

# Brandon LeBeau, PhD

Data and Statistics Maven

## Contact

4245 NE Meadow Creek Cir  
Apartment 106  
Fayetteville, AR 72703  
  
(507) 993-4865

lebea027@umn.edu

## Statistics

Linear Mixed Model  
Regression  
Meta Analysis  
Simulation  
Research Design  
Propensity Score

## Programming

♥ R, Stata, SPSS,  
Lisrel, Amos, SQL,  
Unix, T<sub>E</sub>X, L<sup>A</sup>T<sub>E</sub>X,  
BibT<sub>E</sub>X, BibL<sup>A</sup>T<sub>E</sub>X,  
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

## Research

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.

Detailed achievements:

- Reproducible assessment reports – No more copy and pasting.
- Reduced assessment reporting period from 10 day to 3 days.
- Started R user group to improve R knowledge at the district.

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.

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 multi-level 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*

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

## Teaching

2013–Now	<b>University of Arkansas</b> <i>Visiting Assistant Professor</i> Led two introductory statistics courses, one undergraduate course titled: <i>Statistics in Nursing</i> and one graduate level course titled: <i>Statistics in Education and Health Professions</i>	Fayetteville, Arkansas
2011–2012	<b>Department of Educational Psychology</b> <i>Teaching Assistant</i> Assisted professor in an introductory graduate statistics course. Held office hours, graded assignment, and led a series of labs to acquaint students with the R language.	Minneapolis, Minnesota
2008–2009	<b>Department of Educational Psychology</b> <i>Graduate Instructor</i> 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.	Minneapolis, Minnesota
2007–2008	<b>Department of Educational Psychology</b> <i>Teaching Assistant</i> Assisted with an introductory undergraduate and graduate statistics course. Helped facilitate labs, graded assignments and exams, and held office hours.	Minneapolis, Minnesota

## Packages

SPSSStoR	<b>R Package</b> A R package that converts SPSS syntax to comparable R syntax.	<a href="https://github.com/lebebr01/SPSSStoR">https://github.com/lebebr01/SPSSStoR</a>
simReg	<b>R Package</b> A R package that simulates regression models, both single and multilevel. Exploring power analysis by simulation.	<a href="https://github.com/lebebr01/simReg">https://github.com/lebebr01/simReg</a>
highlightHTML	<b>R Package</b> A R package that post processes HTML files to add highlighting to table cells using CSS.	<a href="https://github.com/lebebr01/highlightHTML">https://github.com/lebebr01/highlightHTML</a>

## Interests

**Statistics:** Simulation, Regression, Linear Mixed Models, Meta Analysis, Longitudinal Data,  
**Research:** Longitudinal Methodological issues, Promoting science, technology, engineering, and mathematics majors, Time to degree, National School Lunch Program

## Publications

### Published Articles

- 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
- Impact of non-normal level one and two residuals on the linear mixed model  
Brandon LeBeau  
Paper presented at American Educational Research Association (AERA) (2013)
- 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 Press

#### 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**

## Unpublished

#### “Model misspecification and assumption violations with the linear mixed model: A meta analysis”

Brandon LeBeau

(2012)

## Presentations

#### 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*

#### 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*

#### 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*

#### 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*

## 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*

## Basics of L<sup>A</sup>T<sub>E</sub>X

Andrew Zieffler, Brandon LeBeau

*Presentation at the University of Minnesota, Minneapolis, MN*

## Introduction to R

Andrew Zieffler, Brandon LeBeau

*Presentation at the University of Minnesota, Minneapolis, MN*

## Introduction to R

Brandon LeBeau

*Presentation at the University of Minnesota, Minneapolis, MN*