

## Curriculum Vitae

### NADINE S. BEZUK

Qualcomm Professor of Mathematics Education  
Co-director, Professional Development Collaborative  
Associate Director, Center for Research in Mathematics and Science Education  
Executive Director, Association of Mathematics Teacher Educators  
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#### EDUCATION

Ph.D. 1986 University of Minnesota, Mathematics Education  
M.A. 1984 University of Minnesota, Mathematics Education  
B.S. 1976 University of Pittsburgh, Child Development and Early Childhood Education

#### PROFESSIONAL EXPERIENCE

8/87 - present San Diego State University, San Diego, CA

- Professor of Mathematics Education, School of Teacher Education (8/98 - present); QUALCOMM Endowed Professor of Mathematics Education (6/07 - present)
- Co-Director, Professional Development Collaborative (6/00 - present)
- Associate Director, Center for Research in Mathematics and Science Education (8/09 - present and 8/88 - 8/92)
- Interim Director, School of Teacher Education (8/95 - 7/96, 1/00 - 8/01)
- Associate Director, School of Teacher Education (8/94 - 7/95, 8/96 - 12/99)
- Associate Professor of Mathematics Education, School of Teacher Education (8/91 - 8/98)
- Assistant Professor of Mathematics Education, School of Teacher Education (8/87 - 8/91)

9/84 - 6/87 University of Minnesota, Minneapolis, MN

- Lecturer and Graduate Teaching Associate, Department of Curriculum and Instruction
- Research Associate, NSF-supported Rational Number Project
- Lecturer, School of Mathematics

9/83 - 6/84 Battle Creek Junior High School, St. Paul, MN

- Classroom teacher, grade 8 mathematics and computer literacy
- Computer coordinator

9/82 - 6/83 Hightstown High School, Hightstown, NJ

- Classroom teacher, mathematics, grades 9-12

9/77 - 12/81 University of Minnesota, Minneapolis, MN

- Research Associate, NSF-supported Rational Number Project
- Graduate Teaching Associate, Department of Curriculum and Instruction
- Graduate Teaching Associate, General College (developmental mathematics)

- 6/81 - 7/81 Hopkins School District Summer Program, Hopkins, MN  
• Classroom teacher, grades K-1-2 (recreational mathematics)

## PUBLICATIONS

- Bowers, J., Bezuk, N., Aguilar, K., & Klass, S. (2011). Designing applets that instantiate effective mathematics pedagogy. *Journal of Technology and Teacher Education*, 19 (1), 45 - 72.
- Bowers, J., Bezuk, N., & Aguilar, K. (2011). Adapting the mathematical task framework to design online didactic objects. *International Journal of Mathematical Education in Science and Technology*, 42 (4), 481 - 495.
- Cathcart, W. G., Pothier, Y. M., Vance, J. H., & Bezuk, N. S. (2011). *Learning mathematics in elementary and middle school: A learner-centered approach* (5<sup>th</sup> ed.). Boston: Pearson.
- Blais, T. V., Moore, S., Bezuk, N.S., & Gawronski, J. D. (2009). Collaborative cycle: A mentoring tool for changing practice. In Zimmerman, G., Guinee, P., Fulmore, L. M., & Murray, E. (Eds.), *Empowering the Mentor of the Experienced Mathematics Teacher*. Reston, VA: National Council of Teachers of Mathematics, 29 – 30.
- Bezuk, N. S. (2008). The impact of mathematics professional development on primary-grade teachers' understanding of geometry: A preliminary report. In *Proceedings of the 2008 Hawaii International Conference on Education*. Honolulu, HI, 344 – 355.
- Bezuk, N. S. (2007). The impact of mathematics professional development on primary-grade teachers: A preliminary report. In *Proceedings of the 2007 Hawaii International Conference on Education*. Honolulu, HI, 231 – 236.
- Bezuk, N. S. (2006). Using children's thinking in an elementary mathematics methods course: Issues related to teaching. In *Proceedings of the 2006 Hawaii International Conference on Education*. Honolulu, HI, 343 – 346.
- Cathcart, W. G., Pothier, Y. M., Vance, J. H., & Bezuk, N. S. (2006). *Learning mathematics in elementary and middle school* (4<sup>th</sup> ed.). Englewood Cliffs, NJ: Prentice Hall.
- Bezuk, N. S., & Gawronski, J. D. (2003). Increasing content and pedagogical knowledge of practicing elementary teachers. In S. Dawson (Ed.), *Proceedings of the Twenty-seventh Annual Meeting of the International Group for the Psychology of Mathematics Education (PME-NA)*. Honolulu, HI: PME, 1, 206.
- Bippert, J., & Bezuk, N.S. (2003). Developmental pathways to mathematics achievement. In N. M. Haynes, M. Ben-avie, & J. Ensign (Eds.), *How social and emotional development add up: Getting results in math and science education*. New York: Teachers College Press, 76 - 88.
- Cathcart, W. G., Pothier, Y. M., Vance, J. H., & Bezuk, N. S. (2003). *Learning mathematics in elementary and middle school* (3<sup>rd</sup> ed.). Englewood Cliffs, NJ: Prentice Hall.
- Carlsson, G., Cohen, R. L., Clements, D. M., Malloy, C. E., Moseley, L. G., Silbey, R. R., and Bezuk, N.S. (2001). *McGraw-Hill mathematics* (grades K – 6). New York: McGraw-Hill.
- Cathcart, W. G., Pothier, Y. M., Vance, J. H., & Bezuk, N. S. (2001). *Learning mathematics in elementary and middle school* (2<sup>nd</sup> ed.). Englewood Cliffs, NJ: Prentice Hall.
- Bezuk, N. S., Whitehurst-Payne, S., & Aydelotte, J. (2000) Successful collaborations with parents to promote equity in mathematics. In W. G. Secada (Ed.), *Changing the faces of mathematics*. Reston, VA: National Council of Teachers of Mathematics, 143 - 148.
- Cathcart, W. G., Pothier, Y. M., Vance, J. H., & Bezuk, N. S. (2000). *Learning mathematics in elementary and middle school*. Englewood Cliffs, NJ: Prentice Hall.

- Philipp, R. A., Armstrong, B. E., Bezuk, N. S., & Schappelle, B. P. (1999). The impact of Cognitively Guided Instruction on elementary mathematics methods instructors' knowledge, beliefs, and practice: A case study. In G. W. Bright, D. L. Chambers, & N. N. Vacc (Eds.), *Incorporating Cognitively Guided Instruction into elementary preservice teacher education programs* (pp. 91-133). Madison, WI: Wisconsin Center for Education Research.
- Morey, A. I., Bezuk, N., & Chiero, R. (1997). Preservice teacher preparation in the United States. *Peabody Journal of Education*, 72 (1), 4 - 24.
- Bezuk, N. S. & P. T. Cegelka (1995). Effective mathematics instruction for all students. In P. T. Cegelka & W. H. Berdine (Eds.), *Effective Instruction for Students with Learning Difficulties* (pp. 345 – 383). Boston, MA: Allyn & Bacon.
- Armstrong, B. E. & Bezuk, N. S. (1995). Multiplication and division of fractions: The search for meaning. In J. T. Sowder & B. P. Schappelle (Eds.), *Providing a foundation for teaching mathematics in the middle grades* (pp. 85 – 119). Albany, NY: SUNY Press.
- Bezuk, N. S., Bohan, H., Clark, G., Kelleher, H., Shaw, J., & Thompson, C. (1995) *Houghton Mifflin mathematics*, grades K - 6. Contributing Author, *Math to Go* (parent involvement) component. Boston: Houghton Mifflin.
- Bezuk, N. S., Holmes, F. A., & Sowder, L. K. (1994). Teachers and students learning together via after-school mathematics enrichment laboratories. In D. Aichele (Ed.), *Professional development of teachers of mathematics* (NCTM's 1994 yearbook), 200 - 203. Reston, VA: National Council of Teachers of Mathematics.
- Curcio, F. & Bezuk, N. S. (1994). *Understanding rational numbers and proportions*. F. Curcio (series Ed.), *NCTM Curriculum and Evaluation Standards Addenda Project--Middle school volume*. Reston, VA: National Council of Teachers of Mathematics.
- Philipp, R., Armstrong, B. A., & Bezuk, N. S. (1993). A preservice teacher learning to teach mathematics in a cognitively guided manner. In B. Pence (Ed.), *Proceedings of the Sixteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)*. San Jose, CA: PME-NA, 2-159 - 2-165.
- Bezuk, N. S. & Armstrong, B. E. (1993, January). Understanding division of fractions. *Mathematics Teacher*, 86 (1), 43 - 46, 56 - 60.
- Bezuk, N. S., Armstrong, B. E., Ellis, A. L., Holmes, F. A., & Sowder, L. K. (1993). Educators and parents working together to help all students live up to their dreams with mathematics. In G. Cuevas & M. Driscoll (Eds.), *Reaching all students with mathematics* (pp. 23 – 44). Reston, VA: National Council of Teachers of Mathematics.
- Bezuk, N. S. & Bieck, M. (1993). Current research on rational numbers and common fractions: Summary and implications for teachers. In D. T. Owens (Ed.), *Research ideas for the classroom--Middle grades mathematics* (chapter 7, pp. 118 - 136). New York: Macmillan.
- Bezuk, N. S. & Holmes, F. A. (1993). A model for achieving equity in mathematics teaching and learning. In B. Pence (Ed.), *Proceedings of the Sixteenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)* (p. 245). San Jose, CA: PME-NA, vol. 2.
- Sowder, J. T., Bezuk, N. S., & Sowder, L. (1993). Using principles from cognitive psychology to guide rational number instruction for prospective teachers. In T. P. Carpenter, E. Fennema, & T. A. Romberg (Eds.), *Rational numbers: An integration of research* (pp. 239 – 259). Hillsdale, NJ: Lawrence Erlbaum Associates.

- Armstrong, B. E. & Bezuk, N. S. (1992, December). Understanding fraction multiplication. *Mathematics Teacher*, 85 (9), 729 - 733, 739 - 744
- Cramer, K. & Bezuk, N. S. (1991). Multiplication of fractions: Teaching for understanding. *Arithmetic Teacher*, 39 (3) (November), 34 - 37.
- Bezuk, N. S., Sowder, J., & Sowder, L. (1990). A cognitive approach to instruction for prospective elementary teachers. In G. Booker, P. Cobb, & T. N. de Mendicuti (Eds.), *Proceedings of the Fourteenth Annual Meeting of the International Group for the Psychology of Mathematics Education*. Oaxtapec, Mexico: IGPME, 216.
- Bezuk, N. S. (1989). Preservice elementary teachers' understanding of proportional reasoning missing value problems. In G. Goldin & C. Maher (Eds.), *Proceedings of the Eleventh Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)*. New Brunswick, NJ: PME-NA, 152-159.
- Bezuk, N. S. (1989). Fractions--Easy pieces. *Arithmetic Teacher*, 36 (6) (February), 3.
- Bezuk, N. S. (1989). Integrating math and social studies: Data collection and analysis. In M. Berg (Ed.), *Integrating Ideas for Social Studies*. Series 1, no. 3, 3-4. Published as a pull-out feature in *Social Studies and the Young Learner*, vol. 1, no. 3 (January/February).
- Bezuk, N. S., & Cramer, K. (1989). Teaching about fractions: What, when, and how? In P. Trafton (Ed.): *New directions for elementary school mathematics*, NCTM's 1989 yearbook, 156-167. Reston, VA: National Council of Teachers of Mathematics.
- Cramer, K., Bezuk, N. S., & Behr, M. (1989). Proportional situations and unit rates. *Mathematics Teacher*, 82 (7) (October), 537-544.
- Bezuk, N. S. (1988). Extended abstract and critique of "Strategies used by secondary school mathematics teachers to solve proportion problems", by L. C. Fisher. In M. N. Suydam (Ed.), *Investigations in Mathematics Education*, 21 (3), 20-26.
- Bezuk, N. S. (1988). Effects of type of numeric ratio on the achievement and solution strategies of preservice and inservice elementary teachers on proportional reasoning word problems. In M. J. Behr, C. B. Lacampagne, & M. M. Wheeler (Eds.), *Proceedings of the Tenth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)*. DeKalb, IL: PME-NA, 72-78.
- Bezuk, N. S. (1988, February). Fractions in the early childhood mathematics curriculum. *Arithmetic Teacher*, 35 (6) (February), 56-60.
- Bezuk, N. S. (1986). Strategies students use in proportional reasoning problems. In G. Lappan & R. Even (Eds.), *Proceedings of the Eighth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)*. East Lansing, Michigan: PME-NA, 351-352.

### **FUNDING AWARDED**

- Grant from Qualcomm Incorporated for "Improving Student Achievement in Mathematics--Continuation", September 2009 – August 2010, \$100,000.
- Grant from Qualcomm Incorporated for "Improving Student Achievement in Mathematics", October 2004 – September 2008, \$5,500,000.
- Grant from the National Science Foundation, Robert Noyce Scholarship Program, (Kathleen Fisher and Cheryl Mason, co-directors) for "Springboard to Success", September 2004 - August 2008, \$494,000.
- Grant from Qualcomm Incorporated for "San Diego Mathematics Professional Development Collaborative", (Lionel "Skip" Meno, co-director), October 2003 – October 2004, \$800,000.

- Grant from University of California Office of the President for “San Diego Mathematics Professional Development Institute”, (Rafaela Santa Cruz and Nicholas Branca, co-directors), May 2001 – June 2004, \$420,000.
- Grant from Qualcomm Incorporated for “San Diego Mathematics Professional Development Collaborative”, (Judith Sowder and Lionel “Skip” Meno, co-directors), April 2000 – September 2003, \$3,000,000.
- Grant from the California Department of Education for “San Diego Comprehensive Teacher Education Institute”, (Mariam True, co-director), June 1995 – June 1999, \$240,000.
- Grant from the National Science Foundation Division of Teacher Preparation and Enhancement (Larry Sowder, co-director) for "San Diego Mathematics Enhancement Project", September 1991 - September 1996, \$1,100,000.
- Grant from SDSU as part of the Technology Initiative for "Technology to Support Authentic Assessment in Mathematics" (with Gail Moriarty), awarded March, 1995, \$2,500.
- Subcontract from the University of Wisconsin from a grant from the National Science Foundation Division of Teacher Preparation and Enhancement (co-director with Randolph Philipp and Barbara Armstrong) for "Cognitively Guided Instruction Preservice Teacher Education Project", February 1991 - September 1994, \$60,000.
- Grant from SDSU as a Multicultural Infusion Initiative for Curriculum and Instruction Grant (co-director with Barbara Armstrong and Randy Philipp) for "Meeting the Needs of All Students in Teaching Mathematics: Focus on the Individual Learner", awarded October, 1991, \$2,271.
- Grant from SDSU as part of the Multicultural Infusion Initiative for "Helping Teachers Help All Students Learn Mathematics", awarded January, 1991, \$4,200.
- Renewal of grant from the SDSU Office of Undergraduate Studies for lottery funds for community service activities for "Kennedy School Mathematics Project", awarded July 1, 1989, \$3,900.
- Grant from SDSU as a PCP Award for Research, Scholarship, or Creative Activity for "Elementary School Teachers' Proportional Reasoning Abilities and Strategies", awarded January 1989, \$1,116.
- Grant from the SDSU Office of Undergraduate Studies for lottery funds for community service activities for "Kennedy School Mathematics Project", awarded June 13, 1988, \$6500.
- Grant from the Greater San Diego Industry-Education Council for "Kennedy School Mathematics Enhancement Project", awarded May, 1988, \$600.
- Dean's Grant for Research (College of Education), awarded for “Elementary Teachers' Solution Strategies on Proportional Reasoning Problems", October, 1987, \$500.

### **CONFERENCE PRESENTATIONS**

- “Developing fraction reasoning to support algebra success” (submitted). Regional meeting of the National Council of Teachers of Mathematics, Dallas, TX, October 10 – 12, 2011.
- “Making sense of division of fractions: Connecting models, contexts, and symbols”. Annual meeting of the National Council of Teachers of Mathematics, Philadelphia, PA, April 25 - 28, 2012.
- “Helping students reason about fractions” (with Steve Klass). Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 3 - 4, 2012.
- "Building mathematics specialist credential programs" (with Shuhua An). Annual meeting of the Northern Section of the California Mathematics Council, Pacific Grove, CA, December 1 - 4, 2011.

- “Strengthening fraction reasoning to lay the foundation for algebra success”. Regional meeting of the National Council of Teachers of Mathematics, Albuquerque, NM, November 2 – 4, 2011.
- “Transforming perspectives about fractions: Helping students develop fraction reasoning”. Annual meeting of the National Council of Teachers of Mathematics, Indianapolis, IN, April 15, 2011.
- “Putting a face on X’: Algebraic reasoning for all students” (with Steve Klass). Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, November 5 - 6, 2010.
- “Math specialist credential: Creating California programs” (with Joanne Rossi Becker). Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, November 5 - 6, 2010.
- “Putting a face on X’: Connecting number sense with algebraic reasoning” (with Steve Klass). Annual meeting of the National Council of Teachers of Mathematics, San Diego, CA, April 21 - 24, 2010.
- “Connecting contexts to concepts using division of fractions” (with Steve Klass). Annual meeting of the National Council of Teachers of Mathematics, San Diego, CA, April 21 - 24, 2010.
- “How can didactic objects be designed to support online learning of mathematics?” (with Janet Bowers and Karen Aguilar). Annual Conference of the Society for Information Technology and Teacher Education. San Diego, CA, March 30, 2010.
- “Connecting fraction reasoning to algebra success” (with Steve Klass). Regional meeting of the National Council of Teachers of Mathematics, Nashville, TN, November 19 – 20, 2009.
- “Guiding and assessing the development of mathematics specialists” (with Steve Klass). Regional meeting of the National Council of Supervisors of Mathematics, Nashville, TN, November 19 – 20, 2009.
- “Math specialist credential: Update on CA and national trends” (with Joanne Rossi Becker). Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, November 6 - 7, 2009.
- “Fostering algebraic reasoning by building fraction understanding” (with Steve Klass). Annual meeting of Cognitively Guided Instruction, San Diego, CA, July 29 - 31, 2009.
- “Algebra success for all: Start with fraction understanding” (with Steve Klass). Annual meeting of the National Council of Teachers of Mathematics, Washington, DC, April 22 - 25, 2009.
- “Guiding and assessing the development of mathematics specialists” (with Steve Klass and Jane Gawronski). Annual meeting of the National Council of Supervisors of Mathematics, Washington, DC, April 20 – 22, 2009.
- “Algebra success for all: Start with fraction understanding” (with Steve Klass). Annual meeting of the Northern Section of the California Mathematics Council, Pacific Grove, CA, December 4 - 7, 2008.
- “Division of fractions: Help all students achieve proficiency” (with Steve Klass). Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, November 7 - 8, 2008.
- “Algebra success for all: Start with fraction understanding” (with Steve Klass). Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, November 7 - 8, 2008.
- “Laying the foundation for success in algebra”. Regional meeting of the National Council of Teachers of Mathematics, Oklahoma City, OK, October 2 – 3, 2008.

- “Making sense of fractions: Laying the foundation for success in algebra” (with Steve Klass). Annual meeting of the National Council of Teachers of Mathematics, Salt Lake City, UT, April 9 – 12, 2008.
- “Dynamic professional development: Strategies to guide and assess teacher growth” (with Jane Gawronski and Steve Klass). Annual meeting of the National Council of Teachers of Mathematics, Salt Lake City, UT, April 9 – 12, 2008.
- “Multiplication and division of fractions: Multiple representations” (with Steve Klass). Annual meeting of the National Council of Teachers of Mathematics, Salt Lake City, UT, April 9 – 12, 2008.
- “Closing the achievement gap through professional development partnerships” (with Jane Gawronski and Steve Klass). Annual meeting of the National Council of Supervisors of Mathematics, Salt Lake City, UT, April 7 – 9, 2008.
- “The Early Assessment Program (EAP): Everything you ever wanted to know!” (with Cathy Williams). Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 1 - 2, 2008.
- “Closing the achievement gap through professional development partnerships” (with Jane Gawronski, Steve Klass, and Linda Dye). Annual meeting of the Association of Mathematics Teacher Educators, Tulsa, OK, January 24 - 26, 2008.
- “First-timers’ session: All about the AMTE conference” (with Jennifer Bay-Williams). Annual meeting of the Association of Mathematics Teacher Educators, Tulsa, OK, January 24 - 26, 2008.
- “The impact of mathematics professional development on primary-grade teachers’ understanding of geometry: A preliminary report”. Hawaii International Conference on Education, Honolulu, HI, January 5 - 8, 2008.
- “The Early Assessment Program (EAP): Everything you ever wanted to know!” (with Cathy Williams). Annual meeting of the Northern Section of the California Mathematics Council, Pacific Grove, CA, November 30 - December 1, 2007.
- “The Early Assessment Program (EAP): Everything you ever wanted to know!” (with Cathy Williams). Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, November 1 - 2, 2007.
- “Making sense of fractions: Laying the foundation for success in algebra”. Featured session at the regional meeting of the National Council of Teachers of Mathematics, Kansas City, MO, October 25, 2007.
- “Closing the achievement gap by building professional development partnerships”. Featured session at the regional meeting of the National Council of Teachers of Mathematics, Kansas City, MO, October 26, 2007.
- “Enhancing fraction understanding to lay the foundation for success in algebra”. Education Colloquium, University of Kansas, October 24, 2007.
- “Using linear growth patterns to make connections between multiple representations” (with Linda Dye). Annual meeting of the National Council of Teachers of Mathematics, Atlanta, GA, March 21 - 24, 2007.
- “Professional development and its impact on students and teachers” (with Jane Gawronski and Steve Klass). Annual meeting of the National Council of Teachers of Mathematics, Atlanta, GA, March 21 - 24, 2007.
- “Assessing the impact of professional development: What, why and how we determine impact on student achievement and teacher practice” (with Jane Gawronski and Steve Klass). Annual meeting of the National Council of Supervisors of Mathematics, Atlanta, GA, March 19 - 21, 2007.

- “Multiplication of fractions: Thinking more deeply” (with Steve Klass). Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 2 - 3, 2007.
- “The impact of mathematics professional development on primary-grade teachers: A preliminary report”. Hawaii International Conference on Education, Honolulu, HI, January 6 - 9, 2007.
- “Multiplication of fractions: Thinking more deeply” (with Steve Klass). Annual meeting of the Northern Section of the California Mathematics Council, Pacific Grove, CA, December 1 - 3, 2006.
- “Division of fractions: Thinking more deeply” (with Steve Klass). Annual meeting of the Northern Section of the California Mathematics Council, Pacific Grove, CA, December 1 - 3, 2006.
- “Reasoning about division of fractions” (with Steve Klass). Annual meeting of the Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, November 2 - 3, 2006.
- “Multiplication and division of fractions: Thinking more deeply” (with Steve Klass). Regional meeting of the National Council of Teachers of Mathematics, Phoenix, AZ, October 5 - 7, 2006.
- “Multiplication and division of fractions: Thinking more deeply” (with Steve Klass). Annual meeting of the National Council of Teachers of Mathematics, St. Louis, MO, April 28, 2006.
- “Rebuilding the foundation for fraction understanding: Preparing students to meet the Standards” (with Steve Klass and Sharon Moore). Annual meeting of the National Council of Teachers of Mathematics, St. Louis, MO, April 26 - 29, 2006.
- “Multiplication and division of fractions: Thinking more deeply” (with Steve Klass). Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 3, 2006.
- “Becoming an AMTE-affiliated group: Learning from experience” (with Claran Einfeldt, Tamas Szabo, Gladis Kersaint, Carol Fry Bohlin, and Hari Koirala). Annual meeting of the Association of Mathematics Teacher Educators, Tampa, FL, January 27 - 28, 2006.
- “Using children’s thinking in an elementary mathematics methods course: Issues related to teaching”. Hawaii International Conference on Education, Honolulu, HI, January 6 - 9, 2006.
- “Multiplication and division of fractions: Thinking more deeply” (with Steve Klass). Annual meeting of the Northern Section of the California Mathematics Council, Pacific Grove, CA, December 5 - 7, 2005.
- “Facets of professional development: One size does not fit all” (with Steve Klass). Mathematics Teacher Education Strand at the Annual meeting of the Northern Section of the California Mathematics Council, Pacific Grove, CA, December 5 - 7, 2005.
- “Multiplication and division of fractions: Thinking more deeply” (with Steve Klass). Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, November 4 - 6, 2005.
- “Rebuilding the foundation for fraction understanding: Preparing students to meet the California Standards” (with Steve Klass and Sharon Moore). Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 4, 2005.
- “San Diego State University Mathematics Specialist Certificate Program: What have we learned?” (with Steve Klass and Jane Gawronski). Annual meeting of the Association of Mathematics Teacher Educators, Dallas, TX, January 28, 2005.

- “A mathematics specialist certificate program: Its structure and impact on practicing Elementary Teachers” (with Susan Nickerson). Hawaii International Conference on Education, Honolulu, HI, January 4 - 7, 2005.
- “Addressing assessment in an elementary mathematics methods course: Helping prospective elementary teachers use a variety of assessments to enhance children’s mathematics understanding” (with Rachelle Feiler). Mathematics Teacher Education Strand at the Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, November 5 - 7, 2004.
- “Rebuilding a foundation for fraction understanding” (with Steve Klass, Sharon Moore, and Gail Moriarty). Annual meeting of the National Council of Teachers of Mathematics, Philadelphia, PA, April 22, 2004.
- “Considerations and questions for the professional development of future and current mathematics teachers” (with Karen Karp, Susan Gay, Janet Caldwell, and Francis “Skip” Fennell). Annual meeting of the National Council of Supervisors of Mathematics, Philadelphia, PA, April 20, 2004.
- “Helping prospective elementary teachers use whole-class and individual assessments to enhance children’s mathematics understanding” (with Rachelle Feiler). Annual meeting of the National Council of Supervisors of Mathematics, Philadelphia, PA, April 20, 2004.
- “Rebuilding the foundation for fraction understanding: preparing students to meet the California Standards” (with Steve Klass, Sharon Moore, and Gail Moriarty). Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, Feb. 6, 2004.
- “Helping prospective elementary teachers use whole-class and individual assessments to enhance children’s mathematics understanding” (with Rachelle Feiler). Annual meeting of the Association of Mathematics Teacher Educators, San Diego, CA, January 23, 2004.
- “Using video examples of children’s mathematical thinking to explicate, compare, and critique processes and goals of content and pedagogy instructors” (with Randy Philipp, Eva Thanheiser, and Debbie Justeson). Annual meeting of the Association of Mathematics Teacher Educators, San Diego, CA, January 23, 2004.
- “Establishing AMTE affiliates to promote professional networks of mathematics educators” (with Carol Fry Bohlin and Susan Beal). Annual meeting of the Association of Mathematics Teacher Educators, San Diego, CA, January 23, 2004.
- “Rebuilding the foundation for fraction understanding: preparing students to meet the California Standards” (with Steve Klass, Sharon Moore, and Gail Moriarty). Annual meeting of the Northern Section of the California Mathematics Council, Asilomar, CA, Dec. 6, 2003.
- “Rebuilding the foundation for fraction understanding: preparing students to meet the California Standards” (with Steve Klass, Sharon Moore, and Gail Moriarty). Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, Nov. 7, 2003.
- “Increasing content and pedagogical knowledge of practicing elementary teachers” (with Jane Gawronski). Annual meeting of the International Group for the Psychology of Mathematics Education, Honolulu, HI, July 17, 2003.
- “Enhancing teachers’ knowledge and practice: A mathematics specialist program for teachers of grades 3 through 6” (with Jane Gawronski, Karen Payne, Steve Klass, and Gail Moriarty). Annual meeting of the National Council of Supervisors of Mathematics, San Antonio, TX, April 7, 2003.
- “Reflections: New NCTM professional development website for mathematics teachers” (with Michaele Chappell). Annual meeting of the Association of Mathematics Teacher Educators, Atlanta, GA, January 31, 2003.

- “Enhancing teachers’ knowledge and practice: A mathematics specialist program for teachers of grades 3 through 6” (with Jane Gawronski, Karen Payne, Steve Klass, and Gail Moriarty). Annual meeting of the Association of Mathematics Teacher Educators, Atlanta, GA, January 31, 2003.
- “Mathematical reasoning: A solution to learning basic facts” (with Gail Moriarty). Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, Feb. 7, 2003.
- “Mathematical reasoning: A solution to learning basic facts” (with Gail Moriarty). Annual meeting of the Northern Section of the California Mathematics Council, Palm Springs, CA, Dec. 7, 2002.
- “Mathematical reasoning: A solution to learning basic facts” (with Gail Moriarty). Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, Nov. 8, 2002.
- “Math specialist program for grades 4, 5, 6 to reform how math is taught and learned in low-performing schools” (with Jane Gawronski, Gail Moriarty, and Shelley Ferguson). Annual meeting of the National Council of Supervisors of Mathematics, Las Vegas, NV, April 20, 2002.
- “A partnership program to prepare and support mathematics specialists for grades 4 - 6” (with Karen Payne, Gail Moriarty, and Shelley Ferguson). Annual meeting of the National Council of Teachers of Mathematics, Las Vegas, NV, April 22, 2002.
- “A university, urban district, and private sector partnership to support mathematics specialists for low performing, high poverty schools” (with Susan Nickerson and Jane Gawronski). Annual meeting of the Association of Mathematics Teacher Educators, San Antonio, TX, January 22, 2002.
- “A partnership program to prepare math specialists for grades 4 - 6” (with Shelley Ferguson). Annual meeting of the Northern Section of the California Mathematics Council, Pacific Grove, CA, Dec. 1, 2001.
- “Infusing NCTM’s ‘Principles and Standards’ into an elementary mathematics methods course”. Annual meeting of the National Council of Teachers of Mathematics, Orlando, FL, April 7, 2001.
- “Infusing standards into elementary mathematics methods courses” (with Lisa Clement). Annual meeting of the Association of Mathematics Teacher Educators, Costa Mesa, CA, January 19, 2001.
- “Changing the faces of mathematics: Perspectives on multiculturalism and gender equity” (with Walter Secada, Eric Gutstein, Karen Ingram, and Richard Kitchen). Annual meeting of the National Council of Teachers of Mathematics, Chicago, IL, April 13, 2000.
- “Integrating *Standards 2000* in elementary mathematics methods courses” (with Lisa Clement). Annual meeting of the National Council of Teachers of Mathematics, Chicago, IL, April 14, 2000.
- “A balanced approach to teaching multiplication”. Western regional meeting of the National Council of Teachers of Mathematics, Phoenix, AZ, Dec. 2, 1999.
- “A balanced approach to teaching multiplication”. Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, Nov. 5, 1999.
- “Opening the ‘algebra gate’ to promote equity and increase access” (with Ron Anderson). Annual meeting of the National Council of Teachers of Mathematics, San Francisco, CA, April 23, 1999.
- “A balanced approach to teaching multiplication”. Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, Nov. 7, 1998.

- “Leadership development activities for mathematics teacher educators: The Association of Teacher Educators” (with Judith Jacobs). Annual meeting of the National Council of Supervisors of Mathematics, Washington, DC, March 31, 1998.
- “Opening the algebra pipeline to promote equity and increase access” (with Anna Cazares & Chris Reising). Annual meeting of the National Council of Teachers of Mathematics, Washington, DC, April 2, 1998.
- “Let’s talk: The status of AMTE” (with Judith Jacobs). Annual meeting of the Association of Mathematics Teacher Educators, Washington, DC, Feb. 15, 1997.
- “Opening the algebra pipeline in elementary school to increase access” (with Anna Cazares & Chris Reising). Annual meeting of the Northern Section of the California Mathematics Council, Asilomar, CA, Dec. 6, 1996.
- “Opening the algebra pipeline in elementary school: Promoting equity and increasing access” (with Anna Cazares & Chris Reising). Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, Nov. 8, 1996.
- "Building a math support system for teachers, parents, and students in urban settings" (with John Aydelotte and Sharon Whitehurst-Payne). Annual meeting of the National Council of Teachers of Mathematics, San Diego, CA, April 25 - 28, 1996.
- “Strategies and successes in involving parents”. Annual meeting of the Northern Section of the California Mathematics Council, Asilomar, CA, Dec. 2, 1995.
- “Promoting equity by involving parents”. Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, Nov. 3 - 5, 1995.
- "Helping parents help their children excel in mathematics" (with John Aydelotte). Annual meeting of the National Council of Teachers of Mathematics, Boston, MA, April 3 - 6, 1995.
- "Manipulatives to help all sixth graders understand algebra" (with Ron Anderson, Anna Cazares, and Chris Reising). Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 3 - 4, 1995.
- "Involving parents, and industry to help all students succeed in mathematics". Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, Nov. 4 - 6, 1994.
- "Linking students, teachers, parents, and industry to help all students excel in mathematics". Annual meeting of the National Council of Teachers of Mathematics, Indianapolis, IN, April 13 - 16, 1994.
- "Community-based mathematics programs to promote equity and excellence". Second annual New Mexico SIMSE (Systemic Initiative in Math and Science Education) higher education conference, Albuquerque, MN, March 11 - 12, 1994.
- "Using 'Beyond the Bell' mathematics enrichment programs to promote equity and excellence". Regional meeting of the National Council of Teachers of Mathematics, San Francisco, CA, February 24 - 26, 1994.
- "Tapping the well of children's multiplication and division knowledge through literature" (with Barbara Armstrong, Randy Philipp, Glenda Andrew, Lettice Charmasson, Carol Holbrook, Cheryl Mangum, Elsie Tanker). Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 4 - 5, 1994.
- "Issues in achieving equity in mathematics teaching and learning" (with Frank Holmes). Plenary discussion session on equity at the sixteenth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA). San Jose, CA, October 17 - 20, 1993.

- "Helping all students learn mathematics via an after-school mathematics enrichment program" (with Frank Holmes). Regional meeting of the National Council of Teachers of Mathematics, New York, NY, May 27 - 29, 1993.
- "Reaching all students with mathematics" (with Frank Holmes). Annual meeting of the National Council of Teachers of Mathematics, Seattle, WA, March 31 - April 3, 1993.
- "Materials to help implement the *Standards* in the middle school (with Fran Curcio and Dorothy Geddes). Annual meeting of the National Council of Teachers of Mathematics, Seattle, WA, March 31 - April 3, 1993.
- "Tapping the well of children's mathematical knowledge through literature" (with Randy Philipp, Glenda Andrew, Lettice Charmasson, Carol Holbrook, Cheryl Mangum, Elsie Tanker). Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 5 - 6, 1993.
- "Helping all students learn mathematics via an after-school mathematics enrichment program" (with Frank Holmes and Antoinette Lopez). Regional meeting of the National Council of Teachers of Mathematics, Minneapolis, MN, November 5 - 7, 1992.
- "An intervention model for use in the multicultural classroom". Presented at "Multicultural classrooms: A constructivist viewpoint", Multicultural Infusion Initiative's Miniconference on Teaching and Learning, San Diego State University, May 20 - 21, 1992.
- "Activities to promote equity through an after-school mathematics enrichment program" (with Frank Holmes, Aeriaka Jacobs, Marie Mullins, and Frank Lucero). Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, January 31 - February 1, 1992.
- "Promoting equity through an after-school mathematics enrichment program" (with Frank Holmes, Andree Carroll, and Rosia Davis). Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, Nov. 8 - 10, 1991.
- "Implementing the *Standards*: Understanding rational numbers and proportions." Annual meeting of the National Council of Teachers of Mathematics, New Orleans, LA, April 17 - 20, 1991.
- "Understanding fractions and proportions." Regional meeting of the National Council of Teachers of Mathematics, Sacramento, CA, February 7 - 9, 1991.
- "Implementing the *Standards*: Activities for understanding fractions and proportions." Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 1 - 2, 1991.
- "Understanding division: From whole numbers to fractions." Annual meeting of the Southern Section of the California Mathematics Council, Palm Springs, CA, Nov. 2 - 4, 1990.
- "A cognitive approach to instruction for prospective elementary teachers." Annual Meeting of the International Group for the Psychology of Mathematics Education, Oaxtapec, Mexico, July 15 - 21, 1990 (with Judith Sowder & Larry Sowder).
- "Teaching proportional reasoning: Manipulatives, strategies, and activities." Annual meeting of the National Council of Teachers of Mathematics, Salt Lake City, UT, April 17 - 21, 1990.
- "Setting the *Standards* for multiplication: Connecting manipulatives with algorithms." Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 2 - 3, 1990.
- "Multiplication: Connecting meaning, manipulatives, symbols, and algorithms." Annual meeting of the Southern Section of the California Mathematics Council, Long Beach, CA, Nov. 17 - 18, 1989.

- "Preservice elementary teachers' understanding of proportional reasoning missing value problems." Eleventh annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA), New Brunswick, NJ, Sept. 20 - 23, 1989.
- "Using manipulatives for multiplication and division." Annual meeting of the National Council of Teachers of Mathematics, Orlando, FL, April 12-15, 1989.
- "Introducing fraction concepts with manipulatives." Regional meeting of the National Council of Teachers of Mathematics, San Jose, CA, February 13-15, 1989.
- "Using manipulatives and problem solving activities to teach fraction concepts." Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 3-4, 1989.
- "Teaching fractions: Current research and new methods." Annual meeting of the Greater San Diego Mathematics Council, San Diego, CA, February 3-4, 1989.
- "Using concrete materials to develop fraction concepts." Annual meeting of the Southern Section of the California Mathematics Council, Long Beach, CA, Nov. 18-19, 1988.
- "Effects of type of numeric ratio on the achievement and solution strategies of preservice and inservice elementary teachers on proportional reasoning word problems." Annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, DeKalb, IL, Nov. 2-6, 1988.
- "Teaching proportional reasoning for understanding." Regional meeting of the National Council of Teachers of Mathematics, Pittsburgh, PA, Oct. 13-15, 1988.
- "Activities for reinforcing basic skills." Annual meeting of the Greater San Diego Math Council, San Diego, CA, February 6, 1988.
- "Proportional reasoning solution strategies: Effect of numeric characteristics." Research colloquium presented at the Center for Research in Mathematics and Science Education (CRMSE), San Diego State University, November 6, 1987.
- "Variables affecting performance and strategies used by seventh grade students on proportional reasoning word problems." Annual meeting of the National Council of Teachers of Mathematics, Anaheim, CA, April 10, 1987.
- "Strategies students use in proportional reasoning problems." Annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Michigan State University, September 26, 1986.
- "Activities for teaching proportional reasoning skills." Annual meeting of the Minnesota Council of Teachers of Mathematics, Inver Grove Heights, MN, March 15, 1986.
- "Rational number concepts and proportional reasoning." Annual meeting of the School Science and Mathematics Association, Minneapolis, MN, October 17, 1985.
- "NSF's Rational Number Project: A fraction of the results." Regional meeting of the National Council of Teachers of Mathematics, St. Paul, MN, November 13, 1981.
- Problem-solving activities in elementary school mathematics. Annual meeting of the Minnesota Council of Teachers of Mathematics, Brainerd, MN, March 28, 1981.

## **PROFESSIONAL ACTIVITIES**

Co-Director, San Diego Mathematics Project, February 2011– present.

Member, Content Advisory Committee, California Commission on Teacher Credentialing, December 2010 – present. Committee defined content to be assessed for examinations for the Mathematics Instruction Certificate.

- Member, Common Core Standards Professional Development Task Force, California Mathematics Project, December 2010 – present.
- Member, Advisory Board, California Association of Mathematics Teacher Educators, November 2010 – present.
- Member, Teaching Mathematics Advisory Panel, California Commission on Teacher Credentialing, March 2009 – September 2010. Panel developed standards for the CA Mathematics Instruction Certificate and Mathematics Instruction Leadership Specialist Credential.
- Member, Program Committee, National Council of Supervisors of Mathematics' 2010 Annual Conference.
- Member, Nominations Committee, National Council of Teachers of Mathematics, 2007 – 10.
- Member, Iris Carl Leadership and Equity Award Task Force, TODOS Mathematics for All, 2005 – 07.
- Member, CSU Early Assessment Program Professional Development Committee for Mathematics, 2004 – 2009.
- Member, CSU Single Subject Reading Task Force, Mathematics Subcommittee member, 2004 – 06.
- Member, SDSU University Promotion, Reappointment, and Tenure Panel, 2003 – 07; chair, 2005 - 06.
- Member, Review Panel for SDSU Faculty Development Grants, 2004, 2005.
- Member, SDSU Administrative Review Panel for Dean Lionel Meno, 2004 – 05
- Association of Mathematics Teacher Educators (AMTE): Executive Director, September 2001 – present, NCTM Representative, April 1999 – September 2001; Immediate Past President, January 1999 – February 2000; President, April 1997 – January 1999; President-elect, April 1996 - April 1997; Treasurer, April 1994 - April 1996.
- Co-founder, California Association of Mathematics Teacher Educators, November 2004; Immediate Past President, 2008 – 09; President, 2006 – 08; President-elect, 2004 – 06.
- National Council of Teachers of Mathematics' Reflections Task Force, April 2001 – January 2004.
- Invited Panelist, Video Conference on the California Mathematics Framework Revisions, California Association for Supervision and Curriculum Development, September 21 and October 19, 2004.
- Member, Mathematics Parent Advisory Committee, Poway Unified School District, 1995 – 1999.
- Member and parent representative, Mathematics Leadership Committee, Poway Unified School District, 1996 – 1999.
- Member and Higher Education Representative, Goals 2000 Advisory Board, Poway Unified School District, 1996 – 1999.
- Member, San Diego City Schools' Higher Education Advisory Board, 1996 - 1999
- Invited Participant and Discussion Group Leader, National Academy of Sciences' Conference on Mathematics Teacher Education Content Knowledge, March 19 - 21, 1999, Washington, DC.
- Invited Participant, EXXON-Cal Poly Conference on Mathematics Teacher Education and Development, March 29 - 31, 1996.
- Co-chair (with Tony Spears), Publicity Committee, 1996 annual meeting of the National Council of Teachers of Mathematics to be held in San Diego.
- Mathematics Expert, Racially Isolated Schools' Student Achievement Review Board, San Diego City Schools, May, 1995.

- Participant, California Mathematics Council's Conference on Pre-service Teacher Education, March 17 - 18, 1995, Los Angeles, CA.
- Member, Steering Committee, Special Interest Group for Research in Mathematics Education (SIG-RME) of the American Educational Research Association (AERA), April, 1991, through April, 1993.
- Western Regional Director, Benjamin Banneker Association (aimed at enhancing the mathematics achievement of African-American students), April, 1991, through April 1992.
- Faculty Mentor, McNair Scholars Program, September, 1992 - present. Student advisees: Ron Anderson, Nelson Maracle, Laura Rivas.
- Faculty Mentor, Minority Access to Energy-Related Careers (MAERC) Program, September, 1992 - present. Student advisee: Ron Anderson. Project: Students' understanding of algebra: Impact of a mathematics enrichment program".
- Associate Editor, *Activities* section, Mathematics Teacher, March, 1990, through March, 1992.
- Member and University Representative, Board of Directors, Greater San Diego Mathematics Council, September, 1988, to present.
- Member, National Center for Research in Mathematical Sciences Education (NCRMSE), University of Wisconsin--Madison, and member of NCRMSE's Working Group on Multiplicative Structures, January, 1989, to January, 1991; member of NCRMSE's Working Group on Teaching and Learning Quantities, January, 1991, to present.
- Participant, National Convocation of "Making Mathematics Work for Minorities", Washington, DC, May 3 - 4, 1990.
- Article referee, Arithmetic Teacher, March, 1986, to present.
- Article referee, Mathematics Teacher, March 1988, to present.
- Article referee, Journal for Research in Mathematics Education, September, 1987, to present.
- Article referee, Focus on Learning Problems in Mathematics, December, 1988, to present.
- Participant, Working Group on Proportional Reasoning, annual meeting of the International Group for the Psychology of Mathematics Education (IGPME), Montreal, Canada, July 13 - 18, 1987.
- Proposal reviewer for the 2010 annual meeting of the National Council of Supervisors of Mathematics.
- Proposal reviewer for 1993, 1989, and 1988 meetings of the North American Chapter of the International Group for the Psychology of Mathematics Education.
- Proposal reviewer for 1989, 1990, 1991, 1992, and 1993 annual meetings of the American Educational Research Association's Special Interest Group for Research in Mathematics Education.
- Proposal reviewer for the 1990 annual meeting of the American Educational Research Association for Division C: Learning and Instruction.
- Proposal reviewer for the 2005 annual meeting of the American Educational Research Association for Special Interest Group for Research in Mathematics Education.

### **PhD Candidates - Dissertation Committee Member**

Cassandra Brown (2009), Perspectives on instructor modeling in mathematics teacher education.

### **RECOGNITIONS AND DISTINCTIONS**

|                     |   |
|---------------------|---|
| Kappa Delta Pi      | Education honorary--honorary faculty member |
| Omicron Delta Kappa | Scholarship and leadership honorary society |

Phi Kappa Phi                      Scholarship honorary society  
 Pi Lambda Theta                  Education honorary society  
 Outstanding Classroom Mathematics Teacher at the Post-secondary level, Greater San Diego  
 Mathematics Council, May, 1995.  
 Member of Who's Who in Education, 1992 - 1993.  
 Certificate of recognition, Kennedy Elementary School, May, 1988  
 Certificate of recognition, Greater San Diego Mathematics Council, May, 1988.  
 Letter of Appreciation: Greater Rochester (MN) Area University Center Board of Directors,  
 February 27, 1987.

### PROFESSIONAL MEMBERSHIPS

American Educational Research Association (AERA)  
 AERA's Special Interest Group for Research in Mathematics Education (SIG-RME)  
 Association of Mathematics Teacher Educators (AMTE)  
 International Group for the Psychology of Mathematics Education (IGPME)  
 North American Chapter of the International Group for the Psychology of Mathematics  
 Education (PME-NA)  
 National Council of Teachers of Mathematics (NCTM)  
 National Council of Supervisors of Mathematics (NCSM)  
 Benjamin Banneker Society (to promote the enhancement of mathematics learning of African  
 American students)  
 Women in Mathematics Education (WME) (to promote the enhancement of mathematics  
 learning of females)  
 California Mathematics Council (CMC)  
 Greater San Diego Math Council (GSDMC)

### CONSULTING EXPERIENCE

5/93 -            Contributing Author, *Math to Go* (parent involvement) component,  
 1995            Houghton Mifflin Company, publishers, K-6 mathematics textbook series.  
                   --Developed the concept and materials for *Math to Go*, the parent involvement  
                   component for the K-6 mathematics textbook series published by Houghton  
                   Mifflin (1995 copyright).

5/94 -            Reviewer, Houghton Mifflin Company  
 present        --Reviewed elementary mathematics methods textbooks and textbooks for  
                   mathematics courses for prospective elementary teachers for the College  
                   Division.

2/92 -            Consultant, Temecula Union School District's Primary Mathematics  
 5/92            Specialist Program.  
                   --Planned and delivered a workshop entitled "The California Mathematics  
                   Framework: New Directions for Teaching Mathematics", focusing on changes  
                   in the 1992 California Mathematics Framework, for inservice teachers from the  
                   Temecula District and student teachers from San Diego State, University of  
                   California--Riverside, and National University.

2/91 -            Consultant, Temecula Union School District's Primary Mathematics  
 5/91            Specialist Program.

- Planned and delivered a workshop entitled "Math Their Way: Building the Conceptual Framework", focusing on using developing understanding in primary-grade mathematics, for student teachers from San Diego State, University of California--Riverside, and National University.
- 3/91 - Consultant and speaker, Cajon Valley New Teacher Retention Project  
--Planned and delivered a workshop entitled "Effective mathematics teaching in the intermediate grades", focusing on using manipulative materials to supplement mathematics textbooks, for first year teachers as part of a project designed to support first year teachers.
- 7/90 Reviewer, Community Service Lottery Proposals, San Diego State University  
--Reviewed proposals in competition for funding from the Community Service Lottery Program.
- 3/90 - Consultant and speaker, Cajon Valley New Teacher Retention Project  
--Planned and delivered a workshop entitled "Effective mathematics teaching in the intermediate grades", focusing on using manipulative materials to supplement mathematics textbooks, for first year teachers as part of a project designed to support first year teachers.
- 5/89 Consultant and speaker, South Bay New Teacher Retention Project  
--Planned and delivered a workshop on teaching mathematics in the elementary school, focusing on using manipulative materials and supplementing standardized textbooks, for first year teachers as part of a project designed to support first year teachers.
- 5/89 - Reviewer, Longman Publishing Corporation  
present --Reviewed elementary and secondary mathematics methods textbooks for the Education Division.
- 5/89 - Reviewer, Prentice-Hall Publishing Corporation  
present --Reviewed elementary and secondary mathematics methods textbooks for the Education Division.
- 1/89 - Reviewer, Macmillan Publishing Corporation  
present --Reviewed elementary and secondary mathematics methods textbooks for the Education Division.
- 3/89 Consultant and speaker, Cajon Valley New Teacher Retention Project  
--Planned and delivered a workshop on teaching mathematics in the elementary school, focusing on using manipulative materials and supplementing standardized textbooks, for first year teachers as part of a project designed to support first year teachers.
- 1/89 - Reviewer, Merrill Publishing Corporation  
present --Reviewed elementary and secondary mathematics methods textbooks for the Education Division.

- 6/88 - Consultant, San Diego Mathematics Project, Dr. Nicholas Branca, director  
6/93 --Coordinated and conducted workshops for mathematics leaders from elementary schools across San Diego county.  
--Assisted Dr. Branca in planning the Project.
- 5/88- Consultant, Kennedy Elementary School (San Diego Unified School  
1998 District).  
--Planned and conducted two sessions of "Family Math Night".  
--Planned and coordinated After-school Math Club and Family Math Fairs, September, 1989, to present.
- 3/87 Consultant: Pipestone (MN) Area School District.  
--Developed and conducted a workshop that examined current trends in elementary school mathematics education and discussed planning for the future.
- 3/87 Consultant, Eden Prairie (MN) School District.  
--Developed and conducted inservice workshops for primary - and intermediate-grade teachers on teaching and problem solving.
- 2/87 Consultant, Wayzata (MN) School District.  
--Developed and conducted inservice workshops on teaching problem solving in elementary school mathematics classes, and using calculators to enhance learning in secondary school mathematics classes.
- 1/86-2/86 Consultant, Roseville (MN) School District.  
--Planned and conducted inservice workshops on the use of manipulative materials in teaching fraction and decimal concepts and operations.
- 9/78-6/80 Consultant, Title I Mathematics Program: St. Paul (MN) School District  
--Planned and conducted inservice workshops and classroom visits for Title I Mathematics teachers and aides for grades K-8.

### TEACHING CERTIFICATION

|              |   |
|--------------|---|
| Pennsylvania | Nursery-Kindergarten-3 (NK-3)                               |
| Minnesota    | Nursery-Kindergarten-6 (NK-6) and Mathematics (grades 7-12) |
| New Jersey   | Teacher of Mathematics (grades K-12)                        |