Nnamdi Chika Ezike, Ph.D.

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EDUCATION

2022   **Ph.D. Educational Statistics and Research Methods**
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
- Performance assessments
- Bayesian psychometric methods

RESEARCH EXPERIENCE

Collegiate Associate   **September 2021 - Present**
Educational Testing Service (ETS), Princeton, NJ
- Exploring how rater effects influences 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**
Tobacco Twitter Project, University of Arkansas, Fayetteville, AR
- Applied time series modelling techniques to model and predict tweet behavior of tobacco companies
- Model sentiments of Twitter users about e-cigarette

Developing & Assessing Measures for Social Surveys (DAMSS) Project, 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

Data Officer   **2010 – 2015**
Hanovia Medical Limited, Abuja, Nigeria
- 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

TEACHING EXPERIENCE
Graduate Teaching Assistant   **Spring 2019 – Present**
Educational Statistics and Research Methods, University of Arkansas, Fayetteville, AR
- Lead instructor for Statistics in Education (ESRM 5393)
- 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

PUBLICATIONS
Ezike N.C, Ames Boykin A, Dobbs PD, Mai H, Primack B.A. (n.d.) Unobserved Components Model: An Application to Twitter Surveillance about Marketing of e-Cigarette Products
JMIR Preprints. 19/02/2022:37412 (https://preprints.jmir.org/preprint/37412)

Ames, A.J., **Ezike, N.C.**, & Myers, A.J. (*In press*). Model-data fit evaluation: Posterior checks and Bayesian model selection. *International Encyclopedia of Education*

Myers, A.J., Cleveland, E., Whitby, P.S., Boykin, A.A., Burnette, K., Holmes, R., **Ezike, N.C.**, (2021). Analysis of a Statewide Early Intervention Program for Young Children with ASD. *Journal of Autism and Developmental Disorders,* 1-3.

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
Cleveland, E., Myers, A.J., Boykin, A.A., Whitby, P.S., Burnette, K., Holmes, R., **Ezike, N.C.**, (*under review*). The Impact of COVID-19 on the Skill Acquisition of Children with Autism Spectrum Disorder Receiving Early Intensive Behavioral Intervention. *Research in Autism Spectrum Disorders*

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., Walker, M., & Casabianca, J (In preparation). Evaluation of Adjudication Rules for Essay Scoring: A Monte Carlo Simulation

Hadfield, J., Bueno, X., **Ezike N.C.,** Turner, R., Lo, W.-J., Crawford, B., Jozkowski, K. (In preparation). Does Political Engagement and Abortion Law Knowledge Inform Racial and Ethnic Disparities in Support for Abortion Access in the US?

CONFERENCE PRESENTATIONS
Ezike, N. C., Walker, M., & Casabianca, J. *Evaluation of Adjudication Rules for Essay Scoring: A Monte Carlo Simulation.* 2022 Annual Conference of the National Council on Measurement in Education (NCME). Accepted for presentation.

Ezike, N. C., & Ames, A. J. *Posterior Predictive Model Checking of the Hierarchical Rater Model* .2022 Annual Conference of the National Council on Measurement in Education (NCME). Accepted for presentation.

Ames, A. J., Leventhal, B. B., **Ezike, N.C.**, & Thompson, K.J., *Bayesian Monte Carlo Simulation Studies: Practice and Implications.* 2022 Annual Conference of the National Council on Measurement in Education (NCME). Accepted for 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., 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).

AWARDS & HONORS

2021   *Chan-Zuckerberg NCME Fellowship* ($3,000)
National Council on Measurement in Education (NCME)

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
- SQL