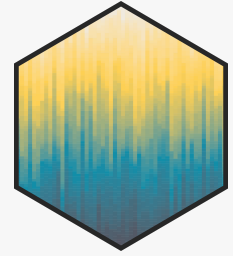


W. Jake Thompson, PhD

Psychometrician & R Developer



EDUCATION

2018
|
2014

Ph.D., Educational Psychology

University of Kansas

Lawrence, KS

- Dissertation: “Evaluating Model Estimation Processes for Diagnostic Classification Models”
- Advisor: Neal Kingston, Ph.D.
- Emphasis: Research, Evaluation, Measurement, and Statistics

2014
|
2010

B.S., Behavioral Neuroscience

University of Kansas

Lawrence, KS

- Honors Thesis: “Dissociating Cognitive and Affective Empathy in Unipolar Depression”
- Advisor: Evangelia G. Chrysikou, Ph.D.
- Minor: Social and Behavioral Sciences Methodology
- Highest Distinction, with University and Departmental Honors

EMPLOYMENT

present
|
August
2014

Accessible Teaching, Learning, and Assessment Systems (ATLAS), University of Kansas

Assistant Director of Psychometrics

Lawrence, KS

- Work across contract and grant-funded projects to promote learning, evaluate student achievement, and develop tools to improve research practice
- Lead a team of 3–4 reports to execute operational scoring and reporting and for the [Dynamic Learning Maps](#) Alternate Assessment
- Develop and lead the implementation of a psychometric research program focused on diagnostic classification modeling, including presentation of findings to a variety of audiences
- Develop internal and external software, such as the R package [measr](#)

Position History

- Assistant Director of Psychometrics (April 2022–present)
- Senior Psychometrician (April 2019–April 2022)
- Psychometrician (April 2018–April 2019)
- Assistant Psychometrician (January 2016–April 2018)
- Graduate Research Assistant (August 2014–January 2016)

CONTACT

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SKILLS

Programming:

R
R Markdown
Stan

Psychometrics:

Diagnostic Classification Models
Item Response Theory
Score Reporting
Reliability
Model Fit

Data Analysis:

Bayesian statistics
Generalized linear models
Multilevel models

present
|
January
2015

Jake Thompson Consulting

Statistical Consultant

📍 Kansas City, KS

- Provide statistical and methodological consultations
- Selected 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.



PUBLICATIONS

2023

Using simulated retests to estimate the reliability of diagnostic assessment systems

Thompson, W. J., Nash, B., Clark, A. K., & Hoover, J. C. (2023). Using simulated retests to estimate the reliability of diagnostic assessment systems. *Journal of Educational Measurement*. <https://doi.org/10.1111/jedm.12359> [Preprint]

2022

Developing and refining a model for measuring implementation fidelity for an instructionally embedded assessment system

Kobrin, J. L., Karvonen, M., Clark, A. K., & **Thompson, W. J.** (2022). Developing and refining a model for measuring implementation fidelity for an instructionally embedded assessment system. *Practical Assessment, Research, and Evaluation*, 27(1), Article 24. <https://scholarworks.umass.edu/pare/vol27/iss1/24>

Effect of lipoprotein apheresis on progression of carotid intima-media thickness in patients with severe hypercholesterolemia

Safarova, M. S., Nugent, A. K., Gorby, L., Dutton, J., **Thompson, W. J.**, & Moriarty, P. M. (2022). Effect of lipoprotein apheresis on progression of carotid intima-media thickness in patients with severe hypercholesterolemia. *American Journal of Cardiology*, 177, 22–27. <https://doi.org/10.1016/j.amjcard.2022.05.002>

Intima-media thickness measured at the common-carotid artery in patients treated with lipoprotein apheresis

Thompson, W. J., Nugent, A., Gorby, L., Dutton, J., Moriarty, P., & Safarova, M. (2022). Intima-media thickness measured at the common-carotid artery in patients treated with lipoprotein apheresis. *Journal of Clinical Lipidology*, 16(3), e46. <https://doi.org/10.1016/j.jacl.2022.05.022>

Gibbs sampler

Thompson, W. J. (2022). Gibbs sampler. In B. B. Frey (Ed.) *The SAGE encyclopedia of research design* (2nd ed., pp. 621–622). SAGE. <https://doi.org/10.4135/9781071812082.n231>

A diagnostic framework for the empirical evaluation of learning maps

Thompson, W. J. & Nash, B. (2022). A diagnostic framework for the empirical evaluation of learning maps. *Frontiers in Education*, 6, 714736. <https://doi.org/10.3389/feduc.2021.714736>

2021

20 years of research in educational measurement

Thompson, W. J. (2021). 20 years of research in educational measurement [Cover graphic]. *Educational Measurement: Issues and Practice*, 40(2). <https://doi.org/10.1111/emip.12348>

2020

New approaches to designing and administering inclusive assessments

Karvonen, M., Kingston, N. M., Wehmeyer, M. L., & **Thompson, W. J.** (2020). New approaches to designing and administering inclusive assessments. *Oxford research encyclopedia of education* (pp. 1–23). Oxford University Press. <https://doi.org/10.1093/acrefore/9780190264093.013.1182>

- 2019 ● **Measuring the reliability of diagnostic mastery classifications at multiple levels of reporting**
Thompson, W. J., Clark, A. K., & Nash, B. (2019). Measuring the reliability of diagnostic mastery classifications at multiple levels of reporting. *Applied Measurement in Education*, 32(4), 298–309. <https://doi.org/10.1080/08957347.2019.1660345> [Preprint]
- 2018 ● **Construct irrelevance**
Thompson, W. J. (2018). Construct irrelevance. In B. B. Frey (Ed.) *The SAGE encyclopedia of educational research, measurement, and evaluation* (pp. 375–376). SAGE. <https://doi.org/10.4135/9781506326139.n143>
- **Evaluating model estimation processes for diagnostic classification models**
Thompson, W. J. (2018). *Evaluating model estimation processes for diagnostic classification models* (Publication No. 10785604) [Doctoral dissertation, University of Kansas]. ProQuest Dissertations and Theses Global. <https://doi.org/10.31237/osf.io/vke5u>
- 2017 ● **Visualizing different levels of compensation in multidimensional item response theory**
Thompson, W. J. (2017). Visualizing different levels of compensation in multidimensional item response theory [Cover graphic]. *Educational Measurement: Issues and Practice*, 36(4). <https://doi.org/10.1111/emip.12177>
- 2016 ● **Assessing cognitive and affective empathy through the Interpersonal Reactivity Index: An argument against a two-factor model**
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. <https://doi.org/10.1177/1073191115599055>
- **Dynamic assessment routing**
Thompson, W. J., Nash, B., Clark, A. K., & Karvonen, M. (2016). Dynamic assessment routing [Featured graphic]. *Educational Measurement: Issues and Practice*, 35(2), 33. <https://doi.org/10.1111/emip.12114>
- 2014 ● **Dissociating cognitive and affective empathy in unipolar depression**
Thompson, W. J. (2014). *Dissociating cognitive and affective empathy in unipolar depression* [Undergraduate thesis, University of Kansas]. Thesis Commons. <https://doi.org/10.31237/osf.io/m4xjf>



TECHNICAL REPORTS

- 2021 ● **2020–2021 DLM administration during COVID-19**
Accessible Teaching, Learning, and Assessment Systems (2021). *2020–2021 DLM administration during COVID-19: Participation, performance, and educational experience* (Technical Report No. 21-02). University of Kansas. [PDF]
- **Using propensity scores to evaluate changes in cross-year performance distributions**
Thompson, W. J. & Hoover, J. C. (2021). *Using propensity scores to evaluate changes in cross-year performance distributions* (Technical Report No. 21-01). University of Kansas; Accessible Teaching, Learning, and Assessment Systems. [PDF]
- **The impact of COVID-19**
Clark, A. K., **Thompson, W. J.**, Kobrin, J., Kavitsky, E., & Karvonen, M. (2021). *The impact of COVID-19: Validity considerations and scoring and reporting in flexible scenarios* (Project Brief No. 21-01). University of Kansas; Accessible Teaching, Learning, and Assessment Systems. [PDF]

2020

Reliability for the Dynamic Learning Maps assessments

Thompson, W. J. (2020). *Reliability for the Dynamic Learning Maps assessments: A comparison of methods* (Technical Report No. 20-03). University of Kansas; Accessible Teaching, Learning, and Assessment Systems. [PDF]

2019

Bayesian psychometrics for diagnostic assessments

Thompson, W. J. (2019). *Bayesian psychometrics for diagnostic assessments: A proof of concept* (Research Report No. 19-01). University of Kansas; Accessible Teaching, Learning, and Assessment Systems. <https://doi.org/10.35542/osf.io/jzqs8>

Instructionally embedded assessment

Clark, A. K., **Thompson, W. J.**, & Karvonen, M. (2019). *Instructionally embedded assessment: Patterns of use and outcomes* (Technical Report No. 19-01). University of Kansas; Accessible Teaching, Learning, and Assessment Systems. [PDF]

2018

Assessing model fit for the Dynamic Learning Maps alternate assessment using a Bayesian estimation

Thompson, W. J. (2018). *Assessing model fit for the Dynamic Learning Maps alternate assessment using a Bayesian estimation* (Technical Report No. 18-01). University of Kansas; Accessible Teaching, Learning, and Assessment Systems. [PDF]



CONFERENCE PRESENTATIONS

2023

Using diagnostic models to evaluate student learning hierarchies in a large-scale assessment

Thompson, W. J., Nash, B., & Hoover, J. C. (2023, September 6–7). *Using diagnostic models to evaluate student learning hierarchies in a large-scale assessment* [Conference session]. Frontier Research in Educational Measurement, Oslo, Norway.

Evaluating the performance of person-fit detection methods in diagnostic classification models

Hoover, J. C. & **Thompson, W. J.** (2023, April 12–15). *Evaluating the performance of person-fit detection methods in diagnostic classification models* [Paper presentation]. National Council on Measurement in Education Annual Meeting, Chicago, IL.

Using machine learning to identify causes of differential item functioning

Hoover, J. C., Frey, B., & **Thompson, W. J.** (2023, April 12–15). *Using machine learning to identify causes of differential item functioning* [Paper presentation]. National Council on Measurement in Education Annual Meeting, Chicago, IL.

Using contribution analysis to evaluate the validity argument for an assessment system

Kobrin, J., Clark, A. K., & **Thompson, W. J.** (2023, April 12–15). Using contribution analysis to evaluate the validity argument for an assessment system. In J. Kobrin (Chair), *Approaches for evaluating and reporting the strength of validity evidence for assessments* [Symposium]. National Council on Measurement in Education Annual Meeting, Chicago, IL.

A simulated retest method for estimating classification reliability

Thompson, W. J. & Clark, A. K. (2023, April 12–15). A simulated retest method for estimating classification reliability. In Y. Bao, M. Madison, & Q. Pan (Chair), *Diagnostic measurement: Operational and implementational issues* [Symposium]. National Council on Measurement in Education Annual Meeting, Chicago, IL. [Slides]

Applied diagnostic classification modeling with the R package measr

Thompson, W. J. (2023, March 28–30). *Applied diagnostic classification modeling with the R package measr* [Paper presentation]. National Council on Measurement in Education Annual Meeting, Virtual Sessions. [Slides]

2022

Visualizing validity evidence

Clark, A. K., **Thompson, W. J.**, & Kobrin, J. (2022, April 22–25). *Visualizing validity evidence: Considering strength of evidence following disrupted administration* [Paper presentation]. National Council on Measurement in Education Annual Meeting, San Diego, CA.

Modifying the M_2 statistic to handle missing data

Hoover, J. C. & **Thompson, W. J.** (2022, April 22–25). *Modifying the M_2 statistic to handle missing data* [Paper presentation]. National Council on Measurement in Education Annual Meeting, San Diego, CA.

Development and evaluation of a composite item-fit statistic for diagnostic classification models

Kobrin, J., **Thompson, W. J.**, Wang, W., & Hoover, J. C. (2022, April 22–25). *Development and evaluation of a composite item-fit statistic for diagnostic classification models* [Paper presentation]. National Council on Measurement in Education Annual Meeting, San Diego, CA.

The impact of COVID-19 on education for students with significant cognitive disabilities

Kobrin, J., Clark, A. K., Beitling, B., & **Thompson, W. J.** (2022, April 21–26). *The impact of COVID-19 on education for students with significant cognitive disabilities* [Paper presentation]. American Educational Research Association Annual Meeting, San Diego, CA.

2021

Vascular age in patients with familial hypercholesterolemia and/or elevated lipoprotein(a) treated with lipoprotein apheresis

Safarova, M. S., Gorby, L., Dutton, J., Nugent, A. K., **Thompson, W. J.**, & Moriarty, P. M. (2021, November 13–15). *Vascular age in patients with familial hypercholesterolemia and/or elevated lipoprotein(a) treated with lipoprotein apheresis* [Poster presentation]. American Heart Association Scientific Sessions, Virtual Conference.

The I-SMART project: Empirical map validation

Hoover, J. C., **Thompson, W. J.**, Nash, B., & Kobrin, J. (2021, June 8–11). *The I-SMART project: Empirical map validation* [Paper presentation]. National Council on Measurement in Education Annual Meeting, Virtual Conference. [[PDF](#)]

Technical evidence for diagnostic assessments

Thompson, W. J., Clark, A. K., & Nash, B. (2021, June 8–11). Technical evidence for diagnostic assessments. In W. J. Thompson (Chair), *Diagnostic assessments: Moving from theory to practice* [Symposium]. National Council on Measurement in Education Annual Meeting, Virtual Conference. [[PDF](#) / [Slides](#)]

Developing and refining a model for measuring implementation fidelity for an instructionally embedded assessment system

Kobrin, J., Karvonen, M., Burnes, J., **Thompson, W. J.**, & Clark, A. K. (2021, April 9–12). *Developing and refining a model for measuring implementation fidelity for an instructionally embedded assessment system* [Poster presentation]. American Educational Research Association Annual Meeting, Virtual Conference. [[PDF](#)]

2020

Model fit for diagnostic classification models

Thompson, W. J. & Hoover, J. C. (2020, June 2–3). *Model fit for diagnostic classification models* [Paper presentation]. Modern Modeling Methods Conference, University of Connecticut, Storrs, CT. (Conference canceled)

Diagnostic assessment: DIF detection from binary and aggregate mastery classifications

Hoover, J. C., **Thompson, W. J.**, Clark, A. K., & Nash, B. (2020, April 16–20). *Diagnostic assessment: DIF detection from binary and aggregate mastery classifications* [Paper presentation]. National Council on Measurement in Education Annual Meeting, San Francisco, CA. (Conference canceled)

- **Comparing reliability methods for diagnostic mastery classifications**
Thompson, W. J., Nash, B., & Clark, A. K. (2020, April 16–20). *Comparing reliability methods for diagnostic mastery classifications* [Paper presentation]. National Council on Measurement in Education Annual Meeting, San Francisco, CA. (Conference canceled)
- **Branding and packaging reports with R Markdown**
Thompson, W. J. & Pablo, N. (2020, January 29–30). *Branding and packaging reports with R Markdown* [Conference session]. rstudio::conf(2020), San Francisco, CA. <http://bit.ly/ratlas-rstudioconf>
- 2019 ● **Empirical methods for evaluating maps**
Thompson, W. J. & Nash, B. (2019, April 4–8). Empirical methods for evaluating maps: Illustrations and results. In M. Karvonen (Chair), *Beyond learning progressions: Maps as assessment architecture* [Symposium]. National Council on Measurement in Education Annual Meeting, Toronto, Canada. [[PDF](#) / [Slides](#)]
- 2018 ● **A hierarchical IRT model for identifying group-level aberrant growth**
Brussow, J. A., Skorupski, W. P., & **Thompson, W. J.** (2018, April 12–16). *A hierarchical IRT model for identifying group-level aberrant growth* [Paper presentation]. National Council on Measurement in Education Annual Meeting, New York, NY.

● **Using simulation to evaluate retest reliability of assessment results**
Nash, B., Clark, A. K., & **Thompson, W. J.** (2018, April 12–16). *Using simulation to evaluate retest reliability of assessment results* [Paper presentation]. National Council on Measurement in Education Annual Meeting, New York, NY. [[PDF](#)]

● **Measuring the reliability of student mastery classifications at multiple levels of reporting**
Thompson, W. J., Clark, A. K., & Nash, B. (2018, April 12–16). *Measuring the reliability of student mastery classifications at multiple levels of reporting* [Paper presentation]. National Council on Measurement in Education Annual Meeting, New York, NY. [[PDF](#) / [Slides](#)]
- 2017 ● **A hierarchical IRT model for identifying group-level aberrant growth**
Brussow, J. A., Skorupski, W. P., & **Thompson, W. J.** (2017, September 6–8). *A hierarchical IRT model for identifying group-level aberrant growth* [Poster presentation]. Conference on Test Security, Madison, WI.

● **Creating an R package for a reproducible workflow in educational assessment**
Thompson, W. J. (2017, July 4–7). *Creating an R package for a reproducible workflow in educational assessment* [Poster presentation canceled]. useR! – International R User Conference, Brussels, Belgium.

● **Evaluating an initialization tool for student placement into a map-based assessment**
Nash, B. & **Thompson, W. J.** (2017, April 26–30). *Evaluating an initialization tool for student placement into a map-based assessment* [Paper presentation]. National Council on Measurement in Education Annual Meeting, San Antonio, TX. [[PDF](#)]
- 2016 ● **Pitavastatin lowers plasma levels of COQ10 less than equipotent doses of rosuvastatin or atorvastatin**
Moriarty, P. M., Sponseller, C. A., Backes, J., Ruisinger, J., Sehar, N., Denney, L., **Thompson, W. J.**, & Wick, J. A. (2016, August 27–31). *Pitavastatin lowers plasma levels of COQ10 less than equipotent doses of rosuvastatin or atorvastatin* [Poster presentation]. European Society of Cardiology Congress, Rome, Italy.

● **Pitavastatin lowers plasma levels of COQ10 less than equipotent doses of rosuvastatin or atorvastatin**

Moriarty, P. M., Sponseller, C. A., Backes, J., Ruisinger, J., Sehar, N., Denney, L., **Thompson, W. J.**, & Wick, J. A. (2016, June 2–4). *Pitavastatin lowers plasma levels of COQ10 less than equipotent doses of rosuvastatin or atorvastatin* [Poster presentation]. Symposium of the International Atherosclerosis Society: “Anitschkow” Days, Saint Petersburg, Russia.

2014

● **Dissociating cognitive and affective empathy**

Thompson, W. J. & Chrysikou, E. G. (2014, April 29). *Dissociating cognitive and affective empathy* [Poster presentation]. University of Kansas Symposium for Undergraduate Psychology Engagement and Research, Lawrence, KS.

● **Dissociating cognitive and affective empathy**

Thompson, W. J. & Chrysikou, E. G. (2014, April 26). *Dissociating cognitive and affective empathy* [Conference session]. University of Kansas Undergraduate Research Symposium, Lawrence, KS.

2013

● **Getting into a character’s head: The role of reading fiction vs. non-fiction in empathy**

Ramey, C. H. & **Thompson, W. J.** (2013, November 14–17). *Getting into a character’s head: The role of reading fiction vs. non-fiction in empathy* [Poster presentation]. Psychonomic Society Annual Meeting, Toronto, Canada.

● **Dissociating cognitive and affective empathy: Implications for mood disorders**

Thompson, W. J. & Chrysikou, E. G. (2013, November 14–17). *Dissociating cognitive and affective empathy: Implications for mood disorders* [Poster presentation]. Psychonomic Society Annual Meeting, Toronto, Canada.

● **Transcranial direct current stimulation as a possible intervention tool for emotion regulation in depression**

Chrysikou, E. G., **Thompson, W. J.**, Hanson, G. K., Martin, L. E., & Ingram, R. E. (2013, June 20). *Transcranial direct current stimulation as a possible intervention tool for emotion regulation in depression* [Poster presentation]. Integrating Technology in Translational Research Symposium, Kansas City, MO.

● **Color pleasantness modulated by physiological arousal**

Thompson, W. J., Burda, K., Jamison, A., & Supica, D. (2013, May 7). *Color pleasantness modulated by physiological arousal* [Poster presentation]. University of Kansas Symposium for Undergraduate Psychology Engagement and Research, Lawrence, KS.

● **Performance, competency, and career level among physicians in a treatment program**

Gorey, C. M., **Thompson, W. J.**, Vickers, K. L., Williams, M. V., & Williams, B. W. (2013, April 18–20). *Performance, competency, and career level among physicians in a treatment program* [Poster presentation]. Federation of State Medical Boards Annual Meeting, Boston, MA.

● **Competency, diagnosis, and career level among physicians in a treatment program**

Williams, B. W., Gorey, C. M., **Thompson, W. J.**, Vickers, K. L., & Williams, M. V. (2013, April 18–20). *Competency, diagnosis, and career level among physicians in a treatment program* [Poster presentation]. Federation of State Medical Boards Annual Meeting, Boston, MA.

📦 **R PACKAGES**

2023

● **ratlas: ATLAS formatting functions and templates**

Thompson, W. J., Pablo, N., & Hoover, J. (2023). *ratlas: ATLAS formatting functions and templates*. R package version 0.0.0.9000. <https://ratlas.netlify.app>

- **taylor: Lyrics and song data for Taylor Swift's discography**
Thompson, W. J. (2023). *taylor: Lyrics and song data for Taylor Swift's discography*. R package version 2.0.1.9000. <https://taylor.wjakethompson.com>
- **measr: Bayesian psychometric measurement using 'Stan'**
Thompson, W. J. (2023). *measr: Bayesian psychometric measurement using 'Stan'*. R package version 0.2.1.9000. <https://measr.info>
- **wjake: Personal R package for miscellaneous themes, templates, and functions**
Thompson, W. J. (2023). *wjake: Personal R package for miscellaneous themes, templates, and functions*. R package version 0.1.0. <https://github.com/wjakethompson/wjake>
- **dcm2: Calculating the M_2 model fit statistic for diagnostic classification models**
 Hoover, J. & **Thompson, W. J.** (2023). *dcm2: Calculating the M_2 model fit statistic for diagnostic classification models*. R package version 1.0.2. <https://CRAN.R-project.org/package=dcm2>
- **tdcmStan: Automating the creation of Stan code for TDCMs**
 Hoover, J. & **Thompson, W. J.** (2023). *tdcmStan: Automating the creation of Stan code for TDCMs*. R package version 2.0.0. <https://CRAN.R-project.org/package={tdcmStan}>
- 2022 ● **dlmr: The Dynamic Learning Maps psychometric operational workflow**
Thompson, W. J. (2022). *dlmr: The Dynamic Learning Maps psychometric operational workflow*. Internal R package.
- **rstandlm: Bayesian psychometrics for Dynamic Learning Maps**
Thompson, W. J. (2022). *rstandlm: Bayesian psychometrics for Dynamic Learning Maps*. Internal R package.
- 2020 ● **jayhawkdown: A bookdown template for University of Kansas dissertations**
Thompson, W. J. (2020). *jayhawkdown: A bookdown template for University of Kansas dissertations*. R package version 1.0.0. <https://jayhawkdown.wjakethompson.com>



TUTORIALS AND WORKSHOPS

- 2023 ● **Diagnostic modeling with R and Stan**
Thompson, W. J. (2023, June 20–23). *Diagnostic modeling with R and Stan* [Workshop]. StanCon, Washington University in St. Louis, MO.
- 2021 ● **Tidy data science with the Tidyverse and Tidymodels**
Thompson, W. J. (2021, June 14–18). *Tidy data science with the Tidyverse and Tidymodels* [Workshop]. Summer Research Methods Camp, hosted by the Achievement and Assessment Institute, University of Kansas, Lawrence, KS. <https://tidyds-2021.wjakethompson.com>
- 2020 ● **Using R for item response theory**
Thompson, W. J. (2020, February 24). Using R for item response theory [Guest lecture]. In N. Kingston (Instructor), *Item response theory* [EPSY 922]. Department of Educational Psychology, University of Kansas, Lawrence, KS. <https://github.com/wjakethompson/r-irt>

2019

Tidy data science

Thompson, W. J. (2019, May 20–24). *Tidy data science* [Workshop]. Stats Camp: Summer Statistical Institute, hosted by the Center for Research Methods and Data Analysis and the Achievement and Assessment Institute, University of Kansas, Lawrence, KS. <https://tidy-ds.wjakethompson.com>

Psychometric considerations for learning maps-based assessments

Thompson, W. J., Nash, B., & Clark, A. K. (2019, February 22). *Psychometric considerations for learning maps-based assessments* [Invited talk]. Educational Psychology Proseminar, University of Kansas, Lawrence, KS. <https://www.wjakethompson.com/talk/2019-02-psycho-learning-maps/>

2017

Introduction to ggplot2

Thompson, W. J. (2017, March 1). Introduction to ggplot2 [Tutorial]. In P. E. Johnson (Instructor), *Statistical computing* [POLS 909]. Department of Political Science, University of Kansas, Lawrence, KS. <https://github.com/wjakethompson/pols-909-ggplot2>

2016

Data visualization using ggplot2

Thompson, W. J. (2016, October 10). *Data visualization using ggplot2* [Tutorial]. Research, Evaluation, Measurement, and Statistics graduate seminar, University of Kansas, Lawrence, KS. <https://github.com/wjakethompson/ggplot2-seminar-talk>

2015

Statistical analysis in sports

Thompson, W. J. (2015, October 9). *Statistical analysis in sports* [Invited talk]. Research, Evaluation, Measurement, and Statistics graduate seminar, University of Kansas, Lawrence, KS. [[Slides](#)]

Data manipulation in R

Thompson, W. J. (2015, October 7). *Data manipulation in R: Using and transforming your data* [Tutorial]. Center for Educational Testing and Evaluation, University of Kansas, Lawrence, KS.

Data mining in R

Thompson, W. J. (2015, September 30). *Data mining in R: Answering questions about your data* [Tutorial]. Center for Educational Testing and Evaluation, University of Kansas, Lawrence, KS.

2013

Using transcranial direct current stimulation for the treatment of mood disorders

Thompson, W. J. & Chrysikou, E. G. (2013, November 22). *Using transcranial direct current stimulation for the treatment of mood disorders* [Invited talk]. Hoglund Brain Imaging Center Neuroimaging Journal Club, University of Kansas Medical Center, Kansas City, MO. [[Slides](#)]



AWARDS

Currently Funded Projects

- **Principal Investigator:** *Improving Software and Methods for Estimating and Evaluating Diagnostic Classification Models* (2021–2023). USED, Institute of Education Sciences; \$225,000.
- **Co-Principal Investigator:** *Dynamic Learning Maps (DLM) Alternate Assessment System*. Ongoing state contracts. PI: Meagan Karvonen.
- **Other Personnel (Psychometrician):** *Pathways for Instructionally Embedded Assessment (PIE)* (2022–2026). USED, Office of Elementary and Secondary Education, Office of School Support and Accountability; \$2,500,000. PI: Brooke Nash.

Previously Funded Projects

- **Other Personnel (Psychometrician):** *Innovations in Science Map, Assessment, and Reporting Technology (I-SMART)* (2016–2020). USED, Office of Elementary and Secondary Education. PI: Meagan Karvonen.

Unfunded Projects

- **Principal Investigator:** *Improving Software and Methods for Estimating and Evaluating Diagnostic Classification Models* (2020–2022). USED, Institute of Education Sciences; \$225,000.

Professional Awards

- AERA Division H Outstanding Publication Award for Advances in Methodology (2023)
- Educational Measurement: Issues and Practice Cover Showcase Winner (2023)
- AERA Inclusion and Accessibility in Educational Assessment SIG Annual Award (2022)
- Educational Measurement: Issues and Practice Cover Showcase Winner (2020)
- Educational Measurement: Issues and Practice Cover Showcase Winner (2017)
- Educational Measurement: Issues and Practice Cover Showcase Top 10 (2016)
- Chancellor's Doctoral Fellowship (2014–2018)
- Outstanding Research by an Undergraduate in Psychology (2014)
- University of Kansas Department of Psychology Best Honors Thesis (2014)
- Dane G. Hansen Leader of Tomorrow Scholarship (2010–2014)

SERVICE

Institutional Service

- University of Kansas
 - Research Technology working group (2021)

Professional Affiliations

- American Educational Research Association (2015–present)
 - Division D: Measurement and Research Methodology
 - SIG: Cognition and Assessment
 - Program Chair, Cognition and Assessment SIG (2022–2023)
- American Statistical Association (2019–present)
 - Sections: Bayesian Statistical Science, Statistical Computing, Statistics in Sports
- National Council on Measurement in Education (2015–present)
 - SIGMIE: Diagnostic Measurement
 - Co-Chair, Diagnostic Measurement SIGMIE (2024–2026)
 - Student Representative, Diversity and Testing Committee (2015)

Reviewer

- Behaviormetrika (2019–present)
- International Journal of Research in Education and Science (2019–present)
- Journal of Educational Measurement (2023–present)
- Journal of Open Source Software (2019–present)
- National Council on Measurement in Education annual meeting (2019–present)
- American Educational Research Association, Division H, Outstanding Publications (2019)