BrandonLeBeau, PhD
Data and Statistics Maven

Contact
Iowa City, IA 52245

(507) 993-4865

brandonl@uark.edu
http://educate-r.org

Statistics
Linear Mixed Model
Regression
Meta Analysis
Simulation
Research Design
Propensity Score

Programming
♥ R, Stata, SPSS,
Lisrel, Amos, SQL,
Unix, TEX, LATEX,
BibTEX, BibLATEX,
HTML, CSS

Education

2007–2013	**Doctor** of Philosophy	University of Minnesota

Educational Psychology – Quantitative Methods in Education

Misspecification of the covariance matrix in the linear mixed model: A monte carlo simulation

2003–2007	**Bachelor** of Arts	Luther College

Major: Psychology
Minor: Mathematics

Post-Graduate

2014–now	**University of Iowa**	Iowa City, IA

Assistant Professor

This unique position within the College of Education has my time split evenly between the Iowa Testing Program and the Educational Measurement and Statistics program. My responsibilities include expanding my research agenda and helping conduct research and development with the Iowa Testing Program. In addition, I will be teaching an online course titled:

2013–2014	**University of Arkansas**	Fayetteville, Arkansas

Visiting Assistant Professor

Led three sections of introductory statistics, one section at the undergraduate level and two at the graduate level in the Fall 2013 semester. Scheduled to teach the same three sections in Spring 2014 with an additional section of a graduate research methods course.

Course titles taught or scheduled to teach, level of course in parentheses:

- Statistics in Nursing (Undergraduate)
- Statistics in Education and Health Profession (Graduate)
- Research Methods in Education (Graduate)

2012–2013	**Saint Paul Public Schools**	Saint Paul, Minnesota

Assessment Specialist

Analyzed districtwide assessment data and prepared reports to disseminate to stakeholders, including school board, superintendent, staff, and parents. Also performed statistical analyses to evaluate district programs and developed methods section for grant applications.

Detailed achievements:

- Reproducible assessment reports – No more copy and pasting.
- Reduced assessment reporting period from 10 day to 3 days.
- Wrote methods section for successful grant application with the Department of Education.
- Started R user group to improve R knowledge at the district.

Graduate Experience

| 2012–2012 | **College of Liberal Arts** | Minneapolis, Minnesota |

Quantitative Analyst

Helped the College of Liberal Arts explore trends in time to degree. Used graphical procedures to explore bottlenecks in time to degree.

| 2011-2012 | **Department of Educational Psychology** | Minneapolis, Minnesota |

Teaching Assistant

Assisted professor in an introductory graduate statistics course. Held office hours, graded assignment, and led a series of labs to acquant students with the R language.

| 2009-2012 | **Office of Research Consultation and Services** | Minneapolis, Minnesota |

Research Consultant

Assisted graduate students and university faculty on their theses or research projects. Provided methodological and statistical advice and performed analyses for sponsored faculty projects.

| 2009-2011 | **Minnesota Mathematics Achievement Project** | Minneapolis, Minnesota |

Quantitative Analyst

Performed statistical analyses, using cross-sectional and longitudinal multilevel models, on a National Science Foundation grant. Aided in preparing manuscripts for publications and attended national conferences.

| 2010-2011 | **Department of Educational Psychology** | Minneapolis, Minnesota |

Research Assistant

Conducted simulation studies in R and presented findings in biweekly meetings. Prepared a technical report summarizing findings.

| 2009-2010 | **Saint Paul Public Schools** | Saint Paul, Minnesota |

Quantitative Analyst

Analzed assessment data using descriptive and inferential analyses. Prepared reports for dissemination to stakeholders.

| 2008-2009 | **Department of Educational Psychology** | Minneapolis, Minnesota |

Graduate Instructor

Led three sections of an introductory undergraduate statistics course. Led students through topics such as descriptive statistics, sampling distributions, and t-tests. Used group/exploratory learning as much as possible.

| 2007-2008 | **Department of Educational Psychology** | Minneapolis, Minnesota |

Teaching Assistant

Assisted with an introductory undergraduate and graduate statistics course. Helped facilitate labs, graded assignments and exams, and held office hours.

Packages

| SPSStoR | **R Package** | https://github.com/lebebr01/SPSStoR |

A R package that converts SPSS syntax to comparable R syntax.

| simReg | **R Package** | https://github.com/lebebr01/simReg |

A R package that simulates regression models, both single and multilevel. Exploring power analysis by simulation.

| highlightHTML | **R Package** | https://github.com/lebebr01/highlightHTML |

A R package that post processes HTML files to add highlighting to table cells using CSS.

Interests

Statistics: Simulation, Regression, Linear Mixed Models, Meta Analysis, Longitudinal Data, Research Design, Hierarchical Linear Models, Nonparametric Statistics

Research: Longitudinal Methodological issues, Promoting science, technology, engineering, and mathematics majors, Time to degree, National School Lunch Program

Publications

Published Article

A multisite study of high school mathematics curricula and developmental mathematics course-taking in college
Michael Harwell, Thomas Post, Brandon LeBeau, Danielle Dupuis, Amanuel Medhanie
Educational Research Quarterly *(2013).* **in press**

A multi-institutional study of the relationship between high school mathematics curricula and college mathematics achievement and course taking
Michael Harwell, Thomas Post, Amanuel Medhanie, Danielle Dupuis, Brandon LeBeau
Journal for Research in Mathematics Education *(2013).* **in press**

The Impact of Institutional Factors on the Relationship Between High School Mathematics Curricula and College Mathematics Course-Taking and Achievement.
Michael Harwell, Dupuis Danielle, Thomas Post, Amanuel Medhanie, Brandon LeBeau
Educational Research Quarterly *36.3 (2013) pp. 22–46*

Student and high-school characteristics related to completing a science, technology, engineering or mathematics (STEM) major in college
Brandon LeBeau, Michael Harwell, Debra Monson, Danielle Dupuis, Amanuel Medhanie, Thomas R Post
Research in Science & Technological Education *30.1 (2012) pp. 17–28. Taylor & Francis*

A Multi-Institutional Study of the Relationship between High School Mathematics Achievement and Performance in Introductory COLLEGE Statistics
Danielle N Dupuis, Amanuel Medhanie, Michael Harwell, Brandon LeBeau, Debra Monson, Thomas R Post
Statistics Education Research Journal *11.1 (2012) pp. 4–20. International Association for Statistics Education and the International Statistical Institute. PO Box 24070, 2490 AB The Hague, The Netherlands*

The role of the ACCUPLACER mathematics placement test on a student's first college mathematics course
Amanuel G Medhanie, Danielle N Dupuis, Brandon LeBeau, Michael R Harwell, Thomas R Post
Educational and Psychological Measurement *72.2 (2012) pp. 332–351. Sage Publications*

Outcomes Assessment of Case-Based Writing Exercises in a Veterinary Clinical Pathology Course
Leslie Sharkey, Helen Michael, Brandon LeBeau, Bruce Center, Deb Wingert
Journal of veterinary medical education *39.4 (2012) pp. 396–403. UT Press*

Student eligibility for a free lunch as an SES measure in education research
Michael Harwell, Brandon LeBeau
Educational Researcher *39.2 (2010) pp. 120–131. SAGE Publications*

Articles In Preparation

Impact of non-normal level one and two residuals on the linear mixed model: A monte carlo simulation
Brandon LeBeau
In Preparation for Communication in Statistics – Simulation and Computation *(2014).* **in preparation**

Misspecification of the covariance matrix with the linear mixed model: A monte carlo simulation
    Brandon LeBeau

    In preparation for Journal of educational and behavioral statistics *(2014).* **in preparation**

Impact of serial correlation on random effect misspecification with the linear mixed model
    Brandon LeBeau

    In preparation for Multivariate Behavioral Research *(2014).* **in preparation**

Presentations

Model misspecification and assumption violations with the linear mixed model: A meta analysis
    Brandon LeBeau

    Paper accepted to American Educational Research Association (AERA) conference, Philadelphia, PA (2014)

Impact of non-normal level one and two residuals on the linear mixed model
    Brandon LeBeau

    Paper presented at American Educational Research Association (AERA), San Francisco, CA (2013)

Linking the 3rd Grade Reading MAP and Mondo Assessments: A logistic regression analysis
    Brandon LeBeau, Jose Palma

    Presentation to the Evaluation Roundtable at the Saint Paul Public Schools, Saint Paul, MN (2013)

Introduction to R – Practical reasons to use R in a large urban school district
    Brandon LeBeau

    Presentation to the Research, Evaluation, and Assessment department at the Saint Paul Public Schools, Saint Paul, MN (2013)

Exploring the interaction between gender and race/ethnicity at Saint Paul Public Schools
    Brandon LeBeau

    Presentation to the Evaluation Roundtable at the Saint Paul Public Schools, Saint Paul, MN (2012)

A multisite study of the relationship between high school mathematics curricula and developmental mathematics course-taking and achievement in college
    Michael Harwell, Brandon LeBeau, Thomas Post, Amanuel Medhanie, Danielle Dupuis

    Paper presented at the Society for Research on Educational Effectiveness, Washington DC (2011)

An institutional analysis of the relationship between high school mathematics curricula and preparation for college mathematics
    Michael Harwell, Thomas Post, Danielle Dupuis, Amanuel Medhanie, Brandon LeBeau, Debra Monson

    Paper presented at the annual meeting of the American Educational Research Association, Denver, CO (2010)

Basics of LaTeX
    Andrew Zieffler, Brandon LeBeau

    Presentation at the University of Minnesota, Minneapolis, MN (2009)

Introduction to R
    Andrew Zieffler, Brandon LeBeau

    Presentation at the University of Minnesota, Minneapolis, MN (2008)

Introduction to R
    Brandon LeBeau

    Presentation at the University of Minnesota, Minneapolis, MN (2008)