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EDUCATION

- May 2012 **THE PENNSYLVANIA STATE UNIVERSITY** University Park, PA
Ph.D., Curriculum & Instruction, Emphasis area: Mathematics Education
Dissertation: Characterizing the Nature of Students' Feature Noticing-and-Using
with Respect to Mathematical Symbols Across Different Levels of Algebra
Experience
- May 1997 **UNIVERSITY OF KANSAS** Lawrence, KS
M.S.E., Teaching and Leadership
Thesis: Effect of Real-World Experiences and Applications on the Attitudes and
Beliefs of Students Toward Mathematics
- May 1992 **UNIVERSITY OF KANSAS** Lawrence, KS
B.S.E., Curriculum and Instruction, Major: Mathematics

ACADEMIC AND PROFESSIONAL EXPERIENCE

- 2014-Present **MISSOURI STATE UNIVERSITY** Springfield, MO
Assistant Professor
- Teach elementary and middle school mathematics content courses (MATH 320/343)
 - Teach capstone secondary mathematics methods course (MATH 411)
 - Serve as an advisor for undergraduate and graduate candidates in the middle and secondary program
 - Facilitator of the Reed Academy Mathematics Project
 - Develop instructional materials for MATH 320, MATH 343, MATH 411
 - Co-Principal Investigator on MDHE funded *Getting It W.R.I.T.E in Mathematics* Grant
- 2007-2014 **GRACE PREP HIGH SCHOOL** State College, PA
Principal/Mathematics Teacher
- Led development of programs at a school that was recognized in 2015 as one of the top 1% of private schools in the state of Pennsylvania
 - Led departmental program in which standardized test scores were well above national and state averages in mathematics (SAT, TerraNova).
 - Developed necessary protocols for effectively managing a school
 - Directed professional development experiences for teachers
 - Achieved solvency of school budget that was significantly in debt and implemented programs that ensured long-term survivability
 - Managed day-to-day operations of the school, recruitment and retention of the students, hiring and retention of teachers, and the overall climate of the school.
 - Launched international student advancement program
 - Taught algebra, geometry, algebra 2, AP statistics and applied calculus
- 2006-2007 **THE PENNSYLVANIA STATE UNIVERSITY**

Instructor of record, MTHED 411: Teaching Secondary Mathematics I

- Taught mathematics methods courses with over 20 prospective secondary mathematics students in each semester
- Participated in ongoing course development under direction of Dr. Rose Mary Zbiek

Instructor of record, CI 495C: Clinical Applications of Instruction – Secondary Education

- Supervised 7 prospective secondary mathematics teachers in their mid-level field experience
- Conducted on-campus seminars with student cohort

2005-2006

THE PENNSYLVANIA STATE UNIVERSITY

University Park, PA

Instructor of record, MTHED 497A: Data Analysis in Secondary Mathematics

- Taught specialized content course for secondary teachers
- Participated in ongoing course development under direction of Dr. M. Kathleen Heid

2002-2007

MID-ATLANTIC CENTER FOR MATHEMATICS TEACHING AND LEARNING

University Park, PA

Academic Researcher

- Taught mathematics content course (Data Analysis) and mathematics methods course (Teaching Secondary Mathematics I) to undergraduate secondary mathematics education majors.
- Participated in research focused on the mathematical knowledge of prospective secondary mathematics teachers.
- Assisted in interview schedule development, interviews, and analysis of interviews with prospective secondary mathematics teachers to investigate statistical thinking.
- Participated in instrument development, data collection, and data analysis from classroom observations and interviews to investigate prospective secondary mathematics teachers' reasoning about topics in data analysis.
- Assisted in the development of curricular materials for a data analysis course for prospective secondary mathematics teachers.

1992-2002

USD 232 DESOTO SCHOOL DISTRICT

DeSoto, KS

Secondary Mathematics Teacher/Department Chair

- Taught algebra 1, algebra 2, precalculus, calculus, and statistics
- Served as mathematics department chair at DeSoto High School from 1993-1999 and at Mill Valley High School from 2000-2002.
- Taught courses ranging from lower-level algebra to statistics and calculus
- Wrote curriculum from for courses ranging from algebra to statistics
- Led strategic planning committee and mathematics curriculum committee
- Served on state-level committee to evaluate Kansas State Mathematics Assessment, 1999.
- Conducted professional development for teachers in conjunction with Kansas Standards Academy, 1999.
- Mentored prospective teachers for the University of Kansas and Avila College, 1994-2000.

1995-2001

JOHNSON COUNTY COMMUNITY COLLEGE

Overland Park, KS

Adjunct Statistics Instructor

PRESENTATIONS

PRESENTATIONS (NATIONAL, REFEREED)

Barnett, J. & **Sullivan, P.** (2017, April). *Closing the Gap: Fraction Equivalence and Comparison*. 2017 National Council of Teachers of Mathematics Annual Conference, San Antonio, TX. (Upcoming)

Sullivan, P., Barnett, J., Harbaugh, A., & Russell, M. (2017, February). *Missing the Mark: Finding the Target*. 2017 Association of Mathematics Teacher Educators Annual Conference, Orlando, FL.

Sullivan, P. & Perkinson, D. (2006, April). *Transforming your teaching*. 2006 National Council of Teachers of Mathematics Annual Conference, St. Louis, MO.

Sullivan, P., Heid, K., & Karagoz Akar, G. (2006, April). *Characterizing the Depth of Prospective Secondary Teachers' Knowledge*, 2006 Research Pre-session of the National Council of Teachers of Mathematics Annual Meeting, St. Louis, MO.

Sullivan, P. & Perkinson, D. (2005, April). *Transforming your Teaching*, 2005 National Council of Teachers of Mathematics Annual Conference, Anaheim, CA.

Sullivan, P., Heid, K., & Karagoz Akar, G. (October, 2005). *Characterizing the Depth of Prospective Secondary Teachers' Knowledge*, 27th Annual Meeting of Psychology of Mathematics Education-North America Roanoke, VA.

Sullivan, P. (1998, June). *Effect of Real-World Experiences and Applications on the Attitudes and Beliefs of Students Toward Mathematics*. Sixth National Integration Conference: Connecting Classroom, Communities, and Careers, Beaver Creek, CO.

PRESENTATIONS (REGIONAL AND STATE, REFEREED)

Sullivan, P. & Piccolo, D. (2016, December). *Challenging Students to Elaborate Their Thinking: Lessons Learned by Practicing Teachers*. 2016 Missouri Council of Teachers of Mathematics Annual Meeting, Columbia, MO.

Sullivan, P. (2016, December). *Turning Down the Volume: Helping Students Make Sense of Operations with Fractions*. 2016 Missouri Council of Teachers of Mathematics Annual Meeting, Columbia, MO.

Harbaugh, A. & **Sullivan, P.** (2016, December). *Not Your Momma's Multiplication*. 2016 Missouri Council of Teachers of Mathematics Annual Meeting, Columbia, MO.

Sullivan, P. (2016, November). "Turning Down the Volume", "Coming in the Back Door" and Other Strategies to Increase Students' Engagement and Thinking. 2016 Kansas City Area Teachers of Mathematics Conference, Kansas City, MO.

Harbaugh, A. & **Sullivan, P.** (2015, December). *Effective Practices in Elementary & Secondary Teacher Preparation*. 2015 Missouri Council of Teachers of Mathematics Annual Meeting, Columbia, MO.

Sullivan, P. & Harbaugh, A. (2015, December). *A Seamless Transition: Whole Number Operations to Rational Number Operations*. 2015 Missouri Council of Teachers of Mathematics Annual Meeting, Columbia, MO.

Sullivan, P. & Harbaugh, A. (2015, October). *Using Pattern to Extend and Develop Algebraic Reasoning*. 34th Annual GAM Conference, Gifted Association of Missouri, Columbia, MO.

Harbaugh, A. & **Sullivan, P.** (2014, December). *Area Models of Fraction Operations: Concrete to Abstract*. 2014 Missouri Council of Teachers of Mathematics Annual Meeting, Columbia, MO.

Sullivan, P. & Ragan, Gay A. (2014, December). *What 'Goes Into' It! Dividing and Conquering!* 2014 Missouri Council of Teachers of Mathematics Annual Meeting, Columbia, MO.

Killion, K., Harbaugh, A., Ragan, G., & **Sullivan, P.** (2014, October). *Mental Arithmetic and Mathematical Strategies*. 33rd Annual GAM Conference, Gifted Association of Missouri, Springfield, MO.

Sullivan, P. (2007, October). *Unpacking Secondary Teachers' Mathematical Knowledge*. Regional National Council of Teachers of Mathematics Conference, Kansas City, MO.

Sullivan, P. (1999, October). *Adding New Ingredients to Mathematical Pi*, Regional National Council of Teachers of Mathematics Conference. Topeka, KS.

PRESENTATIONS (INVITED)

Sullivan, P. (2017, April). *Finding Joy in the Midst of Alligators*. Annual Meeting of Southwest Missouri District Association of Mathematics Teachers. Springfield, MO.

Barnett, J. & **Sullivan, P.** (2016, November). *The Gap Trap...and other Risky Reasoning with Fractions*. Innov8: Engaging the Struggling Learner. St. Louis, MO.

Barnett, J., Bryant, C. & **Sullivan, P.** (2016, November). *Team Time, Facilitator*. Innov8: Engaging the Struggling Learner. St. Louis, MO.

Sullivan, P. (2016, May). *Do You Know What You Think You Know?* MAT² Spring Meeting. Columbia, MO.

Sullivan, P. (2016, March). *Thinking about Mathematics*. Annual Meeting of Southwest Missouri District Association of Mathematics Teachers. Springfield, MO.

Sullivan, P. (2015, October). *Recapturing the Teacher's Voice in Academic Writing*. MTHED 597 Colloquium, Penn State University, University Park.

PROFESSIONAL DEVELOPMENT WORKSHOPS

Sullivan, P., Glasgow, B., & Stone, C. Missouri Council of Teachers of Mathematics Summer Series—Data Analysis. (14 hours of professional development for secondary mathematics teachers at 3 different locations).

Sullivan, P., Van Gilder, J., & Piccolo, D. (2015, 2016). Getting It W.R.I.T.E (Writing, Reading, Inquiry, Technology, & Engagement) in Mathematics. (120 & 110 hours of professional development for 20-25 secondary mathematics teachers in southwest Missouri).

Sullivan, P. (2016, March). *“Re-Conceptualizing” Elementary Mathematics Content*. (4 hours of professional development for K-8 teachers in Perry, KS School District)

Watanabe, T., Perkinson, D., & **Sullivan, P.** (2004). *Maintaining Cognitive Demand of Tasks*. (24 hours of professional development for rural Pennsylvania mathematics teachers).

Sullivan, P. Conner, A., & Speight, E. (2004, January). *Introduction to Fathom*, (Six hours of professional development for Pittsburgh, PA secondary teachers).

Sullivan, P. (1999, August). *Problem Solving Across the Curriculum*. (Six hours of professional development for Hiawatha, KS secondary teachers).

PUBLICATIONS

Sullivan, P., Barnett, J., & Ragan, G. (2016). Missing the Mark: Finding the Target. *Teaching Children Mathematics*. NCTM. Reston, VA. (Revise & Re-Submit)

Sullivan, P., Heid, M. K., Grady, M., Karunakaran, S. (2015). Chapter 39. Pythagorean Theorem. In Heid, M.K. & Wilson, P. (Ed.), *Mathematical Understanding for Secondary Teaching: A Framework and Classroom-Based Situations*.

Charlotte, NC: Information Age Publishing.

Sullivan, P., Heid, M.K. and Karagoz Akar, G. (2005). *Characterizing the depth of prospective mathematics teachers' knowledge*. Proceedings of 27th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education.

GRANTS (WRITTEN AND FUNDED)

- 2015-2017 **MISSOURI DEPARTMENT OF HIGHER EDUCATION-- CYCLE 13 GRANT**
Co-Principal Investigator: *Getting it W.R.I.T.E (writing, reading, inquiry, technology, and engagement) in Mathematics*. (\$500,968)
- 2016 **FACULTY CENTER FOR TEACHING AND LEARNING—MISSOURI STATE UNIVERSITY**
Principal Investigator: *Bringing Student Learning into Focus in Pre-Service Mathematics Teaching*. (\$4152)
- 2015 **FACULTY CENTER FOR TEACHING AND LEARNING—MISSOURI STATE UNIVERSITY**
Principal Investigator: *Closing the Gap: Unpacking the Development of Students' Understanding of Fraction Concepts*, "Sponsored by Faculty Center for Teaching and Learning. (\$4754)
- 2012 **DISSERTATION RESEARCH INITIATION GRANT—COLLEGE OF EDUCATION—THE PENNSYLVANIA STATE UNIVERSITY** (\$600)
Principal Investigator: *Characterizing the Nature of Students' Feature Noticing-and-Using with Respect to Mathematical Symbols Across Different Levels of Algebra Experience*
- 2002-2007 **NATIONAL SCIENCE FOUNDATION: MID-ATLANTIC CENTER FOR MATHEMATICS TEACHING AND LEARNING (MAC-MTL)**
Graduate fellowship: (\$25,000/year fellowship plus tuition and benefits)
- 2005-2006 **GRADUATE STUDENT TRAVEL GRANT: THE PENNSYLVANIA STATE UNIVERSITY**
Conference travel support grant: 2005/2006 Annual National Council of Teachers of Mathematics Conferences (St. Louis, MO & Anaheim, CA) (\$600/year)
- 2000 **TOYOTA TIME GRANT**
Summer program called *AlgebraCamp* to support struggling high school algebra students. (\$10,000)
- 1998 **KANSAS DEPARTMENT OF EDUCATION CURRICULUM PLANNING GRANT**
Curriculum Grant: Supported professional development by Project 2061. (\$10,000)
- 1994-1996 **TECHNOLOGY INITIATIVE GRANT, JOHNSON COUNTY COMMUNITY COLLEGE**
Curriculum Grant: Develop study guides for CORD curriculum modules. (\$600/year)

HONORS AND AWARDS

- 2016 **MISSOURI MATHEMATICS TEACHER EDUCATOR OF THE YEAR**
Missouri Council of Teachers of Mathematics
- 2008-2011 **THE PENNSYLVANIA STATE UNIVERSITY**
Recipient: Donald B. & Mary Louise Tait Scholarship in Mathematics (\$1200/year)
- 2001 **SCIENTIFIC AMERICAN AWARD FOR OUTSTANDING ACHIEVEMENT IN EDUCATION**
- 1999 **PRESIDENTIAL AWARD FOR EXCELLENCE IN SCIENCE AND MATHEMATICS TEACHING** (\$10,000)
- 1996 **COMMENDATION FOR INNOVATIVE PROJECTS IN EDUCATION (NASA)**
Recipient: "Space Island" Project

PROFESSIONAL ORGANIZATIONS

Leadership Centre County

Southwest Missouri District Association of Mathematics Teachers (2014-present)

Missouri Association of Mathematics Teacher Educators (2015-present)

Missouri Council of Teachers of Mathematics (2014-present)

National Council of Teachers of Mathematics (1992-present)

Association of Mathematics Teacher Educators (2014-present)