# Benjamin R. Shear

Curriculum Vitae December 2023

ADDRESS CONTACT

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# **EDUCATION**

2017 Ph.D., Stanford Graduate School of Education

Developmental and Psychological Sciences Advisors: Edward Haertel & sean f. reardon

2012 M.A., University of British Columbia

Measurement, Evaluation, and Research Methodology

Advisor: Bruno D. Zumbo

2006 B.A., Dartmouth College

Philosophy (mathematics minor), magna cum laude

#### **EMPLOYMENT**

2017 - Assistant Professor

Present Research and Evaluation Methodology, School of Education, University of Colorado,

Boulder, CO

Faculty Partner

Center for Assessment, Design, Research and Evaluation (CADRE), School of

Education, University of Colorado, Boulder, CO

2009 - 2016 Graduate Research Assistant

Stanford Center for Education Policy Analysis (Stanford), Stanford Center for Assessment, Learning and Equity (Stanford), Edgeworth Laboratory (UBC), Visual

Cognition Lab (UBC)

2006 - 2008 High School Mathematics Teacher

Eagle Rock School & Professional Development Center, Estes Park, CO

#### **PUBLICATIONS**

# **PEER-REVIEW JOURNAL ARTICLES**

**Shear, B. R.** (2023). Gender bias in test item formats: Evidence from PISA 2009, 2012, and 2015 math and reading tests. *Journal of Educational Measurement*. <a href="https://doi.org/10.1111/jedm.12372">https://doi.org/10.1111/jedm.12372</a>

- **Shear, B. R.** (2023). Causal inference and COVID: Contrasting methods for evaluating pandemic impacts using state assessments. *Educational Measurement: Issues and Practice, 42*(1), 99–109. <a href="https://doi.org/10.1111/emip.12540">https://doi.org/10.1111/emip.12540</a>
- **Shear, B. R.**, & Reardon, S. F. (2021). Using pooled heteroskedastic ordered probit models to improve small-sample estimates of latent test score distributions. *Journal of Educational and Behavioral Statistics*, 46(1), 3–33. <a href="https://doi.org/10.3102/1076998620922919">https://doi.org/10.3102/1076998620922919</a>
- **Shear, B. R.** (2018). Using hierarchical logistic regression to study DIF and DIF variance in multilevel data: DIF and DIF variance in multilevel data. *Journal of Educational Measurement*, *55*(4), 513–542. <a href="https://doi.org/10.1111/jedm.12190">https://doi.org/10.1111/jedm.12190</a>
- **Shear, B. R.**, Nordstokke, D. W., & Zumbo, B. D. (2018). A note on using the nonparametric Levene test when population means are unequal. *Practical Assessment, Research & Evaluation*, 23(13), 1–11.
- Lockwood, J. R., Castellano, K. E., & **Shear, B. R.** (2018). Flexible Bayesian models for inferences from coarsened, group-level achievement data. *Journal of Educational and Behavioral Statistics*, 43(6), 663–692. https://doi.org/10.3102/1076998618795124
- Reardon, S. F., **Shear, B. R.**, Castellano, K. E., & Ho, A. D. (2017). Using heteroskedastic ordered probit models to recover moments of continuous test score distributions from coarsened data. *Journal of Educational and Behavioral Statistics*, 42(1), 3–45. https://doi.org/10.3102/1076998616666279
- Zumbo, B. D., Liu, Y., Wu, A. D., **Shear, B. R.**, Olvera Astivia, O. L., & Ark, T. K. (2015). A methodology for Zumbo's third generation DIF analyses and the ecology of item responding. *Language Assessment Quarterly*, *12*(1), 136–151. <a href="http://doi.org/10.1080/15434303.2014.972559">http://doi.org/10.1080/15434303.2014.972559</a>
- **Shear, B. R.**, & Zumbo, B. D. (2013). False positives in multiple regression: Unanticipated consequences of measurement error in the predictor variables. *Educational and Psychological Measurement*, 73(5), 733–756. <a href="http://doi.org/10.1177/0013164413487738">http://doi.org/10.1177/0013164413487738</a>

# **BOOK CHAPTERS AND INVITED SUBMISSIONS**

- Stout, W., Henson, R., DiBello, L., & **Shear, B. R.** (2019). The Reparameterized Unified Model system: A diagnostic assessment modeling approach. In M. von Davier & YS Lee (Eds.), *Handbook of Diagnostic Classification Models* (pp. 47–79). Springer. <a href="https://doi.org/10.1007/978-3-030-05584-4">https://doi.org/10.1007/978-3-030-05584-4</a> 3
- Fahle, E. M., **Shear, B. R.**, & Shores, K. A. (2019)\*. Assessment for monitoring of education systems: The U.S. example. *The ANNALS of the American Academy of Political and Social Science*, 683(1), 58–74. https://doi.org/10.1177/0002716219841014
- **Shear, B. R.**, & Roussos, L. A. (2017). Validating a distractor-driven geometry test using a generalized diagnostic classification model. In B. D. Zumbo & A. M. Hubley (Eds.), Understanding and investigating response processes in validation research (Vol. 69, pp. 277–304). Springer International Publishing. <a href="https://doi.org/10.1007/978-3-319-56129-5">https://doi.org/10.1007/978-3-319-56129-5</a> 15
- Zumbo, B. D., Liu, Y., Wu, A. D., Forer, B., & **Shear, B. R.** (2017). National and international educational achievement testing: A case of multi-level validation framed by the ecological model of item responding. In B. D. Zumbo & A. M. Hubley (Eds.), *Understanding and investigating response processes in validation research* (Vol. 69, pp. 341–361). Springer International Publishing. https://doi.org/10.1007/978-3-319-56129-5 18
- **Shear, B. R.**, & Zumbo, B. D. (2014). What counts as evidence: A review of Validity Studies in Educational and Psychological Measurement. In B. D. Zumbo & E. K. H. Chan (Eds.), *Validity*

and validation in social, behavioral, and health sciences (pp. 91–111). Springer. https://doi.org/10.1007/978-3-319-07794-9 6

#### REPORTS AND OTHER PUBLICATIONS

- Mork, K., **Shear, B. R.**, & Diaz-Bilello, E. (2022). *Descriptive Analyses of Connect for Success, Multi- Tiered Systems of Support, and Accountability Pathways.* The Center for Assessment, Design,
  Research and Evaluation (CADRE). <a href="https://www.colorado.edu/cadre/2022/04/08/descriptive-analyses-connect-success-multi-tiered-systems-support-and-accountability">https://www.colorado.edu/cadre/2022/04/08/descriptive-analyses-connect-success-multi-tiered-systems-support-and-accountability</a>
- **Shear, B. R.,** Diaz-Bilello, E., Student, S., & Pierre-Louis, M. (2021). *Evaluation of Colorado School Turnaround Network and School Turnaround Leadership Development Grants: Descriptive Analysis of 2015- 2020 Cohorts.* The Center for Assessment, Design, Research and Evaluation (CADRE). <a href="https://www.colorado.edu/cadre/2021/04/02/evaluation-colorado-school-turnaround-network-and-school-turnaround-leadership">https://www.colorado.edu/cadre/2021/04/02/evaluation-colorado-school-turnaround-network-and-school-turnaround-leadership</a>
- **Shear, B. R.** (2020). *Comparison of 2019 cohort and baseline student growth percentiles*. The Center for Assessment, Design, Research and Evaluation (CADRE). <a href="https://www.colorado.edu/cadre/node/373/attachment">https://www.colorado.edu/cadre/node/373/attachment</a>
- Shear, B. R. (2019). Summary of median growth percentile analyses: Descriptive statistics, demographics correlations, and stability analyses. The Center for Assessment, Design, Research and Evaluation, University of Colorado Boulder.

  <a href="https://www.colorado.edu/cadre/2020/01/16/summary-median-growth-percentile-analyses-descriptive-statistics-demographics">https://www.colorado.edu/cadre/2020/01/16/summary-median-growth-percentile-analyses-descriptive-statistics-demographics</a>
- Fahle, E. M., **Shear, B. R.**, Kalogrides, D., Reardon, S. F., Chavez, B., & Ho, A. D. (2019). *Stanford Education Data Archive Technical Documentation (Version 3.0)*. <a href="https://edopportunity.org/papers/SEDA">https://edopportunity.org/papers/SEDA</a> documentation v30 DRAFT09212019.pdf [Also contributed to documentation for Versions 2.0 and 2.1]
- **Shear, B. R.**, Diaz-Bilello, E., Chattergoon, R. (2017, August). *Considerations for adopting and implementing innovative assessment systems.* Report prepared for the Colorado Department of Education. Center for Assessment, Design, Research and Evaluation, University of Colorado Boulder.
- **Shear, B. R.** (2017). Review of "Apples to Apples: The Definitive Look at School Test Scores in Milwaukee and Wisconsin." National Education Policy Center, University of Colorado Boulder. <a href="http://nepc.colorado.edu/thinktank/review-milwaukee-vouchers">http://nepc.colorado.edu/thinktank/review-milwaukee-vouchers</a>
- Nayfield, I., Pecheone, R., Whittaker, A., **Shear, B. R.**, & Klesch, H. (2015). Educative assessment & meaningful support: 2014 edTPA administrative report. Stanford Center for Assessment, Learning and Equity.
- **Shear, B. R.** (2014). "Mathematics achievement" and "Mean differences." In *Encyclopedia of Quality of Life and Well-Being Research*. Springer Reference.

#### **IN PROGRESS**

- Shear, B. R. Measuring public school enrollment changes during COVID-19.
- Shear, B. R. & Briggs, D. C. Measurement issues in causal inference.
- Shear, B. R., Taylor, J., & Fahle, E. M. Determinants of between-school variation in student achievement: Results from US population data.

Shear, B. R., reardon, s. f., & Ho, A. D. *Models for aggregate growth and progress using multiyear, multicohort datasets.* 

#### STATISTICAL SOFTWARE AND DATASETS

- Reardon, S. F., Fahle, E. M., Ho, A. D., **Shear, B. R.**, Kalogrides, D., Saliba, J. & Kane, T.J. (2023). Stanford Education Data Archive (Version SEDA 2022 2.0). <a href="http://purl.stanford.edu/db586ns4974">http://purl.stanford.edu/db586ns4974</a>.
- Reardon, S. F., Ho, A. D., **Shear, B. R.**, Fahle, E. M., Kalogrides, D., Jang, H., Chavez, B. (2021). Stanford Education Data Archive (Version 4.1). <a href="http://purl.stanford.edu/db586ns4974">http://purl.stanford.edu/db586ns4974</a>. [Also contributed to development of Versions 1.0, 1.1, 2.0, 2.1, 3.0, and 4.0]
- **Shear, B. R.** & Reardon, S. F., (2017; 2019), HETOP: Stata module for estimating heteroskedastic ordered probit models with ordered frequency data, <a href="http://EconPapers.repec.org/RePEc:boc:bocode:s458287">http://EconPapers.repec.org/RePEc:boc:bocode:s458287</a>.

# **SELECTED CONFERENCE PAPERS AND PRESENTATIONS**

#### **INVITED SESSIONS**

- Shear, B. R. (2022, April). *Item format gender bias in large-scale assessment: New evidence and considerations for state accountability testing.* Invited poster for Excellence in Education Research: Early Career Scholars and Their Work at the 2022 American Educational Research Association Annual Meeting, San Diego, CA.
- Shear, B. R. (May, 2021). Scales of Educational Opportunity: Using Administrative Test Score Data to Study Educational Opportunity in the US. Keynote Address at Inaugural Interdisciplinary Social Research Seminar (on-line). Trent University, Ontario, Canada.
- Shear, B. R. (2019, March). *Using administrative test-score data to study educational opportunity in the U.S.* Invited Keynote Address at the 7<sup>th</sup> Annual Leadership Symposium, St. John's University, Queens, NY.

# PEER-REVIEW PRESENTATIONS, PAPERS, AND POSTERS

- Shear, B. R., Taylor, J., Fahle, E. M. (2023, September). *Determinants of between-school variation in student achievement: Results from US population data*. Presented at the Society for Research on Educational Effectiveness 2023 Conference. Arlington, VA.
- Shear, B. R., reardon, s. f., Warner, Z., Ho, A. D., & Fahle, E. M. (2023, June). *Using state and national test score data to understand district-level educational opportunities from 2009-2022.*Coordinated Session at the CCSSO National Conference on Student Assessment 2023. New Orleans, LA.
- Shear, B. R., Mork, K., Student, S., Huchton, M., Hartman, A., & Lovinguth, M. (2022, June). *Using OTL Indicators to Describe Educational Experiences and Contextualize Spring 2021 Test Score Data in Three Districts.* Coordinated Session at the CCSSO National Conference on Student Assessment 2022. Atlanta, GA.
- Shear, B. R. (2022, April). *Item format gender bias in large-scale assessment: New evidence and considerations for state accountability testing.* Presented at the 2022 National Council on Measurement in Education Annual Meeting, San Diego, CA.

<sup>\* =</sup> authorship listed alphabetically.

- Shear, B. R., Ho, A. D., & Reardon, S. F. (2021, May). *Models for aggregate growth and progress using multiyear, multicohort datasets.* Presented at the 2021 National Council on Measurement in Education Annual Meeting [held on-line].
- Shear, B. R., Ho, A. D., Reardon, S. F., & Fahle, E. M. (2020, March). *Improving the precision and interpretation of aggregate school growth metrics*. Accepted at the Society for Effectiveness in Education 2020 Annual Meeting. [Not presented due to COVID-19 cancellation of conference.]
- Shear, B. R. (2019, June). *Validating the use of growth for high-stakes accountability*. Presented at the CCSSO National Conference on Student Assessment, Orlando, FL.
- Shear, B. R. (2018, April). *Using hierarchical logistic regression to study DIF variance*. Presented at the National Council on Measurement in Education Annual Meeting, New York, NY.
- Shear, B. R., Reardon, S. F., Fahle, E. M., & Ho, A. D. (2018, April). *Mapping proficiency standards using heteroskedastic ordered probit models and NAEP-based linear linking*. Presented at the National Council on Measurement in Education Annual Meeting, New York, NY.
- Ho, A. D., Shear, B. R., Reardon, S. F., & Fahle, E. M. (2018, April). *Rise and convergence of state proficiency standards in the Common Core era*. Presented at the National Council on Measurement in Education Annual Meeting, New York, NY.
- Shear, B. R., Ho, A. D., Reardon, S. F., & Fahle, E. M. (2018, March). *Trends in state proficiency standards in the Common Core era.* Paper presented at the Society for Research on Educational Effectiveness Spring 2018 Conference, Washington, DC.
- Shear, B. R., & Reardon, S. F. (2017, April). *Using pooled heteroskedastic ordered probit models to improve small-sample estimates*. Paper presented at the National Council on Measurement in Education 2017 Annual Meeting, San Antonio, TX.
- Lockwood, J. R., Castellano, K. E., & Shear, B. R. (2017, April). Flexible Bayesian models for inferences from coarsened, group-level achievement data. Paper presented at the National Council on Measurement in Education 2017 Annual Meeting, San Antonio, TX.
- Shear, B. R., & Thum, Y. M. (2017, March). Sensitivity of achievement gap trend estimates to alternative treatments of nested data. Paper presented at the Society for Research on Educational Effectiveness Spring 2017 Conference, Washington, DC.
- Shear, B. R., & Thum, Y. M. (2016, April). *Alternative approaches for comparing test score achievement gap trends.* Poster presented at the National Council on Measurement in Education 2016 Annual Meeting, Washington, DC.
- Shear, B. R., Castellano, K. E., Reardon, S. F., & Ho, A. D. (2015, April). *Recovering NAEP and state test score distributions using coarsened data.* Paper presented at the National Council on Measurement in Education 2015 Annual Meeting, Chicago, IL.
- Shear, B. R., Roussos, L. A., DiBello, L. V., Henson, R. A., & Stout, W. F. (2015, April). Fitting diagnostic classification models to distractor-driven tests for validation purposes. Paper presented at the National Council on Measurement in Education 2015 Annual Meeting, Chicago, IL.
- Shear, B. R., Castellano, K. E., Reardon, S. F., & Ho, A. D. (2014, March). Simultaneous estimation of multiple achievement gaps from ordinal proficiency data. Paper presented at the Society for Research on Educational Effectiveness Spring 2014 Conference, Washington, DC.
- Shear, B. R., Nordstokke, D. W., & Zumbo, B. D. (2013, April). *On centering scores before applying the nonparametric Levene test*. Paper presented at American Educational Research Association 2013 Annual Meeting, San Francisco, CA.

- Ark, T. K., Shear, B. R., & Zumbo, B. D. (2013, April). *Demonstration of the impact of data entry errors on generalizability and decision studies: Crossed and nested two-facet designs.* Paper presented at the American Educational Research Association 2013 Annual Meeting, San Francisco, CA.
- Liu, Y., Shear, B. R., & Zumbo, B. D. (2013, April). *Impact of outliers arising from a subpopulation on ordinary least squares and robust regression estimates*. Paper presented at the American Educational Research Association 2013 Annual Meeting, San Francisco, CA.
- Shear, B. R., Olvera, O. L., & Zumbo, B. D. (2012, April). *Relative variable importance measures for multiple linear regression in suppression situations: A Monte Carlo study*. Paper presented at the American Educational Research Association 2012 Annual Meeting, Vancouver, BC.
- Shear, B. R., & Zumbo, B. D. (2012, April,). What counts as evidence? An empirical review of Validity Studies in Educational and Psychological Measurement. Poster presented at the American Educational Research Association 2012 Annual Meeting, Vancouver, BC.
- Zumbo, B. D., Liu, Y., Shear, B. R., Olvera, O.L., Ark, T.K., & Wu, A.D. (2012, April). *Latent class logistic regression family of models and its applications to Explanatory DIF.* Paper presented at the National Council on Measurement in Education 2012 Annual Meeting, Vancouver, BC.
- Zumbo, B. D., Liu, Y., Wu, A. D., Forer, B., & Shear, B. R. (2010, May). *National and international educational achievement testing: a case of multi-level validation.* Paper presented at the American Educational Research Association 2010 Annual Meeting, Denver, CO.

# **HONORS AND AWARDS**

2023	University of Colorado Provost's Faculty Achievement Award
2020	AERA Division D Award for Significant Contribution to Educational Measurement and Research Methodology (jointly with sean reardon, Andrew Ho, Erin Fahle, and Demetra Kalogrides)
2018	NCME Annual Award for Exceptional Achievement in Educational Measurement (jointly with sean reardon, Andrew Ho, Erin Fahle, Ken Shores, Katherine Castellano, and Demetra Kalogrides)
2017 - Present	National Education Policy Center Fellow
2012 - 2016	Institute of Education Sciences Predoctoral Training Fellowship
2012 - 2013	Thomas G. and Terry B. Eastman Fellowship
2011 - 2012	ECPS Department Student Funding Award
2011	UBC Faculty of Education Student Research Grant
2009	Americorps Education Award
2006	Phi Beta Kappa inductee

#### **RESEARCH FUNDING**

2023 – 2024	Technical Assistance to Colorado Department of Education. Colorado Department of Education. PI Benjamin Shear; Co-PI Elena Diaz-Bilello (Total award \$75,069).
2022 - 2023	Technical Assistance to Colorado Department of Education. Colorado Department of Education. PI Benjamin Shear; Co-PI Elena Diaz-Bilello (Total award \$72,259).

2021 - 2022	Gender Bias in Item Formats for Large-Scale Assessments. AERA Grants Program, NSF Award NSF-DRL #1749275 (Total award \$25,000).
2021 - 2022	Technical Assistance to Colorado Department of Education. Colorado Department of Education. PI Benjamin Shear; Co-PI Elena Diaz-Bilello (Total award \$73,640).
2020 - 2021	Technical Assistance to Colorado Department of Education. Colorado Department of Education. PI Benjamin Shear; Co-PI Elena Diaz-Bilello (Total award \$73,189).
2019 - 2020	Technical Assistance to Colorado Department of Education. Colorado Department of Education. PI Benjamin Shear; Co-PI Elena Diaz-Bilello (Total award \$67,221).
2019 - 2020	Accountability and Assessments in Small Rural School Districts. School of Education Place-Based Partnership Award. PI Terri Wilson; Co-PI Benjamin Shear (Total award \$13,999).
2018 - 2019	Technical Assistance to Colorado Department of Education. Colorado Department of Education. PI Benjamin Shear; Co-PI Elena Diaz-Bilello (Total award \$55,000).
2017 - 2019	Expanding the Stanford Education Data Archive. Bill and Melinda Gates Foundation. Subaward from Stanford University, PI Sean F. Reardon. (Total award \$1,013,000; CU Boulder award \$146,812).
2017 - 2018	Technical Assistance to Colorado Department of Education. Colorado Department of Education. PI Elena Diaz-Bilello; Co-PI Benjamin Shear (Total award \$76,705).
2011 - 2012	Measurement validation practices: A systematic review of the literature and implications for validity theory. Faculty of Education UBC HSS Seed Grant. Co-PI with Dr. Bruno Zumbo. (\$6,739 CAD).

# **TEACHING**

#### **GRADUATE COURSES**

EDUC 7396: Categorical Data Analysis, University of Colorado Boulder School of Education, Spring 2017, 2019, 2020

EDUC 7456: Multilevel Modeling, University of Colorado Boulder School of Education, Fall 2022

EDUC 8230: Quantitative Methods I, University of Colorado Boulder School of Education, Fall 2018, 2019

EDUC 8240: Quantitative Methods II, University of Colorado Boulder School of Education, Spring 2021, 2022, 2023

EDUC 8710: Introduction to Measurement in Survey Research, University of Colorado Boulder School of Education, Fall 2017, 2020, 2021, 2023

EDUC 8720: Advanced Topics in Measurement: Item Response Theory, University of Colorado Boulder School of Education, Spring 2018

# **TEACHING ASSISTANTSHIPS**

EDUC 259X: Application of Hierarchical Linear Models in Behavioral and Social Research, Stanford Graduate School of Education, Winter 2015

EDUC 200C: Introduction to Statistical Methods in Education, Stanford Graduate School of Education, Fall 2013/2014/2015

#### **DISSERTATION COMMITTEES**

- Jessica Alzen (completed 2017)
- Michael Turner (completed 2018)
- Rajendra Chattergoon (completed 2020)
- Amy Burkhardt (completed 2020)
- Spencer Dudley (completed 2021)
- Chris Vardeman (completed 2022)
- Kaitlin Mork (chair, completed 2023)
- Sandy Student (completed 2023)
- Hannah Denker (completed 2023)
- Medjy Pierre-Louis (in progress)
- Alexander Bentz (in progress)
- Anna Noble (in progress)
- Michelle Doughty (in progress)

#### **UNDERGRADUATE THESIS COMMITTEES**

Landon Jacquinot (completed 2020)

#### **SERVICE AND PROFESSIONAL ACTIVITIES**

#### SCHOOL OF EDUCATION SERVICE

- Faculty Retreat Planning Committee (2017-2018)
- Coordinate Weekly REM Program Area Seminar ("REMinar") (2018-present)
- NEPC Schools of Opportunity Reviewer (2018-2019)
- School of Education Awards Committee member (2020-present)
- School of Education Place-Based Seed Grants reviewer (2020-present)
- School of Education Doctoral Mentorship Pathways Program mentor & selection committee (2020-present)
- School of Education Research and Evaluation Methodology faculty search committee member (2021)
- School of Education Scholarship Application Reviewer (2023)

#### STATE AND NATIONAL COMMITTEES

- National Council on Measurement in Education, *Publications Committee Member* (2013-2016)
- National Council on Measurement in Education Special Conference on Classroom Assessment, Planning Committee Member (2019)
- Measures for Early Success: Supporting Early Learners and Educators with Innovative, Equitable Assessments, *Technical Advisory Group Member* (2022)
- Edmentum, Technical Advisory Committee Member (2022-present)
- Colorado Department of Education, *Technical Advisory Panel for Longitudinal Growth Member* (2022-present)
- AERA 2024 Annual Meeting Cognition and Assessment Program Chair (2023-2024)

# **PROFESSIONAL AFFILIATIONS**

American Educational Research Association (AERA), National Council on Measurement in Education (NCME), Psychometric Society, Society for Research on Educational Effectiveness (SREE)

#### **AD-HOC REVIEWER**

**Journals:** American Educational Research Journal; Educational Measurement: Issues and Practice; Educational Assessment; Educational and Psychological Measurement; Educational Researcher; AERA Open; Journal of Educational Measurement; Journal of Modern Applied Statistical Methods; Psychology

in the Schools; School Effectiveness and School Improvement; Public Affairs Quarterly; Journal of Experiential Education; Journal of Educational and Behavioral Statistics

Conferences: NCME Annual Meeting; AERA Annual Meeting; SREE Annual Meeting

#### TRAINING SESSIONS AND WORKSHOPS

Research Possibilities in STEM Education in Early Education using Large Scale Data Sets: SEDA and ABCD. (with Elizabeth Hoffman). (December, 2022). Presentation for the AERA-NSF Grants Program 2022 Fall Research Conference. Washington, DC.

Assessment & Measurement: Guidance Interpreting Effect Sizes in Educational Research Part 2. (with Sandy Student). (March, 2022). Association of Colorado Educational Evaluators (ACEE) March Membership Meeting.

Assessment & Measurement: Guidance Interpreting Effect Sizes in Educational Research Part 1. (with Sandy Student). (February, 2022). Association of Colorado Educational Evaluators (ACEE) February Membership Meeting.

AERA-ICSPR Series in STEM Data and Data Use: Introduction to the Stanford Education Data Archive (SEDA) (with sean f. reardon, Andrew Ho, and Erin Fahle). (March, 2021). On-line webinar. <a href="https://www.aera.net/Professional-Opportunities-Funding/Professional-Development-Courses/PEERS-STEM-Data-and-Data-Use-Series">https://www.aera.net/Professional-Opportunities-Funding/Professional-Development-Courses/PEERS-STEM-Data-and-Data-Use-Series</a>

Using School-Level Data from the Stanford Education Data Archive (with sean f. reardon, Andrew Ho, and Erin Fahle). (March, 2019). Half-day workshop presented at the Society for Research on Educational Effectiveness Annual Meeting, Washington, DC.

The Stanford Education Data Archive: Using big data to study academic performance (with sean f. reardon, Andrew Ho, and Erin Fahle). (April, 2018). Half-day workshop presented at the National Council on Measurement in Education Annual Meeting, New York, NY.

The Stanford Education Data Archive: Using big data to study academic performance (with sean f. reardon, Andrew Ho, and Erin Fahle). (February, 2018). Half-day workshop presented at the Society for Research on Educational Effectiveness Annual Meeting, Washington, DC.

The Stanford Education Data Archive: Using big data to study academic performance (with sean f. reardon, Andrew Ho, and Erin Fahle). (April, 2017). Half-day workshop presented at the American Educational Research Association Annual Meeting, San Antonio, TX.

The Stanford Education Data Archive: Using big data to study academic performance (with sean f. reardon, Andrew Ho, and Erin Fahle). (March, 2017). Half-day workshop presented at the Society for Research on Educational Effectiveness Annual Meeting, Washington, DC.

The Stanford Education Data Archive: Using big data to study academic performance (with sean f. reardon, Andrew Ho, Kenneth Shores and Erin Fahle). (May, 2016). Workshop presented at the Education and Inequality in 21<sup>st</sup> Century America Conference, Stanford Center for Education Policy Analysis, Stanford, CA.

Exploratory factor analysis in R and Stata. (April, 2016). Workshop presented at the Stanford GSE Methodology Lunch Series, Stanford, CA.

The concept of validity and some novel validation methods (with Bruno Zumbo). (October, 2011). Inconference workshop presented at the Northeastern Educational Research Association Annual Meeting, Rocky Hill, CT.