

## **Ilana Seidel Horn**

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### **EDUCATION**

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| 2002 | University of California, Berkeley, Mathematics Education, Ph.D. |
| 1998 | University of California, Berkeley, Mathematics Education, MA    |
| 1993 | Swarthmore College, Mathematics, BA with Distinction             |

### **RESEARCH INTERESTS**

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Secondary mathematics education, teachers' informal and formal learning, high school departments as contexts for teacher and student learning, classroom discourse, teachers' discourse, equitable mathematics teaching

### **ACADEMIC POSITIONS**

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| 2003 to present | Assistant Professor, Mathematics Education, College of Education, University of Washington, Seattle.                           |
| 2002-2003       | AERA-IES Postdoctoral Researcher, Stanford University, Stanford, California.   |
| 1995- 2002      | Research Assistant, University of California, Berkeley, with Judith Warren Little, Alan Schoenfeld, Phil Daro and David Stern. |

### **HONORS**

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| 2007-2009               | Spencer Foundation/National Academy of Education Postdoctoral Fellow                            |
| 2003                    | American Educational Research Association Division K Outstanding Dissertation Award             |
| 2003                    | University of California, Berkeley, Graduate School of Education Outstanding Dissertation Award |
| 2001-2002               | Spencer Dissertation Fellowship   |
| 1998-1999,<br>2000-2001 | UC Berkeley Graduate School of Education, University Fellowship                                 |

1997-1998, 2000	Spencer Graduate Research Fellow, Center for Integrated Studies of Teaching and Learning
1996-1997	Regents Fellowship
1995-1996	University Fellowship

## PUBLICATIONS

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### *Articles* (\* denotes peer reviewed publications)

- \* Horn, I.S. (In press). Turnaround Students in High School Mathematics: Constructing Identities of Competence through Mathematical Worlds. *Mathematical Thinking and Learning*.
- \* Horn, I.S. (In press). Accountable argumentation as a participation structure to support mathematical learning through disagreement. In A. Schoenfeld (Ed.) *A Study of Teaching: Multiple Lenses, Multiple Views*. Journal for Research in Mathematics Education monograph series. Reston, VA: National Council of Teachers of Mathematics.
- Horn, I.S. (In press). The Inherent Interdependence of Teachers. *Phi Delta Kappan*.
- \* Horn, I.S., Nolen, S.B., Ward, C., & Campbell, S.S. (In press). Developing practices in multiple worlds: The role of identity in learning to teach. *Teacher Education Quarterly*.
- \* Horn, I.S. (2007). Fast kids, slow kids, lazy kids: Framing the mismatch problem in math teachers' conversations, *Journal of the Learning Sciences*, 16(1), 37-79.
- Horn, I. (2006, Spring). Teacher collaboration and ambitious teaching: Reflections on what matters. *New Horizons for Learning Online Journal*.
- \* Horn, I.S. (2006, Winter). Lessons learned from detracked mathematics departments. *Theory into Practice*, 45(1), 72-81.
- \* Horn, I.S. (2005). Learning on the job: A situated account of teacher learning in high school mathematics departments. *Cognition & Instruction*, 23(2), 207-236.
- Horn, I.S. (2004, November). Why do students drop advanced mathematics? *Educational Leadership*, 61-64.
- \* Little, J. W., Horn, I. S., & Bartlett, L. (2002). Identity, community & commitment: Emerging topics in research on high school teaching. *Revista de Educação/Journal of Education. (In Portuguese)*, 11(2), 9-20.

### **Book chapters**

- Nolen, S.B., Ward, C.J., Horn, I.S., Childers, S., Campbell, S.S., & Manha, K. (In press). Motivational development in novice teachers: The development of utility filters. *International Conference on Motivation*.
- Little, J.W. & Horn, I.S. (2007). Resources for professional learning in talk about teaching. In L. Stoll & K. S. Louis (Eds.) *Professional Learning Communities: Divergence, Detail and Difficulties*. London: Open University Press.

Horn, I.S. (2003). Helping, Bluffing, and Doing Portfolios in a high school geometry classroom. In Beth Rubin and Elena Silva (Eds.), *Critical voices: Students living school reform*. New York: Routledge Press.

### ***Technical Reports***

- Little, J.W., Horn, I.S., and Bartlett, L. (2000). Teacher learning, professional community and accountability in the context of high school reform. Final report to the National Program for Excellence and Accountability in Teaching, Office of Educational Research and Improvement, US Department of Education.
- Little, J.W. & Horn, I.S. (1998). Teacher learning, professional community, and accountability in restructuring high schools: Site selection progress report. Paper prepared for the National Program for Excellence and Accountability in Teaching, Office of Educational Research and Improvement, US Department of Education.
- Urquiola, M., Stern, D., Horn, I., Dornsife, C., & Chi, B. (1996). School to work, college, and career: A review of policy, practice and results. National Center for Research on Vocational Education.

### ***Articles Under Review***

- Horn, I.S., Nolen, S.B., & Ward, C. (In preparation). Minding the gaps: Recontextualizing practices in teacher education.
- Horn, I.S. & Little, J.W. (In preparation). Workplace routines and professional learning in teacher community.
- Horn, I.S. (Revise & resubmit). Teaching replays, teaching rehearsals, and re-visions of practice: Learning from colleagues in a mathematics teacher community. *Teachers College Record*.

### **GRANT AWARDS**

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- Principal Investigator, Recontextualizing Practices: Learning to Teach Rigorous and Accessible Mathematics in the High School. Spencer/National Academy of Education Postdoctoral Fellowship. September 2007-August 2009. \$55K.
- Principal Investigator, Urban Teacher Scholars Program: Bridging Theory and Practice for Novice Teachers, funded by Teachers for a New Era Grant, Carnegie Foundation. September 2005 – June 2007. \$60K.
- Co-Principal Investigator, Role of multiple contexts in TEP students' development of teaching identity, interest and commitment to learning to teach, funded by Teachers for a New Era Grant, Carnegie Foundation. September 2004 – September 2008. \$150K.
- Co-Principal Investigator, "PD<sup>3</sup>" Project, Funded by the National Science Foundation through the Math-Science Partnership grants under the auspices of the Institute for Advanced Study/Park City Mathematics Institute. Project involves a national partnership with the Park City Mathematics Institute and a local partnership with the Seattle Public Schools, focusing on professional development with secondary mathematics teachers. September 2003 – August 2008. \$1.0 million.
- Co-Principal Investigator, Building Professional Learning Communities in Mathematics: Enlarging Content with Natural Resource Applications, Funded by the Office of

- the Superintendent of Public Instruction in Washington State. May 2004 –August 2006, \$366 K.
- Proposer and Primary Researcher, Examining the Contexts and Practices of Effective High School Algebra Teachers, Stanford University, Stanford, CA. Faculty sponsor: Jo Boaler. Funded by the American Educational Research Association and the Institute for Educational Sciences. June 2002 -June 2003, \$57 K.
- Proposer and Coordinator, Supporting Teachers Supporting Students: Situated Professional Development to Help *All* Students Succeed in High School Algebra, San Lorenzo High School, San Lorenzo, CA. Funded by the University of California Office of the President. August 2000 to June 2001, \$25 K.

## PRESENTATIONS

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### *Refereed Conferences*

- Horn, I.S. (2008, March). *Minding the Gaps: Recontextualizing practices in teacher education*. American Educational Research Association annual meeting, New York, NY.
- Horn, I.S. (2007, October). *Supporting Struggling Students in the High School*. Northwest Mathematics Conference, Bellevue, WA.
- Nolen, S.B., Ward, C., & Horn, I.S. (2007, August). *The social construction of goals and definitions of success in learning contexts*. European Association for Research on Learning biennial meeting, Budapest, Hungary.
- Nolen, S.B., Ward, C., Horn, I.S., Campbell, S.S., Manha, K., & Childers, S. (2007, August). *Interest and identity in the practice of beginning teachers*. European Association for Research on Learning biennial meeting, Budapest, Hungary.
- Bier, M., Horn, I.S., Campbell, S.S., Kazemi, E., Hintz, A., Peterson, M., Stevens, R., Saxena, A., & Peck, C. (2007, April). *Design for simultaneous renewal in university-public school partnerships: Hitting the “sweet spot.”* American Educational Research Association annual meeting, Chicago, IL.
- Nolen, S.B., Ward, C., Horn, I.S., Campbell, S.S., Manha, K. & Childers, S. (2007, April). *Motivation to learn during student teaching*. American Educational Research Association annual meeting, Chicago, IL.
- Horn, I.S. (2006, August). *Teaching replays, teaching rehearsals, and principled revisions: Learning from colleagues in a mathematics teacher community*. European Association for Research on Learning, SIG on Teaching and Teacher Education biennial conference, Garryvoe, Ireland.
- Horn, I.S. (2006, April). *Teaching the turnarounds: Collective responsibility for student learning*. National Council of Teachers of Mathematics, Research Pre-session, St. Louis, MO.
- Horn, I.S. (2006, April). *Lessons learned from detracked mathematics departments*. American Educational Research Association annual meeting, San Francisco, CA.

- Little, J.W. & Horn, I. (2006, April). *Resources for Professional Learning in Talk about Teaching: From "Just Talk" to Consequential Conversation*. American Educational Research Association annual meeting, San Francisco, CA.
- Horn, I.S. (2006, April). *Turnaround Students in High School Mathematics: The Department's Role in Student Persistence and Identity Construction*. American Educational Research Association annual meeting, San Francisco, CA.
- Horn, I.S. (2005, October). *Discourse that Promotes Mathematical Reasoning: An Analysis of an Effective Algebra Teacher*. Psychology in Mathematics Education-North America Conference. Roanoke, Virginia.
- Nolen, S.B., Horn, I.S., Ward, C., Stevens, R. & Estacio, K. (2005, August). *When Worlds Collide: Negotiating Competing Views of Teaching across Social Contexts and the Effect on Student Teachers' Motivation to Learn*. Paper presented at the 10<sup>th</sup> biennial meeting of the European Association for Research on Learning, Nicosia, Cyprus.
- Nolen, S. B., Ward, C. J., Horn, I. S., Stevens, R., & Estacio, K. (2005, August). Relatedness in preservice teacher education. Paper presented at the 10<sup>th</sup> biennial meeting of the European Association for Research on Learning and Instruction, Nicosia, Cyprus.
- Horn, I.S. (2005, April). *Share, compare, and analyze: Discourse that coordinates the social and mathematical in an inquiry-oriented classroom*. American Educational Research Association annual meeting, Montréal, Quebec, Canada.
- Horn, I.S. (2004, October). *Developing conceptually transparent language for teaching through collegial conversations*. Psychology in Mathematics Education-North America Conference, Toronto, Ontario, Canada.
- Horn, I.S. (2004, April). *Persistence in mathematics as an enactment of student identity*. American Educational Research Association annual meeting, San Diego, CA.
- Horn, I.S. (2002, April). *In pursuit of group-worthy problems: Resources for teacher learning in an inquiry-oriented mathematics department*. American Educational Research Association annual meeting, New Orleans, LA.
- Horn, I.S. (2001, April). *Fast kids, slow kids, lazy kids: Conceptions of students and subject matter in two high school math departments*. American Educational Research Association annual meeting, Seattle, WA.
- Horn, I.S. (1999, April). *Accountable argumentation as a participant structure to support mathematical learning through disagreement*. American Educational Research Association annual meeting, Montréal, Quebec, Canada.
- Horn, I.S. (1999, October). *The role of representations in students' mathematical argumentation*. Poster presented at Psychology in Mathematics Education-North America Conference, Cuernavaca, Morelos, Mexico.
- Horn, I.S. (1998). *Performing assessments, transforming practices: Doing portfolios in a high school geometry classroom*. Ethnography in Education Conference, University of Pennsylvania, Philadelphia.

#### ***Invited Presentations and Workshops***

- Horn, I.S. (2008, February). *The significance of teacher community in professional development*. Teachers Development Group Leadership Seminar on Mathematics Professional Development, Portland, OR.

- Nolen, S.B., Horn, I.S., Ward, C.J., Childers, S., Campbell, S.S., & Manha, K. (2008, February). *Becoming teachers: A situative look at learning, identity, and motivation*. Teachers for a New Era Research Series. University of Washington.
- Horn, I.S. & Campbell, S.S. (2008, January). *Urban Teacher Scholars: Redesigning teacher education*. Teachers for a New Era Research Series. University of Washington.
- Horn, I.S. (2007, October). *Consequential conversations for mathematics teachers*. Olympic Peninsula Mathematics Transition Project, Bremerton, WA.
- Horn, I.S. & King, J. (2007, January). *Urban Teacher Scholars: Bridging Theory and Practice for Novice Teachers*. Teachers for a New Era Learning Forum, University of Washington.
- Peck, C., Horn, I.S., & King, J. (2006, December). *Collaboration among Teacher Education, Arts and Sciences, and Public Schools*. Teachers for a New Era Arts and Science Luncheon. University of Washington.
- Horn, I.S. (2006, November). *Teaching replays, teaching rehearsals, and re-visions of practice*. SRI International, Menlo Park, CA.
- Horn, I.S. (2006, June). *What's happening in mathematics education?* College of Education Emeritus Faculty Lunch, University of Washington.
- Horn, I.S. (2006, May). Discussant for a live example of equitable teaching practice. Raising the floor: Progress and setbacks in the struggle for quality mathematics education for all. Mathematical Sciences Research Institute, Berkeley, CA.
- Horn, I.S. (2005, November). *What we know about effective mathematics education*. Policymakers Exchange, University of Washington.
- Horn, I.S. (2005, July). *So you want to be a mathematics educator?* Park City Mathematics Institute, Park City, UT.
- Horn, I.S. (2005, March). *Struggling students in the high school mathematics classroom*. Seattle Public Schools.
- Horn, I.S. (2004, August). *Planning coherent units for middle school mathematics*. Northwest Mathematics Interaction, University of Washington.
- Horn, I.S. (2004, May). *Re-thinking persistence in high school mathematics*. University of Washington College of Education, Center Connect.
- Horn, I.S. (2004, May). *Engaging all students in mathematical thinking: 'Group-worthy' problems in the classroom*. Puget Sound Council of Teachers of Mathematics.
- Horn, I.S. (2004, February). *Math Methods Microteaching: A Performance Assessment for Pre-service Teachers*. University of Washington, Teacher Education Program.
- Horn, I.S. (2004, February). *Creating Equitable Mathematics Classrooms Through a Department Community*. Northwest Mathematics Interaction/Park City Mathematics Institute, Seattle, WA.
- Horn, I.S. & Cabana, C. (2002). *Mathematics Reform in the Classroom*. Principal Leadership Institute, Berkeley, CA.
- Horn, I.S. & Aguirre, J. (2001). *Mathematics Reform in the Classroom*. Principal Leadership Institute, Berkeley, CA.
- Horn, I.S. (2000, April). The California Exit Exam. Panel presentation hosted by the Berkeley Evaluation and Assessment Research Group.
- Horn, I.S. (1998, July). *Mathematics Education Reform in California: Seeking Sensible Ground in the "Math Wars."* Kumon Mathematics and Reading Centers.

## SERVICE

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### **Reviewer**

- 2006-present *Journal of the Learning Sciences*
- 2006 *Equity and Excellence in Education*
- 2005 *Teachers College Record*
- 2000-present American Educational Research Association, Divisions C and K
- 2004-2005 Psychology in Mathematics Education-North America

### **University and Community**

- 2004-present Ongoing consultancies with Seattle Public High Schools
- 2004-present Consultant, University of Washington GEAR-UP project
- 2005-2006 College of Education Futures Committee
- 2004-2005 Zesbaugh Scholarship Committee
- 2003-2004 Strengthening and Sustaining Teachers Advisory Board
- 2005-2006 Panelist, Community Mathematics Panels, Seattle Public Schools

### **National**

- 2006-present Association for Women in Mathematics, Educational Committee
- 2005-2006 Knowles Science Teaching Foundation, Conference Advisory Committee

## TEACHING EXPERIENCE

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**Assistant Professor**, College of Education, University of Washington, 2003 to present  
Teaching Mathematics in the Secondary School I  
Teaching Mathematics in the Secondary School II  
Analysis of Teaching: Beyond the Classroom  
Seminar in Mathematics Education: Classroom Discourse  
Mathematics Education Research Group

### **Mathematics Instructor**

University of California, Berkeley, Academic Talent Development Program, 1999  
California State University, Hayward, Summer Bridge Program, 1995, 1996

### **High School Mathematics Teacher**

San Lorenzo High School, San Lorenzo, CA, 1999-2000  
Alameda High School, Alameda, CA, 1993-1995

**PROFESSIONAL AFFILIATIONS**

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American Educational Research Association  
International Society of the Learning Sciences  
National Council of Teachers of Mathematics  
Psychology in Mathematics Education, North America

**LANGUAGES**

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French: Speak, write, read fluently  
Spanish: Speak, write, read functionally