

Meghan Shaughnessy

Curriculum Vitae

University of Michigan
 School of Education
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EDUCATION

Ph.D. University of California, Berkeley (2009)

Graduate School of Education, Development in Mathematics and Science Program

Dissertation: Students' Flexible Use of Multiple Representations for Rational Number: Decimals, Fractions, Parts of Area, and Number Lines

Advisor: Geoffrey Saxe

Committee members: Alan Schoenfeld (Education); Thomas Wickens (Psychology)

M.A. University of California, Berkeley (2005)

Graduate School of Education, Development in Mathematics and Science Program

B.A. Wellesley College (2003)

Double Major: Mathematics and Psychology

PROFESSIONAL EXPERIENCE

Research Specialist , University of Michigan	2012 - present
Instructor, Elementary Teacher Education Program , University of Michigan	2009 - present
Associate Chair of Elementary Teacher Education for Program Design & Innovation , University of Michigan	2012 – 2014
Post Doctoral Researcher , University of Michigan	2009 – 2012

RESEARCH PROJECTS

Assessing Teaching Practice (@Practice) , University of Michigan	2011 - present
Principal investigator of a set of NSF-funded projects focused on research and development of simulations for assessing, and supporting learning of high-leverage teaching practices and mathematical knowledge for teaching. Direct a project team consisting of a project manager, post doctoral research fellows, and graduate student researchers. (http://sites.soe.umich.edu/at-practice/)	
Organizing to Learn Practice (O2LP) Project	2016 – present
Principal investigator of an NSF-funded project studying teacher learning through participating in classroom-focused professional development. Direct a project team consisting of a project manager, post doctoral research fellows, and graduate student researchers.	
Core Practice Consortium	2015 – present
Core member of a multi-university group focused on advancing practice-based teacher education through a focus on core teaching practices in English language arts, history, science, and mathematics. The group also develops specific instructional approaches for teaching novices to carry out these practices. (http://corepracticeconsortium.com/)	

TeachingWorks, University of Michigan 2011 - present

Designer and facilitator of professional convenings of teacher educators across institutions and programs to develop capacity for practice-based teacher education instruction. Core researcher and designer of formative assessments of novice teachers' capabilities with high-leverage practices in mathematics. Two recent projects include:

- *Partnership with the University of North Carolina–Charlotte*: Designed and led professional development workshops for teacher education faculty members and leaders from a nearby school district focused on the high-leverage teaching practices of eliciting and interpreting student thinking, leading group discussions, and setting up and managing small group work. Significant attention was given to pedagogies to use in methods courses.
- *Partnership with Towson University*. Designed and led professional development workshops for teacher education faculty members and leaders from a nearby school district focused on the high-leverage teaching practices of eliciting and interpreting student thinking, leading group discussions, and explaining and modeling content. Significant attention was given to pedagogies (e.g., rehearsals) to use in methods courses to support novices' development of skills with these practices.

Elementary Mathematics Laboratory (EML), University of Michigan 2005 – present

Designer and researcher of mathematics curriculum and instruction for upper elementary students. The Elementary Mathematics Laboratory is a project that brings together the study and development of teaching practice with the teaching and learning of students and teaching professionals.

Developing Teaching Expertise About Mathematics (Dev-TE@M Project), University of Michigan 2009 – 2013

Senior investigator on an NSF-funded project to develop three professional development modules focused on mathematics instruction. Co-led the development of module content and facilitator supports for two modules.

(<http://www.umich.edu/~devteam/>)

Learning Mathematics through Representations (LMR) Project, University of California, Berkeley 2004 – 2009

Graduate student researcher on a IES-funded project (PI, Geoffrey Saxe) which developed a research-based curriculum unit for the teaching and learning of integers and fractions.

Diversity in Mathematics Education (DiME) Project, University of California, Berkeley 2003 - 2009

Graduate student researcher involved in data collection in middle school mathematics classrooms. DiME was a consortium of universities and school districts that focused on issues of equity in mathematics education.

UNIVERSITY TEACHING EXPERIENCE**EDUC 411, Teaching Children Mathematics**, School of Education, University of Michigan. 2009 – 2017 (every fall)

Lead instructor for a practice-based elementary mathematics methods course. Redesigned the course in 2011. Organizer of the planning group for the course (2 sections) since 2010. Mentored graduate students apprenticing to teach the course.

- ED 412, Mathematical Practices: A Focus on K-8 Teaching and Learning** Fall 2018
Course designer and lead instructor for a course for teacher candidates majoring in elementary mathematics.
- EDUC 415, Children as Sense-Makers #2**, School of Education, University of Michigan. Winter 2014, 2013, 2012, 2011
Lead instructor and designer of a mathematics-focused practice-based course focused on eliciting and interpreting student thinking, explaining core content, and identifying common patterns in student thinking. A portion of the course was embedded in a local elementary school, with opportunities for teaching interns to work with students. Mentored graduate students teaching the course.
- EDUC 415, Children as Sense-makers #1**, School of Education, University of Michigan. Fall 2012, 2011, 2018
Lead instructor for a four-week course focused on learning to elicit, interpret, and develop a student's thinking about the scientific phenomenon of day and night.
- EDUC 210, Investigating Teaching and Learning**, School of Education, University of Michigan. Fall 2017, 2015, 2014, Winter 2014, Fall 2013, 2012, 2010
Co-director of an independent study course for undergraduate students in which students conducted close analyses of mathematics instruction using records of practice and their own direct interactions with children.
- Elementary Mathematics Content Pedagogy Workshops**, Teach for America Certification Project, School of Education, University of Michigan. 2010 – 2011
Instructor for sessions on mathematics pedagogy for Teach for America, Detroit.
- Elementary Mathematics Laboratory Tutoring Apprenticeship Program**, School of Education, University of Michigan. Summer 2010
Director of a program in which 25 undergraduate students worked under close supervision with an individual fifth grader daily during a two-week summer mathematics program. Provided training and support to the undergraduate students.
- EDUC 114A, Early Development and Education**, Graduate School of Education, University of California, Berkeley. Spring 2007
Co-instructor of a child development and education course for undergraduate students.

PROFESSIONAL DEVELOPMENT EXPERIENCE

Following is a sample of the professional development workshops I have led.

- Designing Practices-based Teacher Education.** Lakehead University, Orillia (Ontario, Canada). August 2017
Led a full-day professional development for teacher education faculty focused on practices-based teacher education. Participants learned about the foundation of practices-based teacher education and examined examples from one teacher education program.
- Supporting the improvement in teaching through observing others' teach.** 2015 – 2016
Marion County Public Schools, FL. (w/ N. Garcia)
Co-led a series of professional development sessions for elementary and middle school mathematics coaches focused on "making teaching public." Coaches learned to teach model lessons in ways that made the work of teaching visible for observing teachers and to facilitate prebriefing and debriefing conversations of such teaching.

Connections between the IES Practice Guide and the Common Core. (w/ T. Boerst & R. Gersten). 2013 - 2015

Led professional development focused on deepening understanding of the topics in the Common Core (e.g., fractions on the number line and decimals) and implementing recommendations in IES "fractions" practice guide. *Presented in multiple locations including: Macon, GA; REL-Southeast Bridge Event in Jacksonville, FL and Miami, FL; South Carolina Council of Teachers of Mathematics Fall Conference; Making Connections Conference in Biloxi, MS.*

Connecting number and operations in the classroom: Fractions. (w/ T. Boerst, & A. Waltrup). A National Council of Teachers of Mathematics Institute, New Orleans, LA. July 2013

Co-designed and delivered a 6-hour professional development session for the institute. Delivered the professional development twice during the institute.

GRANTS

Awarded

Organizing to Learn Practice: Teacher Learning in Classroom-Focused Professional Development. National Science Foundation, \$2,699,837, 2016-2020. (Principal Investigator; co-principal investigators: Nicole Garcia & Deborah Loewenberg Ball)

Investigating Relationships Between Mathematical Knowledge for Teaching and High Leverage Teaching Practices. National Science Foundation, \$1,499,331, 2015-2018. (Co-Principal Investigator with Timothy Boerst & Deborah Loewenberg Ball).

Strengthening the Quality, Design and Usability of Simulations as Assessments of Teaching Practice. National Science Foundation, \$449,906, 2015-2017. (Principal Investigator, co-principal investigators: Timothy Boerst & Deborah Loewenberg Ball).

Investigating Simulations of Teaching Practice: Assessing Readiness to Teach Elementary Mathematics. National Science Foundation, \$450,000, 2013-2015. (Co-Principal Investigator with Timothy Boerst, Deborah Loewenberg Ball, & Hyman Bass).

PUBLICATIONS

*indicates graduate student or postdoctoral researcher co-author

Books

McNamara, J. & **Shaughnessy, M. M.** (2015/2010). *Beyond Pizzas and Pies: 10 Essential Strategies for Supporting Fraction Sense*. Sausalito, CA: Math Solutions.

Articles

Shaughnessy, M., Ghouseini, H., Kazemi, E., Franke, M., Kelley-Petersen, M., & *Hartmann, E. (2019). An investigation of supportin teacher learning in the context of a common decomposition for leading mathematics discussions. *Teaching and Teacher Education, 80*, 167–179.

Shaughnessy, M., Boerst, T., & *Farmer, S. O. (2018). Complementary assessments of preservice teachers' skill with eliciting student thinking. *Journal of Mathematics Teacher Education*. <https://doi.org/10.1007/s10857-018-9402-x>

Shaughnessy, M., & Boerst, T. (2018). Appraising the skills that preservice teachers bring to teacher education: Skill with the practice of eliciting a student's thinking. *Journal of Teacher Education, 69*(1), 40–55.

Saxe, G. B., **Shaughnessy, M. M.,** & Gearhart, M., & Haldar, L. C. (2013). Coordinating numerical and linear units: Elementary students' strategies for locating whole numbers on the number line. *Mathematical Thinking and Learning, 15*, 235–258.

- Shaughnessy, M. M.** (2011). Identify fractions and decimals on a number line. *Teaching Children Mathematics*, 17(7), 428–434.
- McNamara, J. C., & **Shaughnessy, M. M.** (2010). Student errors: What can they tell us about what students DO understand? *NCSM Spring Newsletter*, 28–31.
- McNamara, J. C., & **Shaughnessy, M. M.** (2008). Understanding fractions through measurement. *The California Mathematics Council ComMuniCator*, 33(1), 30–32.

Book chapters

- Shaughnessy, M.**, & Boerst, T. (2018). Designing simulations to learn about preservice teachers' capabilities with eliciting and interpreting student thinking. In G. J. Stylianides & K. Hino (Eds.), *Research advances in the mathematical education of pre-service elementary teachers: An international perspective* (pp.125–140). Springer.
- Danielson, K. A., **Shaughnessy, M.**, & *Jay, L. P. (2018). Use of representations in teacher education. In P. Grossman, *Teaching core practices in teacher education* (pp. 15–33). Cambridge, MA: Harvard Education Press.
- Schutz, K., Grossman, P., & **Shaughnessy, M.** (2018). Approximations of practice in teacher education. In P. Grossman, *Teaching core practices in teacher education* (pp. 57–83). Cambridge, MA: Harvard Education Press.
- Shaughnessy, M.**, Ball, D. L., & Garcia, N. (2017). A laboratory approach to the professional development of elementary mathematics specialists. In M. B. McGatha & N. R. Rigelman (Eds.), *Elementary mathematics specialists: Developing, refining, and examining programs that support mathematics teaching and learning* (pp. 123–131). Charlotte, NC: IAP.
- Garcia, N., & **Shaughnessy, M.** (2017). Organizing to learn practice: Classroom-focused professional development. In L. West & M. Boston (Eds.), *Annual perspectives in mathematics education* (pp. 135–144). Reston, VA: National Council of Teachers of Mathematics.
- Saxe, G. B., Gearhart, M., **Shaughnessy, M.**, Earnest, D., Cremer, S., Sitabkhan, Y., Platas, L. & Young, A. (2009). A methodological framework and empirical techniques for studying the travel of ideas in classroom communities. In B. Schwartz, T. Dreyfus and R. Hershkowitz (Eds.), *Transformation of knowledge in classroom interaction*, Routledge.
- Saxe, G. B., **Shaughnessy, M. M.**, Shannon, A., Langer-Osuna, J. M., Chinn, R., & Gearhart, M. (2007). Learning about fractions as points on a number line. In W. G. Martin, M. E. Strutchens, & P. C. Elliott (Eds.), *The learning of mathematics: Sixty-ninth yearbook* (pp. 221–237). Reston, VA: NCTM.

Proceedings

- Boerst, T., & Shaughnessy, M. (in press). Connecting mathematical knowledge with engagement in teaching practices. *Proceedings of the Eleventh Congress of the European Society for Research in Mathematics Education (CERME11)*. Utrecht: the Netherlands.
- Shaughnessy, M.**, *DeFino, R., *Pfaff, E., Blunk, M., & Boerst, T. (in press). Impact of a mathematical mistake on preservice teachers' eliciting of student thinking. *Proceedings of the Eleventh Congress of the European Society for Research in Mathematics Education (CERME11)*. Utrecht: the Netherlands.
- Garcia, N., **Shaughnessy, M.**, *Prawat, X. J., *Pfaff, E., *Mortimer, J., Cirino, N., Blunk, M., & *Robinson, D. (2018). Changing Teaching Practice: Examining Professional Development Impact on Mathematics Discussion Leading Practice. In T. E. Hodges, G. J. Roy, & A. M. Tyminski (Eds.), *Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 366–369). Greenville, SC: University of South Carolina & Clemson University.

- Shaughnessy, M.,** *DeFino, R., *Pfaff, E., & Blunk, M. (2018). How do preservice teachers elicit the thinking of a student who has made a mistake? In T. E. Hodges, G. J. Roy, & A. M. Tyminski (Eds.), *Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 791–794). Greenville, SC: University of South Carolina & Clemson University.
- *DeFino, R., *Prawat, X., & **Shaughnessy, M.** (2017, October). Preservice teachers' generalizations about an area strategy. *Proceedings of the Thirty-ninth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Indianapolis, IN.
- *Prawat, X., *DeFino, R., & **Shaughnessy, M.** (2017, October). Generating a follow-up problem to confirm student thinking and understanding: What can preservice teachers do?. *Proceedings of the Thirty-ninth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Indianapolis, IN.
- Shaughnessy, M.,** Garcia, N. M., Selling, S. K., & Ball, D. L. (2016). What knowledge and skill do mathematics teacher educators need and (how) can we support its development? *Proceedings of the Thirty-eighth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Tucson, AZ: University of Arizona.
- Shaughnessy, M.,** Boerst, T., & Ball, D. L. (2015). Simulating teaching: New possibilities for assessing teaching practice. *Proceedings of the Thirty-seventh Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. East Lansing, MI: Michigan State University.
- Selling, S. K., **Shaughnessy, M.,** *Willis, A., Garcia, N., *O'Neill, M. K., & Ball, D. L. (2015). Standardized assessments of beginning teachers' discussion leading practice: Is it possible and what can we learn? *Proceedings of the Thirty-seventh Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. East Lansing, MI: Michigan State University.
- Saxe, G. B., **Shaughnessy, M. M.,** Earnest, D., Cremer, S., Platas, L. M., Sitabkhan, Y., & Young, A. (2007). Fractions on the number line: The travel of ideas. In T. Lamberg & L. Wiest (Eds.), *Proceedings of the Twenty Ninth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 530–532). Reno, NV: University of Nevada, Reno.

Professional development modules

Dev-TE@M Project. (2013). *Supporting reasoning and explanation in elementary mathematics teaching*.

These materials are designed for use in real-time with practicing elementary mathematics teachers. They integrate four core elements of mathematics teaching (mathematical knowledge for teaching, knowledge of student thinking, teaching practice, and learning from practice).

Dev-TE@M Project. (2012). *Representing and comparing fractions in elementary mathematics teaching*.

INVITED PRESENTATIONS

**indicates graduate student or postdoctoral researcher co-presenter*

Shaughnessy, M. (2018, October). *Approximating practice in teacher preparation: Comparing two pedagogies*. Teacher Preparation Transformation Center Initiative Capstone Convening. Seattle, WA.

Shaughnessy, M., & Garcia, N. (2016, February). *Leading mathematics discussions: An observational tool for providing feedback*. Session presented at the Mathematical Sciences Research Institute (MSRI) Critical Issues in Mathematics Education series, Berkeley, CA.

- Garcia, N., & **Shaughnessy, M.** (2015, October). *High-leverage teaching practices: What, why, and how?* Keynote talk at the Ohio Confederation of Teacher Education Organizations fall conference, Dublin, OH.
- Shaughnessy, M.**, & *Curren-Preis, M. (2015, June). *High-leverage teaching practices: What, why, and how?* Presentation conducted at the State University of New York at Cortland, Cortland, NY.
- Shaughnessy, M.** (2014, November). *Assessment for instructors' and interns' learning: Progress in leading mathematics discussions.* Talk presented in the TeachingWorks Seminar Series, Ann Arbor, MI.
- Shaughnessy, M.** (2013, October). *Beyond counting parts: Engaging students in foundational fraction ideas.* Talk presented at University of Illinois Chicago Office of Mathematics Education Colloquium Series, Chicago, IL.
- Shaughnessy, M. M.**, Suzuka, K., & Boerst, T. (2012, March). *Developing materials that support teachers' capacity to teach mathematics in the Common Core.* Session presented at the Mathematical Sciences Research Institute (MSRI) Critical Issues in Mathematics Education series, Berkeley, CA.
- Shaughnessy, M.**, & Forzani, F. (2012, November). *High-leverage teaching practices in teacher education and assessment.* Session presented at a meeting of the Indiana Association of Colleges for Teacher Education, Muncie, IA.
- Palinscar, A., & **Shaughnessy, M.** (2012, July). *Children as sense-makers: Orientation and practice.* Session presented at Connecting Advances in Learning Research and Teacher Practice: A Conference about Teacher Education at Teachers College, Columbia University, New York City, NY.

SELECTED PRESENTATIONS (2010 – present)

**indicates graduate student co-presenter*

- Shaughnessy, M.**, Boerst, T., *Prawat, X. J., & *DeFino, R. (2019, April). Exploring the connections between the practices of preservice teachers and their mathematical knowledge and dispositions. Paper presented at the annual meeting of the American Educational Research Association (AERA). Toronto, ON.
- Boerst, T., & **Shaughnessy, M.** (2019, April). Interpreting student thinking: What can novices do at the beginning of teacher preparation. Paper presented at the annual meeting of the American Educational Research Association (AERA). Toronto, ON.
- Garcia, N., **Shaughnessy, M.**, Pynes, D. (2019, April). Components of professional development that lead to change in teaching practice. Discussion session at the 2019 National Council of Teachers of Mathematics Research Conference, San Diego, CA.
- Boerst, T., & **Shaughnessy, M.** (2019, February). *The Assessing Teaching Practice Project: Simulations of Eliciting and Interpreting Student Thinking.* Plenary talk at the Simulations in Teacher Education Conference. Louisville, KY.
- Shaughnessy, M.**, DeFino, R., Pfaff, E., Blunk, M., & Boerst, T. (2019, February). *Unexpected student responses: What do preservice teachers do when a student makes a mistake?* Paper presented at the Eleventh Congress of the European Society for Research in Mathematics Education (CERME11). Utrecht, the Netherlands.
- Boerst, T., & **Shaughnessy, M.** (2019, February). *Connecting mathematical knowledge and dispositions with engagement in mathematics teaching practices.* Paper presented at the Eleventh Congress of the European Society for Research in Mathematics Education (CERME11). Utrecht, the Netherlands.
- Garcia, N., **Shaughnessy, M.**, Prawat, X. J., *Pfaff, E., Mortimer, J., Cirino, N., Blunk, M., & Robinson, D. (2018, November). *Changing Teaching Practice: Examining Professional Development Impact on Mathematics Discussion Leading Practice.* Presented at the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Greenville, SC.

- Shaughnessy, M.,** *DeFino, R., *Pfaff, E., & Blunk, M. (2018, November). *How do preservice teachers elicit the thinking of a student who has made a mistake?* Presented at the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education). Greenville, SC.
- Pfaff, E., **Shaughnessy, M.,** & Boerst, T. (2018, October). *Using teaching simulations to assess and develop skills with interpreting student thinking.* Session presented at the NCME Special Conference on Classroom Assessment: Assessment in the Disciplines. Lawrence, KS.
- Shaughnessy, M.,** Garcia, N., & Pynes, D. (2018, October). *Learning from others' teaching: Supporting students in learning to critique mathematical arguments.* Session presented at the National Council of Teachers of Mathematics Regional Conference and Exposition, Hartford, CT.
- Boerst, T., **Shaughnessy, M.,** & Pfaff, E. (2018, April). *Designing simulations to advance preservice teachers' knowledge and skills.* Discussion session presented at the 2018 National Council of Teachers of Mathematics Research Conference, Washington, DC.
- Shaughnessy, M.,** & Garcia, N. (2018, April). *Using video to support the improvement of teaching practice.* Session presented at the annual meeting of the National Council of Supervisors of Mathematics, Washington, DC.
- *DeFino, R., **Shaughnessy, M.,** & Boerst, T. (2018, April). *Change over time: Tracing and analyzing novice teachers' skills with eliciting and interpreting student thinking.* Paper presented at the annual meeting of the American Educational Research Association (AERA). New York, NY.
- *Therault-Kimmey, E., **Shaughnessy, M.,** & Boerst, T. (2018, April). *Identifying potential trajectories in teacher learning: Eliciting student thinking in elementary mathematics.* Poster presented at the annual meeting of the American Educational Research Association (AERA). New York, NY.
- Shaughnessy, M.,** Tenney Muirhead, M., & Geller, A. (2018, March). *Video in practice-based teacher education: The case of an elementary mathematics methods course.* Presentation at the American Association of Colleges for Teacher Education Annual Conference. Baltimore, MD.
- Shaughnessy, M.,** Moore, J., Curren-Preis, M., & Boerst, T. (2018, March). *Eliciting student thinking: Exploring similarities and differences across elementary English language arts and mathematics.* Presentation at the American Association of Colleges for Teacher Education Annual Conference. Baltimore, MD.
- Shaughnessy, M.,** Boerst, T., & *DeFino, R. (2018, February). *Interpreting student thinking: Features of and changes in preservice teachers' use of inferences and supporting evidence.* Session presented at the annual meeting of the Association of Mathematics Teacher Educators (AMTE). Houston, TX.
- Superfine, A. C., Tyminski, A., **Shaughnessy, M.,** Marshall, A., Goffney, I., & Garcia, N. (2018, February). *Considering the AMTE standards for preparing math teachers: Implications for the work of math teacher educators.* Session presented at the annual meeting of the Association of Mathematics Teacher Educators (AMTE). Houston, TX.
- Shaughnessy, M.,** & Boerst, T. (2017, April). *The teaching skills that novices bring to teacher education: The case of eliciting student thinking.* Paper presented at the annual meeting of the American Educational Research Association, San Antonio, TX.
- Garcia, N. & **Shaughnessy, M.** (2017, April). *Mathematical Practices: Making complex mathematics accessible to every student.* Presented at the annual meeting of the National Council of Teachers of Mathematics (NCTM), San Antonio, TX.
- Boerst, T., **Shaughnessy, M.,** & *Therault-Kimmey, E. (2017, April). *Connecting teacher candidates' MKT & their eliciting of student thinking.* Session presented at the 2017 National Council of Teachers of Mathematics Research Conference, San Antonio, TX.
- Garcia, N., **Shaughnessy, M.,** & Ball, D. L. (2017, April). *Public teaching: Strategies for coaches to support the "seeing" of teaching.* Session presented at the annual meeting of the National Council of Supervisors of Mathematics, San Antonio, TX.

- Boerst, T., **Shaughnessy, M.**, & Ball, D. L. (2017, February). *Interpreting students' thinking: Preservice teachers' inferences and their use of supporting evidence*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Orlando, FL.
- Ball, D.L., **Shaughnessy, M.**, & Garcia, N. (2017, February). *Reconsidering video as a tool to support teacher learning*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Orlando, FL.
- Shaughnessy, M.**, Garcia, N., Selling, S. K., & Ball, D. L. (2016, November). *What knowledge and skill do teacher educators need and (how) can we support its development?* Paper presented at the Thirty-eighth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Tucson, AZ: University of Arizona.
- Shaughnessy, M.**, & Boerst, T. (2016, July). *Appraising the skills for eliciting student thinking that preservice teachers bring to teacher education*. Invited paper presented at the 13th International Congress on Mathematics Education (ICME), Hamburg, Germany.
- Shaughnessy, M.**, & Garcia, N. (2016, April). *Fractions: Making complex mathematics accessible to all students*. Presented at the annual meeting of the National Council of Teachers of Mathematics (NCTM), San Francisco, CA.
- Boerst, T., **Shaughnessy, M.**, *Farmer, S. O., & Selling, S. K. (2016, April). *Understanding practices that preservice teachers use to elicit student thinking*. Session presented at the National Council of Teachers of Mathematics 2016 Research Conference, San Francisco, CA.
- Shaughnessy, M.**, Garcia, N., Selling, S. K., *O'Neill, M. K., *Salazar, S. B., *Wilkes, C., *Willis, A., & Ball, D. L. (2016, April). *Making content explicit: The practice and beginners' skills*. Session presented at the National Council of Teachers of Mathematics 2016 Research Conference, San Francisco, CA.
- Ball, D. L., **Shaughnessy, M.**, Garcia, N., Selling, S. K. (2016, April). *(How) can video be used to support teacher learning?* Session presented at the annual meeting of the National Council of Supervisors of Mathematics, Oakland, CA.
- Shaughnessy, M.**, Garcia, N., Selling, S. K., *O'Neill, M. K., *Salazar, S. B., *Wilkes, C., *Willis, A., & Ball, D. L. (2016, April). Assessing novices' skills in leading mathematics discussions. In D. L. Ball (Chair), *Beginning Mathematics Teaching*. Symposium conducted at the annual meeting of the American Educational Research Association, Washington, D.C.
- Shaughnessy, M.**, *Mann, L., & Ball, D. L. (2016, April). Preparing teachers to attend deliberately to equity in teaching mathematics. In I. M. Goffney (Chair), *Preparing Preservice Teachers for Ambitious and Equitable Mathematics Teaching*. Symposium conducted at the annual meeting of the American Educational Research Association, Washington, D.C.
- Selling, S. K., **Shaughnessy, M.**, & Boerst, T. (2016, April). *Towards learning trajectories for core practices in teacher preparation: Eliciting student thinking*. Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C.
- Garcia, N., Selling, S. K., & **Shaughnessy, M.** (2016, February). *Investigating how beginning mathematics teachers make content explicit*. Session presented at the annual meeting of the American Association of Colleges of Teacher Education, Las Vegas, NV.
- Boerst, T., **Shaughnessy, M.**, & *Farmer, S. O. (2016, February). *Exploring alternatives for assessing preservice teachers' eliciting student thinking*. Session presented at the annual meeting of the American Association of Colleges of Teacher Education, Las Vegas, NV.
- Boerst, T., Muirhead, M. T., **Shaughnessy, M.**, & Geller, A. (2016, February). *Expanding horizons: Innovative uses of video in practice-based teacher education*. Session presented at the annual meeting of the American Association of Colleges of Teacher Education, Las Vegas, NV.
- Selling, S.K., **Shaughnessy, M.**, & Boerst, T. (2016, February). *Eliciting student thinking: Decomposing interactional instructional practice*. Session presented at the annual meeting of the American Association of Colleges of Teacher Education, Las Vegas, NV.

- Shaughnessy, M.**, Selling, S. K., & Garcia, N., & (2016, February). *What knowledge and skill do teacher educators need and (how) can we support its development?* Session presented at the annual meeting of the American Association of Colleges of Teacher Education, Las Vegas, NV.
- Shaughnessy, M.**, Garcia, N., McNamara, J., & *Willis, A. (2016, January). *Professional learning for leading mathematics discussions*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Irvine, CA.
- Shaughnessy, M.**, Boerst, T., & Ball, D. L. (2015, November). *Simulating teaching: New possibilities for assessing teaching practice*. Paper presented at the Thirty-seventh Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. East Lansing, MI: Michigan State University.
- Selling, S. K., **Shaughnessy, M.**, *Willis, A., Garcia, N., *O'Neill, M. K., & Ball, D. L. (2015, November). *Standardized assessments of beginning teachers' discussion leading practice: Is it possible and what can we learn?* Paper presented at the Thirty-seventh Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. East Lansing, MI.
- Shaughnessy, M.**, *Farmer, S., Boerst, T., & Ball, D. L. (2015, April). Simulations of student thinking that assess teaching skill and knowledge in use. In M. Shaughnessy (Chair), *Teaching simulations that assess (the use of) teaching knowledge and skill*. Symposium conducted at the annual meeting of the American Educational Research Association, Chicago, IL.
- Ball, D. L., *Mann, L., **Shaughnessy, M.**, & Bass, H. (2015, April). Explicitness in creating access for all students to complex elementary mathematics. In P. Grossman (Chair), *Revisiting Explicit Instruction in English and Mathematics*. Symposium conducted at the annual meeting of the American Educational Research Association, Chicago, IL.
- Shaughnessy, M.**, Ball, D. L., *Mann, L., & Garcia, N. (2015, April). *(How) can explicitness about mathematical practices support equitable instruction?* Session presented at the annual meeting of the National Council of Supervisors of Mathematics, Boston, MA.
- Ball, D. L., Garcia, N., & **Shaughnessy, M.** (2015, April). *Beyond "tell me what you noticed": Using video to improve instruction*. Session presented at the annual meeting of the National Council of Supervisors of Mathematics, Boston, MA.
- Ball, D. L., **Shaughnessy, M.**, & *Mann, L. (2015, April). Preparing teachers to attend deliberately to equity in teaching mathematics. In I. Goffney (Chair), *Preparing preservice teachers to enact equitable instruction in mathematics*. Research symposium conducted at the National Council of Teachers of Mathematics 2015 Research Conference, Boston, MA.
- Shaughnessy, M.**, & Boerst, T. (2015, March). *Assessing teaching practice: New ways of thinking about why, when, and how*. Session presented at the annual meeting of the American Association of Colleges of Teacher Education, Atlanta, GA.
- Boerst, T., Muirhead, M. T., **Shaughnessy, M.**, Suzuka, K., & Geller, A. (2015, February). *Becoming a program that uses video to support teacher learning*. Session presented at the annual meeting of the American Association of Colleges of Teacher Education, Atlanta, GA.
- Boerst, T. B., **Shaughnessy, M.**, Ball, D. L., & *Farmer, S. (2015, February). *Attending to teacher preparation outcomes from the beginning: Learning from baseline and mid-program assessments*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Orlando, FL.
- Shaughnessy, M. M.**, Boerst, T., & Ball, D. L. (2014, April). *Eliciting and interpreting of students' thinking: What skills do those entering the teaching profession bring?*. Presented at the National Council of Teachers of Mathematics 2014 Research Conference, New Orleans, LA.
- Ball, D. L., Bass, H., Garcia, N., McNamara, J. C., *O'Neill, M. K., & **Shaughnessy, M. M.** (2014, April). *Using practice as a site for professional learning for teaching*. Presented at the National Council of Teachers of Mathematics 2014 Research Conference, New Orleans, LA.

- Garcia, N., *O'Neill, M. K., & **Shaughnessy, M.** (2014, April). *Productive mathematics tasks in a Common Core classroom*. Presented at the annual meeting of the National Council of Teachers of Mathematics (NCTM), New Orleans, LA.
- Davis, E. A., **Shaughnessy, M. M.**, & Boerst, T., (2014, April). Designing an elementary teacher education program to foster ethical and skillful beginning teaching practice. In L. Valli (Chair), *Redesigning teacher education as practice-based venture: Lessons and challenges*. Symposium conducted at the annual meeting of the American Educational Research Association, Philadelphia, PA.
- Ball, D. L., Garcia, M., & **Shaughnessy, M.** (2014, March). *Becoming explicit: Articulating practice in the Elementary Mathematics Laboratory*. Session presented at the annual meeting of the American Association of Colleges of Teacher Education, Indianapolis, IN.
- Boerst, T., **Shaughnessy, M.**, & Davis, E. A. (2014, March). *Assessing the use of content knowledge in practice in an elementary teacher education program*. Session presented at the annual meeting of the American Association of Colleges of Teacher Education, Indianapolis, IN.
- Ball, D. L., **Shaughnessy, M.**, Boerst, T., *Mann, L., & *Farmer, S. (2014, February). *Preparing beginners to DO equitable mathematics instruction, not just believe in it*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Irvine, CA.
- Boerst, T., **Shaughnessy, M.**, & Ball, D. L. (2014, February). *Assessing beginners' mathematical knowledge for teaching (MKT) in practice*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Irvine, CA.
- Shaughnessy, M.** (2013, November). *Beyond counting parts: Engaging students in foundational fraction ideas*. Session presented at the regional meeting of the National Council of Teachers of Mathematics, Louisville, KY.
- Shaughnessy, M.** (2013, April). Learning to engage in mathematical practices. In D. L. Ball (Chair), *The Elementary Mathematics Laboratory: Designing and studying instruction*. Structured poster session conducted at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Shaughnessy, M.** (2013, April). Designing for the interactive mathematical work of teaching. In M. Shaughnessy (Chair), *Designing and using a laboratory approach to the collective study of instruction* Symposium conducted at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Boerst, T., **Shaughnessy, M.**, & Suzuka, K. (2013, April). *Professional development integrating mathematical and teaching practices*. Session presented at the 2013 Annual Meeting and Exposition of the National Council of Teachers of Mathematics, Denver, CO.
- Shaughnessy, M.**, Jacobs, J. E., Boerst, T., & Suzuka, K. (2013, April). *Facilitating teachers' capacity to teach mathematics in the Common Core through practice-based professional development materials*. Session presented at the annual meeting of the National Council of Supervisors of Mathematics, Denver, CO.
- Boerst, T., **Shaughnessy, M.**, & Ball, D. L. (2013, April). *Assessing enacted mathematics teaching practice*. Research symposium presented at the research pre-session of the 2013 Annual Meeting and Exposition of the National Council of Teachers of Mathematics, Denver, CO.
- Shaughnessy, M.**, Boerst, T., & Davis, E. A. (2013, February). *Developing high-leverage practices in an elementary teacher education program*. Session presented at the annual meeting of the American Association of Colleges of Teacher Education, Orlando, FL.
- Suzuka, K., & **Shaughnessy, M.** (2013, January). *Enhancing teachers' capacity to teach mathematics in the Common Core through professional development materials*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Orlando, FL.
- Shaughnessy, M.**, & Suzuka, K. (2012, October). *Practice-based professional development for practicing elementary teachers*. Session presented at the regional meeting of the National Council of Teachers of Mathematics, Hartford, CT.

- Boerst, T., **Shaughnessy, M.**, Sleep, L., & Ball, D. L. (2012, April). *Assessing pre-service teachers' enacted mathematics teaching practice through simulations*. Work session presented at the research pre-session of the 2012 Annual Meeting and Exposition of the National Council of Teachers of Mathematics, Philadelphia, PA.
- Shaughnessy, M.**, Boerst, T., Sleep, L., & Ball, D. L. (2012, April). Exploring how the subject matters in pedagogies of practice. In W. Doyle (Chair), *Understanding and supporting teaching practice: Multiple perspective*. Symposium conducted at the annual meeting of the American Educational Research Association, Vancouver, BC.
- Boerst, T., **Shaughnessy, M.**, Sleep, L., Ball, D. L., & Lai, Y. (2012, February). *Designing and using simulations to assess pre-service teachers' enacted mathematics teaching practice*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Fort Worth, TX.
- Shaughnessy, M.**, Ball, D. L., Bass, H., *Kim, Y., *Kwon, M., & Sleep, L. (2011, April). *Learning to do mathematics as a teacher*. Work session presented at the research pre-session of the 2011 Annual Meeting and Exposition of the National Council of Teachers of Mathematics, Indianapolis, IN.
- Shaughnessy, M.**, Suzuka, K., Boerst, T., & Jacobs, J. E. (2011, April). *Developing teaching expertise @ mathematics: Practice-based professional development for practicing elementary mathematics teachers*. Session presented at the annual meeting of the National Council of Supervisors of Mathematics, Indianapolis, IN.
- Boerst, T., **Shaughnessy, M.**, Suzuka, K., Korbett, B., & Wray, J. (2011, January). *Scaling practice-based professional development: Issues and design*. Session presented at the annual meeting of the Association of Mathematics Teacher Educators, Irvine, CA.
- Saxe, G. B., Gearhart, M., Earnest, D., Haldar, L. C., **Shaughnessy, M.**, Sitabkhan, Y., & Zheng, Y. (2010, April). Learning mathematics through representations: The development of a research-based curriculum on integers and fractions. In R. Perry (Chair), *Linear measurement interpretations of rational number: Teacher and student learning across cultures, curricula, and contexts*. Structured poster session conducted at the annual meeting of the American Educational Research Association, Denver, CO.
- Shaughnessy, M.** (2010, May). *Fifth grade students' reinterpretations of points on the number line as fraction and decimal notations*. Paper presented at the annual meeting of the American Educational Association, Denver, CO.
- Shaughnessy, M.**, & McNamara, J. C. (2010, January). *Fractions: Unpacking the myths*. Session conducted at the annual meeting of the Association of Mathematics Teacher Educators, Irvine, CA.

HONORS AND AWARDS

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| Association of American Publishers (APP) Revere Award Winner ,
Category: Classroom, Professional Resources, Subject Areas, <i>Beyond Pizzas and Pies: 10 Essential Strategies for Supporting Fraction Sense, Second Edition</i> (2015). | 2016 |
| Association of Educational Publishers (AEP) Distinguished Achievement Awards Finalist , Category: Professional Development – Curriculum, <i>Beyond Pizzas and Pies: 10 Essential Strategies for Supporting Fraction Sense</i> (2010). | 2011 |
| Spencer Foundation Research Training Fellowship , Center for the Study of Teaching and Learning, University of California, Berkeley | 2007 – 2008 |
| Dean's Normative Time Fellowship , University of California, Berkeley | Awarded Fall
2006 |
| Diversity in Mathematics Education Fellowship , University of California, Berkeley | 2003 – 2009 |
| University Fellowship , University of California, Berkeley | 2003 – 2005;
2006 – 2007 |

OTHER PROFESSIONAL ACTIVITIES AND SERVICE

Board Member , Michigan Association of Mathematics Teacher Educations	2019 – present
Associate Vice President for Research , Association of Mathematics Teacher Educators	2019 - present
Research Committee Member , Association of Mathematics Teacher Educators	2018 - present
Dissertation Committee Member , Monica Gonzalez, University of Houston	2017
Strand Leader , Psychology in Mathematics Education, North American Chapter (PME-NA), 2017 conference	2017
U.S. – Finland Workshop on Mathematics Education	2016
Invited participant in the convening which was held at the University of Helsinki. Presented on practice-based teacher education.	
Board member , AERA Special Interest Group in Research in Mathematics Education (SIG-RME)	2015 - 2017
Elementary Curriculum Design Group.	2010 - 2013
Member of the planning group for the redesign of the Elementary Teacher Education Program at the University of Michigan.	
Reviewer	
<i>Action in Teacher Education</i>	2019 - present
<i>Cognition & Instruction</i>	2011 - present
<i>Computers & Education</i>	2018 - present
<i>Journal for Research in Mathematics Education</i>	2018 - present
<i>Journal of Mathematics Teacher Education</i>	2018 - present
<i>Journal of Teacher Education</i>	2015 - present
<i>Mathematics Teaching in the Middle School</i>	2008 – present
<i>Teaching and Teacher Education</i>	2017 - present
<i>Teaching Children Mathematics</i>	2008 – present
Association of Mathematics Teacher Educators (AMTE)	2010 – present
American Educational Research Association, Division C Section 3 (Learning and Instruction in Mathematics)	2006 – 2008
American Educational Research Association, Division K (Teaching and Teacher Education)	2014, 2018
American Educational Research Association, SIG-RME (Special interest group: Research in Mathematics Education)	2006 – present
National Council of Teachers of Mathematics (NCTM) Research Conference	2007 - present
Psychology in Mathematics Education, North American Chapter (PME-NA)	2007, 2015-present