

Jonathan D. Schweig

RAND Corporation
1776 Main Street
Santa Monica, CA 90403

Phone: (310) 393-0411 Ext. 6584
Email: jschweig@rand.org

Education

A.B. Mathematics and English & American Literature, Brown University 1999.

M.A. Curriculum and Teacher Education, Stanford University 2002.

M.S. Statistics, University of California, Los Angeles 2014.

Ph.D. Education, Social Research Methodology Division, University of California, Los Angeles 2014.

Dissertation title: Multilevel Factor Analysis and Student Ratings of Instructional Practice

Dissertation committee: José Felipe Martínez (chair), Peter Bentler, Li Cai, Noreen Webb

Awards and Honors

Graduate School of Education and Information Studies Outstanding Ph.D. Dissertation 2014.

Elwood Zillgitt & Mildred B. Finney Fellowship 2013.

IES pre-doctoral fellowship in Advanced Quantitative Methods 2009.

Honors in Creative Writing, Brown University 1999.

Research Experience

Research Assistant, UCLA Luskin School of Public Affairs, Los Angeles, CA 2011–2014.

Research Assistant, Los Angeles Education Research Institute, Los Angeles, CA 2011–2014.

Research Assistant, Advanced Research and Data Analysis Center, Davis, CA 2013.

Graduate Student Researcher, National Center for Research on Evaluation, Standards, and Student Testing, Los Angeles, CA 2009–2014.

Professional Experience

Full Social Scientist, RAND Corporation, Santa Monica, CA 2017–present.

Core Faculty Member, Pardee RAND Graduate School, Santa Monica, CA 2016–present.

Associate Social Scientist, RAND Corporation, Santa Monica, CA 2014–present.

Program Director, Math for America, New York, NY 2005–2009.

Mathematics Teacher, Nightingale Bamford School, New York, NY 2002–2005.

Mathematics Teacher, Lincoln School, Providence, RI 1999–2001.

Publications

Journal Articles

Nava, I., Park, J., Dockterman, D., Kawasaki, J., Schweig, J.D., Quartz, K., & Martinez J.F. (2018). Measuring Teaching Quality of Secondary Mathematics and Science Residents: A Classroom Observation Framework and Pilot Generalizability Study. *Journal of Teacher Education* doi: 10.1177/0022487118755699.

Wang, J., Schweig, J.D. & Herman, J. (2017). Is There a Magnet School Effect? A Multisite Study of MSAP-Funded Magnet Schools *Journal of Education for Students Placed at Risk (JESPAR)*. 22(2), 77–99.

Schweig, J. D. (2016). Moving beyond means: Revealing features of the learning environment by investigating the agreement of student ratings. *Learning Environments Research*. 19(3), 441–462.

Martinez, J. F., Schweig, J. D. & Goldschmidt, P. (2016). Combining Multiple Measures of Teacher Practice and Performance: Technical and Conceptual Considerations. *Educational Evaluation and Policy Analysis* 38(4), 738–756.

Schweig, J. D. & Pane, J.F. (2016). Intention-to-Treat Analysis in Partially-Nested Randomized Controlled Trials with Real-World Complexity. *International Journal of Research & Method in Education* 39(3), 268–286.

Downer, J. T., Stuhlman, M., Schweig, J., Martinez, J. F., & Ruzek, E. (2015). Measuring effective teacher-student interactions from a student perspective: A multi-level analysis. *The Journal of Early Adolescence*, 35(5-6), 722–758.

Schweig, J. D. (2014). Quantifying Error in Survey Measures of School and Classroom Environments. *Applied Measurement in Education* 27(2), 133–157.

Schweig, J. D. (2014). Cross-Level Measurement Invariance in School and Classroom Environment Surveys: Implications for Policy and Practice. *Educational Evaluation and Policy Analysis* 36(3), 259–280.

Schweig, J. D. (2014). Multilevel Factor Analysis by Model Segregation: New Applications for Robust Test Statistics. *Journal of Educational and Behavioral Statistics*.39(5), 394–422.

Technical Reports

Edelman, A., Perera, R., & Schweig, J.D. (2018). Results from the Teach For America 2017 National Principal Survey Training Corps. Santa Monica, CA: RAND. RR-2192.

Goldman, C. A., Schweig, J. D., Buenaventura, M., & Wright, C. (2017). Geographic and Demographic Representativeness of the Junior Reserve Officers' Training Corps. Santa Monica, CA: RAND. RR-1712-OSD.

Davis, L. M., Karoly, L. A., Bozick, R., Lavery, D., Barnes-Proby, D., Weidmer, B. A., Iyiewuare, P. Schweig, J.D.,... & Blankenship, C. (2016). Evaluation of the SB 1041 Reforms to California's CalWORKs Welfare-to-Work Program. Santa Monica, CA: RAND. RR-1348.

Augustine, C., McCombs, J. S., Pane, J.F., Schwartz, H.L., Schweig, J.D., McEachin, A. & Siler-Evans, K. (2016). Learning from Summer: Effects of Voluntary Summer Learning Programs on Low-Income Urban Youth. Santa Monica, CA: RAND. RR-1557.

Scherer, E., Ryan, S. Daughtery, L. Schweig, J.D., Bozick,R. & Gonzalez, G. (2014). Transforming an Urban School System: Progress of New Haven School Change and New Haven Promise Education Reforms (2010–2013) – Technical Appendixes. Santa Monica, CA: RAND. RR-777/1-CFGNH

Schweig, J. D. (2013). Testing the Assumption of Cross-Level Measurement Invariance in Multilevel Models: Evidence from School and Classroom Environment Surveys. *CRESST report # 829*

Schweig, J. D. (2013). Measurement Error in Multilevel Models of School and Classroom Environments: Implications for Reliability, Precision, and Prediction. *CRESST report # 828*

Herman, J., Wang, J., Straubhaar, R., Schweig, J. D. & Hsu, V. (2013). Evaluation of Green Dot's Locke Transformation Project: From the Perspective of Teachers and Administrators. *CRESST report # 824*

Wang, J. , Schweig, J. D., Griffin, N., Baldanza, M., Rivera, N. & Hsu, V. (2013). Inspiring Minds through a Professional Alliance of Community Teachers (IMPACT): Evaluation Results of the Cohort I Math and Science Apprentice Teachers. *CRESST report # 826*

Conference Presentations

Schweig, J.D., Kaufman, J. & Opfer, V.D. (2018) Understanding Standards-aligned Mathematics Teaching using Instructional Logs: A national perspective. Presented at the Association for Education Finance and Policy Annual Conference, Portland, Oregon.

Schweig, J.D. (2017). Building a Repository of Social and Emotional Learning Assessments. Presented at the Association for Public Policy Analysis and Management Fall Research Conference, Chicago, Illinois

Schweig, J. D., Martinez, J. F. & Langi, M. (2017). Beyond means: Investigating classroom learning environments through consensus in student surveys. Presented at the biennial EARLI Conference for Research on Learning and Instruction, Tampere, Finland.

Schweig, J. D., Martinez, J. F. (2017). Revealing Features of the Learning Environment by Investigating Consensus Among Student Ratings. Presented at the annual meeting of the American Educational Research Association, San Antonio, Texas.

Schweig, J. D. & Pane, J. (2015). Partially Nested Randomized Control Trials in Educational Research: Applications to a Summer Learning Program. Presented at the Modern Modeling Methods Conference, Storrs, Connecticut.

Schweig, J. D. (2013). Multilevel Modeling by Model Segregation: The Surprising Necessity of Robust Statistics with Normal Data. Presented at the Modern Modeling Methods Conference, Storrs, Connecticut.

Downer, J., Stuhlman, M., Schweig, J. D., Martinez, J. F. (2013) Measuring Effective Teacher-Student Interactions from a Student Perspective: A Multi-level Analysis. Presented at the annual meeting of the American Educational Research Association, San Francisco, California.

Martinez, J. F. , Schweig, J. D. (2013). Combining Multiple Measures of Teacher Performance: Validity Considerations. Presented at the annual meeting of PACE (Policy Assessment for California Education), Sacramento, California.

Schweig, J. (2013) The Impact of Measurement Error on the Estimation of Group-level Treatment Effects. Presented at the annual meeting of the American Educational Research Association, San Francisco, California.

Schweig, J. D. (2012). Multilevel Construct Validity: An Empirical Investigation of the Assumption of Cross-Level Invariance. Poster presented at the Modern Modeling Methods Conference, Storrs, Connecticut.

Schweig, J. D. (2012). Policy implications of different approaches to describing the accuracy of school and classroom environment measures. Paper presented at the annual meeting of the American Educational Research Association, Vancouver, British Columbia.

Schweig, J. D. (2011). Multilevel Construct Validation of School Climate Measures: An example using the North Carolina Working Conditions Survey. Poster presented at the Research in Progress Gala at the annual meeting of the American Educational Research Association, New Orleans, Louisiana.

Forzani, F., Ball, D.L., Franke, M., Dorr, A., Schweig, J. D., Farr, S., Kra, I. (2008). Facing Challenges of Instructional Improvement through Teacher Education. Participant in symposium presented at the annual meeting of the American Educational Research Association, New York, New York.

Schweig, J. D. (2008). Mentoring Mathematics Teachers: New Teacher Induction and the Math for America Fellowship Program. Presented at the New Teacher Center Symposium, San Jose, California.

Invited Talks and Workshops

Hierarchical Linear Models, Pardee RAND Graduate School, Santa Monica, CA 2018.

Latent Variable Models, Pardee RAND Graduate School, Santa Monica, CA 2016.

Intention-to-Treat Analysis in Partially-Nested Randomized Controlled Trials with Real-World Complexity, Statistics in Education Research Group, Carnegie Mellon University, Pittsburgh, PA 2016.

Multilevel Factor Analysis, University of Pennsylvania, Philadelphia, PA 2015.

Measurement Error in the Social Sciences, California State University, Long Beach, Long Beach, CA 2012.

Value Added Models of Student Growth, University of California, Los Angeles, Los Angeles, CA 2010.

Mathematics and Fairness, New York City, NY 2008.

Research Funding

Principal Investigator. *Evaluation of the Equitas Academy Charter Schools Replication & Expansion Project*. \$242,000 subcontract on U.S. Department of Education Charter Schools Replication and Expansion grant. 2016-2020.

Principal Investigator. *2017 Teach for America National Principal Survey*. \$90,000 contract with Teach for America. 2016-2017.

Principal Investigator. *Illuminating the black box: Using consensus in student survey reports as an indicator of instructional microclimates in mathematics and science*. \$450,000 grant from NSF. 2016-2017.

Co-Principal Investigator. *A Validation Study of the Instructional Culture Insight Survey*. \$46,000 contract with TNTP. 2015-2016.

Co-Principal Investigator. *Examining the Representation of the Junior Reserve Officers' Training Corps (JROTC)* \$250,000 contract with the Office of the Secretary of Defense. 2015-2016.

Combining Multiple Measures of Teacher Performance: External Proposal for using Measures of Effective Teaching Project Data. No-cost effort from the Bill and Melinda Gates Foundation, 2013-2014.

Select Professional Activities

Application of Bayesian Statistics in Social Science, California State University, Long Beach, Long Beach, CA. Dr. Scott Lynch, Professor of Sociology, Princeton University. 2012.

Using Instrumental Variables in Education Research. University of California, Los Angeles, Los Angeles, CA. Dr. Sean Reardon. 2011.

Economic Models in Education Research Workshop, University of Chicago, Chicago, IL. Dr. Robert Gibbons, MIT; Dr. C. Kirabo Jackson, Northwestern University; Dr. Derek Neal, University of Chicago; Dr. Canice Prendergast, University of Chicago; Dr. Douglas Staiger, Dartmouth College. 2011.

Value Added Models for Analyzing Teacher Effectiveness. University of California, Los Angeles, Los Angeles, CA. Dr. Daniel McCaffrey. 2011.

Designing and Developing Professional Development Program, Park City Math Institute, Park City, UT. Dr. James King, University of Washington; Dr. Gail Burrill, Michigan State University; Carol Hattan, Vancouver, WA. 2009.

Professional Affiliations and Editorial Service

Member, Editorial Board, *American Educational Research Journal* 2017–2018.

Ad hoc Reviewer: *Journal of Educational and Behavioral Statistics*, *Studies in Educational Evaluation*, *Educational Evaluation and Policy Analysis*, *Educational Administration Quarterly*, *Journal of Teacher Education*, *Educational Assessment, Learning and Individual Differences*, *Educational Measurement: Issues and Practice*, *Economics of Education*, *Education Finance and Policy*, *Learning and Instruction*, *Education Policy Analysis Archives*

Member, Association for Education Finance and Policy

Member, American Educational Research Association

Member, National Council of Teachers of Mathematics

Member, European Association for Research on Learning and Instruction

Reviewer, AERA annual meeting, Division L Section 5 (Testing and Accountability)

Reviewer, AERA annual meeting, Division D Research in Progress Gala

Computer Skills

SAS, Stata, SPSS, HLM, Mplus, EQS, LISREL, R