

SUMMARY

Education research professional with over 25 years of cross-sectoral experience in PK-16+ education research and practice. Mission: To build better systems for generating and integrating high-quality evidence in policy and practice, to improve educational experiences and outcomes at scale.

EDUCATION RESEARCH AND POLICY EXPERIENCE

Carnegie Foundation for the Advancement of Teaching: *Managing Director, Carnegie Impact Lab.*

Provide strategic and operational leadership to build evidence to guide the development and use of new educational models; manage external partnerships to co-design and implement research and development agenda to transform high schools.

San Francisco Unified School District: *Manager of Research and Evaluation.* Oversaw SFUSD's research and evaluation portfolio; guided co-development of research agendas; coordinated external research projects, including establishing new institutional partnerships; created and led internal team of researchers in conducting rigorous evaluations. Adapted tools and provided training and coaching in continuous improvement to facilitate district and site staff's implementation of research evidence.

Nexus Research and Policy Center: *Senior Research Scientist.* Led research on higher education teaching and learning. Topics included faculty development, personalized learning, automated assessment, text mining, and discussion-based learning.

UCLA – Department of Psychology: *Research assistant* (Philip Kellman). Developed materials for research using Perceptual Learning Modules to improve students' algebra problem-solving through multiple representations.

LessonLab: *Consultant / research assistant* (James Stigler). Assisted in developing coding protocol for videotaped science lessons from Trends in International Mathematics and Science Study (TIMSS).

TEACHING AND PROFESSIONAL DEVELOPMENT EXPERIENCE

UC Berkeley – Graduate School of Education: *Lecturer, Visiting Scholar.* Taught graduate students in doctoral, master's, and teaching credential programs in high-school mathematics, science, technology, and English. Led research lab; supervised research assistants; mentored students.

Carnegie Mellon University

- **Heinz School of Public Policy and Management:** *Co-instructor.*
Co-designed and co-instructed course in statistics and educational assessment for public school principals and for Education Technology Management master's students to learn how to analyze and interpret assessment data.
- **Eberly Center for Teaching Excellence:** *Teaching Fellow.*
Provided formal observations and consultations to graduate student teaching assistants seeking feedback on their teaching. Identified and coded video examples of outstanding instruction for interactive web-based resource.

Crossroads School for the Arts and Sciences. *Instructor* (math and science); *acting chair* (science department). Taught chemistry (regular, honors, and Advanced Placement) and algebra (level II and intermediate). Managed departmental business; supervised and evaluated teachers. Research Corporation: *Partner in Science.* Klingenstein Center for Independent School Education: *Summer Institute Fellow.*

ADDITIONAL WORK EXPERIENCE

Socos Labs, LLC: Co-Founder and Director of Learning Design

Projects included: Interactive dashboard for College for America faculty to explore relationships between grader feedback and student work products; interactive AI system to support student essay-writing. AI-based recommendation system to support parental engagement for children's cognitive and socioemotional development.

Augniscent Inc. (acquired by Rabbit): Co-Founder and Director of Learning Sciences.

Developed ML-based adaptive tutor to articulate decision boundaries and map learning trajectories.

EDUCATION

Carnegie Mellon University

Ph.D., M.S., Cognitive Psychology. Certificate from Program for Interdisciplinary Educational Research (PIER), funded by Institute for Education Sciences (IES). Jacob K. Javits Graduate Fellow; National Science Foundation (NSF) Graduate Fellowship Honorable Mention; American Psychological Association (APA) Dissertation Research Award. *Learning to Discriminate and Generalize through Problem Comparisons*. Dissertation committee: Kenneth R. Koedinger, Marsha C. Lovett, David Klahr, Brian Junker.

Harvard University

A.B. cum laude, Chemistry. Harvard-Radcliffe National Scholar. McDonnell Douglas Corporation Research Intern.

SELECTED PUBLICATIONS AND PRESENTATIONS

PUBLICATIONS:

Ming, N.C., & Dickson, S. (in press). Mind the Thorns: Practice-Side Tensions and Tradeoffs When Coproducing Research. In J. Senechal, D. Naff, & H. Parkhouse (Eds.), *Navigating Issues of Equity in Schools through Research-Practice Partnerships: Stories from the Field*. New York NY: Taylor & Francis Group.

Gálvez-Bohórquez, D., Firestone, A., & **Ming, N.** (2024). "Envisioning a Future that Defies Predictions: Characterizing the Differential Impact of COVID-19 Using Longitudinal Modeling." Paper presented at the annual meeting of the American Educational Research Association (AERA), Philadelphia PA.

Lewis, C., Friedkin, S., Houseman, N., Liebert, S., **Ming, N.**, & Takahashi, A. (2023). Joyful, Powerful Mathematics for All: School-wide Lesson Study to Support Teaching Through Problem-Solving. In E. Anderson & S.D. Hayes (Eds.), *Continuous Improvement: A leadership process for school improvement*. Charlotte NC: Information Age Publishing.

Ramirez, C., Gálvez-Bohórquez, D., & **Ming, N.** (2023). "The challenges and successes of adapting summer learning programs: Addressing pandemic-related unfinished learning." Paper presented at the annual conference of the American Evaluation Association, Indianapolis IN.

Ming, N.C. (2023). Building Evidence Systems to Integrate Implementation Research and Practice in Education. William T. Grant Foundation Digest: Issue 8, Winter 2022/23.
<https://wtgrantfoundation.org/digest/building-evidence-systems-to-integrate-implementation-research-and-practice-in-education>

Farley-Ripple, E., **Ming, N.**, Goldhaber, D., Sarfo, A.O., & Arce-Trigatti, P. (2022). *Building Capacity for Evidence-Informed Improvement: Supporting State and Local Education Agencies*.
<https://crue.cehd.udel.edu/wp-content/uploads/2022/10/Building-Capacity-for-Evidence-Informed-Improvement-October-2022-1.pdf>

- National Academies of Sciences, Engineering, and Medicine. (2022). *The Future of Education Research at IES: Advancing an Equity-Oriented Science*. <https://www.nationalacademies.org/our-work/the-future-of-education-research-at-the-institute-of-education-sciences-in-the-us-department-of-education>
- Ming, N.**, Corrigan, D., Maghes, M., Kennedy, A., Le, Q.T., & Bradley, K. (2022). Agendas and Guidelines for Developing and Supporting Research. In L. Wentworth, C. Conaway, S. Shewchuk, & P. Arce-Trigatti (Eds.), *RPP Brokers Handbook, V. 2: A Guide to Brokering in Education Research-Practice Partnerships*. Houston, TX: National Network of Education Research-Practice Partnerships (NNERPP). <https://nnerpp.rice.edu/rpp-brokers-handbook/>
- Corrigan, D., **Ming, N.**, & Ozer, E. (2022). Establishing Partnership Identity through the Co-creation of a Partnership Agreement. In L. Wentworth, C. Conaway, S. Shewchuk, & P. Arce-Trigatti (Eds.), *RPP Brokers Handbook, V. 2: A Guide to Brokering in Education Research-Practice Partnerships*. Houston, TX: National Network of Education Research-Practice Partnerships (NNERPP). <https://nnerpp.rice.edu/rpp-brokers-handbook/>
- Ming, N.** (2022). IDEA Data Discussion Protocol. In L. Wentworth, C. Conaway, S. Shewchuk, & P. Arce-Trigatti (Eds.), *RPP Brokers Handbook, V. 2: A Guide to Brokering in Education Research-Practice Partnerships*. Houston, TX: National Network of Education Research-Practice Partnerships (NNERPP). <https://nnerpp.rice.edu/rpp-brokers-handbook/>
- Ming, N.C.**, & Goldenberg, L. (2021). Research Worth Using: (Re)Framing Research Evidence Quality for Educational Policymaking and Practice. *Review of Research in Education*, 45(1), 129-169. <https://doi.org/10.3102/0091732X21990620>
- Kim, M., Shen, J., Wentworth, L., **Ming, N.**, Reininger, M., & Bettinger, E. (2020). Infrastructure for Stanford-SFUSD Partnership: Development of Data-Sharing Structures and Processes (pp. 417-466). In S. Cole, I. Dhaliwal, A. Sautmann, & L. Vilhuber (Eds.), *Handbook on Using Administrative Data for Research and Evidence-Based Policy*. Cambridge MA: Abdul Latif Jameel Poverty Action Lab (J-PAL). <https://admindatahandbook.mit.edu/book/v1.0/sfUSD.html>
- Ming, N.C.**, & Kennedy, A.I. (2020). Developing and Using Indicators for Continuous Improvement. *Teachers College Record (Yearbook)*, 122(14). <https://www.tcrecord.org/Content.asp?ContentId=23462>
- Ming, N.C.** (2019). What are the dimensions of district capacity that enable effective evidence-based decision-making? *NNERPP Extra*, 1(2), 6-11. <https://nnerppextra.rice.edu/dimensions-of-district-capacity/>
- Ming, N.C.** (2018). "The Language of Discipline: Student Behaviors and Staff Supports." Paper presented at annual meeting of the American Educational Research Association, New York City, NY.
- Kim, M., **Ming, N.C.**, & Khanna, R. (2018). "Effects of Coaching on Student Outcomes." Paper presented at annual meeting of the American Educational Research Association, New York City, NY.
- Ming, N.C.** (2016). "Designing Actionable Research: Collaborative Refinement and Deliberate Data." Paper presented at annual meeting of the American Educational Research Association (AERA), Washington, DC.
- Ming, N.C.**, & Ming, V.L. (2015). Visualizing and assessing knowledge from unstructured student writing. *Technology, Instruction, Cognition, and Learning*, 10(1), 27-44. <https://eric.ed.gov/?id=EJ1257703>
- Ming, N.C.**, & Ming, V.L. (2013). "Faculty tools for visualizing online class discussions." Paper presented at annual meeting of the American Educational Research Association (AERA), San Francisco CA.
- Ming, N.C.**, & Baumer, E.P.S. (2011). Using text mining to characterize online discussion facilitation. *Journal of Asynchronous Learning Networks*, 15(2), 71-109. <https://eric.ed.gov/?id=EJ935578>

- Ming, N.C.** (2009). Analogies vs. contrasts: A comparison of their learning benefits. In B. Kokinov, D. Gentner, & K. Holyoak (Eds.), *New frontiers in analogy research: Proceedings of the Second International Conference on Analogy* (pp. 338-347). Sofia, Bulgaria: New Bulgarian University.
- Lovett, M.C., & **Chang, N.M.** (2007). Data analysis skills: What and how are students learning? In M. Lovett & P. Shah (Eds.), *Thinking with Data: Proceedings of the 33rd Carnegie Symposium on Cognition* (pp. 293-318). Mahwah NJ: Lawrence Erlbaum Associates.
- Chang, N.M.**, Koedinger, K.R., & Lovett, M.C. (2005). Performance vs. learning: Knowing the right answers for the right reasons. In K. Forbus, D. Gentner, & T. Regier (Eds.), *Proceedings of the 26th Cognitive Science Society* (p. 1537). Mahwah NJ: Lawrence Erlbaum Associates.
- Chang, N.M.**, Koedinger, K.R., & Lovett, M.C. (2003). Learning spurious correlations instead of deeper relations. In R. Alterman & D. Kirsh (Eds.), *Proceedings of the 25th Cognitive Science Society* (pp. 228-233). Boston, MA: Cognitive Science Society.
- Wise, J.A., Kubose, T., **Chang, N.**, Russell, A., & Kellman, P.J. (2000). Perceptual Learning Modules in Math & Science Instruction. In P. Hoffman & D. Lemke (Eds.), *Teaching & Learning in a Network World* (pp. 169-176). Amsterdam: IOS Press.

PRESENTATIONS:

- Lewis, C.C., Gálvez-Bohórquez, D.M., & **Ming, N.** (2025, Apr 25). "School-wide Lesson Study." Poster presentation in structured poster session, "Mapping the Landscape of Improvement Research: Representing Diverse Approaches Using a Common Grammar," at the Annual Meeting of the American Educational Research Association (AERA). Denver CO.
- Ming, N.**, & Li, Y.-L.A. (2025, Mar 13). "Eliciting Priorities for High-School Transformation from Community Expertise." Poster presentation at the 50th Annual Conference of the Association for Education Finance & Policy (AEFP). Washington DC.
- Ming, N.**, & Krishnan, S. (2024, Jul 25). "Co-Creating Research Agendas with Multiple Communities: From Present to Future." Presentation at the Annual Forum of the National Network of Research Practice Partnerships (NNERPP). Richmond VA.
- Farley-Ripple, E., **Ming, N.**, Goldhaber, D., Sarfo, A.O., & Arce-Trigatti, P. (2024, Mar 14). "Building Capacity for Evidence-Informed Improvement: Supporting State and Local Education Agencies." Presentation at the 49th Annual Conference of the Association for Education Finance & Policy (AEFP). Baltimore MD.
- Ming, N.**, Liebert, S., Friedkin, S., Carberry, M., & Cortez-Ramirez, K. (2024, Mar 25). "Spreading Instructional Improvement across a Network of Schools through Lesson Study." Presentation at the 11th Annual Carnegie Foundation Summit on Improvement in Education. San Diego CA.
- Ming, N.** (2023, Oct 2). "Building Organizational Systems for Evidence Use." Presentation at workshop co-hosted by Aspen Global Change Initiative and Transforming Evidence Funders Network ("Assessing the Impacts of Engaged Research and Its Use: Evidence and Opportunities"). Warrenton VA.
- Le, Q.T., & **Ming, N.** (2023, Jul 10). "Using Evidence to Guide SFUSD's Learning Recovery Strategies." Presentation at the Council of Great City Schools (CGCS)'s Curriculum, Research, and Instructional Leaders Meeting. Portland OR.
- Ming, N.**, Salehi, N., Flynn, K., Ozer, E., & Villa, B. (2022, Jul 21). "Power and Ethics: Exploring Family, Community, and Practice-Side Engagement in Research." Presentation at the Annual Forum of the National Network of Research Practice Partnerships (NNERPP).

- Ming, N.**, Dibner, K., Patton-Terry, N., & Coburn, C. (2022, July 18). "The Future Is Now: Advancing Equity-Informed Science in Education Research." Presentation at the Annual Forum of the National Network of Research Practice Partnerships (NNERPP).
- Ming, N.C.**, & Goldenberg, L. (2021, October 22). "Research Worth Using: What Evidence Should We Trust for Making Decisions?" Presentation at the Annual Fall Conference of the Council of Great City Schools (CGCS).
- Ming, N.C.**, & Brown, J. (2021, October 20). "Integrating Action Research into Practice." Presentation at the Annual Fall Conference of the Council of Great City Schools (CGCS).
- Ming, N.C.**, Corrigan, D., Ozer, E., & Villa, B. (2021, July 21). "Integrating Participatory Action Research into District Decision-Making." Presentation at the Annual Forum of the National Network of Research Practice Partnerships (NNERPP).
- Ming, N.C.**, & Goldenberg, L. (2021, July 21). "Research Worth Using: Dimensions of Evidence Quality for Educational Policymaking and Practice." Presentation at the Annual Forum of the National Network of Research Practice Partnerships (NNERPP).
- Ming, N.C.**, Akyea, S.G., Clarkson, A, Dwyer, T., Lesnick, J., & Pitts, C. (2021, July 20). "Strategies for ARP Funds: Leveraging new dollars with evidence and RPPs." Panel presentation at the Annual Forum of the National Network of Research Practice Partnerships (NNERPP).
- Ming, N.C.** (2021, March). "Post-Pandemic Research Needs: Perspectives from SFUSD's Research Office." Presentation at the Society for Research on Educational Effectiveness (SREE) 2021 Virtual Convening.
- Ming, N.C.**, & Lesnick, J. (2020, July). "Building Evidence-Based Decision-Making Structures." Presentation at National Network of Educational Research-Practice Partnerships (NNERPP) Virtual Annual Forum.
- Deninger, M., Dickson, S., & **Ming, N.C.** (2020, July). "Managing Many: How the P-side Manages Multiple RPPs." Presentation at National Network of Educational Research-Practice Partnerships (NNERPP) Virtual Annual Forum.
- Ming, N.C.**, Klaus, B., & Khanna, R. (2019, April). "Building Connections across Network Levels through Implementation Measures." Presentation at Carnegie Summit for Improvement in Education, San Francisco CA.
- Ming, N.C.**, & Kim, M. (2018, April). "Growing a District-wide Culture of Improvement: Transforming Our Approach to Data." Presentation at Carnegie Summit for Improvement in Education, San Francisco CA.
- Ming, N.C.** (2018, March). "Improve Evaluation, or Evaluate Improvement?" Presentation at Society for Research on Educational Effectiveness (SREE), Washington DC.
- Ming, N.C.** (2018, March). "Building District Capacity to Engage with Research: What Really Matters." Presentation at Society for Research on Educational Effectiveness (SREE), Washington DC.
- Balu, R., Easton, J., Brock, T., Lopez-Turley, R., & **Ming, N.C.** (2017, July 28). "Assessing Effectiveness: How do we get better at getting better?" Panel presentation at National Network of Education Research-Practice Partnerships (NNERPP) annual forum, Nashville, TN.
- Herlihy, C., & **Ming, N.C.** (2017, May). "How can we better support districts in using evidence for decision-making and action?" Roundtable presentation at Strategic Data Project (SDP) convening, Boston, MA.
- Khanna, R., & **Ming, N.C.** (2017, January). "From Data to Action: Accountability, Research, & Improvement." Plenary presentation at the National Science Foundation (NSF) Inclusion across the

Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (INCLUDES) conference, San Diego, CA.

Guerrero, G., Khanna, R., **Ming, N.C.**, & Wentworth, L. (2015, October). "Designing Research for Action from the Start: Lessons from the Partnership between Stanford University and San Francisco Unified School District." Presentation at the Council of Great City Schools conference, Long Beach, CA.

Wentworth, L., Khanna, R., & **Ming, N.C.** (2015, August). "Stanford University – San Francisco Unified School District Partnership." Presentation at the National Network of Education Research-Practice Partnerships (NNERPP) forum, Houston, TX.

Ming, N.C. (2014, July). "Balancing standardization and personalization in education." Keynote address at Higher Education Policy Institute (HEPI)'s symposium, "Framing the Future of Higher Education: Higher Education Instruction and Learning in the 21st Century." Austin TX.
<https://youtu.be/kr8DgX3TbR4>

Ming, V.L., & **Ming, N.C.** (2014, March 4). "Keeping the promise of educational technology." Keynote address at SXSWedu. Austin TX. <https://youtu.be/XO4iBlGJ67g>

Ming, N.C. (2012, April 19). "Nurturing an Exchange of Views for Identifying and Achieving Shared, Quality Learning Outcomes." Panel presentation at Western Interstate Commission for Higher Education (WICHE)'s annual Western Academic Leadership Forum ("Academic Leadership in the West: Harnessing the Power of Disruptive Innovation"). Phoenix AZ.

Chang, N.M. (2005, October). "When practice isn't perfect: The distinction between learning and performance." 30th annual Professional and Organizational Development (POD) Network Conference. Milwaukee, WI.

AWARDS, GRANTS, AND FELLOWSHIPS

Council of Great City Schools (CGCS) "Informing Progress in Urban Education" Research Team Award (\$4,000). Recognition of an urban school district research team that has demonstrated excellence in the field of research or evaluation. (2023)

William T. Grant Foundation: Institutional Challenge Grant Continuation (\$350,000). "Understanding and Intervening on Inequities in Chronic Absenteeism and its Consequences among High School Students." Co-funded by Doris Duke Charitable Foundation. Co-Principal Investigator. (2023-2025)

Spencer Foundation and **William T. Grant Foundation** Supplemental Grant (\$15,000). "Addressing racial inequities by elevating the voices of staff in research partnerships": Agency Principal Investigator. (2022-2023)

National Network of Research-Practice Partnerships (NNERPP) for Student Voice Award (\$7,500). "Spreading & Sustaining YPAR / Youth Voice in SFUSD". (2021-2022)

William T. Grant Foundation: Institutional Challenge Grant (\$649,975). "Understanding and Intervening in Inequities in Chronic Absenteeism and its Consequences Among High School Students." Co-funded by **Spencer Foundation** and **Doris Duke Charitable Foundation**. Co-Principal Investigator. (2020-2023)

California Office to Reform Education (CORE) Improvement Advisor Fellow. Advanced training in continuous improvement methods provided by Carnegie Foundation for the Advancement of Teaching. (2016-2017)

Pittsburgh Science of Learning Center Project Award: "Using Comparisons to Leverage Learning from Chemistry Visualizations" (\$54,816). With Alan Schoenfeld as official PI. (2007-2009)

University of California, Berkeley – Professional Development Grant: "Using Comparisons to Leverage Learning from Algebra Tools" (2007-2008)

PROFESSIONAL TRAINING

Completed 18 credits in quality improvement training from the Institute for Healthcare Improvement.

ADVISORY AND BOARD SERVICE

Society for Research in Educational Effectiveness: Board Member. (2023-present)

Advancing Innovative Math Solutions (AIMS) Collaboratory (funded by Bill and Melinda Gates Foundation): Advisory board member. (2022-present)

SEER (Standards for Excellence in Education Research) Research Network (SEERNet) for Digital Learning Platforms (IES Award # R305N210034): Advisory board member. (2021-2024)

Child Care Law Center: Board Member. (2015-2018)

REVIEW AND OTHER SERVICE

Institute of Education Sciences:

- What Works Clearinghouse–Tools, Online Assistance, Standards, and Training (WWC-TOAST) Small Working group of Experienced Education Practitioners (SWEEP) consultant (2023-2025).
- Partnerships and Collaborations panel reviewer (2018, 2019).

National Academies in Science, Engineering, and Medicine: Appointed member of Committee on the Future of Education Research at the Institute of Education Sciences (2021-2022)

National Science Foundation: Panel reviewer (2023, 2025)

W.T. Grant Foundation – Use of Research Evidence: Reviewer

American Institutes for Research (AIR) Equity Initiative – Educational Equity through Policy Implementation: Reviewer

University of Delaware - Center for Research Use in Education:

CREATED (Collaboration, Research, Equity, and Action Together in Education) curriculum for knowledge brokering: Contributor and reviewer.

Society for Research in Educational Effectiveness: Reviewer; conference co-chair.

Professional and Organizational Development Network

Cognitive Science Society

Teachers College Record

American Educational Research Association (AERA) Open

Statistics Education Research Journal

Zentralblatt für Didaktik der Mathematik