

KATHRYN N. HAYES

Oakland, CA 94611
(510)885- 3486
Kathryn.hayes@csueastbay.edu

Department of Educational Leadership
Institute for STEM Education
California State University, East Bay
25800 Carlos Bee Blvd
Hayward, CA 94542-3004

EDUCATION

Ph.D. Science Education and School Organization and Educational Policy

University of California, Davis, June 2014

Dissertation title: **Equity in Elementary Science Education: A Study of Institutional Factors**

Committee: UC Davis: Tom Timar, Cary Trexler, Jamal Abedi; University of Utah: Andrea Rorrer

M.A. Education, Behavioral Sciences Women's Studies emphasis, CSUS, August 2002

B.A. Anthropology (with distinction), The Colorado College, May, 1996, cum laude

PUBLICATIONS

Peer Reviewed:

Hayes, K.N. Lee, C. S., DiStefano, R., O'Connor, D., & Seitz, J. (2016). Measuring science instructional practice: A survey tool for the age of NGSS. *Journal of Science Teacher Education*.

Lee, C. S., **Hayes, K. N.**, DiStefano, R., Seitz, J. C., & O'Connor, D. (In press). Engagement as a Mediating Factor Between Student Motivation and Science Achievement in Middle School. *International Journal of Science Education*.

Hayes, K.N., (2016). Neoliberalism in historical light: How business models displaced science education goals in two eras. *Educational Leadership and Administration: Teaching and Program Development Journal*, 27, 1-18.

Hayes, K.N., & Trexler, C.J. (2016). Testing Predictors of Instructional Practice in Elementary Science Education: The Significant Role of Accountability. *Science Education*, 100(2), 266-289.

Yamashita, L.; **Hayes, K.N.**, Trexler, C.J. (2016). How pre-service teachers navigate the trade-offs of food systems across time scales: A lens for exploring understanding of sustainability. *Environmental Education Researcher*.

Trexler, C. J., Hess, A., & **Hayes, K.N.** (2013). Urban elementary students' conceptions of learning goals for agricultural science and technology. *Natural Sciences Education* 42, 49-56.

Hayes, K.N., Booker, A., Middleton, B. R., & maria ross, j. (2012). Digital media meets informal learning: Opportunities for generating new participatory roles. *LEARNing Landscapes*, 5 (2), 145-161.

Repinski, S. L., **Hayes, K. N.**, Miller, J. K., Trexler, C. J., & Bliss, F. A. (2011). Plant breeding graduate education: Opinions about critical knowledge, experience, and skill requirements from public and private stakeholders worldwide. *Crop Science*, 21(6), 2325-2336.

Miller, J. K., Repinski, S. L., **Hayes, K. N.** Bliss, F. A. and Trexler, C. J. (2011). Designing graduate level plant breeding curriculum: A Delphi study of private sector stakeholder opinions. *Journal of Natural Resources and Life Sciences Education*. 40:82-90.

Book Chapters, Reports, Policy Briefs, and Non-peer Reviewed Articles:

Tucker, D., Andrews, B., & **Hayes, K. N.** (2016). Students apply NGSS science practices in environmental stewardship. *California Classroom Science*, 28(5).

Hayes, K.N. (2015). Elementary Science Education: Fixing a Leaky Pipeline. Policy Brief.

Hayes, K.N., maria ross, j., & Middleton, B. R. (2012). *Doing collaborative public history: The Restore/Restory project; A report*. Davis, CA: University of California, Davis; Center for Regional Change.

Hayes, K.N. (2009). Perspectives of transformation: Negotiation and equilibrium within university/school partnerships. In Wong, Pia and Glass, eds. *Interrupting Tradition: Prioritizing Urban Children, their Teachers and Schools through Professional Development Schools*. SUNY Press.

CONFERENCE PRESENTATIONS

Hayes, K. *Communicating Across Assumptions for the Purpose of Practical, Research Based Teaching Reform*. Venture and Vexation. Science Education at the Crossroads, Cleveland, October 2015.

Hayes, K. *Characterizing organizational response strategies: The role of resources and compound pressures in science education*. Poster. American Educational Research Association, Chicago, April, 2015.

Hayes, K. *Factoring inequity: Teacher and school predictors of science education time*. Paper. American Educational Research Association, Chicago, April, 2015.

O'Connor, D., Lee, C., Hayes, K., et al. *The Diverse Forms of Teacher Leadership: Examining Priorities, Skills, and Roles of Teacher Leaders in Middle School Science*. Paper. American Educational Research Association, Chicago, April, 2015.

Lee, C., Hayes, K., et al. *Integrating NGSS Science Practices in Middle School Science Classrooms: Examining the Process of Two Lesson Study Teams*. Roundtable. American Educational Research Association, Chicago, April, 2015.

Hayes, K. *Pedagogical Choice in Elementary Science Education: Testing Explanatory Variables*. Paper. National Association for Research in Science Teaching, Chicago, April 2015

Hayes, K., Lee, C., et al. *Measuring Science Instructional Practice: A Survey Tool for the Age of NGSS*. Poster. National Association for Research in Science Teaching, Chicago, April 2015.

Lee, C., Hedman, R., Hayes, K., et al. *Teachers Grappling with NGSS and Common Core: Empirically Examining Lesson Study Teams*. Paper. National Association for Research in Science Teaching, Chicago, April 2015.

Lee, C., Hayes, K., et al. *Conditions that Support Lesson Study for Integrating NGSS in Science Classroom*. Poster. National Association for Research in Science Teaching, Chicago, April 2015.

Formative Assessment According to Experts: A Delphi Approach. Poster. American Educational Research Association, Philadelphia, April, 2014.

Speaking With Policy: Examining the Empirical and Emancipatory Possibilities of Qualitative Research. Paper. American Anthropology Association Meeting, Chicago, November 2013 (Chair of session).

Efficiency In Education: The Displacement of Reform Narratives by Business Models. Paper. American Anthropology Association Annual Meeting, San Francisco, November 2012 (Chair).

A Conversation: How Can Quantitative Methods Contribute to Place-Based Research? Paper. North American Association for Environmental Education Research, Oakland, October 2012.

Grounding the Critical Pedagogy of Place: Evidence from the Field. Paper. North American Association for Environmental Education Research Symposium, Oakland, October 2012.

Student Value and Aspirations: The Hopes and Hazards of a Collaborative Preparatory Program. Paper. University of Pennsylvania Ethnography of Education Forum, February 2011.

Policy's Children: Undermining Success at an Urban Preparatory Program. Poster. American Anthropological Association Meeting, New Orleans, November 2010.

Theater of the Future Teacher: Boal Meets This American Life—Innovations in Pre-Service Preparation of Urban Secondary Teachers. Presentation. California Council on Teacher Education, San Diego, October 2009.

Changing the Lens: Understanding New Perspectives Among Pre-Service Teachers Engaged in the Practice of Ethnographic Research. Paper. American Anthropological Association Meeting, November 2008.

Learning the Craft of Teaching in Urban Schools. Paper. American Educational Research Association, San Diego, April 2004.

GRANTS

Advisor, Teaming for Effectiveness and Equity in Mathematics (TEEM) (In review)	2016-2018
California Elementary Mathematics and Science Professional Learning Initiative. Total requested \$497,262	
Co-PI, Science Partnership for Instructional Innovation (Funded)	2015-2018
California Math-Science Partnership Professional Development Program, Cohort 12, \$3 million	
Researcher, California Subject Matter Project (CSMP), \$15,000 (Funded)	2016-2017

FELLOWSHIPS AND AWARDS

UC/ACCORD (All Campus Consortium on Research for Diversity) Dissertation Fellowship, 2013-2014
 Graduate Group in Education Dissertation Year Fellowship, 2012-2013
 Chancellor's Doctoral Incentive Program Fellowship, 2009-2014
 2014 Award for Academic Promise, UC Davis Graduate Group in Education
 2011 Award for Academic Distinction, UC Davis Graduate Group in Education
 UCEC Fellowship, for the Institute for Training in Educational Evaluation
 David L. Clark National Graduate Student Research Seminar fellowship; AERA Divisions G, L and the University Council for Educational Administration, April 2012
 Publication, *Doing collaborative public history: The Restore/Restory project* chosen by Imagining America as one of two case studies to exemplify public scholarship research and project assessment. September, 2012
 Participatory Action Research Fellow, Community Forestry and Environmental Research Foundation, 2010-2011

TEACHING AND PROFESSIONAL EXPERIENCE

University Level:

Assistant Professor, California State University, East Bay, September 2015
Department of Educational Leadership; Ed.D. Program.

Associate Instructor, University of California, Davis, January 2014 to April 2014

- Graduate course: *Inquiry into Classroom Practice*, qualitative and quantitative research methods

Adjunct Faculty, California State University, Sacramento, August 2006 to December, 2013

- Graduate courses:
 - *Educational Research (fall, 2013)*, qualitative and quantitative research design
- Credential courses:
 - *Anthropology of Education (13 sections, 2006-2010)*, building an understanding of social and cultural issues within classrooms and schooling
 - *Science Methods for Multiple Subject (3 sections, 2007-2009)*, a lab based course inducting pre-service teachers into the nature and process of science education
- Undergraduate courses:
 - *Sex-role Stereotyping in Education (8 sections, 2006-2012)*, covering gender equity and related topics
 - *Introduction to Environmental Science (4 sections, 2008-2012)*
 - *First year Seminar (8 sections, 2008-2012)*

Teaching Assistant, University of California, Davis, September 2009 to present

- Graduate courses:
 - *Ethnographic Research (3 two-quarter courses, 2010-2012)* with Karen Watson-Gegeo (Facilitated the class, readings, methods discussions, and presentations, as the professor is off site.)
 - *Survey methods (2012)* with Jamal Abedi
 - *MA Research Methods (2013)*

Adjunct Faculty, Folsom Lake College, August 2008 to December 2008

- *Introductory Sociology*

K-12 Level:

Educational Outreach Coordinator, American River Conservancy, January, 2004 to December 2007
Developed several sets of curriculum. Responsible for grant funding. Conducted professional development for teachers. Supervised field instructors.

Teacher, American River Conservancy, January, 2001 to December 2003

Taught science and environmental education curriculum throughout 15 local public schools, grades K-10. Developed several sets of curriculum.

Teacher, Coloma Outdoor Discovery School, February, 1998 to May 2003

Developed, taught, and evaluated curriculum for science and environmental education programs. Trained personnel; Taught and directed outdoor education programs for children from throughout northern California.

Professional:

Chair, Innovations in Environmental Education Fund, August 2010 to July 2014

Oversaw the visioning process and grant making of a foundation committed to funding teachers' development of environmental education.

SERVICE

Committee member, Semester conversion. Department of Educational Leadership, CSU East Bay
Representative for CSU East Bay, Carnegie Project on the Education Doctorate (CPED)
Reviewer, papers submitted to *Science Education* and *Policy Futures in Education*.
Advisory board member, BEETLES (Better Environmental Education, Teaching, Learning, Expertise and Sharing), Lawrence Hall of Science
Chair, Committee 14, Council on Anthropology and Education (Ethnography of Educational Policy and Systems) 2009-2014
Reviewer, papers submitted to the National Association for Research in Science Teaching, American Educational Research Association, and American Anthropology Association Annual Meeting.
Hiring committee member, U.C. Davis School of Education Faculty position in Policy, 2013
Faculty work group, STEM initiative grants 2009, California State University, Sacramento
Shenandoah High School Advisory Board 2004-2006
California Regional Environmental Education Community Network Advisory Board 2002-2005

PROFESSIONAL MEMBERSHIPS

National Association for Research in Science Teaching
American Anthropology Association, Council on Anthropology and Education
American Educational Research Association
North American Association for Environmental Education

REFERENCES

Thomas B. Timar
Professor
UC Davis School of Education, School Organization and Educational Policy emphasis area
tbtimar@ucdavis.edu

Cary J. Trexler
Associate Professor
UC Davis School of Education, Science and Agricultural Education emphasis area
cjtrexler@ucdavis.edu

Andrea Rorrer
Associate Dean for Faculty Research, College of Education
Andrea.Rorrer@utah.edu

Jamal Abedi
Professor
UC Davis School of Education, Learning and Mind Sciences emphasis area
jabedi@ucdavis.edu

Karen Watson-Gegeo
Professor
UC Davis School of Education, Language, Literacy, and Culture emphasis area
kawatsongegeo@ucdavis.edu

Jeff Seitz
Professor and Chair
Department of Earth & Environmental Sciences
California State University, East Bay

Kathryn N. Hayes

California State University, East Bay

jeff.seitz@csueastbay.edu

Sherrie Carinci

Professor

College of Education

California State University, Sacramento

carincis@csus.edu