Wendy Chan

Graduate School of Education
University of Pennsylvania
3700 Walnut Street Philadelphia, PA 19104-6126

☎ +1 (215) 573 – 2038
✉ wechan@upenn.edu
🌐 scholar.gse.upenn.edu/chan/

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 – 2026	**Co-Principal Investigator** (with A. Reisman, T. Patterson, and A. Kaplan), The Development of Novice Teachers' Role-Identities as Discussion Facilitators in Social Studies Classrooms. James S. McDonnell Foundation. Funding: $2,464,086
2019 – 2028	**Co-Investigator** (with T. Power and J. Nissley-Tsiopinis), Evaluation of Homework, Organization, and Planning Skills Program: A Replication Study. Institute of Education Sciences. Funding: $121,997
2019 – 2023	**Co-Investigator** (with T. Power and J. Mautone), 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)

17. **Chan, W.**, Oh, J.*, and Wilson, K.J.* Redefining Populations of Inference for Generalizations from Small Studies. *Journal of Research on Educational Effectiveness*. `https://doi.org/10.1080/19345747.2023.2290546`.

16. **Chan, W.** (2023). Propensity Scores for Causal Inference and Generalization. Forthcoming in *The Asia Pacific Education Review*. Invited paper for special issue on Causal Research Designs and Analysis in Education.

15. Conrad, J., Reisman, A., Patterson, T., Jay, L., Kaplan, A., Eisman, J., & **Chan, W.** (2023). White Preservice Teachers Facilitating African American History Discussions: Tensions of Identity in Practice. *Teaching and Teacher Education, 125,* 104050.

14. **Chan, W.** and Oh, J.* (2023). Robust Small Area Estimation for Generalization. *Journal of Experimental Education*, *91*(3), 539 – 556. `https://doi.org/10.1080/00220973.2022.2088671`.

13. **Chan, W.** and Hedges, L.V. Pooling Interactions Into Error Terms in Multisite Experiments. (2022). *Journal of Educational and Behavioral Statistics*, *47*(6), 639 – 665. `https://doi.org/10.3102/10769986221104800`.

12. Conrad, J., Reisman, A., Jay, L., Patterson, T., Eisman, J., Kaplan, A., & **Chan, W.** (2022). To What Ends? Analyzing Teacher Candidate Goals and Perceptions of Student Talk in Social Studies Discussions. *The Journal of Social Studies Research*, `https://doi.org/10.1016/j.jssr.2022.01.003`.

11. **Chan, W.** (2022). The Role of Distributional Overlap on the Precision Gain of Bounds for Generalization. *American Journal of Evaluation*, *43*(1), 90 – 107.

10. **Chan, W.**, Hedges, L.V., & Hedberg, E.C. (2022). The Effects of Downstream Clustering in Longitudinal Studies. *Journal of Experimental Education*, *90*(3), 731 – 759.

9. **Chan, W.** (2022). The Sensitivity of Small Area Estimates Under Propensity Score Subclassification for Generalization. *Journal of Research on Educational Effectiveness*, *15*(1), 178 – 215.

8. **Chan, W.**, Oh, J.*, & Luo, P.* (2021). The Implications of Population Changes on Generalization and Study Design. *Journal of Research on Educational Effectiveness*, *14*(2), 471 – 500.

7. **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.

6. **Chan, W.** (2021). An Evaluation of Bounding Approaches for Generalization. *Journal of Experimental Education*, *89*(4), 690 –720.

5. **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.

4. **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.

3. **Chan, W.** (2017). Partially Identified Treatment Effects for Generalizability. *Journal of Research on Educational Effectiveness*, *10*(3), 646 – 669.

2. 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.

1. 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

Mautone, J.A., Holdaway, A., **Chan, W.,** Michel, J., Guevara, J., Davis, A., Desrochers, C., Evans, E., Gajary, Z., Leavy, S., Rios, D., Tremont, K., Cacia, J., Jawad, A., & Power, T.J. Reducing Disparities in Behavioral Health Treatment in Pediatric Primary Care: Comparing Partnering to Achieve School Success (PASS) to Usual ADHD Care: A Study Protocol.

Wilson, K.J.*, **Chan, W.**, Gottfried, M., Huang, J.*, & Hildreth, D. Which Students Benefit from Gifted and Talented Programs? A Case Study of New York City's Gifted and Talented Program. (Revise and Resubmit)

Conrad, J., Gallagher, J., & **Chan, W.** Getting Critical with Compelling Questions: Shifts in Elementary Teacher Candidates' Curriculum Planning from Inquiry to Critical Inquiry. (Revision Under Review)

Chan, W., Huang, J.*, Tong, Y.*, Oh, J.*, & Li, C.* The Implications of Propensity Score Augmentation for Generalization.

Ren, W.* & **Chan, W.** The Alignment Between Contextual and Model Generalization: An Application with PISA 2015. (Revision Under Review)

WORKING PAPERS

Wilson, K.J.*, **Chan, W.**, & Gottfried, M.A. Schoolwide Inclusion and Schoolwide Attendance.

Chan, W. & Boruch, R.F. Tribal Languages, Randomized Trials, and Ontologies.

PRESENTATIONS

2024

Rush, A., Kaplan, A., Reisman, A., Patterson, T., & **Chan, W.** Teacher Role Identity and Racial Socialization in the Classroom. Roundtable to be presented at the American Educational Research Association Annual Meeting. Philadelphia, PA.

2023

Chan, W., Huang, J., Tong, Y., Oh, J., & Li, C. The Implications of Propensity Score Augmentation for Generalization. Paper to be presented at the Society for Research on Educational Effectiveness. Arlington, VA.

Chan, W., Huang, J., Tong, Y., Oh, J., & Li, C. The Implications of Using Multiple Data Sources for Generalization Studies. Paper presented at the American Educational Research Association Annual Meeting. Chicago, IL.

Conrad, J., Gallagher, J., & **Chan, W.** Getting Critical with Compelling Questions: Shifting Elementary Teacher Candidates' Curriculum Planning from Inquiry to Critical Inquiry. Roundtable presented at the American Educational Research Association Annual Meeting. Chicago, IL.

Wu, Q., Kaplan, A., Jay, L., Reisman, A., Patterson, T., **Chan, W.**, Conrad, J., Eisman, J.I., del Calvo, A., & Schiera, A.J. Teacher Identity, Motivation, and Instructional Practice: A Longitudinal Case Study of a Social Studies Teacher.

Paper presented at the American Educational Research Association Annual Meeting. Chicago, IL.

2022

Chan, W., Eisman, J., Kaplan, A., Reisman, A., Patterson, T.J., Conrad, J., Jay, L., & del Calvo, A. The Implications of Aggregation on Understanding Longitudinal Motivational Processes. Symposium presented at the College & University Faculty Assembly. Philadelphia, PA.

Chan, W., Oh, J.*, & Wilson, K.J.* Redefining Populations of Inference for Generalization. Paper presented at the Society for Research on Educational Effectiveness. Arlington, VA.

Eisman, J.I., Kaplan, A., **Chan, W.**, Patterson, T., Reisman, A. Motivational Mechanisms in Teacher Professional Development: A Two-Case Study. Poster presented at the 2022 American Psychological Association Annual Convention. Minneapolis, MN.

Chan, W., Eisman, J., Kaplan, A., Reisman, A., Patterson, T.J., Conrad, J., Jay, L., & del Calvo, A. The Implications of Aggregation on Understanding Longitudinal Motivational Processes. Poster presented at the 2022 American Psychological Association Annual Convention. Minneapolis, MN.

Kaplan, A., **Chan, W.**, Eisman, J., Reisman, A., Patterson, T., Jay, L., Conrad, J., del Calvo, A., & Schiera, A.J. A Complex Dynamic Systems Perspective on Teacher Learning as Identity Change: Novice Social Studies Teachers Learning to Facilitate Discussions. Paper presented at the American Educational Research Association Complex Theories in Education SIG Winter Webinar. (Virtual)

Chan, W. & Oh, J.* Robust small area estimation for generalization. Poster presented at the American Educational Research Association Annual Meeting. San Diego, CA.

Reisman, A., **Chan, W.**, Jay, L., Patterson, T., Kaplan, A., Conrad, J., del Calvo, A., Eisman, J., & Schiera, A.J. Measuring Preservice Teachers' Discussion Facilitation in Social Studies Classrooms. Paper presented at the American Educational Research Association Annual Meeting. San Diego, CA.

Conrad, J., Reisman, A., Patterson, T., Jay, L., Kaplan, A., Eisman, J., & **Chan, W.** White Preservice Teachers Facilitating African American History Discussions: Tensions of Identity in Practice. Paper presented at the American Educational Research Association Annual Meeting. San Diego, CA.

2021

Chan, W. & Oh, J.* Robust small area estimation for generalization. Paper presented at the Society for Research on Educational Effectiveness. (Virtual)

Chan, W. The Generalizability of the Study of Deeper Learning Using Small Area Estimation. Poster presented at the American Educational Research Association Annual Meeting. (Virtual)

Ren, W. & **Chan, W.** Cross-national generalizability of the factors that affect science achievement. Poster 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 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 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 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 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)

<u>2019</u>
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.

<u>2018</u>
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.

<u>2017</u>
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.

<u>2016</u>
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.

<u>2015</u>
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.

<u>2014</u>
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.

INVITED PRESENTATIONS

<u>2023</u>
Chan, W. Robust Small Area Estimation for Generalization. Invited session for the *Journal of Educational and Behavioral Statistics*. Joint Statistical Meetings. Toronto, Canada.

<u>2021</u>
Chan, W. The Implications of Population Changes on Generalization and Study Design. Invited talk at the Institute of Education Sciences (IES) Predoctoral Program. University of Pennsylvania, Philadelphia, PA.

<u>2020</u>

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. (Virtual)

<u>2019</u>

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

<u>2018</u>

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.

<u>2017</u>

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

TEACHING (* courses I proposed)

University of Pennsylvania

2022 – 2023	Replication and Reproducibility (EDUC 5600) *
2019	Regression and Analysis of Variance (EDUC 7667)
2017 –	Introduction to Causal Inference for Educational Research (EDUC 7650) *
2017	Advanced Topics in Impact Evaluation (EDUC 871; Co-Instructor with Robert Boruch)
2016 –	Introductory Statistics for Education Research (EDUC 6667)

Northwestern University

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

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*

EDITORIAL APPOINTMENTS

2023 –	Editorial Board, *American Journal of Evaluation*
2022 –	Editorial Board, *Journal of Educational and Behavioral Statistics*

PROFESSIONAL SERVICE

University

2023 –	*Faculty Representative*, Doctoral Oversight Committee, Graduate School of Education, University of Pennsylvania
2017 – 2020	*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

2023	*Research Methods Chair*, Society for Research on Educational Effectiveness Meeting
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

2023	*Reviewer*, National Science Foundation (NSF)
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, Medical Research Council (UK Research and Innovation), PCORI (Patient-Centered Outcomes Research Institute)

PROFESSIONAL EXPERIENCE

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

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)