2006). Muncie Community Schools. Conducted a quantitative evaluation of the Title IID EET mathematics program for 8th grade students.

Evaluation and data analysis (2003-present). Indiana Charter Schools. Conducted data analysis, advised in report writing and data collection and conducted a workshop for charter school principals in data analysis and reporting of students' academic progress.

Interrater reliability study (2005). Teachers College, Ball State University. Conducted a study to determine the interrater reliability of the rubric for assessing Teacher Education majors' electronic portfolios.

Reliability and validity study (2005). History Department, Ball State University. Conducted study to determine reliability and validity of the department's Decision Point 2 examination for social studies education majors.

Reliability and validity study (2005). Muncie Central High School. Conducted study to determine reliability and validity of the school's Mathematics Competency Exam.

S.E.E.T. New Faculty Grant (2005). Internal Ball State University grant to investigate the performance of multiple statistical tools for assessing the dimensionality of test items.

Interrater reliability study (2004). Teachers College, Ball State University. Conducted a study to determine the interrater reliability of the Interstate New Teacher Assessment

and Support Consortium (INTASC) for the Office of Educational Field Experiences at Ball State University.

Teaching

Graduate and Undergraduate Courses Taught

Ball State University (2003-present)

Introduction to Educational Measurement: undergraduate (EDPSY 345)

Research Methodology (EDPSY 640)

Introduction to Statistical Methodology (EDPSY 641)

Intermediate Statistics (EDPSY 642)

Topics in Advanced Research Methods as independent study (EDPSY 645)

Introduction to Educational Measurement (EDPSY 646)

Computers in Research (EDPSY 740)

Seminar in Nonparametric statistics (EDPSY 744)

Seminar in Structural Equation Modeling (EDPSY 744)

Regression analysis (EDPSY 741)

Multivariate Statistics (EDPSY 742)

Factor Analysis (EDPSY 743)

Theory of Measurement (EDPSY 746)

Independent Study (Kimberly Miller, Spring 2005, Summer 2005)

Independent Study (Sherri Searcy, Spring 2005)

Independent Study (Kiev Gracias, Spring 2006, Spring 2007)

Independent Study (Pam Sebura, Fall 2006)

Independent Study (Barbara Thomas, Fall 2006-Spring 2007)

Independent Study (Pat Gillespie, Spring 2007)

Independent Study (Jenni Mohr, Spring 2007)

Independent Study (Rebecca Hanson, Fall 2007)

Independent Study (Jeanne McNamara, Fall 2008)

Independent Study (Vickie Eastman, Spring 2009)

University of South Carolina (1997-2003)

Introduction to Statistics (STAT 201)