

Christopher G. Thompson, Ph.D

CONTACT INFORMATION

Address: Department of Educational Psychology
Texas A&M University
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Google Scholar: <https://scholar.google.com/citations?user=upBD75YAAAAJ&hl=en&authuser=1>

PROFESSIONAL EXPERIENCE

- Assistant Professor of Research, Measurement and Statistics
Texas A&M University **August 2017 - Present**
- Director of Educational Research and Evaluation Laboratory
Texas A&M University **January 2019 - Present**
- Postdoctoral Associate in Measurement and Statistics
Florida State University **April 2016 - June 2017**

EDUCATION

Florida State University, Tallahassee, FL

- **Doctor of Philosophy**, Measurement and Statistics **April 2016**
Dissertation: A Weakly-informative Group-specific Prior Distribution for Meta-analysis
Advisor: Betsy J. Becker
- **Master of Science**, Measurement and Statistics **August 2011**
Thesis: The Impact of Multiple-endpoint Dependency on Homogeneity Measures in Meta-analysis
Advisor: Betsy J. Becker
- **Bachelor of Science**, Secondary Mathematics Education **December 2009**

RESEARCH

PEER-REVIEWED ARTICLES

* Denotes current or former Texas A&M student collaboration

Li*, H., Luo, W., Baek, E., **Thompson, C. G.**, & Lam*, K. H. (in press). Estimation and statistical inferences of variance components in the analysis of single-case experimental design using multilevel modeling. *Behavior Research Methods*.

Aloe, A., **Thompson, C. G.**, Liu, V. Z., & Lin, L. (in press). Estimating partial standardized mean differences from regression models. *The Journal of Experimental Education*.

Chen, Y.-J., **Thompson, C. G.**, Xu*, Z., Irey, R., & Georgiou, G. K. (in press). Rapid automatized naming and spelling performance in alphabetic languages: A meta-analysis. *Reading and Writing*.

- Gilson, C. B., **Thompson, C. G.**, Ingles*, K. E., Stein*, K. E., Nygaard*, M., & Wang*, N. (2021). The job coaching academy for transition educators: A preliminary evaluation. *Career Development and Transition for Exceptional Individuals*, 44, 148-159.
- Amer, F. A., **Thompson, C. G.**, & Lin, L. (2021). Bayesian methods for meta-analyses of binary outcomes: Implementations, examples, and impact of priors. *International Journal of Environmental Research and Public Health*, 18(7), 1-14.
- Russell*, A. M., Yu*, B., **Thompson, C. G.**, Sussman, S. Y., & Barry, A. E. (2020). Assessing the relationship between youth religiosity and their alcohol use: A meta-analysis from 2008-2018. *Addictive Behaviors*, 106, 1-10.
- Thompson, C. G.**, & Von Gillern, S. (2020). Video-game based instruction for vocabulary acquisition with English language learners: A Bayesian meta-analysis. *Educational Research Review*, 30, 1-23.
- Thompson, C. G.**, & Becker, B. J. (2020). A group-specific prior distribution for effect-size heterogeneity in meta-analysis. *Behavior Research Methods*, 52(5), 2020-2030.
- Thompson, C. G.**, & Semma*, B. (2020). An alternative approach to frequentist meta-analysis: A demonstration of Bayesian meta-analysis in adolescent development research. *Journal of Adolescence*, 82, 86-102.
- Semma*, B., Henri*, M. A., Luo, W., & **Thompson, C. G.** (2019). Mixed-effects reliability generalization of the meaning in life questionnaire. *Journal of Psychoeducational Assessment*, 37(7), 837-851.
- Tokac, U., Novak, E., & **Thompson, C. G.** (2019). Effects of game-based learning on student mathematics achievement: A meta-analysis. *Journal of Computer Assisted Learning*, 35(3), 407-420.
- Thompson, C. G.**, Kim, R.-S., Aloe, A. M., & Becker, B. J. (2017). Extracting the variance inflation factor and other multicollinearity diagnostics from typical regression results. *Basic and Applied Social Psychology*, 39(2), 81-90.
- Yeaton, W. H., & **Thompson, C. G.** (2016). Transforming the canons of John Stuart Mill from philosophy to replicative empirical research: The Common Cause research design. *Journal of Methods and Measurement in the Social Sciences*, 7(2), 122-143.
- Thompson, C. G.** (2016). Graphing effects as fuzzy numbers in meta-analysis. *Journal of Modern Applied Statistical Methods*, 15(1), 957-977.
- Thompson, C. G.**, & Becker, B. J. (2014). The impact of multiple endpoint dependency on Q and I^2 in meta-analysis. *Research Synthesis Methods*, 5(3), 235-253.
- Andon, A., **Thompson, C. G.**, & Becker, B. J. (2014). A quantitative synthesis of the immigrant achievement gap across OECD countries. *Large-scale Assessments in Education*, 2(7), 1-20.
- Aloe, A., & **Thompson, C. G.** (2013). The synthesis of partial effect sizes. *Journal of the Society for Social Work and Research*, 4(4), 390-405.

UNDER REVIEW

Thompson, C. G., Semma*, B., Wang*, N., & Ettekal, I. (revise and resubmit). Using Bayesian meta-regression to advance prevention science research: An introduction and empirical illustration.

Wang, Y., Lin, L., **Thompson, C. G.**, & Chu, H. (revise and resubmit). A penalization approach to random-effects meta-analysis.

Harris*, B., McCredie*, M. N., Truong*, T., Regan*, T., Leach*, W., **Thompson, C. G.**, & Fields, S. A. (revise and resubmit). Relations between adolescent sensation seeking and risky sexual behaviors across sex, race, and age: A meta-analysis.

Thompson, C. G., Yeaton, W. H., Velasquez, T., Petrova, K., & Becker, B. J. (under review). Extending the reach of the Common Cause design using meta-analytic methods: Applications and issues.

Suárez*, M. I., Stackhouse*, E. W., Keese*, J. & **Thompson, C. G.** (under review). A meta-analysis examining the relationship between parents' sexual orientation and children's educational and developmental outcomes.

He*, B., & **Thompson, C. G.** (under review). Family involvement on English learners' outcomes-A synthetic analysis.

Keese*, J., **Thompson, C. G.**, Waxman, H. C., McIntush*, K., & Svajda-Hardy*, M. (under review). A worthwhile endeavor? A meta-analysis of research on novice teacher induction programs.

Rice*, M., Erbeli, F., **Thompson, C. G.**, Sallese*, M. R., & Fogarty, M. (under review). Efficacy of phonemic awareness instruction: A meta-analysis relevant to the COVID-19 pandemic.

Yllades*, V., Semma*, B., **Thompson, C. G.**, Pierson*, L., & Ganz, J. B. (under review). Meta-analysis on the effect of bilingual exposure on language development for individuals with autism spectrum disorders.

Perez*, K. A., Lench, H. C., & **Thompson, C. G.** (under review). Indicators of self-transformative change after experimental elicitations: A meta-analysis.

Pierson*, L. M., Ganz, J. B., **Thompson, C. G.**, Wattanawongwan*, S., Yllades*, V., & Thompson, J. L. (under review). Storybooks used as intervention anchors for children with developmental disabilities: A systematic review and meta-analysis.

IN PREPARATION

Aloe, A. M., Becker, B. J., **Thompson, C. G.**, & Park, S. (in preparation). Planning for precise meta-analysis and meta-regression.

Thompson, C. G., Semma*, B., & Baek, E. (in preparation). A data-driven prior distribution for between-studies heterogeneity in meta-analysis.

Thompson, C. G., Aloe, A. M., & Becker, B. J. (in preparation). Synthesizing estimators from regression models of different sizes.

Baek, E., Semma*, B., Altinsoy*, F., Ji*, Y., Lam*, K., Luo, W., & **Thompson, C. G.** (in preparation). A systematic review of meta-analyzing single-case data using multilevel modeling.

Calabrese*, J. E., Capraro, M. M., & **Thompson, C. G.** (in preparation). The Relationship between problem and problem solving.

Nanavaty*, N., **Thompson, C. G.**, Meagher, M., McCord, C., & Mathur, V. A. (in preparation). Traumatic life experience and pain sensitization: Meta-analysis of laboratory findings.

BOOK CHAPTERS Aloe, A. M., **Thompson, C. G.**, & Reed, D. K. (2020). CUTOs: A framework for contextualizing evidence. In B. Albers, A. Shlonsky, & R. Mildon (Eds.), *Implementation science 3.0* (pp. 39-52). Springer.

Arrastia-Chisholm, M. C., & **Thompson, C. G.** (2018). Teacher self-regulation to preservice teachers: Comparing teacher self-regulation across cultures. In G. Rich, et al. (Eds.), *Teaching psychology around the world* (pp. 201-211). Cambridge Scholars Publishing.

Becker, B. J., & **Thompson, C. G.** (in preparation). Meta-analysis. In D. McCaffrey (Ed.), *International Encyclopedia of Education* (4th ed.). Elsevier.

CONFERENCE PROCEEDINGS Banerjee*, M., McKeown, D., **Thompson, C.** & Owens, J. (2021). How does blended learning in teacher professional development impact student achievement? A meta-analysis. *Society for Information Technology and Teacher Education International Conference*.

BOOK REVIEWS **Thompson, C.** (2012). [Review of the book *In Pursuit of the Traveling Salesman* by W. J. Cook]. *Locis*. DOI: 10.4169/loci003821

CONFERENCE PRESENTATIONS Rice*, M., Erbeli, F., **Thompson, C.**, Sallese*, M. R., & Fogarty, M. (2021, September). *Phonemic awareness: Using meta-analysis findings to plan instruction during COVID19 and beyond*. Poster presented at the annual meeting of the Society for Research on Educational Effectiveness, Arlington, VA.

Rice*, M., Erbeli, F., **Thompson, C.**, Sallese*, M. R., & Fogarty, M. (2021, July). *Efficacy of phonemic awareness instruction: A meta-analysis relevant to the COVID-19 pandemic*. Poster presented at the 28th annual meeting of the Society for the Scientific Study of Reading. (Virtual Conference).

Harris*, B., McCredie*, M., Truong*, T., Regan, T., Leach, W., **Thompson, C.**, & Fields, S. A. (2021, April). Relations between sensation seeking and risky sexual behavior in adolescents across age, sex, and race: A meta-analysis. Paper presented at the annual meeting of the Society of Behavioral Medicine. (Virtual Conference).

Keese*, J., **Thompson, C. G.**, McIntush*, K., & Svajda-Hardy*, M. (2021, April). *Studies on newly hired teachers: What we know from published research to what teachers experience*. Paper presented at the annual meeting of the American Educational Research Association. (Virtual Conference).

Li*, H., Luo, W., Lam*, K., Baek, E., & **Thompson, C. G.** (2021, April) Multilevel modeling in single case studies with count and proportion data. Structured Poster Session presented at the annual meeting of the American Educational Research Association. (Virtual Conference).

Banerjee*, M., McKeown, D., **Thompson, C.** & Owens, J. (March, 2021). How does blended learning in teacher professional development impact student achievement? A meta-analysis. Paper presented at the annual meeting of the Society for Information Technology and Teacher Education. (Virtual Conference).

Thompson, C. G. (2021, February). *What is Bayesian logic?* Talk given at 5th annual Voices of Impact Series, College Station, TX.

Li*, H., Lam*, K., Luo, W., Baek, E., & **Thompson, C. G.** (June, 2020). *Innovated methods to improving performance of multilevel modeling for variance components in the analysis of SCED*. Paper presented at the annual meeting of the Modern Modeling Methods, Storrs, CT. (Conference Canceled).

Thompson, C. G., & Novak, E. (2020, April). *Identifying action video game characteristics: An exploratory factor analysis*. Roundtable Session presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (Conference Canceled).

Suárez*, M. I., Stackhouse, E. W., Keese*, J., & **Thompson, C. G.** (2020, April). *A meta-analysis examining the relationship between parents' sexual orientation and children's developmental outcomes*. Roundtable Session presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (Conference Canceled).

Li*, H., Lam*, K. H., Luo, W., Baek, E., & **Thompson, C. G.** (2020, April). *Performance of multilevel modeling and power of tests for variance components in the analysis of single-case experimental designs*. Structured Poster Session presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (Conference Canceled).

Gilson, C., **Thompson, C. G.**, Ingles*, K., Stein*, K., Nygaard*, M., & Wang*, N. (2019, October). *Lessons learned from the trenches of transitions: The job coaching academy a pilot study*. Paper presented at the annual meeting of the Division on Career Development and Transition International Conference, Seattle, WA.

Thompson, C. G., & Von Gillern, S. (2019, April). *Video-game based instruction for vocabulary acquisition with English language learners: A Bayesian meta-analysis*. Paper presented at the annual meeting of the American Educational Research Association, Toronto, Canada.

Zhu*, G., Suárez*, M. I., **Thompson, C. G.**, & Peng, Z. (2019, April). *A meta-analysis on the effect of flipped instruction on K-12 students' academic achievement*. Paper presented at the annual meeting of the American Educational Research Association, Toronto, Canada.

Baek, E., Semma*, B., Altinsoy*, F., Luo, W., & **Thompson, C. G.** (2019, April). *A systematic review of meta-analyzing single-case data using multilevel modeling*. Structured Poster presented at the annual meeting of the American Educational Research Association, Toronto, Canada.

Novak, E., & **Thompson, C. G.** (2019, April). *The development of an action video game characteristics instrument: An exploratory factor analysis*. Poster presented at the annual meeting of the American Educational Research Association, Toronto, Canada.

Thompson, C. G., Semma*, B., & Baek, E. (2019, February). *A data-driven prior distribution for between-studies heterogeneity in meta-analysis*. Paper presented at the annual Texas Universities' Educational Statistics & Psychometrics Alliance Conference, Dallas, TX.

Gilson, C., **Thompson, C. G.**, Ingles*, K., Stein*, K., Nygaard*, M., & Wang*, N. (2019, February). *The job coaching academy*. Paper presented at the annual Texas Transition Conference, San Antonio, TX.

Gilson, C., & **Thompson, C. G.** (2018, October). *Coaching the coach: A comprehensive job coaching academy for special education teachers and paraprofessionals*. Paper presented at the annual meeting of the Division on Career Development and Transition International Conference, Cedar Rapids, IA.

Thompson, C. G., & Becker, B. J. (2018, April). *The meta-analysis of bivariate and partial effects using a power prior distribution*. Roundtable Session presented at the annual meeting of the American Educational Research Association, New York, NY.

Tokac, U., Novak, E., & **Thompson, C. G.** (2018, April). *Effects of game-based instruction on mathematics achievement: A meta-analysis*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

Semma*, B., Henri*, M. A., Luo, W., & **Thompson, C. G.** (2018, April). *Bayesian, method of moments, and REML estimation in mixed-effects reliability generalization studies*. Poster presented at the annual meeting of the National Council on Measurement in Education, New York, NY.

Thompson, C. G. (2016, April). *A new group-specific weakly-informative prior distribution for Bayesian meta-analysis*. Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C.

Thompson, C. G., & Aloe, A. M. (2016, April). *Assessing meta-analysis results from regression models of different sizes*. Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C.

Becker, B. J., **Thompson, C. G.**, & Aloe, A. M. (2015, November). *Computing the variance inflation factor post hoc*. Paper presented at the annual meeting of the Florida Educational Research Association, Altamonte Springs, FL.

Thompson, C. G., & Aloe, A. M. (2015, April). *Synthesizing meta-analysis results from regression models of different sizes*. Poster presented at the In-Progress Research Gala at the annual meeting of the American Educational Research Association, Chicago, IL.

Novak, E., Tokac, U., & **Thompson, C. G.** (2015, April). *Effects of game-based learning on students' mathematics achievement: A meta-analysis*. Poster presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Thompson, C. G., & Aloe, A. M. (2014, November). *Assessing meta-analysis results from regression models of different sizes*. Paper presented at the annual meeting of the Florida Educational Research Association, Cocoa Beach, FL.

Becker, B. J., Aloe A. M., & **Thompson, C. G.** (2014, August). *Teaching about generalizability in meta-analyses*. Poster presented at the Joint Statistical Meeting of the American Statistical Association, Boston, MA.

Thompson, C. G. (2013, June). *An alternative to the forest plot: Graphing effects as fuzzy numbers*. Paper presented at the annual meeting of the Society for Research Synthesis Methods, Providence, RI.

Thompson, C. G., & Becker, B. J. (2013, April). *How violating the independence assumption in meta-analyses with multiple-endpoint data affects the Q statistic*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Andon, A., **Thompson, C. G.**, & Becker, B. J. (2013, April). *A meta-analysis of the immigrant achievement gap across OECD countries*. Poster presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Sakon, F., Kuleshov, A., & **Thompson, C.** (2012, April). *Merging history and technology: Immersive strategies for solving cubic polynomials*. Paper presented at the annual meeting of the National Council of Teachers of Mathematics, Philadelphia, PA.

Thompson, C. G., & Becker, B. J. (2011, November). *The impact of multiple endpoint dependency on homogeneity measures in meta-analysis*. Paper presented at the annual meeting of the Florida Educational Research Association, Orlando, FL.

Thompson, C. G., Reta-Sánchez, A., Becker, B. J., & Lang, L. B. (2011, May). *A meta-analysis of the immigrant achievement gap: An analysis of PISA, TIMSS, and PIRLS*. Paper presented at the annual meeting of the Comparative and International Education Society, Montréal, Canada.

Thompson, C. G., & Becker, B. J. (2010, November). *A simulation of dependent outcome in multiple-endpoint meta-analyses using Q statistics and Type I error rates*. Poster presented at the annual meeting of the Florida Educational Research Association, Orlando, FL.

INVITED TALKS

Thompson, C. G. (2021, September). *Informative prior distributions using fuzzy numbers in Bayesian meta-analysis*. Texas A&M University, College Station, TX. (Webinar).

Thompson, C. G. (2017, November). *Meta-analysis concepts and applications*. Samford University, Birmingham, AL. (Webinar).

Thompson, C. G. (2017, March). *A meta-analysis of the immigrant achievement data: timeline, original study, and re-examination*. Florida State University, Tallahassee, FL.

Thompson, C. G. (2015, December). *A brief introduction to Bayesian meta-analysis: What is it and why all the hype?* University of Iowa, Iowa City, IA. (Webinar).

WORKSHOPS

Thompson, C. G., Ferron, J., & Joo, S. (2016, November). *Meta-analysis of group and single-case studies*. Workshop presented at the annual meeting of the Florida Educational Research Association, Lakeland, FL.

Aloe, A. M., **Thompson, C. G.**, & Gozutok, A. S. (2014, November). *Using meta-analyses for policy decisions*. Workshop presented at the annual meeting of the Florida Educational Research Association, Cocoa Beach, FL.

GRANTS

Thomas, A., Young, J., **Thompson, C. G.**, & Ramadan, H. M. (Under Review). *Educational Math Games? A Gap Analysis*. Institute of Education Sciences. Role: Co-Principal Investigator.

- Roles and Responsibilities: Main role will be quantitative methodologist. I will help design and implement a meta-analysis and evidence gap analysis. I will also contribute to conference presentations and a series of papers related to the sets of analyses.

Thompson, C. G., & Baek, E. (2021). *A Bridge Between Contemporary Meta-analysis and Applied Research: Explorations and Extensions of Bayesian Meta-analysis for Educational and Social Science Researchers*. College of Education and Human Development Catapult Grant, \$30,000. Role: Principal Investigator.

- Roles and Responsibilities: Main roles will include: Responsibility for overseeing the grant and general administrative duties (e.g., budget). In terms of applied work, I will be responsible for educating applied researchers on Bayesian meta-analysis using group-based data. Dr. Baek, an advanced RMS graduate student, and myself will collaborate to disseminate applied and tutorial papers on Bayesian meta-analysis software to various educational and social science journals. The three aforementioned persons will also facilitate corresponding workshops and presentations.

Gilson, C. B., & **Thompson, C. G.** (2017). *The Job Coaching Academy: A Proposed Training Program for Job Coaches in Special Education Transition Programs*. College of Education and Human Development Catapult Grant, \$30,000. Role: Co-Principal Investigator.

- Roles and Responsibilities: Main role was quantitative methodologist. I assisted with experimental design, feedback on instrument development, cleaned and maintained data, conducted statistical analyses, and contributed with writing of methods descriptions and results for conference presentations and manuscripts.

TEACHING

COURSES TAUGHT **Texas A&M University**, College Station, TX
EPSY 636: Techniques of Research
EPSY 642: Meta-analysis of Behavioral Research
EPSY 685: Directed Studies (Bayesian Methods in Education)
EPSY 685: Directed Studies (Systematic Review of Problem Solving in Mathematics)
EPSY 691: Doctoral Research

STUDENT ADVISING Majzun, Ashley – Dissertation Committee Chair
Wang, Naike – Dissertation Committee Chair
+Philip, Joshua – Dissertation Committee Co-Chair

+Avci, Hulya – Dissertation Committee Member
+Craft, Ashley – Dissertation Committee Member
+Dulas, Heather – Dissertation Committee Member
Fletcher, Katherine – Dissertation Committee Member
+Georgio, Gertrude – Dissertation Committee Member
+Ingles, Kristina – Dissertation Committee Member
+Nyman, Tristin – Dissertation Committee Member
+Polet, Milian, – Dissertation Committee Member
+Wan, Yidou – Dissertation Committee Member
+Webster, Joseph – Dissertation Committee Member

Semma, Brandie – Dissertation Committee Chair (Graduated 2020)
Dissertation: *Examination of a Bayesian Joint Modeling Approach for Handling Missing Moderators in Meta-regression*

+Fuller, Marcus – Dissertation Committee Member (Graduated 2020)
+Keese, Jeffrey – Dissertation Committee Member (Graduated 2020)
+Kestian, Jade – Dissertation Committee Member (Graduated 2020)
+Marbach, Joshua – Dissertation Committee Member (Graduated 2020)
+Namrata, Nanavaty – Dissertation Committee Member (Graduated 2021)
+Perez, Kenneth – Dissertation Committee Member (Graduated 2020)
+Pierson, Lauren – Dissertation Committee Member (Graduated 2021)
+Salles, Mary – Dissertation Committee Member (Graduated 2021)
+Smith, Sandra – Dissertation Committee Member (Graduated 2020)

Chen, Meixuan – Master’s Committee Member (Graduated 2019)

+Main role is/was methodologist on non-Research, Measurement, and Statistics student committee

SERVICE

INTERNAL SERVICE Director of Educational Research and Evaluation Laboratory (EREL)

- Roles and Responsibilities: I oversee Research, Measurement and Statistics (RMS) graduate assistants who provide consulting for entry-level statistics courses, as well students with thesis and dissertation research. I manage the technology in the EREL, which consists of ten general use machines with several statistical packages, as well as three other computers reserved for RMS students and faculty for long-term statistical simulations. Last, I help maintain the EREL website. During the COVID-19 pandemic, I have overseen the virtual shift of the EREL.

Member of RMS Clinical Assistant Professor Search Committee

- Roles and Responsibilities: I played a part in the process of hiring a new Clinical Assistant Professor in Research, Measurement, and Statistics. This covered the process of choosing initial interviews from a pool of candidates, performing screening interviews, conducting finalist interviews, and choosing candidates to send position offers.

EXTERNAL SERVICE *Review Editor:* Frontiers in Education (Assessment, Testing and Applied Measurement Section)

Ad-Hoc Reviewer:

Annual Conference of the American Educational Research Association
Behavior Modification
Behavior Research Methods
British Journal of Mathematical and Statistical Psychology
Human Resource Development Review
International Journal of STEM Education
Journal of Adolescence
Journal of Educational and Behavioral Statistics
Journal of Psychoeducational Assessment
Measurement in Physical Education and Exercise Science
Prevention Science
Psychological Methods
Psychonomic Bulletin & Review
Research Quarterly for Exercise and Sport
Research Synthesis Methods
School Psychology Review

National Service:

American Educational Research Association, Educational Statisticians SIG Member-At-Large (2021-2022)
American Educational Research Association, Division D: Outstanding Dissertation Award Committee (2021)

Professional Affiliations:

American Educational Research Association
American Statistical Association