

# NICOLE B. KERSTING

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University of Arizona  
Department of Teaching, Learning, and  
Sociocultural Studies,  
College of Education,  
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Interdisciplinary Graduate Program in  
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## EDUCATION

Ph.D. **University of California, Los Angeles**, Education, Division of Research Methodology,  
Advanced Quantitative Methods, 2005

Dissertation: *Assessing Teachers' Knowledge of Teaching Mathematics: Instrument  
Development and Validation* (Chair: Dr. Noreen Webb)

M.A. **University of California, Los Angeles**, Education, Division of Research Methodology,  
Advanced Quantitative Methods, 2002

**University of California, Berkeley**, Intercampus Exchange Program, 2001

M.A. **Friedrich-Wilhelm University of Bonn, Germany**, German and Romance Languages,  
Linguistics, and Literature, 1994 [There were no bachelor degrees at that time and hence  
the Master degree was the basic university degree awarded in Germany]

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## CHRONOLOGY OF EMPLOYMENT

Associate Professor of Quantitative Research Methodology 2015 - present  
Department of Teaching, Learning, and Sociocultural Studies &  
Faculty Member of the Interdisciplinary Graduate Program in 2010- present  
Statistics (GDIP)  
University of Arizona

Assistant Professor of Quantitative Research Methodology 2009 - 2015  
*Department of Teaching, Learning, and Sociocultural Studies* 2011 - 2015  
*Department of Educational Psychology* 2009 - 2010  
University of Arizona

Research Scientist 2005 - 2008  
*LessonLab Research Institute, Santa Monica, CA*

Graduate Student Researcher 2004 - 2005  
*LessonLab Research Institute, Santa Monica, CA*

Graduate Student Researcher 2001 - 2004  
*Graduate School of Education and Information Studies, University  
Nicole. B. Kersting*

*of California, Los Angeles, CA*

Teaching Assistant <i>Graduate School of Education and Information Studies, University of California, Los Angeles, CA</i>	2002
Research Associate (Country Associate for Switzerland, Third International Mathematics and Science Video Study (TIMSS Video 1999) <i>LessonLab Research Institute, Santa Monica, CA</i>	1998 – 2001
Research Associate, Third International Mathematics and Science Video Study (TIMSS Video 1994) <i>Department of Psychology, University of California, Los Angeles</i>	1995 – 1998

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## GRANTS AND FELLOWSHIPS

Collaborative Proposal: Mathematical Modeling with Community Contexts <u>Principal Investigator:</u> Erin Turner <u>Senior Personnel:</u> <b>Nicole B. Kersting</b> Research funded by the National Science Foundation (NSF), Core Research (ECR) Fundamental Research in Science, Technology, Engineering and Mathematics (STEM) Education program, award # 1561305. This project seeks to develop a professional development program for upper elementary teachers to help them learn about and implement mathematical modeling lessons in their classrooms, specifically for teachers of diverse learners. Requested award amount: \$708,632.	2016 - 2019
<i>Adapting the Classroom Video Analysis Approach as a Feasible and Scalable Measure of Common-Core-Aligned Mathematics Knowledge for Teaching (Indicator 6).</i> <u>Principal Investigator:</u> <b>Nicole B. Kersting</b> Research Funded by the National Science Foundation (NSF), EAGER grant under the PRIME competition, award # 1445431. This project extends the original Classroom video analysis approach to become a content-specific and scalable measure of the Common Core State Standards in Mathematics (CCSS-M). Existing CVA video items on the topic of fractions will be mapped to the Common Core Standards and new item formats around video clips will be developed. Item functioning and score reliability will be explored and evidence on predictive validity vis-a-vis student learning will be examined. Award Amount: \$299,445.	2014 - 2016

*Exploring Automated Scoring of Language-based Instructional Quality Codes using Verbatim Lesson Transcripts.* 2012  
Principal Investigator: **Nicole B. Kersting**  
Research funded by the National Science Foundation (NSF),  
Discovery Research K-12 (DRK-12), award # 1250973.  
This project explores automated text analysis approaches to  
develop automated scoring capabilities of instructional quality  
rubrics using verbatim lesson transcripts.  
Award Amount: \$169,230

*Assessing Instructional Quality in Mathematics: An Observational Study of High and Low Value-Added Teachers.* 2007- 2013  
Principal Investigator: **Nicole B. Kersting**, Co-PI until 2009: James  
W. Stigler  
Research funded by the National Science Foundation (NSF),  
Discovery Research K-12 (DRK-12), initial award # 0732204, since  
2009 award # 0949241.  
The study examines the stability of teacher value-added scores  
under different statistical models and over time and explores their  
relationship with instructional quality, as measured through 275  
videotaped classroom lessons, rated for instructional quality, and  
curriculum-based measures of student learning.  
Award Amount: \$1,499,025.

*Using Video Clips of Classroom Instruction as Item Prompts to Measure Teacher Knowledge of Teaching Mathematics: Instrument Development and Validation.* 2006- 2012  
Principal Investigator: **Nicole B. Kersting**  
Research funded by the Institute of Educational Sciences (IES),  
Teacher Quality, award # R305M060057.  
The study explores a novel assessment approach that uses video  
clips of classroom instruction as stimuli in the item design to elicit  
teachers' *usable* teaching knowledge. Assessments in three content  
areas (fractions, ratio and proportions, and variables, expressions,  
and equations) were developed and score reliability and validity  
(with regard to teaching quality and student learning) were  
examined.  
Award Amount: \$1,474,620.

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## GRANT COLLABORATIONS

*Understanding the Effects of Mathematics Teacher Preparation on the Quality of Classroom Teaching and Students' Learning* 2014 - 2017  
Principal Investigators: Dawn Berk & James Hiebert, University of  
Delaware, DE  
My Role: Collaborator.

The project, which seeks to connect mathematics teacher preparation, teaching practice, and student learning, uses the CVA measures as one of the measures to assess teachers' usable teaching knowledge over time. We will collaborate on creating and setting up the custom CVA scales for this project and support data collection.

Research Funded by the National Science Foundation (NSF),  
Research on Education and Learning (REAL) program, award #  
1420578

*Evaluating the Developing Mathematical Ideas (DMI) Professional Development Program: Researching its impact on teaching and student learning.*

2010 - 2015

Principal Investigator: James K. L. Hammerman,  
Technical Education Research Centers, Inc. (TERC), Cambridge,  
MA

My Role: Collaborator and Advisory Board Member.

The project evaluates the effectiveness of a popular professional development program, called "Developing Mathematical Ideas", through a randomized field trial. To measure the impact of the DMI program on teachers' usable knowledge, we developed, piloted, administered and scored a classroom video analysis assessment scale on numbers and operations.

Research funded by the National Science Foundation (NSF),  
Discovery Research K-12 (DRK-12), award # 1019769.

*Differentiated Professional Development: Building Mathematics Knowledge for Teaching Struggling Learners.*

2010 - 2016

Principal Investigator: Amy R. Brodesky  
Education Development Center (EDC), Boston, MA

My Role: Collaborator

Collaborated during 2013-2014 to facilitate use and scoring of CVA teacher knowledge measures.

Research funded by the National Science Foundation (NSF),  
Discovery Research K-12 (DRK-12), award # 1020163

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## PUBLICATIONS

(\*student)

Heshmati, S\*., **Kersting, N.**, & Sutton, T. (2016). Opportunities and Challenges of Implementing Instructional Games in Mathematics Classrooms: Examining the Quality of Teacher-Student Interactions during the Cover-up and Un-cover Games. *International Journal of Science and Mathematics Education*. Available Online first at [http://www.readcube.com/articles/10.1007/s10763-016-9789-8?author\\_access\\_token=CwVFzLoR-irkULC-HmgdZve4RwIQNchNByi7wbcMAY6\\_UzN0NTn6LrJhyHbvAxyd63wQaC59BSw17labbb](http://www.readcube.com/articles/10.1007/s10763-016-9789-8?author_access_token=CwVFzLoR-irkULC-HmgdZve4RwIQNchNByi7wbcMAY6_UzN0NTn6LrJhyHbvAxyd63wQaC59BSw17labbb)

RMHETZjgtV3hDATWQCpM1shla4cRM2fSLkMVtUz\_P9DXbW07y5pPLmwbxtMbZnNPnf3Tg%3D%3D.

- Kersting, N. B.**, Stevenson, P., & Chen, M. - K. (2016). Exploring Issues of Dimensionality and Model Selection: Practical Considerations from the Classroom Video Analysis (CVA) Instrument Development Effort. In A. Izsák, J. T. Remillard, & J. Templin (Eds.), *Psychometric methods in mathematics education: Opportunities, challenges, and interdisciplinary collaborations*. Journal for Research in Mathematics Education monograph series. Reston, VA: National Council of Teachers of Mathematics. ISSN-9530.
- Kersting, N. B.**, Sutton, T. Kalinec-Craig, C., Stoehr, K. J., Heshmati, S., Lozano, G., & Stigler, J. W. (2016). Further Exploration of the Classroom Video Analysis (CVA) Instrument as a Measure of Usable Knowledge for Teaching Mathematics: Taking a Knowledge System Perspective. *ZDM – International Journal for Mathematics Education*, 48(1), 97-109. doi:10.1007/s11858-015-0733-0
- Kersting, N. B.** (2014). Why “Engineering” Teacher Evaluation Systems is best (2014). *Teachers College Record*, Date Published: July 11, 2014. <http://www.tcrecord.org> ID Number: 17599, Date Accessed: 7/17/2014
- Kersting, N. B.**, Sherin, B. & Stigler, J. W. (2014). Automated Scoring of Teachers’ Open-Ended Responses to Video Prompts: Bringing the Classroom Video Analysis (CVA) Assessment to Scale. *Educational & Psychological Measurement*, 74(6), 950-974. doi:10.1177/0013164414521634
- Kersting, N. B.**, Chen, M.-K. & Stigler, J. W. (2013). Value-Added Teacher Estimates as Part of Teacher Evaluations: Exploring the Effects of Data and Model Specifications on the Stability of Teacher-Value Added Scores. In A. Amrein-Beardsley, C. Collins S. Polasky and E. Sloat (Eds.) *Value-Added: What America’s Policymakers Need to Know and Understand*, Special issue on value-added research for policy. *Educational Policy Analysis Archives*. <http://epaa.asu.edu/ojs/article/view/1167>.
- Kersting, N. B.**, Givvin, K. B., Thompson, B., Santagata, R. & Stigler, J. (2012). Developing Measures of Usable Knowledge: Teachers’ Analyses of Mathematics Classroom Videos Predict Teaching Quality and Student Learning. *American Educational Research Journal*, 49(3), 568-590. doi:10.3102/0002831212437853
- Santagata, R., **Kersting, N.**, Givvin, K., & Stigler, J. (2011). Rich Problems as a Lever for Change: An Experimental Study of the Effects of a Professional Development Program on Students’ Mathematics Learning. *Journal of Research on Educational Effectiveness*, 4, 1-24. doi: 10.1080/19345747.2010.498562
- Kersting, N. B.**, Givvin, K., Sotelo, F., & Stigler, J. W. (2010). Teacher’s Analysis of Classroom Video Predicts Student Learning of Mathematics: Further Explorations of a Novel Measure of Teacher Knowledge. *Journal of Teacher Education*, Vol. 61, No. 1-2, 172-181. doi:10.1177/0022487109347875

**Kersting, N.** (2008). Using Video Clips as Item Prompts to Measure Teachers' Knowledge of Teaching Mathematics. *Educational and Psychological Measurement*, vol. 68, 845-861. doi:10.1177/0013164407313369

Webb, N., Ing, M., **Kersting, N.**, & Nemer, K. (2006). Help Seeking in Cooperative Learning Groups. In: Karabenick, S. & Newman, R (Eds.). *Help Seeking in Academic Settings* (p.45-89). Mahwah, NJ: Lawrence Erlbaum Associates.

U.S. Department of Education, National Center for Education Statistics. *Teaching Mathematics in the United States: Comparing the Results from the TIMSS 1995 and TIMSS 1999 Video Studies of Eighth-Grade Mathematics Lessons*. NCES (2003), by Hiebert, J., Gallimore, R., Garnier, H., Bogard Givvin, K., Hollingsworth, H., Jacobs, J., Chui, A. M., Wearne, D., Smith, M., **Kersting, N.**, Manaster, A., Tseng, E., Etterbeek, W., Manaster, C. and Stigler, James. W. Washington, DC: 2003.

Hiebert, J., Gallimore, R., Garnier, H., Bogard Givvin, K., Hollingsworth, H. Jacobs, J., Chui, A. M., Wearne, D., Smith, M., **Kersting, N.**, Manaster, A., Tseng, E., Etterbeek, W., Manaster, C., Gonzales, P. and Stigler, J. W. (2003). *Understanding and Improving Mathematics Teaching: Highlights from the TIMSS 1999 Video Study*. Phi Delta Kappan, 84, 768-775.

#### **OTHER PUBLICATIONS**

**Kersting, N. B.** (2011). Studying teacher knowledge and its impact on teaching and student learning. *Imagine Research*, Winter 2010, p. 3-5.

**Kersting, N. K.** (2009), The Classroom Video Analysis Instrument (CVA), published at <https://www.teknoclips.org>.

U.S. Department of Education, National Center for Education Statistics. *Teaching Mathematics in the United States: Comparing the Results from the TIMSS 1995 and TIMSS 1999 Video Studies of Eighth-Grade Mathematics Lessons*. NCES (2003), by Hiebert, J., Gallimore, R., Garnier, H., Bogard Givvin, K., Hollingsworth, H., Jacobs, J., Chui, A. M., Wearne, D., Smith, M., **Kersting, N.**, Manaster, A., Tseng, E., Etterbeek, W., Manaster, C. and Stigler, James. W. Washington, DC: 2003.

#### **WORK IN PROGRESS**

**Kersting, N. B.**, Sherin, B., & Boving, S. M. (rejected to be resubmitted to Educational and Psychological Measurement). Using Naïve Bayes and Feature Engineering to Automate Scoring of Instructional Quality in Mathematics Based Verbatim Lesson Transcripts: An Exploratory Study. *Learning Analytics and Knowledge (LAK)*.

Sherin, B., **Kersting, N. B.**, & Berland, M. (under review). Analytics in Support of Qualitative Analysis (and Vice Versa). *Learning Analytics & Knowledge (LAK)*.

**Kersting, N.B.**, Lozano, G., Chen, M.-K., Stoehr, Heshmati, S., Stoehr, K. J., Vezino, B., & Stigler, J. W. (manuscript in preparation). *Adapting the Classroom Video Analysis*

*Approach as a Feasible and Scalable Measure of Common-Core-Aligned Mathematics Knowledge for Teaching.*

**Kersting, N. B.**, Sutton, T., Kalinec-Craig, C., Stoehr, K. J., Chen, M.-K., Heshmati, S., Goswami, G., Thomas, M., Boulds, J., & Stigler, J. W (manuscript in preparation). Developing measures of instructional quality in mathematics: Instrument development and validation.

**Kersting, N. B.**, (manuscript in preparation). Exploring the Validity of Value-added Scores: Relating Teacher Value added to Instructional Quality.

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## CONFERENCES / SCHOLARLY PRESENTATIONS

### CONFERENCE PRESENTATIONS PEER REVIEWED

**Kersting, N. B.**, Chen, M.-K., Lozano, G., Heshmati, S., Stoehr, K. J., & Stigler, J. W. (2016, April). Extending the CVA into a Content-focused, Common Core Aligned Measure of Mathematics Knowledge for Teaching. In K. King (Chair): Developing and Validating Indicators for Teachers' Science and Mathematics Content Knowledge for Teaching. Symposium accepted at the annual meeting of the American Educational Research Association, Washington, D.C.

**Kersting, N. B.**, Stevenson, P., Chen, M.- K. (2014, April). Exploring Issues of Dimensionality and Model Selection: Practical Considerations from the Classroom Video Analysis (CVA) Instrument Development Effort. In: *Psychometric Methods in Math Education: New Opportunities and Challenges*. Research Symposium presented at the annual conference of the National Council of Teachers of Mathematics (NCTM), New Orleans, LA.

**Kersting, N. B.**, Sutton, T., Craig, C. K., Chen, M.-K., Heshmati, S., Stoehr, K. J., Thomas, M., Goswami, G. (2014, April). *Understanding the relationship between teacher value-added scores, instructional quality, and independent measures of student learning*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

**Kersting, N. B.** (2014, April). Further Exploration of the Classroom Video Analysis Approach for Measuring Usable Teaching Knowledge. In Mathematics. In **N. B. Kersting** (Chair) *Further Exploration of the Classroom Video Analysis Approach For Measuring Usable Teaching Knowledge in Mathematics*. Symposium presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

**Kersting, N. B.**, Sherin, B., & Stigler, J. W. (2014, April). Exploring the Reliability and Validity of Computer-Generated Scores to Improve the Scoring Process of the Classroom Video Analysis Assessment. In Mathematics. In **N. B. Kersting** (Chair) *Further Exploration of the Classroom Video Analysis Approach For Measuring Usable Teaching Knowledge in Mathematics*. Symposium presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

**Kersting, N. B.**, Chen, M. K., Sutton, T., Boulds, J., Stigler, J. W. (2012, April). *Relating Mathematics Teachers Value-added Scores to Teacher Knowledge, Instructional Quality, and Project-developed Student Learning Measure*. Paper presented at the annual meeting of the American Educational Research Association, Vancouver, Canada.

**Kersting, N. B.**, Sutton, S., Bartel, C., Stoehr, K., J., Heshmati, S., Lozano, G., & Stigler, J. W. (2012, April). *Using Teachers' Analyses of Teaching to Measure Usable Knowledge for Teaching Ratios, Proportions, Variables, Expressions, and Equations*. Poster session presented at the annual meeting of the American Educational Research Association, Vancouver, Canada.

Sutton, T., Boulds, J., Lozano, G., Heshmati, S., & **Kersting, N. B.** (2012, April). *Extending the Video-Analysis Approach: Developing a Measure of Mathematics Knowledge for Teaching Expertise*. Poster session presented at the annual meeting of the American Educational Research Association, Vancouver, Canada.

Boulds, J., Kalinec-Craig, C., Stoehr, K. J., Sutton, T., & **Kersting, N. B.** (2012, April). *Exploring Teachers' Analyses of Classroom Instruction: Beliefs about Teaching and Learning*. Working Group Roundtable Session presented at the annual meeting of the American Educational Research Association, Vancouver, Canada.

**Kersting, N.**, Chen, M.-K., Choi, K. C., & Stigler, J. W. (2011, April). *Value-added Teacher Estimates as Part of Teacher Evaluations: Exploring Properties of Value-added Scores from a Psychometric Perspective*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Heshmati, S., Sutton, T., & **Kersting, N. B.** (2011, April). *Mathematical Games: An Exploratory Study on Quality of Teacher-Student Interactions in Game and Non-Game Lessons*. Poster session presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

**Kersting, N. B.**, Givvin, Stigler, J. W., & Santagata, R. (2010, April). *Using Video to Measure Teacher Knowledge: Exploring the Relationship Between Teacher Knowledge, Teaching Practice, and Student Learning*. Paper presented at the annual meeting of the American Educational Research Association, Denver, CO.

**Kersting, N. B.**, Givvin, K. B., Santagata, R., Sotelo, F., & Stigler, J. W. (2009, April). Teachers' Analysis of Classroom Video as a Predictor of Students Mathematics Learning: Further Exploration of a Novel Measure of Teacher Knowledge. In **N. B. Kersting** (Chair), *New Developments in Measuring Teacher Knowledge in Mathematics: Exploring the Reliability and Validity of Three Novel Measures*. Symposium conducted at the annual meeting of the American Educational Research Association, San Diego, CA.

## **SCHOLARLY PRESENTATIONS, INVITED**



- Kersting, N. B.** (2017, September). *Classroom Video Analysis: What makes a good clip and what makes a good task?* Invited presentation at the International Congress within the Frame of the Quality Initiative on Teacher Education. *New perspectives on future teacher's professional competencies from an international perspective.* University of Hamburg, Hamburg, Germany.
- Kersting, N. B.,** Brodesky, A., & Hammerman, J. (2014, August). *Challenges Aligning Existing Measures with Professional Development Learning Goals to Evaluate Program Effectiveness.* Collaborative panel session presented at the Annual Discovery Research K-12 (DRK-12) PI Meeting, National Science Foundation, Washington, D.C.
- Kersting, N. B.** (2014, June). *Using Classroom Video Prompts to Measure Teachers' Usable Knowledge.* Invited Presentation, Educational Testing Service (ETS), Princeton, New Jersey.
- Kersting, N. B.,** Sherin, B. & Stigler, J. W. (2013, November). *Video Analysis as Tool for Teacher Learning and Measure of Usable Teaching Knowledge.* Invited Presentation, Research and Design Conference on Digital Learning by the Teaching Channel & National Science Foundation, and Northwestern University, Evanston, IL.
- Kersting, N. B.,** Sutton, T., Chen, M. – K., & Stigler, J. W. (2012, June). *Relating Mathematics Teachers' Value-added Scores to Teacher Knowledge, Instructional Quality, and Project-developed Student Learning Measure.* Poster session presented at the Annual Discovery Research K-12 (DRK-12) PI Meeting, National Science Foundation, Crystal City, VA.
- Kersting, N. B.** (2011, September). *Validity and Reliability: Affordances and Limitations of Items that Use Video.* Invited presentation at the Interdisciplinary Conference on Assessment in K-12 Mathematics: Collaborations Between Mathematics Education and Psychometrics, Atlanta, GA.
- Kersting, N. B.** (2011, May). *Investigating Teacher Quality.* Invited presentation at the *Assessing Teaching Collaboratory.* Carnegie Foundation for the Advancement of Teaching, Stanford, CA.
- Kersting, N. B.,** Sutton, T., & Stigler, J. W. (2010, December). *Assessing Instructional Quality in Mathematics: A comparative Study of High and Low Value-added Teachers' Videotaped Lesson.* Poster session presented at the Annual Discovery Research K-12 (DRK-12) PI Meeting, National Science Foundation, Washington, DC.
- Kersting, N.** (2010, November). *Exploring the Stability & Meaning of Value-added Teacher Effect Estimates.* Invited Presentation, National Science Foundation, Arlington, VA.
- Kersting, N. B.,** Sutton, T., Chen, M. – K., Stigler, J. W. (2010, June). *Capturing Teacher Knowledge: Exploring the Classroom Video Analysis Measure's Relationship to MKT, Teaching Quality and Student Learning.* Poster session presented at the Fifth Annual IES Research Conference, Washington, D.C.

- Kersting, N. B.**, Givvin, K. B., & Stigler, J. W. (2009, November). *Assessing Instructional Quality of High and Low Value-added Teachers*. Poster session presented at the Annual Discovery Research K-12 (DRK-12) PI Meeting, National Science Foundation, Washington, DC.
- Kersting, N.**, Givvin, K., & Stigler, J. (2009, June). Capturing Teacher Knowledge: Exploring the Classroom Video-Analysis (CVA) Measure's Relationship to Teaching Quality and Student Learning. Poster session presented at the Fourth Annual IES Research Conference, Washington, DC.
- Kersting, N. B.** (2009, March). *Teachers Analysis of Classroom Video Predicts Student Learning of Mathematics: A Test Worth Teaching To?* Invited Presentation, University of Delaware, Newark, DE.
- Kersting, N. B.**, Givvin, K. B., Santagata, & R., Sotelo (2008, June). *Capturing Teacher Knowledge: Measuring What Matters*. Poster session presented at the Third Annual IES Research Conference, Washington, DC.

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## HONORS AND AWARDS

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| Recipient of the Leigh Burstein Award of Research Methodology for innovative dissertation work. Graduate School of Education & Information Studies (GSEIS), University of California, Los Angeles.                                                                    | 2004        |
| <i>CAESL Fellow, the Center for the Assessment and Evaluation of Student Learning (CAESL)</i> is a national center funded by the National Science Foundation in partnership with WestEd, the UC Berkeley Graduate School of Education, UCLA, and Stanford University. | 2002 - 2004 |
| Travel Grant, Graduate School of Education & Information Studies (GSEIS), University of California, Los Angeles.                                                                                                                                                      | 2002 & 2003 |
| Regents Stipend, University of California, Los Angeles.                                                                                                                                                                                                               | 2003        |
| Departmental Fellowship, Graduate School of Education & Information Studies (GSEIS), University of California, Los Angeles.                                                                                                                                           | 2002        |

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## SERVICE / OUTREACH

### NATIONAL/INTERNATIONAL SERVICE

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| Accepted invitation to serve a 3-year rotation on the grant merit review panels of the Institute of Educational Sciences (IES)                                                                  | 2015 - 2017 |
| Invited Reviewer of expert paper on teacher knowledge by the Centre for Educational Research and Innovation (CERI) of the Organization of Economic Development and Cooperation (OECD) to inform | 2014        |

development of a new international, cross-cultural measure of teachers' general pedagogical knowledge. *Paris, France.*

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| Grant Proposal Reviewer for the Institute of Educational Sciences (IES).<br>Merit Review Panels for the <i>Education Research Grant Programs.</i>                                        | 2014 |
| Grant Proposal Reviewer for the <i>National Science Foundation</i> , Merit<br>Reviews Panels for grant programs under the <i>Directorate for<br/>Education and Human Resources (EHR)</i> | 2012 |
| Grant Proposal Reviewer for the <i>National Science Foundation</i> , Merit<br>Reviews Panels for grant programs under the <i>Directorate for<br/>Education and Human Resources (EHR)</i> | 2011 |
| Grant Proposal Reviewer for the National Science Foundation, Merit<br>Reviews Panels for grant programs under the <i>Directorate for<br/>Education and Human Resources (EHR)</i>         | 2010 |
| Grant Proposal Reviewer for the National Science Foundation, Merit<br>Reviews Panels for grant programs under the <i>Directorate for<br/>Education and Human Resources (EHR)</i>         | 2008 |

Served as Reviewer for the following education journals

*ZDM – International Journal for Mathematics Education (ZDM)*  
*American Educational Research Journal (AERJ)*  
*Journal for Teacher Education (JTE)*  
*Cognition and Instruction (CI)*  
*Educational and Psychological Measurement (EPM)*  
*Comparative Education Review (CER)*

**DEPARTMENT SERVICE**

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|------------------------------------------------------------------|----------------|
| Promotion & Tenure Committee                                     | 2016 – present |
| Operations Committee                                             | 2016 - present |
| Graduate Curriculum Committee                                    | 2016 - present |
| Teaching, Learning, & Sociocultural Studies Operations Committee | 2013 - present |
| Curriculum committee                                             | 2011-2013      |

Provided support for faculty and students on statistics, measurement, and methodology for research and grant writing

**COLLEGE SERVICE**

Provided support for faculty and students on statistics, measurement, and methodology for research and grant writing

**UNIVERSITY SERVICE**

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|-----------------------------------------------------------------------------------------------------|--------------|
| Chair of the Student Admission Committee of the Interdisciplinary<br>Graduate Program in Statistics | 2014, Spring |
| Member of the Executive Committee of the Interdisciplinary Graduate                                 | 2013 - 2014  |

Program in Statistics, University of Arizona.

Faculty Member in the Interdisciplinary Graduate Program in Statistics 2010 - present

Invited lecturer, *Predicting Teaching Practice and Student Learning: Further exploration of a Novel Approach to Measuring Teacher Knowledge in Mathematics*. Colloquium sponsored by the University of Arizona Department of Mathematics 2010

**PROFESSIONAL MEMBERSHIPS**

American Educational Research Association (AERA) 2004 - present  
Division D: Research Methodology  
Research in Mathematics Education Special Interest Group

European Association for Research on Learning and Instruction (EARLI) 2002 - 2007