CANDACE WALKINGTON

Department of Teaching and Learning, Southern Methodist University
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EDUCATION

IES Postdoctoral Fellow in Mathematical Thinking, Learning, and Instruction (2010-2012)
Wisconsin Center for Educational Research, University of Wisconsin - Madison
Advisor: Mitchell Nathan

Ph.D. in Mathematics Education (2006-2010; Ph.D. awarded in December, 2010)
Department of STEM Education, University of Texas at Austin
Advisor: Anthony Petrosino
Dissertation Title: "Playing the Game of Story Problems: Situated Cognition in Algebra Problem Solving"
Dissertation funded by the Pittsburgh Science of Learning Center (PSLC)

M.S. in Mathematics (2004-2006)
Department of Mathematics, Texas A&M University, College Station
Specialization: Probability Theory
3.9 GPR; 43 graduate credit hours

B.S. in Applied Mathematical Sciences (2000-2004)
Department of Mathematics, Texas A&M University, College Station
Graduated *Magna Cum Laude*; 3.8 GPR

FACULTY AND RESEARCH POSITIONS

Assistant Professor of Mathematics Education (2012-Present)
Department of Teaching and Learning, Southern Methodist University
Undergraduate courses taught: Teaching Mathematics in Elementary School (EDU 5355), Integrated STEM Studies (current; EDU 5330)
Graduate courses taught: Numerical Reasoning: Numbers and Operations (EDU 6379)

IES Postdoctoral Fellow in Mathematical Thinking, Learning, and Instruction (2010-2012)
Wisconsin Center for Education Research, University of Wisconsin, Madison
Worked as postdoctoral fellow on IES training grant. Responsibilities include taking quantitative research courses, continuing personal research agenda, and working on U-W grants. Worked on "Tangibility for Teaching of Mathematics" grant, involving running learning experiments and analysis of video data in project-based classrooms. Also worked on IDIOM grant examining students' inductive strategies to support mathematical proof.

Remote Researcher (2008-Present)
The Pittsburgh Science of Learning Center (www.learnlab.org)
Lead researcher on PSLC-funded 3-part algebra study. Final phase of study involves curriculum replacement of one unit of Cognitive Tutor Algebra for 150 Algebra I students in PA. In charge of writing original grant for funding, coordinating all 3 studies, obtaining permissions, working in Cognitive Tutor Authoring Tools, quantitative & qualitative data collection and analysis, writing for publication.

Consultant in Teaching Effectiveness (2010-2011)
The National Math and Science Initiative, Dallas, TX
In partnership with the Gates Foundation's Measuring Effective Teaching Project (www.metproject.org), further developed the UTOP classroom observation protocol for grades 4-8 mathematics; coordinated training 100 Master Teachers to rate 1000 video lessons and attain instrument reliability; teaching behaviors tied to student achievement; in charge of writing policy reports and scholarly publications.

Consultant/Graduate Research Assistant (2007-2013)
UTeach Natural Sciences, University of Texas at Austin
Leader of UTeach research team developing a K-12 math/science classroom observation protocol (UTOP); field-tested protocol on UTeach and non-UTeach graduates teaching secondary math and science over 3 years; engaged in qualitative & quantitative analysis of data; currently working with other team members preparing results for publication; funded by Noyce Scholarship Grant.

OTHER TEACHING EXPERIENCE

Associate Professor of Mathematics (2009-2010)
Collin County Community College
Designed and taught sequence of Mathematics for Middle Grades Teacher courses for 4 semesters using a guided discovery approach (5-E) where students collaboratively investigate complex, open-ended problems, as well as generate conceptual proofs of mathematical ideas; average instructor rating of 4.8/5; also taught College Algebra & Finite Mathematics

Assistant Instructor: Elementary Math Methods (2008)
Department of Curriculum and Instruction, University of Texas at Austin
Responsible for individually planning and teaching course every week; course focused on using Cognitively Guided Instruction in elementary mathematics; modified pre-existing syllabus and materials, administered all grades

Teaching Assistant: Project-Based Instruction (2007-2008)
UTeach Natural Sciences, University of Texas at Austin
Worked as teaching assistant and assistant instructor to Dr. Mary Walker; gave detailed and ongoing feedback to students on their 5-E lessons, observed and evaluated field teaches, developed theoretical/literature basis of the course, developed grading rubrics and class discussion objectives

Elementary Facilitator: Apprentice Teachers of Cohort G (2006)
Department of Curriculum and Instruction, University of Texas at Austin
Managed elementary Apprentice Teachers at University of Texas at Austin; observed and evaluated their teaching, gave feedback & grades

Resident Mathematician: Iola Middle School, Iola, TX (2005-2006)
NSF GK-12 Fellowship Program, Texas A&M University
Taught at a rural middle school in grades 5-8 to increase interest and achievement in mathematics; taught 8-10 lessons per week; made presentations, wrote and executed lesson plans, incorporated projects into curriculum, increased the technological competence of students and teachers; ran middle school math club and summer math/science camps (visit peer.tamu.edu for more information on this NSF GK-12 program)

Teaching Assistant: Calculus I (2005)
Department of Mathematics, Texas A&M University
Lectured and provided one-on-one tutoring at three 2-hour help sessions per week

PEER-REVIEWED JOURNAL ARTICLES

Nathan, M., Srisurchan, R., Walkington, C., Wolfgram, M., Williams, C., & Alibali, M. (2013). Cohesion as a mechanism of STEM integration. *Journal of Engineering Education*, *102*(1), 77-116.

Nathan, M., Walkington, C., Boncoddo, R., Pier, E., Williams, C., & Alibali, M. (accpted). Actions Speak Louder with Words: The Roles of Action and Pedagogical Language for Grounding Mathematical Reasoning. *Learning and Instruction*.

Walkington, C. (2013). Using learning technologies to personalize instruction to student interests: The impact of relevant contexts on performance and learning outcomes. *Journal of Educational Psychology*, *105*(4), 932-945.

Walkington, C., Petrosino, A., & Sherman, M. (2013). Supporting algebraic reasoning through personalized story scenarios: How situational understanding mediates performance and strategies. *Mathematical Thinking and Learning*, *15*(2), 89-120. (*winner, AERA Division C *Graduate Student Research* award)

Walkington, C., Sherman, M., & Howell, E. (in press). Connecting Algebra to sports, video games, and social networking: How personalized learning makes ideas "stick." *Mathematics Teacher*.

Walkington, C., Sherman, M., & Petrosino, A. (2012). 'Playing the game' of story problems: Coordinating situation-based reasoning with algebraic representation. *Journal of Mathematical Behavior*, *31*(2), 174-195.

Wasserman, N., & Walkington, C. (2014). Exploring links between beginning UTeacher's beliefs and observed classroom practices. *Teacher Education & Practice*, *27*(2), XX-XX.

BOOK CHAPTERS

Walkington, C., & Bernacki, M. (in press). Motivating students by "personalizing" learning around individual interests: A consideration of theory, design, and implementation issues. In S. Karabenick & T. Urdan (eds.) *Advances in Motivation and Achievement*, Emerald Group Publishing.

Walkington, C., & Marder, M. (in press). Exploring excellence in teaching using the UTeach Observation Protocol: Connecting teaching behaviors to teacher value-added on assessments measuring conceptual understanding. In Kane, T. J., Kerr, K. A. and Pianta, R. C. (Eds.) *Designing teacher evaluation systems: New guidance from the Measures of Effective Teaching project*. San Francisco: Jossey-Bass.

Walkington, C., Nathan, M., Wolfgram, M., Alibali, M., & Srisurichan, R. (in press). Bridges and barriers to constructing conceptual cohesion across modalities and temporalities: Challenges of STEM integration in the precollege engineering classroom. In J. Strobel, S. Purzer, & M. Cardella, (Eds.), *Engineering in Pre-College Settings: Synthesizing Research, Policy, and Practices*. Purdue University Press.

REFEREED CONFERENCE PROCEEDINGS

Bernacki, M., & Walkington, C. (in press). The Impact of a Personalization Intervention for Mathematics on Learning and Non-Cognitive Factors. Paper to appear in the Non-Cognitive Factors & Personalization for Adaptive Learning Workshop at the *7th International Conference of Educational Data Mining*, London. (note: Bernacki and Walkington are both first authors)

Boncoddo, R., Williams, C., Pier, L., Walkington, C., Alibali, M., Nathan, M., & Dogan, F. (2013). Gesture as a window to justification and proof. In Martinez, M. & Castro Superfine, A (Eds.) *Proceedings of the 35th annual meeting of the North American Chapter of the International*

Group for the Psychology of Mathematics Education (pp. 229-236). Chicago, IL: University of Illinois at Chicago.

Cooper, J., Walkington, C., Williams, C., Akinsiku, O., Kalish, C., Ellis, A., & Knuth, E. (2011). Adolescent reasoning in mathematics: Exploring middle school students' strategic approaches to empirical-based justifications. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 2188-2293). Boston, MA: Cognitive Science Society.

Nathan, M., Walkington, C., Srisurichan, R., & Alibali, M. (2011). Modal Engagements in Pre-College Engineering: Tracking Math and Science Concepts Across Symbols, Sketches, Software, Silicon, and Wood. In *Proceedings of the 118th American Society of Engineering Education Annual Conference and Exposition*. Vancouver, CA.

Pier, E., Walkington, C., Williams, C., Boncoddo, R., Alibali, M. W., Nathan, M. J., & Waala, J. (accepted). Hear what they say and watch what they do: Predicting valid mathematical proofs using speech and gesture. In W. Penuel, S. A. Jurow, and K. O'Connor (Eds.), *Learning and Becoming in Practice: Proceedings of the Eleventh International Conference of the Learning Sciences* (pp. xx-xx). Boulder, CO: University of Colorado. (*nominated for ICLS 2014 Best Student Paper)

Walkington, C., Boncoddo, R., Williams, C., Nathan, M., Alibali, M., Simon, E., & Pier, E. (accepted). Being mathematical relations: Dynamic gestures support mathematical reasoning. In W. Penuel, S. A. Jurow, and K. O'Connor (Eds.), *Learning and Becoming in Practice: Proceedings of the Eleventh International Conference of the Learning Sciences* (pp. xx-xx). Boulder, CO: University of Colorado.

Walkington, C., Cooper, J., Kalish, C., & Akinsiku, O. (2012). How middle school students reason differently in everyday and mathematical contexts: Typicality and example choice in mathematical justification. In Van Zoest, L. R., Lo, J.-J., & Kratky, J. L. (Eds.) *Proceedings of the 34th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Kalamazoo, MI: Western Michigan University. MI.

Walkington, C., Clinton, V., & Howell, E. (2013). The associations between readability measures and problem solving in algebra. In Martinez, M. & Castro Superfine, A (Eds.) *Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 86-89). Chicago, IL: University of Illinois at Chicago.

Walkington, C., Clinton, V., Ritter, S., Nathan, M., & Fancsali, S. (in press). The Impact of Cognitive and Non-Cognitive Text-Based Factors on Solving Mathematics Story Problems. Paper to appear in the Non-Cognitive Factors & Personalization for Adaptive Learning Workshop at the *7th International Conference of Educational Data Mining*, London.

Walkington, C., Cooper, J., & Howell, E. (2013). The effects of visual representations and interest-based personalization on solving percent problems. In Martinez, M. & Castro Superfine, A (Eds.) *Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 533-536). Chicago, IL: University of Illinois at Chicago. (NOTE: Both Walkington and Cooper are first authors on this paper).

Walkington, C., & Maull, K. (2011). Exploring the assistance dilemma: The case of context personalization. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society* (pp. 90-95). Boston, MA: Cognitive Science Society.

Walkington, C., & Sherman, M. (2012). Using adaptive learning technologies to personalize instruction: The impact of interest-based scenarios on performance in algebra. In van Aalst, J., Thompson, K.,

Jacobson, M., & Reimann, P. (Eds.), *Proceedings of the 10th International Conference of the Learning Sciences*. Sydney, NSW, Australia.

Williams, C., Akinsiku, O., Walkington, C., Cooper, J., Ellis, A., Kalish, C., Knuth, E. (2011). Understanding students' similarity and typicality judgments in and out of mathematics. In *Proceedings of the 32nd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Reno, NV.

Williams, C.C., Pier, E., Walkington, C., Alibali, M.W., Nathan, M., Dogan, M.F., & Boncoddo, R. (2013). Broadening what we perceive: An introduction to research methods for analyzing gesture and language. In Martinez, M. & Castro Superfine, A (Eds.) *Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1260-1263). Chicago, IL: University of Illinois at Chicago.

Williams, C., Walkington, C. Boncoddo, R., Srisurichan, R., Pier, L., Nathan, M., & Alibali, M. (2012). Invisible proof: The role of gestures and action in proof. In Van Zoest, L. R., Lo, J.-J., & Kratky, J. L. (Eds.) *Proceedings of the 34th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Kalamazoo, MI: Western Michigan University. MI.

MANUSCRIPTS UNDER REVIEW

Sherman, M., Walkington, C., & Howell, E. (under review). A comparison of Symbol-Precedence View in investigative and conventional textbooks used in Algebra courses. Submitted to *Educational Studies in Mathematics*. (note: Sherman and Walkington are both first authors)

Walkington, C., Cooper, J., Akinsiku, O., & Kalish, C. (under review). Middle school students and mathematicians representations of mathematical objects. Submitted to *Cognition and Instruction*.

Walkington, C., Clinton, V., Ritter, S., & Nathan, M. (under review). How Readability and Topic Incidence Relate to Performance on Mathematics Story Problems in Cognitive Tutor Algebra. Submitted to *Journal of Educational Psychology*.

Weber, E., Walkington, C., & McGalliard, W. (under review). Broadening perspectives on learning and learning trajectories in mathematics education research. Submitted to *Mathematical Thinking and Learning*.

MEDIA COVERAGE OF RESEARCH PROGRAM

Sparks, S. (2012). Studies probe power of "personalization." *Education Week, 32*(5), 1-2. http://www.edweek.org/ew/articles/2012/09/26/05personalize_ep.h32.html
This article was about my research program. It was the most viewed and most emailed article in this issue.

Schwartz, K. (2013). In Teaching Algebra, the Not-So-Secret Way to Students' Hearts. *Mindshift*: A National Public Radio/PBS/KQED publication: http://blogs.kqed.org/mindshift/2013/12/to-learn-algebra-the-not-so-secret-way-to-students-hearts/
This article was about my research program.

TECHNICAL REPORTS

Walkington, C., Arora, P., Ihorn, S., Gordon, J., Walker, M., Abraham, L., & Marder, M. (2011). Development of the UTeach Observation Protocol: A Classroom Observation Instrument to Evaluate Mathematics and Science Teachers from the UTeach Preparation Program (UTeach Technical Report 2011-01). UTeach Natural Sciences, University of Texas at Austin.

PROTOCOLS FOR EDUCATIONAL RESEARCH

Marder, M., Walkington, C., Abraham, L., Allen, K., Arora, P., Daniels, M., Dickinson, G., Ekberg, D., Gordon, J., Ihorn, S. & Walker, M. (2010). *The UTeach Observation Protocol (UTOP) Training Guide.* UTeach Natural Sciences, University of Texas Austin.

NATIONAL CONFERENCE PRESENTATIONS

Donovan, A., Boncoddo, R., Williams, C., Walkington, C., Pier, L., Waala, J., Nathan, M., & Alibali, M. (accepted). Action, Gesture, and Abstraction in Mathematical Learning. Accepted to the 6th Conference of the International Society for Gesture Studies. University of California, San Diego.

Walkington, C., & Bernacki, M. (April, 2014). Students authoring personalized "algebra stories": Problem-posing in the context of out-of-school interests. Paper presented at 2014 Annual Meeting of American Educational Research Association.

Pier, E., Walkington, C., Clinton, V., Boncoddo, R., & Nathan, M. (April, 2014). Exploring computerized text analysis to predict the validity of students' proof construction. Paper presented at 2014 Annual Meeting of American Educational Research Association.

Weber, E., Walkington, C., & McGalliard, W. (February, 2014). Expanding Notions of "Learning Trajectories" in Mathematics Education. Presentation at *The Eighteenth Annual Conference of the Association of Mathematics Teacher Educators* (AMTE). Irvine, CA.

Boncoddo, R., Williams, C., Pier, L., Walkington, C., Alibali, M., Nathan, M., & Dogan, F. (November, 2013). Gesture as a window to justification and proof. Paper presentation at the *35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Chicago, IL: University of Illinois at Chicago.

Clinton, V., Walkington, C., & Howell, E. (November, 2013). Exploring connections between story problem topics and problem solving: Is work hard and socializing easy? Poster presentation at the *35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Chicago, IL: University of Illinois at Chicago.

Walkington, C., Clinton, V., & Howell, E. (November, 2013). The associations between readability measures and problem solving in algebra. Paper presentation at the *35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Chicago, IL: University of Illinois at Chicago.

Walkington, C., Cooper, J., & Howell, E. (November, 2013). The effects of visual representations and interest-based personalization on solving percent problems. Paper presentation at the *35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Chicago, IL: University of Illinois at Chicago. (NOTE: Both Walkington and Cooper are first authors on this paper).

Williams, C.C., Pier, E., Walkington, C., Alibali, M.W., Nathan, M., Dogan, M.F., & Boncoddo, R. (November, 2013). Broadening what we perceive: A method for analyzing gesture and language. Paper presentation at the *35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Chicago, IL: University of Illinois at Chicago.

Boncoddo, R. A., Donovan, A., Walkington, C., Nathan, M. J., & Alibali, M. W. (October, 2013). The Impact of Actions and Gestures on Mathematical Thinking: An Embodied Perspective. Poster presented at the *8th Biennial Meeting of the Cognitive Development Society*, Memphis, TN.

Walkington, C., & Marder, M. (June, 2013). Exploring Excellence in Teaching with the UTeach Observation Protocol. Session presentation at UTeach Institute National Conference, Austin, TX.

Pier, L., Walkington, C., Boncoddo, R., & Alibali, M. (April, 2013). Investigating the impact of coordination of STEM representations on learning in Digital Electronics. Paper session at the 2013 Annual Meeting of the American Educational Research Association, San Francisco, CA.

Walkington, C., Cooper, J., Kalish, C., & Akinsiku, O. (April, 2013). How middle school students and mathematicians reason differently about examples in everyday and mathematical contexts. Paper session at the 2013 Annual Meeting of the American Educational Research Association, San Francisco, CA.

Walkington, C., Nathan, M., Alibali, M., Pier, L., Boncoddo, R., & Williams, C. (April, 2013). Projection as a mechanism for grounding mathematical justification in embodied action. Paper session at the 2013 Annual Meeting of the American Educational Research Association, San Francisco, CA.

Dogan, M.F., Williams, C.C., Walkington, C., & Nathan, M. (April, 2013). Body-based examples when exploring conjectures: Embodied resources and mathematical proof. Paper presented at the Research Presession of the 2013 National Council of Teachers of Mathematics Annual Meeting and Exposition.

Sherman, M. & Walkington, C. (April, 2013). A comparison of symbol precedence view in standards-based and conventional algebra curricula. Paper presented at the Research Presession of the 2013 National Council of Teachers of Mathematics Annual Meeting and Exposition.

Wasserman, N., & Walkington, C. (June, 2012). Exploring links between beginning UTeacher's beliefs and observed classroom practices. Session presentation at UTeach Institute National Conference, Austin, TX.

Marder, M., Walkington, C., & Walker, M. (June 2012). Using the UTeach Observation Protocol to evaluate classroom teaching: Results from the Measures of Effective Teaching Study. Session presentation at UTeach Institute National Conference, Austin, TX.

Walkington, C., Srisurichan, R., Nathan, M., Williams, C., & Alibali, M. (April, 2012). Grounding Geometry Justifications in Concrete Embodied Experience: The Link between Action and Cognition. Paper presentation at 2012 Annual Meeting of the American Educational Research Association. Vancouver, Canada.

Walkington, C. (April, 2012). Context Personalization in Algebra: Supporting Connections between Relevant Stories and Symbolic Representations. Paper presentation at 2012 Annual Meeting of the American Educational Research Association. Vancouver, Canada.

Walkington, C., & Valerius, M. (April, 2012). Using Classroom Observation Research to Inform Debates about Teaching Effectiveness. Paper presentation at 2012 Research Pre-session for National Council of Teachers of Mathematics Annual Meeting, Philadelphia, PA.

Nathan, M., Srisurichan, R., Walkington, C., Williams, C., & Alibali, M. (April, 2012). How STEM Integration is Produced and Maintained in the High School Engineering Classroom. Paper presentation at P-12 Engineering and Design Research Summit. Washington D.C.

Williams, C., Akinsiku, O., Walkington, C., Cooper, J., Ellis, A., Kalish, C., Knuth, E. (October, 2011). Understanding students' similarity and typicality judgments in and out of mathematics. In *Proceedings of the 32nd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. Reno, NV.

Walkington, C., Walker, M., & Marder, M. (July, 2011). Developing tools to evaluate the practice of Noyce Scholars: The UTeach Classroom Observation Protocol. Presentation at NSF Robert Noyce Teacher Scholarship Program Conference, Washington DC.

Cooper, J., Walkington, C., Williams, C., Akinsiku, O., Kalish, C., Ellis, A., & Knuth, E. (July, 2011). Adolescent reasoning in mathematics: Exploring middle school students' strategic approaches to empirical-based justifications. In *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*. Boston, MA.

Walkington, C., & Maull, K. (July, 2011). Exploring the assistance dilemma: The case of context personalization. In *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*. Boston, MA.

Rankin, M., Walkington, C., & Walker, M. (June, 2011). UTeach, UTeach Replication and the UTOP – Strategies to increase the quantity, long-term retention and diversity of science and mathematics teachers and tools to measure the effectiveness of high quality science and mathematics teaching. Session presentation at Science and Mathematics Teacher Imperative National Conference, Portland, OR.

Marder, M., & Walkington, C. (May, 2011). Large Scale Trial of the UTOP Classroom Observation Instrument. Presentation and UTeach Institute National Conference, Austin, TX.

Nathan, M., Alibali, M., Wolfgram, M., Srisurchan, R., & Walkington, C. (June 2011). Threading mathematics through symbols, pixels, sketches and wood: Tailoring high school STEM instruction to build cohesion across modal engagements. Paper presentation at 2011 Meeting of the Jean Piaget Society, Berkley, CA.

Walkington C., Petrosino, A., & Sherman, M. (April 2011). The impact of personalization on problem-solving in algebra. Paper presentation at 2011 American Education Research Association Annual Meeting, New Orleans, LA. (*winner, Graduate Student Research Award, Division C).

Nathan, M., Alibali, M., Wolfgram, M., Srisurchan, R., Felton, M., &Walkington, C. (April 2011). Threading mathematics through symbols, sketches, software, silicone, and wood: Tailoring high school STEM instruction. Poster presentation at 2011 American Education Research Association Annual Meeting, New Orleans, LA.

Sherman, M. & Walkington, C. (April 2011). Functions Perspectives in Algebra: A Framework for Assessing Student Knowledge. Poster presentation at 2011 Research Pre-session for National Council of Teachers of Mathematics Annual Meeting, Indianapolis, IN.

Knuth, E., Ellis, A., Kalish, C., Williams, C., Akinsiku, O., Cooper, J., & Walkington, C. (April 2011). The role of similarity and typicality in students' inferential reasoning. Poster presentation at 2011 Research Pre-session for National Council of Teachers of Mathematics Annual Meeting.

Marder, M., & Walkington, C. (May, 2010). Examining UTeach outcomes: Classroom observations of UTeach graduates. Session presentation at UTeach National Conference, Austin, TX.

Anderson, C., Winn, J., Walkington, C., & Mohmed, A. (May 2010). Views on setting up a UTeach Alumni Network. Session presentation at UTeach National Conference, Austin, TX.

Walkington, C., Sherman, M., & Petrosino, A. (May, 2010). Playing the game of word problems: Situated cognition in algebra problem solving. Poster presentation at 2010 American Education Research Association Annual Meeting, Denver, CO.

Abraham, L., Marder, M., Walker, M., Walkington, C., Arora, P., Allen, K., Gordon, J., & Ihorn, S. (July, 2009). UTOP analysis of beginning math and science teachers: The first three years. Poster presentation at Noyce Scholarship conference, Washington D.C.

Chao, T., & Walkington, C. (July, 2008). Mathematics Education for Social Justice: A brief review of the research and its relation to the Algebra Project & Introducing Content Maps as a tool to analyze connections made within a mathematics classroom. Presentation at two sessions at the first Algebra Project Conference, Jackson, MI.

Arora, P., Walkington, C., Abraham, L., Walker, M., Dodsen, M., Allen, K. & Marder, M. (June, 2008). Analyzing Teacher Quality: Development of a Classroom Observation Protocol. Poster presentation at Noyce Scholarship conference, Washington D.C.

Arora, P., Walkington, C., Dickinson, G., Walker, M., Abraham, L., & Marder, M. (June, 2007). A preliminary examination of Noyce Scholars as teachers. Session presentation & poster presentation at Noyce Scholarship conference, Washington D.C.

Johnson, L., Klemm, W., Hardy, V., Kobiela, M., & Walkington, C. (March, 2006). NSF GK-12 Program: Lessons Learned. Session presentation and poster presentation at National NSF-GK12 conference in Washington D.C. and at regional conference in College Station, TX.

REGIONAL PRESENTATIONS

Cooper, J., & Walkington, C. (July, 2013). Solving percent word problems: Effects of interest-based personalization and visualization. 1st Annual Midwest Meeting on Mathematical Thinking (M3T). Minneapolis, MN.

Walkington, C., & Clinton, V. (July, 2013). Exploring associations between story problem readability and problem-solving accuracy. 1st Annual Midwest Meeting on Mathematical Thinking (M3T). Minneapolis, MN.

Walkington, C., & Wasserman, N. (February 2013). Exploring research in Algebra: Tackling algebra in middle school & high school. Invited talk given at annual conference of Research in Mathematics Education at Southern Methodist University.

Nathan, M., Alibali, M., Wolfgram, M., Srisurchan, R., Felton, M., &Walkington, C. (December 2011). Threading mathematics through symbols, sketches, software, silicone, and wood: Tailoring high school STEM instruction. Poster presentation at Wisconsin Center for Educational Research Annual Poster Fair.

Walkington, C., & Maull, K. (July 2010). The impact of personalization on problem-solving in algebra. Poster presentation at the 2010 Pittsburgh Sciences of Learning Center (PSLC) Summer School, Pittsburgh, PA.

Walkington, C., Sherman, M., & Petrosino, A. (March 2010). The effect of context personalization on problem solving in algebra. Poster presentation at the Council of Graduate Students in Education Conference, Pittsburgh, PA.

Walkington, C. (July, 2007). Culturally relevant problem scenarios in Algebra I. Poster presentation at the Pittsburgh Science of Learning Center (PSLC) Summer School, Pittsburgh, PA.

TALKS

"Mathematics Word Problems and English Language Learners" (April, 2014). Invited guest lecture in Dr. Baker's Masters course for in-service teachers.

"Analysis of Video Data" (April, 2014). Guest lecture in Paige Ware's doctoral course on Qualitative Research. Southern Methodist University.

"Why Educational Video Games?" (March, 2014). Invited guest lecture at Guildhall Video Game Design program – SMU.

"An Inquiry Approach to Mathematics Teaching" (November, 2013). Invited guest lecture in Dr. Ketterlin-Geller's Masters course for school principals.

"Connecting Instruction in Mathematics to Students' Interests and Experiences" (June, 2013). Invited symposium talk given at Reasoning Mind, Dallas, TX.

"Engaging Students in Mathematics" (May, 2013). Invited talk given at Beginning Teachers Institute, Southern Methodist University.

"Analysis of Video Data" (March, 2013). Guest lecture in Paige Ware's doctoral course on Qualitative Research. Southern Methodist University.

"Creating Engaging Math Activities" (November, 2012). Presentation given to Camp Fire Lonestar instructors, Dallas, TX. Camp Fire Lonestar is an after-school program for low-income children in Dallas.

"Using Adaptive Learning Technologies to Personalize Algebra Instruction to Student interests: The Impact of Relevant Contexts on Robust Learning." (August, 2012). Invited talk at LearnLab's Annual Learning Science Workshop on Use of Technology Toward Enhancing Achievement and Equity in the 21st Century. Pittsburgh, PA.

"Bridges and Barriers to Building Conceptual Cohesion in Project-Based Engineering Curricula" (July, 2012). Guest lecture in Curriculum History and Development course for UTeach Engineering program. University of Texas at Austin.

"Supporting Algebra Learning by Connecting Instruction to Students' Out-of-School Interests" (February, 2012). Talk given at Mathematics Education Graduate Seminar, University of Wisconsin-Madison.

"Matching instruction to personal interests: Impact on performance and learning" (December, 2011). Talk given at Cognitive and Developmental Psychology brownbag, University of Wisconsin-Madison.

"Teaching effectiveness in project-based settings: Bridges and barriers to building conceptual cohesion" (November, 2011). Invited talk for Interdisciplinary Training Program in Education Sciences seminar, University of Wisconsin-Madison.

"Measuring effective teaching: Capturing the UTeach vision in classroom observation" (October, 2011). Invited talk at the University of Kansas.

"Supporting algebraic reasoning with context personalization." (March, 2011). Talk given at the Learning Science Luncheon, University of Wisconsin-Madison.

"The effect of context personalization on problem solving in algebra." (December 2010). Talk given before the PSLC Motivation & Metacognition thrust, Pittsburgh, PA.

"Mathematics in context: Story problems versus Project-Based Instruction." (April 2010). Invited talk to UTeach Project-Based Instruction class, Austin, TX.

*"The impact of personalization on algebra word problems." (*January, 2010). Talk given before the PSLC Algebra Course Committee, Pittsburgh, PA.

*"Guided Discovery in the College Mathematics Classroom." (*January, 2010). Talk given at Collin County Faculty Training Workshop in Plano, TX.

"Robust Learning in Culturally & Personally Relevant Algebra Problem Scenarios." (August, 2008). Talk given before the PSLC Algebra Course Committee, Pittsburgh, PA.

WORKSHOPS

Beginning Teachers Institute (May, 2013). Workshop given at Southern Methodist University for new teachers in the Dallas area.

UTeach Observation Protocol (UTOP) (July, 2012). Invited workshop on rating lessons with the UTOP given at the Annual Meeting of the American Association of Physics Teachers.

Measures of Effective Teaching (MET) Project UTOP Professional Development (August, 2012). Invited workshop on rating lessons with the UTOP given at the University of Kansas.

CURRICULUM DEVELOPMENT EXPERIENCE

Math Curriculum Developer: Grades 6-8 Math Modules for PEER Curriculum (2005-2006)
NSF GK-12 Program, Texas A&M University
Worked on developing PowerPoint-based curriculum modules as well as accompanying lesson plans, worksheets, etc. for the math portions of an integrated curriculum initiative funded by the Partnership for Environmental Education and Rural Health (PEER).

CURRENT GRANTS

A new approach to personalized learning: Students as authors of their own "algebra stories"
Spencer/National Academy of Education Postdoctoral Fellowship Grant
Duration: January 2015 – May 2016
Commitment: 25% time Spring 2015, 50% time Fall 2015, 25% time Spring 2016
Amount: $55,000

How Readability and Topic Measures of Mathematics Story Problems are Associated with Student Performance on Large-Scale Assessments
AERA Research Grant
PI: Candace Walkington
Co-PIs: Virginia Clinton (University of Wisconsin - Madison) and Paul Yovanoff (Southern Methodist University)
Duration: January 2014 – January 2015
Amount: $20,000

Building Online Systems for Personalized Learning in Mathematics
Sam Taylor Fellowship, General Board of Higher Education and Ministry, United Methodist Church
PI: Candace Walkington
Duration: Jan 2014 – June 2014
Amount: $2000

Personalizing Algebra Instruction to Student Interests
Funded through "Motivation and Metacognition" Thrust of Pittsburgh Science of Learning Center
PI: Candace Walkington
Other PIs: Matthew Bernacki (University of Nevada – Las Vegas) & Ryan Baker (Teacher's College, Columbia University)
Duration: Sept 2012 – Sept 2014
Amount: $400 + programming support (valued at ~$15,000)

PAST GRANTS

Robust Learning in Culturally & Personally Relevant Algebra Problem Scenarios
Funded through "Diversity and Student Learning" award of Pittsburgh Science of Learning Center
Co-PIs: Anthony Petrosino (UT Austin) & Jim Greeno (University of Pittsburgh)

Duration: PAST (2008-2010)
Amount: 2 semesters GRA support (valued at ~$10,000-15,000) + $9700

Active Geometry: Learning By Doing
Funded through Simmons School of Education and Human Development, Southern Methodist University
PI: Candace Walkington
Duration: Feb 2013-Feb 2014
Amount: $2500

AWARDS

University Research Council Travel Grant ($2000) to attend EDM 2014
ICLS 2014 "Best Student Paper" Nominee *(note: A doctoral student I work with was first author on this paper, and I was second author)*
STaR (Service, Teaching, and Research in Math Education) Program participant, 2013
ICLS Early Career Workshop Participant & Travel Award
AERA Division C Graduate Student Research Award
AERA Division C Graduate Student Seminar Participant & Travel Award
Henderson Foundation Scholarship in Science and Math Education
Jewel Popham Raschke Endowed Presidential Scholarship
NSF GK-12 Fellowship
Texas A&M Graduate Scholar Award
Texas A&M Academic Incentive Award Scholarship
National Merit Commendation

PROFESSIONAL ORGANIZATIONS

Pittsburgh Science of Learning Center (PSLC) – Motivation & Metacognition Thrust
American Educational Research Association – Division C: Learning & Instruction
National Council of Teachers of Mathematics
Cognitive Science Society
International Society of the Learning Sciences

SERVICE – PEER REVIEW

- Reviewer for *Journal for Research in Mathematics Education* (2014; 1 manuscript review)
- Discussant for *Games, Learning, and Society* conference (2012)
- Reviewer for *Psychology of Math Education – North America* conference (2012-2013)
- Reviewer for Division C for the AERA Annual Meeting (2011 & 2012)
- Session Chair for AERA Annual Meeting (2011)
- Reviewer for *International Conference of the Learning Sciences* (2012, 2014)
- Reviewer for *Journal of Mathematical Behavior* (2010-2013: 4 manuscript reviews)
- Reviewer for *Mathematical Thinking and Learning* (2012-2014: 4 manuscript reviews)
- Reviewer for *Educational Researcher* (2013: 2 manuscript reviews)
- Reviewer for *Mathematics Teacher* (2013: 2 manuscript reviews)

SERVICE – UNIVERSITY COMMITTEES

- Masters in Education Program Committee – Department of Teaching and Learning, Southern Methodist University (2012-2013)
- Math/Science/Technology Committee – Department of Teaching and Learning, Southern Methodist University (2012-present)
- Chair, Math/Science/Technology Committee – Department of Teaching and Learning, Southern Methodist University (2013-present)
- Leadership Committee – Department of Teaching and Learning, Southern Methodist University (2013-present)
- Ph.D. Program Committee – School of Education, Southern Methodist University (2013-present)
    - Member, Marketing Sub-Committee (2013-present)
    - Member, Policies Sub-Committee (2013-present)
- Faculty Search Committee– Department of Teaching and Learning, Southern Methodist University (2012-2013)

SERVICE – DOCTORAL COMMITTEES

- Advisor to Elizabeth Howell, Simmons School of Education & Human Development, Southern Methodist University
- Dissertation Committee member for Pooja Shivraj, Simmons School of Education & Human Development, Southern Methodist University

OTHER SERVICE

- Judge, Teacher of the Year, Forney ISD (2013-2014)
- Judge, Dallas Regional Science and Engineering Fair (2014)
- Mentor, Visioneering Middle School Engineering Competition (2014)

COMPUTER SKILLS

Programming experience in Java, C, Pascal, Netlogo, html
Proficiency in Maple, Matlab, R, SPSS, Excel, Mac & PC, MS Office, NVivo, Transana, MyMathlab, Math XL, Blackboard