

Norma C. Ming*

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SUMMARY

Systems Architect & PhD Cognitive Scientist with 25+ years cross-sector experience bridging research, innovation, and policy to create evidence-based learning systems. Expert in knowledge mobilization, co-designing R&D agendas, and building infrastructure for rigorous analysis and continuous improvement. Strategic leader aligning resources with impact to build robust pathways for greater societal well-being.

AREAS OF EXPERTISE

Strategic planning, Impact measurement, Continuous improvement, Systems thinking, Organizational learning, Implementation science, Mixed-methods analysis, Economic evaluation, Learning analytics, Knowledge mobilization, Partnership governance, Participatory methods, Responsible AI, Durable skills.

EDUCATION

Carnegie Mellon University. *Ph.D., Cognitive Psychology.* 2006.

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. Ph.D. committee: Kenneth R. Koedinger, Marsha C. Lovett, David Klahr, Brian Junker.

Harvard University. *A.B. cum laude, Chemistry.* 1995.

Harvard-Radcliffe National Scholar. McDonnell Douglas Corporation Research Intern.

PROFESSIONAL EXPERIENCE

Socos Labs, LLC: *Co-Founder and Director of Learning Design.* 2011-present.

Leading **implementation science** to scale professional learning networks and **cost-effectiveness analysis** to evaluate edtech. Developed **NLP-based naturalistic assessment** models to operationalize latent cognitive constructs (e.g., resilience, curiosity) by analyzing unstructured text data. Designed interactive **AI systems and dashboards** to: scaffold student essay-writing; enable postsecondary faculty to explore correlations between qualitative grader feedback and student work products; and support parental engagement for children's cognitive and socioemotional development.

The Human Trust: *Co-Founder.* 2023-present.

Designing **technical and relational infrastructure** to broker knowledge across research, policy, and practice. Advising on projects that **leverage AI to match individuals to education/work experiences** and **build teams** to maximize cognitive potential, collective intelligence, and economic advancement.

Carnegie Foundation for the Advancement of Teaching: *Managing Director.* 2023-2025.

Launched **Impact Lab**, providing **strategic leadership** and architecting **research infrastructure** to build evidence for post-"Carnegie unit" educational models. **Co-designed national R&D agenda** with education, workforce, and community leaders to align K-12 with postsecondary and career pathways. Managed **data governance** to support research with national network of 24 school systems scaling innovations in **durable skills** development, **competency-based education**, and **work-based learning**.

San Francisco Unified School District: *Manager of Research and Evaluation.* 2014-2023.

Directed **district's research and evaluation portfolio**, structuring oversight to align inquiry with strategic priorities. Integrated evidence requirements for implementation and impact into **fiscal planning and resource allocation** for \$1.1B budget. Coached 60+ senior leaders in **implementation science** and **continuous improvement** methods to embed evidence-based decision-making in district

strategy. Guided superintendent's equity initiative through applying **research and analyses of disaggregated data** to target supports for 'high equity-gap' schools, successfully **narrowing racial achievement gaps**. Created and led **internal evaluation team** to conduct rigorous mixed-methods studies; supported **participatory research**; established **new institutional partnerships**; collaborated with legal and IT to update and expand **data-sharing infrastructure and governance**.

Nexus Research and Policy Center: *Senior Research Scientist*. 2009-2013.

Led research for this spinoff of **Apollo Group** (parent company of **University of Phoenix**) focused on **adult working learners**. Directed studies on **digital pedagogy, NLP, and automated assessment models** to improve postsecondary outcomes and career-focused learning. Pioneered **text mining** techniques to validate metrics for dialogue and facilitation quality in complex social contexts.

Augniscient Inc. (acquired by Rabbit): *Co-Founder*. 2008-2011.

Designed **cognitive logic** for ML-based adaptive tutor, **defining algorithmic decision boundaries** to map student learning trajectories, demonstrating early innovation in **AI-driven personalized learning**.

UC Berkeley – Graduate School of Education: *Lecturer* (2006-2009), *Visiting Scholar* (2009-2013).

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 graduate students.

Carnegie Mellon University

- **Eberly Center for Teaching Excellence:** *Teaching Fellow*. 2003-2006.

Provided formal consultations to graduate student teaching assistants seeking feedback on their teaching. Coded video examples of outstanding instruction for interactive web-based resource.

- **Heinz School of Public Policy and Management:** *Co-instructor*. 2003-2004.

Co-designed and co-instructed course in **statistics and educational assessment** for public school principals and Education Technology Management master's students to use assessment data.

UCLA / LessonLab: *Research assistant*. 2000-2001.

Developed Perceptual Learning Modules for algebra instruction and coding protocols for videotaped science lessons from Trends in International Mathematics and Science Study (TIMSS).

Crossroads School for the Arts and Sciences. *Instructor; acting department chair*. 1995-2000.

Taught chemistry and algebra. Managed departmental business; supervised and evaluated teachers. Research Corporation: *Partner in Science*. Klingenstein Center, Columbia: *Summer Institute Fellow*.

SELECTED AWARDS, GRANTS, AND FELLOWSHIPS

"A Collective Approach to Reimagining a Research and Development Infrastructure to Support Systems Transformation" – Spencer Foundation: Co-principal investigator (PIs Caitlin Farrell, Alison Fox Resnick; CU Boulder) on ~\$150k grant to reimagine national R&D systems for impact. (2026).

Institutional Challenge Grants – William T. Grant, Spencer, & Doris Duke Charitable Foundations: Co-principal investigator with Prof. Emily Ozer (Public Health, UC Berkeley) and Dean Susan Stone (Social Welfare, UC Berkeley) on multiple major grants (\$650k, \$350k, \$15k) focused on reducing educational inequities through elevating youth and staff voice in research partnerships. (2020-2025)

"Informing Progress in Urban Education" Research Team Award, Council of Great City Schools (CGCS): Recognized for excellence in urban school district research and evaluation. (2023)

Student Voice Award, National Network of Research-Practice Partnerships (NNERPP): For national excellence in spreading and sustaining youth-led participatory action research (YPAR). (2021-2022)

Improvement Advisor Fellow, California Office to Reform Education (CORE): Selected for advanced training in continuous improvement methods from the Carnegie Foundation. (2016-2017)

STRATEGIC ADVISORY AND GOVERNANCE

National Academies in Science, Engineering, and Medicine: Appointed member of Committee on the Future of Education Research at the Institute of Education Sciences (IES). Successfully advocated for reorienting federal research priorities to better inform state and local decision-making (2021-2022).

SEERNet for Digital Learning Platforms (IES): Advisory board member for national network establishing standards for excellence in research for digital and AI-enabled learning platforms (2021-2024).

Society for Research in Educational Effectiveness (SREE): Board Member (2023-present), directing strategy for national professional organization to advance production and use of rigorous evidence in policy and practice. Served as conference co-chair (2019-2020).

AIMS Collaboratory (Bill and Melinda Gates Foundation): Advisory Board Member for national network of researchers, ed tech providers, and school systems driving evidence-based solutions for equitable math instruction and professional learning using innovative digital tools (2022-present).

Child Care Law Center: Board Member providing institutional governance and strategic oversight for legal and policy initiatives affecting the child care workforce (2015-2018).

SCIENTIFIC REVIEW & TECHNICAL STANDARDS

National Science Foundation: Panel reviewer for multi-million dollar portfolios of federal research grants in STEM education and innovation (2023, 2025).

Institute of Education Sciences:

- User tester for “Standards for Economic Evaluation of Educational and Social Programs.” (2026).
- WWC-TOAST Consultant: Advised the What Works Clearinghouse on reporting standards for operational utility of evidence (2023-2025).
- Panel reviewer: Evaluated federal grants for Partnerships and Collaborations (2018, 2019).

William T. Grant Foundation: Expert reviewer for “Use of Research Evidence” portfolio, evaluating proposals on improving the utility and use of research in policy and practice (2016-present).

American Institutes for Research (AIR): Reviewer, educational equity portfolio (2022).

University of Delaware / CRETEd (Collaboration, Research, Equity, and Action Together in Education): Contributor and reviewer for national curriculum on knowledge brokering (2022).

Peer reviewer: *Cognitive Science Society, AERA Open, Teachers College Record*

SELECTED PUBLICATIONS AND PRESENTATIONS

NATIONAL ADVISORY & POLICY LEADERSHIP:

National Academies of Sciences, Engineering, and Medicine. (2022). [The Future of Education Research at IES: Advancing an Equity-Oriented Science.](#)

Carnegie Foundation for the Advancement of Teaching. (2025). [A Research and Development Agenda for High School Transformation.](#)

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.

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.

Jackson, C., **Ming, N.**, & Farley-Ripple, E. (2025, Mar 4). [“What Teachers Should Know About Education Research.”](#) *Education Week.*

INSTITUTIONAL GOVERNANCE:

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).

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](#).

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*.

CONTINUOUS IMPROVEMENT & ACTIONABLE INSIGHTS:

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.

Ming, N.C., & Kennedy, A.I. (2020). [Developing and Using Indicators for Continuous Improvement](#). *Teachers College Record (Yearbook)*, 122(14).

TECHNICAL INNOVATION & RESPONSIBLE AI:

Gálvez-Bohórquez, D., Firestone, A., & **Ming, N.** (2024, Apr 12). "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).

Ming, N.C., & Ming, V.L. (2015). [Visualizing and assessing knowledge from unstructured student writing](#). *Technology, Instruction, Cognition, and Learning*, 10(1), 27-44.

ETHICAL & EQUITABLE CO-PRODUCTION:

Ming, N.C., & Dickson, S. (2025). [Practice-Side Tensions and Tradeoffs When Coproducing Research: Mind the Thorns](#). 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.

Ozer, E.J., **Ming, N.**, & Corrigan, D. (in press). YPAR meets URE: Affordances, challenges, and next steps. *Evidence and Policy*.

Ming, N. (2026, Feb 25). "Better questions vs. better supports for evidence: Who decides? What does the research say?" Presentation at Education Knowledge Brokers Network Virtual Forum.

INVITED ADDRESSES & PANEL PRESENTATIONS:

Ming, V.L., & **Ming, N.C.** (2026, Mar 2). "The Promise and Perils of AI for Learning and Evidence Systems." Keynote for "Big Ideas Forum: Reimagining evidence ecosystems and the role of philanthropy."

Ming, V.L., & **Ming, N.C.** (2014, Mar 4). "Keeping the promise of educational technology." Keynote address at SXSWedu (audience: ~6,000). <https://youtu.be/XO4iBlGJ67g>

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, facilitated by The Pew Charitable Trusts ("Assessing the Impacts of Engaged Research and Its Use").

PROFESSIONAL TRAINING

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