

Graduate School of Education
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APPOINTMENTS

2016 – *Assistant Professor of Education*, Graduate School of Education, University of Pennsylvania, Philadelphia, PA

EDUCATION

2011 – 2016 Ph.D., Statistics, Northwestern University, Evanston, IL
2008 – 2010 M.Ed., Mathematics Education, Lehman College, City University of New York, Bronx, NY
2004 – 2008 B.A., Economics and Mathematics, Minor in Physics, Barnard College, Columbia University, New York, NY (*magna cum laude*)
2006 Shanghai Jiaotong University, Shanghai, People's Republic of China
Semester abroad in Shanghai Business Internship Program of Columbia University

FELLOWSHIPS, AWARDS AND HONORS

2019 – 2020 American Educational Research Association (AERA) Fellowship Program on the Study of Deeper Learning
2019 Research Travel Grant, Association for Women in Mathematics and National Science Foundation
2018 Association for Public Policy Analysis & Management (APPAM) 40 for 40 Fellowship
2015 – 2016 Northwestern University Fellowship
2014 – 2015 Travel Grant, Northwestern University
2004 – 2008 British Petroleum Scholarship, Barnard College
2004 – 2008 Dean's List, Barnard College

RESEARCH FUNDING

2020 – 2025 **Co-Principal Investigator**, The Development of Novice Teachers' Role-Identities as Discussion Facilitators in Social Studies Classrooms. James S. McDonnell Foundation.
Funding: \$2,464,086
2019 – 2024 **Co-Investigator**, Evaluation of Homework, Organization, and Planning Skills Program: A Replication Study. Institute of Education Sciences.
Funding: \$121,997
2019 – 2023 **Co-Investigator**, Reducing Disparities in Behavioral Health Treatment for Children in Primary Care. Patient-Centered Outcomes Research Institute (PCORI).
Funding: \$113,211
2017 – 2019 **Principal Investigator**, Assessing the Role of Covariates and Matching in Improving Bounds for Generalization and in Understanding Generalizations Over Time. Spencer Foundation.
Funding: \$36,033
2017 – 2019 **Principal Investigator**, Assessing the Role of Administrative Data in Improving Generalizations from Experimental Studies. University Research Foundation, University of Pennsylvania.
Funding: \$43,495

PUBLICATIONS

(† indicates co-first author, * indicates student author)

1. **Chan, W.**, Oh, J.* , & Luo, P.* (2021). The Implications of Population Changes on Generalization and Study Design. Forthcoming in the *Journal of Research on Educational Effectiveness*.
2. **Chan, W.** (2021). Analysis of Variance. Chapter in *Research Methods & Methodologies in Education*. (Editors: Coe, R., Waring, M., Hedges, L.V., & Arthur, J.). London, United Kingdom: SAGE.
3. **Chan, W.** (2021). The Role of Distributional Overlap on the Precision Gain of Bounds for Generalization. Forthcoming in the *American Journal of Evaluation*.
4. **Chan, W.**, Hedges, L.V., & Hedberg, E.C. (2020). The Impact of Downstream Clustering in Longitudinal Studies. *Journal of Experimental Education*. (In press).
5. **Chan, W.** (2019). An Evaluation of Bounding Approaches for Generalization. *Journal of Experimental Education*. Advanced online publication. <https://doi.org/10.1080/00220973.2019.1697191>.
6. **Chan, W.** (2019). The Relation Among Design Parameters for Statistical Power Between Continuous and Binomial Outcomes in Cluster Randomized Trials. *Psychological Methods*, 24(2), 179 – 195.
7. **Chan, W.** (2018). Applications of Small Area Estimation to Generalization with Subclassification by Propensity Scores. *Journal of Educational and Behavioral Statistics*, 43(2), 182 – 224.
8. **Chan, W.** (2017). Partially Identified Treatment Effects for Generalizability. *Journal of Research on Educational Effectiveness*, 10(3), 646 – 669.
9. Tipton, E., Hallberg, K., Hedges, L.V., and **Chan, W.** (2017). Implications of small samples for generalization: Adjustments and rules of thumb. *Evaluation Review* (Special Issue: External Validity 2), 41(5), 472 – 505.
10. Kang, J., **Chan, W.**[†], Kim, M.O., and Steiner, P.M. (2016). Practice of Causal Inference with the Propensity of Being Zero or One: Assessing the Effect of Arbitrary Cutoffs of Propensity Scores. *Communications for Statistical Applications and Methods*, 23(1), 1–20.

UNDER REVIEW

Chan, W. and Oh, J. Robust Small Area Estimation for Generalization.

Chan, W. The Sensitivity of Small Area Estimates Under Propensity Score Subclassification for Generalization. (Conditionally accepted at the *Journal of Research on Educational Effectiveness*)

Chan, W. and Hedges, L.V. The Analysis of Multisite Experiments. (Revise & Resubmit)

INVITED PRESENTATIONS

2020

Chan, W. The Sensitivity of Small Area Estimates Under Propensity Score Subclassification for Generalization. Invited talk at the Quantitative Methods Group at the American Institutes of Research.

2019

Chan, W. The Role of Data Science in Education. Invited panelist at the Delaware Data Science Symposium. University of Delaware, Newark, DE.

Chan, W. Small Area Estimation for Generalizability. Invited session on small area estimation at the International Statistical Institute World Statistics Congress. Kuala Lumpur, Malaysia.

2018

Chan, W. Presenting Quantitative Results to Interdisciplinary Audiences. Invited talk at the Interdisciplinary Studies in Human Development Lunch Meeting, Graduate School of Education, University of Pennsylvania. Philadelphia, PA.

2017

Chan, W. Bounds for Treatment Effects with Applications to Generalizability. Paper presented at the International Chinese Statistical Association Applied Statistics Symposium. Chicago, IL.

CONFERENCE PRESENTATIONS

2021

Ren, W. & **Chan, W.** Cross-national generalizability of the factors that affect science achievement. Poster to be presented at the American Educational Research Association Annual Meeting. (Virtual).

Jay, L., Reisman, A., Patterson, T., Eisman, J., Kaplan, A., **Chan, W.**, & Conrad, J. Discipline and Identity: Two Lenses for Understanding Preservice Teachers' Development in Facilitating Discussion. Poster to be presented at the American Educational Research Association Annual Meeting. (Virtual).

Ren, W. & **Chan, W.** Heterogeneity of Private School Effects Across Economies Given Different Covariates. Roundtable to be presented at the American Educational Research Association Annual Meeting. (Virtual).

Eisman, J., Kaplan, A., Jay, L., Reisman, A., Patterson, T., **Chan, W.**, & Conrad, J. Role Identity, Motivation, and Moment-by-Moment Decisions About Instructional Moves During Discussion Facilitation. Symposium to be presented at the American Educational Research Association Annual Meeting. (Virtual).

Conrad, J., Reisman, A., Jay, L., Patterson, T., Eisman, J., Kaplan, A., & **Chan, W.** Teacher Candidate Perceptions and Extended Student Sense-making in Historical Discussions: Tensions and Possibilities. Paper to be presented at the American Educational Research Association Annual Meeting. (Virtual).

2020

Chan, W., Oh, J.*, Luo, P.* How generalizable are study samples over time? Poster to be presented at the Society for Research on Educational Effectiveness. Washington, D.C. (Conference cancelled)

Chan, W. The Generalizability of the Study of Deeper Learning Using Small Area Estimation. Poster to be presented at the American Educational Research Association Annual Meeting. San Francisco, CA. (Conference cancelled)

2019

Chan, W. & Gill, J.S.* The Effect of Distributional Overlap on the Precision of Bounds. Paper presented at the Society for Research in Educational Effectiveness. Washington, D.C.

Chan, W. & Gill, J.S.* The Effect of Distributional Overlap on the Precision of Bounds. Poster presented at the American Educational Research Association Annual Meeting. Toronto, Canada.

Ren, W.* & **Chan, W.** The Effectiveness of Private and Public Schools on Academic Achievement in G7 and East-Asian Countries: Evidence from PISA 2015. Roundtable to be presented at the American Educational Research Association Annual Meeting. Toronto, Canada.

2018

Chan, W. Improving the Precision of Bounds for Generalization. Innovation Session presented at the Association for Public Policy Analysis & Management (APPAM) Conference. Washington, D.C.

Chan, W. Bounding Approaches for Generalization. Paper presented at the Society for Research in Educational Effectiveness. Washington, D.C.

Chan, W. Monotonicity Assumptions in Deriving Bounds for Generalization. Poster presented at the American Educational Research Association Annual Meeting. New York, NY.

2017

Chan, W. Bounding Approaches for Generalization. Paper presented at the Association for Public Policy Analysis & Management (APPAM) Conference. Chicago, IL.

Chan, W. The Relation Between Power for Continuous and Binomial Outcomes in Cluster Randomized Trials. Poster presented at the Joint Statistical Meetings. Baltimore, MD.

Chan, W. Small Area Estimates of the Average Treatment Effect with Applications to Generalizability. Paper presented at the American Educational Research Association Annual Meeting. San Antonio, TX.

Chan, W. Applications of Small Area Estimation to the Generalizability of Experiments with Small Sample Sizes. Paper presented at the Society for Research in Educational Effectiveness. Washington, D.C.

2016

Chan, W. Partial Identification of Treatment Effects: Applications to Generalizability. Paper presented at the Spring Meeting of the Society for Research on Educational Effectiveness. Washington, DC.

2015

Tipton, E., Hallberg, K., Hedges, L.V., & **Chan, W.** Implications of Small Samples for Generalization: Adjustments and Rules of Thumb. Paper presented at the Spring Meeting of the Society for Research on Educational Effectiveness. Washington, DC.

2014

Kang, J. & **Chan, W.** Practice of Causal Inference with the Propensity of Being Zero or One. Paper presented at the Joint International Chinese Statistical Association-Korean International Statistical Society Applied Statistics Symposium. Portland, OR.

PROFESSIONAL EXPERIENCE

2012 – 2016	Graduate Research Assistant, <i>Institute for Policy Research, Northwestern University</i>
2014 – 2016	Statistical Consultant, <i>Feinberg School of Medicine, Northwestern University</i>
2005 – 2008	Research Assistant for Professor Alan Dye, <i>Department of Economics, Barnard College</i>
2005 – 2006	Research Assistant, <i>Department of Psychology, Barnard College</i>

TEACHING (* courses I proposed)

University of Pennsylvania

2019	Regression and Analysis of Variance (ED 767)
2017 –	Introduction to Causal Inference for Educational Research (ED 765) *
2017	Advanced Topics in Impact Evaluation (ED 871; Co-Instructor with Robert Boruch)
2016 – 2019	Introductory Statistics for Education Research (ED 667)

Northwestern University

2015	Introduction to Statistics (STAT 202), <i>Instructor</i>
2015	Hierarchical Linear Models (STAT 356), <i>Teaching Assistant</i>
2014 – 2015	Introduction to Statistics (STAT 202), <i>Teaching Assistant</i>
2014	Probability and Statistics (STAT 383), <i>Teaching Assistant</i>
2014	Human Rights Statistics (STAT 370), <i>Guest Lecturer and Teaching Assistant</i>
2013	Survey Sampling (STAT 325), <i>Guest Lecturer</i>
2013	Introductory Statistics for the Social Sciences (STAT 210), <i>Teaching Assistant</i>

Summer Institute in Randomized Trials for Established Researchers, Northwestern University

2013, 2014 Consultant/Group Facilitator for break-out groups

Teach for America

2008 – 2011 Teacher of Arithmetic and Algebra

Columbia University

2007 Introduction to Statistics (STAT W1111), *Teaching Assistant*

PROFESSIONAL SERVICE

University

2017 – *Faculty Representative*, Fellowship Committee, University of Pennsylvania
2017 – 2018 *Committee Member*, Executive Committee, Graduate School of Education, University of Pennsylvania
2017 – 2018 *Mentor*, Quantitative Methods Reading Group, Graduate School of Education, University of Pennsylvania
2017 – 2018 *Member*, Doctoral Seminar Planning Committee, Graduate School of Education, University of Pennsylvania
2015 – 2016 *Colloquium Organizer*, Institute for Policy Research Q-Center, Northwestern University
2014 – 2015 *Colloquium Organizer*, Graduate Women Across Northwestern, Northwestern University

Conference

2017 – *Proposal Reviewer*, Society for Research on Educational Effectiveness Spring Meeting
2019 – 2022 *Member*, Significant Contributions to Research Methodology Committee, American Educational Research Association (Division D)
2018, 2020 *Session Chair*, Society for Research on Educational Effectiveness Spring Meeting
2017 – 2018 *Proposal Reviewer*, American Educational Research Association, Quantitative Methods and Statistical Theory (Division D)
Research, Evaluation and Assessment in Schools (Division H)
2017 *Discussant*, Association for Public Policy Analysis & Management (APPAM) Conference

Grants

2017 – 2018 *Reviewer*, Institute of Education Sciences, Social and Behavioral Education Research Scientific Panel, Low Cost-STEM Scientific Panel
2016 *Proposal Reviewer*, Robert Wood Johnson Foundation

Referee

Ongoing Campbell Collaboration Systematic Reviews, Journal of Research on Educational Effectiveness, Evaluation Review, Action in Teacher Education, Child Development, Journal of the Royal Statistical Society, Series A, Journal of Development Effectiveness

PROFESSIONAL MEMBERSHIPS

Society for Research on Educational Effectiveness (SREE)
Campbell Collaboration Methods Group
American Educational Research Association (AERA)
American Statistical Association (ASA)
Association for Public Policy Analysis & Management (APPAM)
International Chinese Statistical Association (ICSA)