Nnamdi Chika Ezike

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EDUCATION

2022 **Ph.D. Educational Statistics and Research Methods** (expected May 2022)
University of Arkansas, Fayetteville, AR
Dissertation: "Posterior Predictive Model Checking of the Hierarchical Rater Model"
Supervisor: Allison Ames Boykin Ph.D.

2018 **MS Statistics**
Montana State University, Bozeman, MT

2010 **BS Statistics**
Enugu State University of Technology, Enugu

RESEARCH INTERESTS

- Item response theory
- Bayesian psychometric methods
- Educational and psychometric measurement
- Performance assessments

PUBLICATIONS

Ezike, N. C., & Ames, A. J. (2021). The Diagnostic Rating System: Rater Behavior for an Alternative Performance Assessment Rating Method. *Psychological Test and Assessment Modeling, 63(3),* 273-304.

Ames, A. J., Leventhal, B. C., & **Ezike, N. C**. (2020). Monte Carlo Simulation in Item Response Theory Applications Using SAS. *Measurement: Interdisciplinary Research and Perspectives,* 18(2), 55-74.

Williams, B., Lo, W. J., Hill, J., **Ezike, N**., & Huddleston, J. (2019). Employment supports in early work experiences for transition-age youth with disabilities who receive Supplemental Security Income (SSI). *Journal of Vocational Rehabilitation*, vol. 51, no. 2, pp. 159-166.

Ajemigbitse, A. A., Omole, M. K., **Ezike, N. C.,** & Erhun, W. O. (2013). Assessment of the knowledge and attitudes of intern doctors to medication prescribing errors in a Nigeria tertiary hospital. *Journal of Basic and Clinical Pharmacy*, 5(1), 7.

Manuscripts under review
Ames, A.J., **Ezike, N.C.**, & Myers, A.J. (*Revise and Resubmit*). Model-data fit evaluation: Posterior checks and Bayesian model selection.

Myers, A.J., Cleveland, E., Whitby, P.S., Boykin, A.A., Burnette, K., Holmes, R., **Ezike, N.C.**, (*Revise and Resubmit*). Analysis of a Statewide Early Intervention Program for Young Children with ASD

Manuscripts in preparation

Ezike, N.C., Turner, R., Lo, W.-J., Crawford, B., Jozkowski, K. (In preparation). Comparing estimation procedures for omega reliability with non-normal ordinal data.

Ezike, N. C., Ames, A. J., & Leventhal, B. B. (In preparation). Bayesian Dichotomous Item Response Theory Model Selection: Conditional and Marginal Likelihoods

Ezike, N. C. (In preparation). Evaluation of Adjudication Rules for Essay Scoring: A Monte Carlo Simulation

CONFERENCE PRESENTATIONS

Ezike, N.C., Turner, R., Lo, W.-J., Crawford, B., Jozkowski, K, *Comparing estimation procedures for omega reliability with non-normal ordinal data*. Annual Conference of the International Meeting of the Psychometric Society. (July 2021). Poster presentation

Ames, A. J., & Leventhal, B. B., Thompson, K.J., **Ezike, N.C.**, *Simulation studies in psychometrics: State of the practice*. Annual Conference of the International Meeting of the Psychometric Society. (July 2021). Paper presentation

Ezike, N. C., Ames, A. J., & Leventhal, B. B. *Bayesian Item Response Theory Model Selection: Conditional and Marginal Likelihoods*. 2021 Annual Conference of the National Council on Measurement in Education (NCME), Poster presentation.

Ezike, N. C., Cao, C., Liang, X., Lo, W.-J., Abbott, P.C., Li, J. *Path Analysis with Nonnormal Continuous Data: A Monte Carlo Simulation*. 2021 Annual Conference of the American Educational Research Association (AERA), Paper presentation.

Abbott, P.C., Liang, X., Cao, C., Lo, W.-J., **Ezike, N. C.,** Li, J. *Path Analysis with Mixed Categorical and Continuous Data: Maximum Likelihood, Least Squares and Bayesian Estimations*. 2021 Annual Conference of the American Educational Research Association (AERA), Paper presentation.

Li, J., W.-J., Liang, X., Cao, C., Lo, Abbott, P.C., **Ezike, N. C.,** *Path Analysis with Categorical Outcome Data: A Closer Look of the Nonnormality Effects*. 2021 Annual Conference of the American Educational Research Association (AERA), Paper presentation.

Ezike, N.C. & Ames, A.J., *Evaluation of SAS IRT and MCMC Procedures for the GPCM*. Annual Conference of the International Meeting of the Psychometric Society, College Park, Maryland (July 2020)

Ames, A.J., & **Ezike, N. C.** *The Diagnostic Rating System: Rater behavior for an alternative performance assessment rating method*. Annual Conference of the American Educational Research Association (AERA), Paper presentation; April 17th-21st, 2020. San Francisco, CA.

Ezike, N. C. & Lo, W. *Programme for International Student Assessment (PISA) 2015: Cross-Mode Comparison between Paper- and Computer-Based Assessments.* Annual Conference of the American Educational Research Association (AERA), Paper presentation; April 17th-21st, 2020. San Francisco, CA.

Ezike, N. C., Ames, A. J., & Leventhal, B. B. *Evaluation of the SAS IRT Procedure: Parameter Recovery and Item Fit.* Annual Conference of the National Council on Measurement in Education (NCME), Poster presentation; April 10th-20th, 2020. San Francisco, CA.

Lo, W.-J., **Ezike, N.C**, American Psychological Association Conference, "Comparing searching procedures and differences in fit indices for identifying measurement invariance," Chicago, IL, United States. (August 2019).

TEACHING EXPERIENCE

Graduate Teaching Assistant   **Spring 2019 – Present**
Educational Statistics and Research Methods, University of Arkansas, Fayetteville, AR
- Lead instructor for Measurement and Evaluation (ESRM 6653)
- Lead Instructor for "Statistics in Nursing" (ESRM 2403)
- Responsible for instruction, developing course materials, and grading
- Maintained office and lab hours

Graduate Teaching Assistant   **Fall 2015 – Summer 2018**
Department of Mathematical Sciences, Montana State University, Bozeman, MT
- Taught three semesters of College Algebra (M121) and six semesters of Introduction to Statistics (STAT216)
- Graded assignments, exams, and quizzes
- Maintained office hours and tutor hours at the Math Learning Center

RESEARCH EXPERIENCE

Collegiate Associate   **September 2021 - Present**
Educational Testing Service (ETS), Princeton, NJ
- Currently conducting research on issues of equity and fairness in assessment
- Exploring how rater effects influence calibration of automated scoring engines

Research Intern   **June 2021 – August 2021**
Educational Testing Service (ETS), Princeton, NJ
- Conducted Monte Carlo simulations to investigate adjudication rules for scoring performance assessments

Graduate Research Assistant   **May 2020 – Present**
Developing and Assessing Measures for Social Surveys (DAMSS), University of Arkansas, Fayetteville, AR
- Conducted data wrangling and analyses
- Developed codebooks for survey datasets

- Designed and implemented Monte Carlo simulations to evaluate the performance of omega reliability coefficients with nonnormal ordinal data

Statistical and Measurement Support Services (SMSS), University of Arkansas, Fayetteville, AR
- Provided assistance to clients at the design phase of their experiments, determined appropriate sampling techniques and statistical analyses
- Reviewed methods and results sections for grants, dissertations/theses, manuscripts, and scholarly presentations

OTHER EXPERIENCE

Data Officer   **2010 – 2015**

Hanovia Medical Limited, Abuja, Nigeria
- Charged with data management and analyses
- Designed and deployed electronic survey questionnaires using SurveyCTO and ODK
- Developed field data collection plans to guide data collection processes
- Trained enumerators on the use of electronic survey questionnaires
- Supervised and managed field data collection
- Supported the Impact Evaluation Assessment of some World Bank assisted projects

COURSES TAUGHT

University of Arkansas
- ESRM 6653:   Measurement and Evaluation (Doctoral Level Course) [Fall 2021]
- ESRM 2403:   Statistics in Nursing [Spring 2019; Spring 2020]

Montana State University
- STA 216:   Introduction to Statistics [Fall 2016 – Summer 2018]
- M121:   College Algebra [Fall 2015 – Summer 2016]

AWARDS & HONORS

2021   *Outstanding Doctoral Student*
Educational Statistics and Research Methods, University of Arkansas

2020   *Chan-Zuckerberg NCME Fellowship* ($3,000)
National Council on Measurement in Education (NCME)

2018   *Doctoral Academy Fellowship* ($48,000)
University of Arkansas, Fayetteville

2018   *Outstanding Graduate Teaching Assistant*
College of Letters and Science, Montana State University, Bozeman

2017   *Outstanding Graduate Teaching Assistant*
Department of Mathematical Sciences, Montana State University, Bozeman

2010   *Best Graduating Student*
         Department of Mathematics and Statistics, Enugu State University of Technology

AFFILIATIONS AND MEMBERSHIPS

American Educational Research Association
National Council for Measurement in Education
Psychometric Society
American Statistical Association

SOFTWARE SKILLS

- R
- SAS
- M*plus*
- SPSS
- Tableau
- Facets
- Stata