

# ERICA LITKE

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## ACADEMIC APPOINTMENT

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University of Delaware, School of Education Assistant Professor of Mathematics Education Joint Faculty, Department of Mathematical Sciences	2016–Present
Harvard University Graduate School of Education Lecturer on Education	2015–2016

## EDUCATION

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Harvard Graduate School of Education Ed.D., Educational Policy, Leadership, and Instructional Practice Dissertation: <i>The state of the gate: A description of instructional practice in algebra in five urban districts</i> . Dissertation Committee: Heather C. Hill (Chair), Jon R. Star, and David K. Cohen	2015
Harvard Graduate School of Education Ed.M., Administration, Planning, and Social Policy	2001
Oberlin College B.A. Mathematics/English	1997

## PUBLICATIONS

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\*Indicates graduate student co-author

### Peer-Reviewed Publications

- Litke, E.**, Boston, M., & Walkowiak, T. A. (2021). Affordances and constraints of mathematics-specific observation frameworks and general elements of teaching quality. *Studies in Educational Evaluation*, 68. doi: 10.1016/j.stueduc.2020.100956
- Litke, E.** (2020). Instructional practice in algebra: Building on existing features of instruction to inform an incremental improvement approach. *Teaching and Teacher Education*, 91. doi: 10.1016/j.tate.2020.103030
- Litke, E.**, & Hill, H. C. (2020). Exploring the central tendencies of teaching data and statistics in the elementary mathematics classroom. *Elementary School Journal*, 120(3), 480–506. doi: 10.1086/707007
- Litke, E.** (2020). The nature and quality of algebra instruction: Using a content-focused observation tool as a lens for understanding and improving instructional practice. *Cognition and Instruction*, 38(1), 57–86. doi: 10.1080/07370008.2019.1616740 (**Awarded AERA SIG-RME Early Career Publication Award**)
- Hill, H. C., **Litke, E.**, & Lynch, K. (2018). Learning lessons from instruction: Descriptive results from an observational study of urban elementary classrooms. *Teachers College Record*, 120(12), 1–46.
- Charalambous, C., & **Litke, E.** (2018) Studying instructional quality by using a content-specific lens: The case of the Mathematical Quality of Instruction Framework. *ZDM Mathematics Education*, 50(3), 445–460. doi: 10.1007/s11858-018-0913-9

Dougherty, S., Goodman, J., Hill, D., **Litke, E.**, & Page, L. (2017). Objective course placement and college readiness: Evidence from targeted middle school math acceleration. *Economics of Education Review*, 58, 141–161. doi: 10.1016/j.econedurev.2017.04.002

Blazar, D., **Litke, E.**, Barmore, J. (2016). What does it mean to be ranked a “high” or “low” value-added teacher? Observing differences in instructional quality across districts. *American Educational Research Journal*, 53(2), 324–359. doi: 10.3102/0002831216630407

Dougherty, S. M., Goodman, J., Hill, D. V., **Litke, E.**, & Page, L. (2015). Middle school math acceleration and equitable access to 8<sup>th</sup> grade algebra: Evidence from the Wake County Public School System. *Educational Evaluation and Policy Analysis*, 37(1 suppl), 80S–101S. doi: 10.3102/0162373715576076

Hill, H. C., Charalambous, C. Y., Blazar, D., McGinn, D., Kraft, M. A., Beisiegel, M., Humez, A., **Litke, E.**, & Lynch, K. (2012). Validating arguments for observational instruments: Attending to multiple sources of variation. *Educational Assessment*, 17(2–3), 88–106. doi: 10.1080/10627197.2012.715019

Hill, H. C., Umland, K., **Litke, E.**, & Kapitula, L. R. (2012). Teacher quality and quality teaching: Examining the relationship of a teacher assessment to practice. *American Journal of Education*, 118(4), 489–519. doi: 10.1086/666380

**Litke, E.** (2009). After the bell rings: Student perceptions of afterschool. *Teachers College Record* 111(8), 1954–1970.

#### Peer Reviewed Conference Proceedings

**Litke, E.**, & Corven, J.\* (2019). Examining features of algebra instruction in classrooms using a reform-oriented curriculum. In S. Otten, A. Candela, Z. de Araujo, C. Haines, & C. Munter (Eds.) *Proceedings of the 41<sup>st</sup> annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1728–1732). St Louis, MO: University of Missouri.

#### Book Reviews

**Litke, E.** (2012). Review of L. Cuban *Inside the Black Box of Classroom Practice: Change Without Reform in American Education*. Harvard Educational Review, 83(3), 534–537.

#### Manuscripts Under Review

**Litke, E.**, Corven, J.\* , Sternberg, K.\* Examining features of algebra instruction in classrooms using a reform-oriented curriculum. (*Mathematical Thinking and Learning*).

#### Manuscripts in Preparation

**Litke, E.**, Comstock, M.\* , & Blackman, H. How partnerships conceptualize equity in curriculum-aligned professional learning.

Comstock, M.\* , **Litke, E.**, Hill, K., & Desimone, L. Culturally responsive teaching: Beliefs, self-efficacy, and instruction.

Comstock, M.\* , Shores, K., Polanco, C.\* , **Litke, E.**, Desimone, L., Hill, K. Typologizing teacher practice: How teachers integrate culturally responsive, ambitious, and traditional teaching methods.

**Litke, E., & Jansen, A.** Exploring #MTBoS: Preservice teachers' engagement with the Math Twitter Blogosphere through and beyond a mathematics methods course.

### Working Papers

Dougherty, S., Goodman, J., Hill, D., **Litke, E., & Page, L. C.** (2015). *Early Math Coursework and College Readiness: Evidence from Targeted Middle School Math Acceleration* (No. w21395). National Bureau of Economic Research.

### Blogs

Dougherty, S. M., Goodman, J. S., Hill, D. V., **Litke, E., & Page, L.** (2017, April 27). Does More Rigorous Middle School Coursework Change Students' College Readiness? *Brookings, Brown Center Chalkboard*.

### Other Publications

**Litke, E.** (2009). Are you in or are you out? In E. Meyers, P. A. Paul, D. E. Kirkland, & N. F. Dana (Eds.) *The Power of Teacher Networks*. Corwin.

## **FUNDED GRANTS**

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Hiebert, J. (PI), **Litke, E.** (Co-PI), Maxwell, V. (Co-PI), & Riser, J. (Co-PI). *Improving Professional Development in Mathematics by Understanding the Mechanisms that Translate Teacher Learning into Student Learning*. National Science Foundation, DRK-12 (September, 2021–June, 2025, \$2,995,768).

de-Novais, J. (Co-PI), Flynn, J., (Co-PI), **Litke, E.** (Co-PI), Rolón Dow, R. (Co-PI), & Soslau, E. (Co-PI). *Racial Literacy in Elementary Teacher Education*. Center for Teaching and Learning, University of Delaware. (June 1, 2019–June 15, 2020, \$5,000).

Desimone, L. (PI), Hill, K. (Co-PI), Blackman, H. (Co-PI), Wilson, J. (Co-PI), & **Litke, E.** (Senior Researcher). *Research on Curricular Aligned Partnerships*. Bill & Melinda Gates Foundation. (2019–2022, \$1,500,000).

**Litke, E.** (PI). *Empowering Teachers to Improve Algebra Instruction*. General University Research Grant, University of Delaware. (June 1, 2017–May 31, 2021; \$7,500).

## **GRANTS UNDER REVIEW**

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**Litke, E.** (PI), Wilson, J. (Co-PI), & Hill, H. C. (Co-PI). *Supporting Teachers to Develop Equitable Mathematics Instruction Through Rubric-Based Coaching*. Submitted Fall 2020 to National Science Foundation, DRK-12 (Under review, \$2,997,785).

## **SELECTED AWARDS & HONORS**

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Early Career Publication Award, American Educational Research Association, SIG-Research in Mathematics Education	2021
School of Education Nominee, University of Delaware College of Education and Human Development Teaching Award	2019
STaR Fellow, Association of Mathematics Teacher Educators	2017 – 2018
Nominated for University of Delaware Excellence in Teaching Award	2017, 2018
Finalist, Director's Award for Research in Educational Equity, CUNY Institute for Education Policy	2014

Gregory R. Anrig Fellowship Award, Harvard Graduate School of Education	2013, 2014
Doctoral Student Travel Award, Harvard Graduate School of Education	2013, 2014
Qualifying Paper, Passed with Distinction, Harvard Graduate School of Education	2013
AERA Institute on Statistical Analysis for Education Policy on Mathematics Education and Equity, AERA Grants Program/National Science Foundation	2012
Dean's Summer Fellowship, Harvard Graduate School of Education	2009
Master Teacher Fellowship, Cohort II, Math for America	2006 – 2008

## **TEACHING EXPERIENCE**

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University of Delaware. Newark, DE

Teaching Mathematics in the Middle School (Undergraduate)  
 Mathematics for K-8 Teachers: Rational Numbers (Undergraduate)  
 Research/Theory of Mathematics Teacher Education, Policy, and School Improvement (Doctoral)  
 Algebra for Middle School Teachers (Undergraduate, Fall 2021)  
 (In)Equality and Education (Undergraduate Freshman Honors Colloquium, Spring 2022)

Harvard Graduate School of Education. Cambridge, MA

Teacher and Teaching Quality (Graduate)  
 Teaching Mathematics (Graduate)  
 Introduction to Teaching Mathematics (Graduate)

Pace University School of Education. New York, NY

Secondary Methods: Interdisciplinary Curriculum (Graduate)  
 Secondary Methods: Making Math Meaningful (Graduate)  
 Secondary Methods: Learning to Teach (Graduate)

Harvard Graduate School of Education. Cambridge, MA

*Teaching Fellow (Graduate)*  
 Integrating Perspectives in Education (Doctoral Proseminar), School Systems, Intermediate  
 Statistics: Applied Regression and Data Analysis, Teacher and Teaching Quality, Strategies and  
 Policies for Narrowing Racial Achievement Gaps, Introduction to Education Policy, School  
 Reform: Curricular and Instructional Leadership, Urban Education, Academic Writing Services

## **RELATED RESEARCH EXPERIENCE**

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National Center for Teacher Effectiveness, Harvard Graduate School of Education <i>Doctoral Research Assistant</i> <i>Professional Development Facilitator</i>	2009 – 2015
Center for Education Policy Research, Harvard Graduate School of Education <i>Graduate Student Researcher</i> <i>Instructor, Strategic Data Project Institute for Leadership in Analytics</i>	2012 – 2015
Teacher Effectiveness Research Team: Mathematics, Harvard Graduate School of Education <i>Research Assistant</i>	2009 – 2011
Teacher's Network Leadership Institute, New York, NY <i>Teacher Researcher</i> <i>MetLife Fellow</i>	2005 – 2007

## GRANT ADVISORY BOARDS

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Algebra Instruction at Community Colleges

2016 –2018

PI: Laura Watkins (Glendale Community College); Co-PIs: Vilma Mesa (University of Michigan), Irene Duranczyk (University of Minnesota), April Strom (Scottsdale Community College), Nidhi Kohli (University of Minnesota), National Science Foundation

## INVITED TALKS

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*What's the Rush? A Critical Conversation About Acceleration in Middle School Mathematics*, Math Equity Conference, Delaware Mathematics Coalition, Dover, DE, April, 2019

*We Teach More than (Teaching) Math: Developing a Deliberate Focus on Equity in Mathematics Methods Courses*. Invited Keynote Address, Utah Association of Mathematics Teacher Educators Annual Meeting, Salt Lake City, UT, March, 2019

*Exploring a Content-Focused Approach to Describing and Improving Instructional Quality in Mathematics*. Invited Research Talk, University of Utah Mathematics Education Colloquium, Salt Lake City, UT, March, 2019

*Improving Students' Learning Opportunities in Algebra Through Deepening Content-Focused Instructional Features*. Invited Keynote Address, TRU-Math Academy, Delaware Mathematics Coalition, Dover, DE, June, 2018

*The Format and Features of Contemporary Algebra Instruction*. University of Delaware Mathematics Education Colloquium, Newark, DE, January, 2015

*The State of the Gate: The Format and Features of Contemporary Algebra Instruction*. Boston University Research Presentation, Boston, MA, December, 2014

*Beyond Measuring Effectiveness: A Descriptive Look at Algebra Instruction in Six Urban Districts*. Educational Policy, Leadership and Instructional Practice Series, Harvard Graduate School of Education, Cambridge, MA, March 2013

*Mathematical Tasks in the Secondary Classroom: The Development of an Analytic Tool*. (with Katherine Merseth), Boston College Mathematics Education Lecture Series, Boston, MA, November 2010

## ACADEMIC PRESENTATIONS

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**Litke, E.**, Comstock, M., & Blackman, H. *How Partnerships Conceptualize Equity in Curriculum-Aligned Professional Learning*, American Educational Research Association, Virtual, April 2021

**Litke, E.**, & Sternberg, K. *Supporting Incremental Improvements in Algebra Teaching: A Professional Development Approach*, Association of Mathematics Teacher Educators, Virtual, February 2021

de Novais, J., **Litke, E.**, Rolón-Dow, R., Soslau, E., & Flynn, J. *Centering Racial Literacy in Teacher Preparation: A Faculty Learning Community Inquiry Process*, National Association for Multicultural Education, Virtual, October 2020

**Litke, E.,** Thanheiser, E., Heaton, R., Melhuish, K., Reinholz, D., & Shah, N. *Leveraging Diverse Tools to Measure Components of Mathematically Productive Classrooms* (Session Organizer), Association of Mathematics Teacher Educators, Phoenix, AZ, February 2020

**Litke, E.,** & Corven, J. *Examining Features of Algebra Instruction in Classrooms Using a Reform-Oriented Curriculum*, Accepted, Psychology of Mathematics Education-North America Annual Conference, St. Louis, MO, November 2019

**Litke, E.** *Improving Mathematics Teaching Using Observational Instruments: The Case for a Content-Specific Tool*, American Educational Research Association, Toronto, Canada, April 2019

**Litke, E.,** & Dougherty, S. M. *If Not Now, Then When?: Examining Ineligible Students' Mathematics Course-Taking Under a Targeted Acceleration Policy*, American Educational Research Association, Toronto, Canada, April 2019

**Litke, E.,** Reinholtz, D., Shah, N., Thanhauser, E., Heaton, R., & Melhuish, K. *Observation Instruments as Professional Development Tools: Three Approaches to Engage Teachers in Instructional Improvement Efforts* (Session Organizer), Association of Mathematics Teacher Educators, Orlando, FL, February 2019

**Litke, E.,** Boston, M., Walkowiak, T. *Affordances and Constraints of Mathematics-Specific Observation Frameworks and General Elements of Teaching Quality*, European Association for Research on Learning and Instruction SIG 18 & 23, Groningen, the Netherlands, August 2018

**Litke, E.,** & Hill, H. C. *Exploring the Central Tendencies of Teaching Data and Statistics in the Elementary Mathematics Classroom*, American Educational Research Association, New York, NY, April 2018

Wilhelm, A. G., **Litke, E.,** Jansen, A., Parrish, C. *Online Mathematics Teacher Collaboration: Twitter and Blogs as Learning Spaces for Mathematics Teachers*, Association of Mathematics Teacher Educators, Houston, TX, February 2018

**Litke, E.,** & Jansen, A. *Explore #MTBoS: Preservice Teachers Engagement with the MathTwitterBlogosphere Through and Beyond a Mathematics Methods Course*, Association of Mathematics Teacher Educators, Orlando, FL, February 2017

**Litke, E.** *The Format and Features of Contemporary Algebra Instruction*, American Educational Research Association, Washington, D.C., April 2016

**Litke, E.** *The Nature and Quality of Algebra Instruction in Five Urban Districts*, American Educational Research Association, Washington, D.C., April 2016

**Litke, E.** *If Not Now, Then When?: A Discrete-Time Survival Analysis of When Students First Take Algebra I and Courses Beyond in an Urban District*, CUNY Institute for Education Policy Equity Initiative Director's Award Presentation, New York, NY, October 2014

Hill, H. C., **Litke, E.,** Lynch, K., Pollard, C., & Gilbert, B. *Learning Lessons from Instruction: Descriptive Results from an Observational Study of Urban Elementary Classrooms*, Association for Public Policy and Management International, Segovia, Spain, September, 2014

**Litke, E.** *Beyond Measuring Effectiveness: A Descriptive Look at Algebra Instruction in Six Urban Districts*, American Educational Research Association, Philadelphia, PA, April 2014

**Litke, E.** *If Not Now, Then When?: A Discrete-Time Survival Analysis of When Students First Take Algebra I in an Urban District*, American Educational Research Association, Philadelphia, PA, April 2014

Blazar, D., **Litke, E.**, & Barmore, J., & Gogolen, C. *What Does it Mean to be Ranked a “High” or “Low” Value-Added Teacher? Observing Differences in Instructional Quality Across Districts*. American Educational Research Association, Philadelphia, PA, April 2014

Dougherty, S. M., Goodman, J., Hill, D. V., **Litke, E.**, & Page, L. *Algebra Access and Advancement: Investigating the Impact of a Middle Grades Mathematics Acceleration and Early Algebra Assignment Policy*. American Educational Research Association, Philadelphia, PA, April 2014

**Litke, E.** *If Not Now, Then When?: A Discrete-Time Survival Analysis of When Students First Take Algebra I in an Urban District*. Association for Public Policy Analysis and Management. Washington, DC, November 2013

Hill, H. C., Blazar, D., Humez, A., **Litke, E.**, Beisiegel, M., Barmore, J.,..., & Rabinowicz, S. *Examining High and Low Value-Added Mathematics Instruction: Can Expert Observers Tell the Difference?* Association for Public Policy Analysis and Management. Washington, DC, November 2013

Dougherty, S. M., Goodman, J., Hill, D. V., **Litke, E.**, & Page, L. *Getting to Algebra For All: Preliminary Evidence of a Middle School Math Acceleration Policy*. Association for Public Policy Analysis and Management. Washington, DC, November 2013

Dougherty, S. M., Goodman, J., Hill, D. V., **Litke, E.**, & Page, L. *Getting to Algebra For All: Preliminary Evidence of a Middle School Math Acceleration Policy*. Association of Education Finance and Policy. New Orleans, LA, March 2013

Hill, H. C., Umland, K., **Litke, E.**, Kapitula, L. *Teacher Quality and Quality Teaching: Examining the Relationship of a Teacher Assessment to Practice*. American Educational Research Association. Denver, CO, April 2010

**Litke, E.**, & Aminyar, M. *Powers to the People: Social Justice Math Projects for Algebra 2 and Precalculus*. National Council of Teachers of Mathematics. Salt Lake City, UT, April, 2008

## **RELATED PROFESSIONAL EXPERIENCE**

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Urban Assembly Network, New York, NY <i>Achievement Coach</i>	2008 – 2009
East Side Community High School, NYC Department of Education, New York, NY <i>High School Mathematics Teacher</i>	2002 – 2008

## **PROFESSIONAL SERVICE**

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### University Service

University of Delaware Graduate College Committee on Diversity, Equity, and Inclusion	2021
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General University Grant (GUR) Proposal Reviewer	2020
UNIDEL Task Force: Reimagining Secondary STEM Teacher Preparation	2018
University of Delaware, College of Education and Human Development Diversity, Equity, and Inclusion Committee	2020–2021
University of Delaware, School of Education	
Committee on Undergraduate Studies in Education	2018–2020
Director, Middle School Mathematics Program	2016–2020
Coordinator, Mathematics Education PhD Specialization	2017–2018
Welfare Committee	2016–2018
Search Committees	
Open Rank Tenure Track K12 Education Policy	2019–2020
Associate/Full Professor of Mathematics Education	2017–2018
Dean Family Professor Teacher Education/Director	2017–2018
Harvard Graduate School of Education	
Demystifying the Academic Job Search Doctoral Panel	2015
Student Research Conference Training on Panels and Roundtables	2014
Doctoral Admissions Committee	2012–2013
Teacher Education Program Admissions Committee	2012–2013
<u><i>Service to the Field/Professional Development</i></u>	
Comprehensive School Planning Review Process, Member, Study Area 1 School District of Philadelphia, Philadelphia, PA (Paused due to Covid-19)	2019–2020
Math Leaders Session Presenter: <i>Acceleration, Access, and Equity</i> , Delaware Mathematics Coalition, Dover, DE	2019
Leadership Coaching Lab Session: Improving Students’ Learning Opportunities in Algebra Through Deepening Content-Focused Instructional Features, Delaware Mathematics Coalition, Dover, DE	2018
<u><i>Professional Association Service</i></u>	
PME-NA-43 Conference Strand Leader: Preservice Teacher Education	2021
AMTE Conference Proposal Reviewer	2020–2021
MathEd Collective/AMTE: Supporting Math Ed Graduate Students in the Pandemic	2020–2021
AERA Conference Proposal Reviewer (Divisions C, K, L; SIG–RME) Outstanding Reviewer Award, SIG–RME, 2019	2016–2021
AMTE Manuscript Feedback, Reviewer	2019–2021
PME-NA Proposal Reviewer	2019
Creating Balance in an Unjust World: Math Education and Social Justice Conference Organizing Committee; Proposal Reviewer	2007–2008
<u><i>Editorial Board Service</i></u>	
Editorial Board Member, <i>Elementary School Journal</i>	2017–present
Co-Chair, Editorial Board, <i>Harvard Educational Review</i>	2013–2014
Content Editor, <i>Harvard Educational Review</i>	2012–2013

Referee Service

<i>Journal for Research in Mathematics Education</i> (Outstanding Reviewer, 2015)	2015–2021
<i>Studies in Educational Evaluation</i>	2020
<i>Journal for Mathematics Teacher Education</i>	2019–2020
<i>AERAOpen</i>	2019
<i>Education Researcher</i>	2016, 2019–2020
<i>Journal for Research on Educational Effectiveness</i>	2018
<i>Educational Studies in Mathematics</i>	2017–2018
<i>ZDM Mathematics Education</i>	2017
<i>Teaching and Teacher Education</i>	2017
<i>Elementary School Journal</i>	2015–2017
<i>Educational Policy</i>	2016

**CERTIFICATIONS & PROFESSIONAL AFFILIATIONS**

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New York State Permanent Teaching Certification, Mathematics 7–12  
American Educational Research Association  
National Council of Teachers of Mathematics  
Association of Mathematics Teacher Educators