

# W. JAKE THOMPSON

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## Education

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**University of Kansas** August 2014-present Lawrence, KS

*Doctor of Philosophy in Educational Psychology; emphasis in Research, Evaluation, Measurement, and Statistics*

- 4.00 GPA
- Passed comprehensive examinations, May 2017
- Dissertation title: "Evaluating Model Reduction in Diagnostic Classification Models"
- Awards: Chancellor's Doctoral Fellowship, 2016 EM:IP Cover Showcase Top 10, 2017 EM:IP Cover Showcase Winner

**University of Kansas** August 2010-May 2014 Lawrence, KS

*Bachelor of Science in Behavioral Neuroscience - with Highest Distinction*

*Minor in Social and Behavioral Sciences Methodology*

- 3.98 GPA
- University Honors Program
- Departmental Honors in Psychology - Winner, Best Honors Thesis
- Research Experience: Cognitive and Affective Neuroscience Laboratory (June 2012-August 2014), Center for Research Methods and Data Analysis (April 2013-December 2013)
- Awards: Outstanding Research by an Undergraduate in Psychology, J. Michael Young Opportunity Award, Undergraduate Travel Award, Undergraduate Research Award, Dane G. Hansen Leader of Tomorrow Scholarship, Summerfield Scholarship, Robert C. Byrd Scholarship, Kansas Governor's Scholar, Kansas Honor's Scholar
- Certifications: Research Experience Program

## Professional Experience

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**Accessible Teaching, Learning, and Assessment Systems** August 2014-present Lawrence, KS

*Psychometrician Assistant (January 2016-present)*

- Member of the Dynamic Learning Maps psychometric team; create and maintain an R package for the estimation of the psychometric model and scoring of the assessment; develop R and SQL scripts to create deliverable score report files to state partners; collaborate with other psychometricians and content teams to ensure the quality and accuracy of score reports; execute research projects to be presented at national conferences and to the technical advisory committee.

*Graduate Research Assistant (August 2014-January 2016)*

- Member of the Dynamic Learning Maps psychometric team; created R scripts to rescore technology enhanced items; collaborated with psychometricians to develop R scripts to generate student score reports; prepared research projects for presentation.
- Member of the Dynamic Learning Maps science content team; collaborated with consultants, content experts and educators to develop appropriate test standards; developed materials for educator workshops for item writing; assisted in the implementation of a new assessment for member states.

**Jake Thompson Consulting** January 2015-present Kansas City, KS

*Statistical Consultant*

- Provide statistical and methodological consultation on a variety of topics to clients..
- Example projects include: analyzing data for research labs at the University of Kansas Medical Center; providing recommendations for the implementation of evidence centered design to the National Council of State Boards of Nursing; estimating growth projections for JNA Advertising.

- Member of the professional assessment team; collaborated closely with clinicians to ensure that appropriate testing was performed for each assessment; administered neuropsychological assessments and wrote clinical reports on the results; developed and maintained a database to track assessments and keep electronic records.

## **Publications & Presentations**

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### **PUBLICATIONS**

- Thompson, W. J.** (in press). Construct Irrelevant Variance. In B. Frey (Eds.), *The Sage Encyclopedia of Educational Research, Measurement, and Evaluation*. New York: SAGE.
- Thompson, W. J.** (in press). Visualizing different levels of compensation in multidimensional item response theory models. *Educational Measurement: Issues and Practice*.
- Chrysikou, E. G. & **Thompson, W. J.** (2016). Assessing cognitive and affective empathy through the Interpersonal Reactivity Index: An argument against a two-factor model. *Assessment*, 23(6), 769-777. doi:10.1177/1073191115599055
- Thompson, W. J.**, Nash, B., Clark, A., Karvonen, M. (2016). Dynamic Assessment Routing. *Educational Measurement: Issues and Practice*, 35(2), 33.

### **CONFERENCE PRESENTATIONS**

- Thompson, W. J.**, Clark, A., & Nash, B. (2018, April). *Measuring Reliability of Student Mastery Classifications at Multiple Levels*. Paper submitted to the National Council on Measurement in Education Annual Meeting, New York, NY.
- Nash, B., Clark, A., & **Thompson, W. J.** (2018, April). *Using Simulation to Evaluate Retest Reliability of Assessment Results*. Paper submitted to the National Council on Measurement in Education annual meeting, New York, NY.
- Brussow, J. A., Skorupski, W. P., & **Thompson, W. J.** (2018, April). *A Hierarchical IRT Model for Identifying Group-Level Aberrant Growth*. Paper submitted to National Council on Measurement in Education Annual Meeting, New York, NY.
- Brussow, J. A., Skorupski, W. P., & **Thompson, W. J.** (2017, September). *A Hierarchical IRT Model for Identifying Group-Level Aberrant Growth*. Poster to be presented at the Conference on Test Security, Madison, WI.
- Thompson, W. J.** (2017, July). *Creating an R package for a Reproducible Workflow in Educational Assessment*. Poster presented at the annual user! Conference, Brussels, Belgium.
- Nash, B., & **Thompson, W. J.** (2017, April). *Evaluating an Initialization Tool for Student Placement Into a Map-Based Assessment*. Paper presented at the National Council on Measurement in Education Annual Meeting, San Antonio, TX.
- Moriarty, P. M., Sponseller, C. A., Backes, J., Ruisinger, J., Sehar, N., Denney, L., **Thompson, W. J.**, & Wick, J. A. (2016, July). *Pitavastatin Lowers Plasma Levels of COQ10 Less Than Equipotent Doses of Rosuvastatin or Atorvastatin*. Poster presented at the European Society of Cardiology Congress, Rome, Italy.
- Moriarty, P. M., Sponseller, C. A., Backes, J., Ruisinger, J., Sehar, N., Denney, L., **Thompson, W. J.**, & Wick, J. A. (2016, June). *Pitavastatin Lowers Plasma Levels of COQ10 Less Than Equipotent Doses of Rosuvastatin or Atorvastatin*. Poster presented at the Symposium of the International Atherosclerosis Society: "Anitschkow" Days, St. Petersburg, Russia.
- Thompson, W. J.**, & Chrysikou, E. G. (2014, May). *Dissociating Cognitive and Affective Empathy*. Poster presented at the University of Kansas Symposium for Undergraduate Psychology Engagement and Research, Lawrence, KS.
- Thompson, W. J.**, & Chrysikou, E. G. (2013, November). *Dissociating Cognitive and Affective Empathy: Implications for Mood Disorders*. Poster presented at the 54<sup>th</sup> Annual Meeting of the Psychonomic Society, Toronto, Canada.

- Ramey, C. H., & **Thompson, W. J.** (2013, November). *Getting Into a Character's Head: The Role of Reading Fiction vs. Non-Fiction in Empathy*. Poster presented at the 54<sup>th</sup> Annual Meeting of the Psychonomic Society, Toronto, Canada.
- Chrysikou, E. G., **Thompson, W. J.**, Hanson, G. K., Martin, L. E., & Ingram, R. E. (2013, June). *Transcranial Direct Current Stimulation as a Possible Intervention Tool for Emotion Regulation in Depression*. Poster presented at the Integrating Technology in Translational Research Symposium, Kansas City, MO.

## INVITED TALKS

- Thompson, W. J.** (2016, October). *Data visualization using ggplot2*. Talk given to the Research, Evaluation, Measurement, and Statistics graduate seminar, University of Kansas, Lawrence, KS.
- Thompson, W. J.** (2015, October). *Statistical Analysis in Sports*. Talk given to the Research, Evaluation, Measurement, and Statistics graduate seminar, University of Kansas, Lawrence, KS.
- Thompson, W. J.** (2015, October). *Data Manipulation in R: Using and Transforming Your Data*. Talk given at the Center for Educational Testing and Evaluation Lunch & Learn, University of Kansas, Lawrence KS.
- Thompson, W. J.** (2015, September). *Data Mining in R: Answering Questions About Your Data*. Talk given at the Center for Educational Testing and Evaluation Lunch & Learn, University of Kansas, Lawrence, KS.
- Thompson, W. J.** & Chrysikou, E. G. (2014, April). *Dissociating Cognitive and Affective Empathy*. Talk given at the 17<sup>th</sup> Annual Undergraduate Research Symposium, University of Kansas, Lawrence, KS.
- Thompson, J.** (2013, November). *Using Transcranial Direct Current Stimulation for the Treatment of Mood Disorders*. Talk given to the Hoglund Brain Imaging Center Neuroimaging Journal Club, University of Kansas Medical Center.

## Service

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### MEMBERSHIPS

- American Educational Research Association (Division D: Measurement and Research Methodology)
- American Psychological Association (Division 5: Evaluation, Measurement, and Statistics)
- National Council on Measurement in Education
- Student Representative, Diversity and Testing Committee (2015)

## Relevant Coursework and Technical Knowledge

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### GRADUATE COURSES COMPLETED

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| • Bayesian Statistics                           | • Missing Data Analysis                              |
| • Diagnostic Classification Models              | • Multilevel Modeling                                |
| • Generalized Linear Mixed Models               | • Multivariate Analysis                              |
| • Item Response Theory                          | • Statistical Computing Foundations (Audit)          |
| • Linear Regression                             | • Structural Equation Modeling                       |
| • Managing Research Data in the Social Sciences | • Theory and Applications of Educational Measurement |
| • Meta-Analysis                                 |  |

### TECHNICAL KNOWLEDGE

*Exceptional Proficiency:* R, RMarkdown, Microsoft Office

*Proficiency:* Git/Github, Stan, JAGS, BUGS/OpenBUGS, SPSS, MPlus

*Growing Proficiency:* SQL, C++, HTML, CSS