

PAUL N. REIMER

Executive Director
AIMS Center for Math and Science Education
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EDUCATION

Ph.D., Educational Psychology and Educational Technology *2016-21 (exp)*
Michigan State University, East Lansing, MI

M.A., Mathematics Education *2006-08*
Fresno Pacific University, Fresno, CA

B.A., International Studies *1992-96*
George Fox University, Newberg, OR
Spanish Language Emphasis

PROFESSIONAL EXPERIENCE

Executive Director *2019-present*
AIMS Center for Math and Science Education

Senior Researcher *2016-2019*
AIMS Center for Math and Science Education

Mathematics Curriculum and Professional Development Coach *2003-2016*
Selma Unified School District

Senior Mathematics Consultant *2004-2011*
Gail Robinette and Associates

Elementary Teacher *1996-2003*
Selma Unified School District

RESEARCH EXPERIENCE

California Statewide Early Mathematics Initiative

2019-2020

Co-Director

Awarded: \$11,000,000

The AIMS Center assisted a cohort of 100 early childhood directors, coordinators and lead teachers across the state to develop capacity, expertise, and leadership in early mathematics and science education. Together with local partners, we designed, developed, and disseminated resources, communications, and professional learning to improve immediate and long-term math outcomes for children birth through age eight. We also developed reciprocal research/practice partnerships with doctoral students to identify and study immediate opportunities to advance theory and practice in mathematics education.

Project Head Start

2016-2019

Director

Funded through the AIMS Education Foundation

The purpose of this research and development project was to deepen Head Start teachers' knowledge about children's mathematics and explore ways to develop environments and activities that support children's mathematical development. Our professional development model included whole-group learning sessions, video club discussion, collaborative activity design, and classroom coaching.

Creating Algebraic Thinkers (CAT)

2008-2012

California Mathematics and Science Partnership Grant (CaMSP)

Facilitator/Instructor/Coach

PI: Dave Youngs, Fresno Pacific University

Awarded: \$3,000,000

This project examined the effects of professional development activities and associated classroom coaching in increasing teacher content knowledge and pedagogical knowledge as measured by the Learning Mathematics for Teaching (LMT) measures and in improving the level of student proficiencies on local and statewide assessments.

PUBLICATIONS

Journal Articles

Reimer, P. N., (2020). Head Start preschool educators' conceptions of mathematics teaching and learning. *Journal of Early Childhood Teacher Education*.

DOI: [10.1080/10901027.2020.1818649](https://doi.org/10.1080/10901027.2020.1818649)

Reimer, P. N., Mehta, R., Mishra, P. (2019). Learning science with the body in mind. / *Wonder: Rediscovering School Science*, (6), 49-54.

Peer-Reviewed Conference Proceedings

Plaxco, D., **Reimer, P. N.**, Williams-Pierce, C., Ellis, A., Molitoris-Miller, S., Simpson, A., Zandieh, M., Mauntel, M., Dogan, M. F. (2020). Mathematical play: Across ages, context, and content. In Sacristán, A.I., Cortés-Zavala, J.C. & Ruiz-Arias, P.M. (Eds.). (2020). *Mathematics Education Across Cultures: Proceedings of the 42nd Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, Mexico. (pp. 178-180). Cinvestav / AMIUTEM / PME-NA. <https://doi.org/10.51272/pmena.42.2020>

Spina, A., Macias, M., & **Reimer, P. N.** (2020). How facilitators define, design, and implement effective early childhood mathematics professional development. In Sacristán, A.I., Cortés-Zavala, J.C. & Ruiz-Arias, P.M. (Eds.). (2020). *Mathematics Education Across Cultures: Proceedings of the 42nd Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, Mexico. (pp. 1931-1935). Cinvestav / AMIUTEM / PME-NA. <https://doi.org/10.51272/pmena.42.2020>

Gribble J., **Reimer, P.**, Rizo, A., Pauls, S., Caldwell, B., Macias, M., Spina, A., Rosenbaum, A. (2020). Robot block-based coding in preschool. In M. Gresalfi & I.S. Horn, (Eds.), *The Interdisciplinarity of the Learning Sciences, 14th International Conference of the Learning Sciences (ICLS) 2020, Volume 4* (pp. 2229-2232). Nashville, Tennessee: International Society of the Learning Sciences.

Williams-Pierce, C., Plaxco, D., **Reimer, P. N.**, Simpson, A., Hawley Orrill, C., Burke, J. P., Sinclair, N., Guyevskey, V., Ellis, A. B., Dogan, M. F. (2019). Mathematical play: Across ages, context, and content. In S. Otten, A. G. Candela, Z. de Araujo, C. Haines, & C. Munter (Eds.), *Proceedings of the forty-first annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. (pp. 1979–1990). St Louis, MO: University of Missouri.

Chapman, K., Jasien, L., **Reimer, P. N.**, Vogelstein, L. (2019). Designing for productive problem posing in informal STEM spaces. In K. Lund, G. P. Niccolai, E. Lavoué, C. Hmelo-Silver, G. Gweon, and M. Baker, (Eds.), *A Wide Lens: Combining Embodied, Enactive, Extended, and Embedded Learning in Collaborative Settings, 13th International Conference on Computer Supported Collaborative Learning (CSCL) 2019, Volume 2* (pp. 791-797). Lyon, France: International Society of the Learning Sciences.

- Williams-Pierce, C., Plaxco, D., **Reimer, P. N.**, Ellis, A.B., & Dogan, M.F. (2018). Mathematical play: Across age, context, and content. In T.E. Hodges, G. J. Roy, & A. M. Tyminski, (Eds.), *Proceedings of the 40th annual conference of the North American Chapter of the International Group for the Psychology of Mathematics Education*, (pp. 1507-1514). Greenville, SC: University of South Carolina & Clemson University.
- Reimer, P. N.**, & Putnam, R. T. (2018). Head start preschool educators' conceptions of mathematics learning and teaching. In T.E. Hodges, G. J. Roy, & A. M. Tyminski, (Eds.), *Proceedings of the 40th annual conference of the North American Chapter of the International Group for the Psychology of Mathematics Education*, (p. 452). Greenville, SC: University of South Carolina & Clemson University.
- Staudt Willet, K. B., & **Reimer, P. N.** (2018, March). The career you save may be your own: Exploring the mathtwitterblogosphere as a community of practice. In E. Langran & J. Borup (Eds.), *Proceedings of Society for Information Technology & Teacher Education (SITE) International Conference 2018* (pp. 2324-2329). Washington, DC: Association for the Advancement of Computing in Education (AACE).
- Reimer, P. N.** (2017). Videos of preschool mathematical thinking for teacher learning. In E. Galindo & J. Newton, (Eds.), *Proceedings of the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 315-318). Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.

SCHOLARLY PRESENTATIONS

- Reimer, P. N.**, Rizo, A., Pauls, S. (2021, June). *Remote engagement in early mathematics professional development: Using tangible artifacts to mediate participation*. Poster presented at the 42nd Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Mexico.
- Macias, M., Spina, A., Rosenbaum, L. F., Caldwell, B., Gribble, J., **Reimer, P. N.** (2020, May). *Professional development aligned with leaders' goals in early childhood STEM education: A collaboration between researchers and practitioners*. Building Interdisciplinary Community: GGSE Research Symposium. UC Santa Barbara, Santa Barbara, CA.
- Spina, A. D., Macias, M., Rosenbaum, L., Gribble, J., Caldwell, B. & **Reimer, P.N.** (2020, April). *Professional development for leaders in early childhood STEM education: A collaboration between researchers and practitioners* [Paper

Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/v8hcw37>
(Conference Canceled)

Rosenbaum, L. F., Caldwell, B., Gribble, J., Macias, M., Spina, A., & **Reimer, P. N.**, (2020). *Efforts to support and study early math professional development through a research-practice partnership*. Poster presented at the 2020 Research Day Conference. Berkeley, CA. *Conference cancelled due to COVID-19 pandemic.

Reimer, P. N. (2019, December). *Engaging preschool teachers as learners in early childhood mathematics professional development*. Talk for EPET PhD program brownbag seminar at Michigan State University: East Lansing, MI.

Caldwell, B., Gribble, J., Macias, M., **Reimer, P. N.**, Rosenbaum, L. F., & Spina, A. (2019, November). *Fostering culturally-responsive, play-based learning as part of California's Statewide Early Math Initiative*. Promising Math 2019: Early Math Learning in Family and Community Contexts, Chicago, IL.

Reimer, P. N. (2018, October). *Disrupting dichotomies: Conceptions of preschool mathematics teaching and learning*. Talk for EPET PhD program brownbag seminar at Michigan State University: East Lansing, MI.

Reimer, P. N. (2018, September). *Disrupting dichotomies: Opportunities in centered conceptions of early childhood mathematics learning and teaching*. Talk for Graduate School of Education at UC Berkeley: Berkeley, CA.

Reimer, P. N. (2018, May). *Investigating the role of physical interactions in developing meaning in children's mathematical play*. Poster presented at the NSF EMIC Conference Workshop, Madison, WI.

Reimer, P. N. (2017, August). *Teaching is listening: Attending to young children's mathematics*. Keynote speaker at the Fresno Economic Opportunities Commission Head Start Preschool Preservice Day, Fresno, CA.

Reimer, P. N. (2013, July). *Mathematics education: Opportunities for change*. Invited speaker at the AIMS Education Foundation, Fresno, CA.

COURSES TAUGHT

Michigan State University, College of Education

Department of Counseling, Educational Psychology, & Special Education

CEP 805 Learning Mathematics with Technology

Co-Instructor Spring 2018, 2019

Fresno Pacific University, Center for Professional Development

EDU-921 Writing in the Math Classroom

MAT-922 Patterns and Relationships K-2

MAT-923 Assessing Students' Mathematics Learning

MAT-924 Virtual Manipulatives

MAT-925 Patterns and Relationships 3-5

MAT-926 Developing Algebraic Thinking

MAT-927 Teaching Math to English Language Learners

MAT-928 Technology-Enhanced Mathematics Learning

MAT-929 Fostering Mathematics Discussions

MAT-930 Common Core Mathematical Practices

MAT-931 Mathematics for Social Justice

MAT-932 Using Rich Math Tasks in the Classroom

MAT-933 Improve Fluency: Number Talks

STEM-900 Inspiring STEM Learning

STEM-901 Coding in the Classroom

STEM-902 Maker Movement: Tech and Tinkering

STEM-904 Teaching Robotics

Online Instructor, 2008–present

Fresno Pacific University, Graduate School of Education

Patterns and Functions for Elementary Teachers

Graduate Instructor 2010–2013

PROFESSIONAL SERVICE

Co-Organizer

Mathematical Play working group for the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)

Conference Proposal Reviewer

Psychology of Mathematics Education North American Chapter (PME-NA)

Master of Ceremony

California Early Math Symposium

Fresno, CA

June, 2018

PROFESSIONAL MEMBERSHIPS

American Educational Research Association (AERA) Division C, Division K
North American Chapter of the International Group for the Psychology of Mathematics
Education (PME-NA)
National Council of Teachers of Mathematics (NCTM)
California Mathematics Council (CMC)
National Association for the Education of Young Children (NAEYC)