CURRICULUM VITAE

Tadanobu (Tad) Watanabe
Professor of Mathematics Education

GENERAL INFORMATION

275 Kennesaw State University Rd. NW
MD 1102, Kennesaw, GA 30144
470–578–6376
twatanab@kennesaw.edu

EDUCATION

Ph.D. Mathematics Education, Florida State University, Tallahassee, Florida; December 1991.
Dissertation: "Coordination of units: An investigation of second grade children's pre-rational number concepts."
Dissertation Advisor: Grayson H. Wheatley

M.S. Mathematics, Purdue University, West Lafayette, Indiana; August 1986.

B.A. Mathematics, Taylor University, Upland, Indiana; May 1984.

PROFESSIONAL EXPERIENCE

August 2011 – present	Professor of Mathematics Education, Kennesaw State University, Kennesaw, Georgia. [Assistant Chair: January 2014 – present]
June 2006 – August 2011	Associate Professor of Mathematics Education, Kennesaw State University, Kennesaw, Georgia.
August 2002 – June 2006	Associate Professor of Mathematics Education, Pennsylvania State University, University Park, Pennsylvania.
August 1998 – July 2002	Associate Professor of Mathematics Education, Towson University, Towson, Maryland. [Vice Chair: August 2001 – July 2002]
August 1992 – July 1998	Assistant Professor of Mathematics Education, Towson University, Towson, Maryland.
August 1991 – July 1992	Mathematics Instructor, North Florida Junior College, Madison, Florida.
August 1989 – July 1991	Graduate Instructor, Florida State University, Dept. of Curriculum & Instruction, Tallahassee, Florida. Taught mathematics education courses for prospective elementary school teachers.
August 1988 – July 1989	Mathematics/Science Teacher, Cornerstone Christian School, Bloomington, Indiana. Taught mathematics for Grades 9–11 and a Grade 9 Physical Science course.

August 1984 – July 1988 Graduate Instructor, Purdue University, Dept. of Mathematics, West Lafayette, Indiana. Taught a variety of lower division mathematics courses.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

National Council of Teachers of Mathematics
Association of Mathematics Teacher Educators
Japan Society of Mathematical Education

HONORS, AWARDS, AND FELLOWSHIPS

Japan Society for the Promotion of Science Postdoctoral Fellowship (Short-Term), 2000, Tsukuba, Japan.
Title of research project: "Elementary School Teachers' Perspectives and Uses of Mathematics Teachers Manuals: A Comparative Study."

TEACHING, SUPERVISION, & MENTORING

COURSES TAUGHT AT KENNESAW STATE UNIVERSITY

1. MATH 2008, Foundations of Number and Operations
2. MATH 3315, Critical Content of ECE Math I
3. MATH 3316, Rational Numbers and Proportional Reasoning (Formerly Critical Content of ECE Math, II)
4. MATH 3317, Geometry and Measurement for Elementary Teachers (Formerly Critical Content of ECE Math, III)
5. MATH 3318, Algebra for Elementary Teachers

Honors Contract in MATH 3316, Spring, 2009
Student: Morgan Shapiro

STUDENT ADVISING (other than student supervision) at KSU

I currently do not advise undergraduate students because of my assistant chair responsibilities.

TEACHING & STUDENT SUPERVISION AT OTHER INSTITUTIONAL AFFILIATIONS

Towson University

Mathematical Ideas: A general education mathematics survey course.
Mathematical Concepts and Structures I & II
Quantitative and Geometric Reasoning
Above 3 courses were a series of mathematics content courses specially designed for prospective elementary school teachers.
Teaching Mathematics in Elementary Schools: An elementary mathematics methods course.
Supervised Observation/Participation in Elementary School Mathematics: A field-based course taken concurrently with the methods course.
Seminar in Mathematics Teaching in Elementary/Middle Schools: A mathematics methods course for the Master of Arts in Teaching program.

Pennsylvania State University

Teaching Mathematics in Elementary Schools: An elementary mathematics methods course.
Teaching Secondary School Mathematics I: The first of 2 mathematics methods courses for prospective secondary school mathematics teachers.
Colloquium in Mathematics Education: A mathematics education colloquium for doctoral students in mathematics education.
Foundations of Mathematics Education: A doctoral level mathematics education course, focusing on mathematics curriculum.

Master's Thesis: "Korea-US cross national comparison study on mathematics of college entrance examinations." Hyun-Jung Lee, 2005.

Master's Paper: "Problem solving in mathematics." Shelley Chauby, 2005.

Undergraduate Honor's Thesis: "The effects of invented algorithms on 1st and 2nd grade students: A replication study." Susan Tolnai, 2004.

Doctoral Dissertation Committees

Debbie MacCullough, December 2007.
Gulseren Karagos, December 2007.
Because of my departure from Penn State University, I had to resign from the doctoral committees of the following students when they completed the comprehensive examination.

Donna Kinnoll
Jeannie Shimizu
Shari Reed

University of Delaware

Doctoral Dissertation Committee

Eric Sisofo, December 2009.

University of Pennsylvania

Doctoral Dissertation Committee

Jennifer Shouffler, August 2018.

SCHOLARSHIP OF TEACHING, RESEARCH AND CREATIVE ACTIVITY

PUBLICATIONS

Scholarly Books (Author):

Friel, S. N., Arbaugh, F., Mooney, E. S., Pualee, D. K., Watanabe, T., & Smith, M. S. (2009). *Navigating through problem solving and reasoning in Grades 6–8*. Reston, VA: National Council of Teachers of Mathematics.
Bright, G. W., Jordan, P. L., Malloy, C. & Watanabe, T. (2005). *Navigating through measurement in grades 6–8.* Reston, VA: National Council of Teachers of Mathematics.
Takahashi, A., Watanabe, T., & Yoshida, M. (2004). *Elementary school teaching guide for the Japanese Course of Study: Arithmetic (Grades 1–6)* [English translation of the document published by the Ministry of Education.]. Madison, NJ: Global Education Resources.
Reynolds, A., Trowell, S. & Watanabe, T. (1999). *The big ideas in middle school mathematics: Presenter's materials*. Norman, OK: Educational Enrichment Inc.

Reynolds, A., Trowell, S. & Watanabe, T. (1998). *The big ideas in middle school mathematics: Teacher's resource*. Norman, OK: Educational Enrichment Inc.

Scholarly Books (Editor):

Takahashi, A., Watanabe, T., McDougal, T., & Fridekin, S. (in press). *Teaching and Learning Elementary Mathematics through Lesson Study: Voices from the Field.* Routledge

Son, J. Watanabe, T. & Lo, J. (Eds.) (2017). *What matters? Research trends in international comparative studies in mathematics education*. Heidelberg: Springer.

Watanabe, T. & Thompson, D. (Eds.). (2004). *The work of mathematics teacher educators: Exchanging ideas for effective practice*. (AMTE Monograph Series, Vol. 1). San Diego, Association of Mathematics Teacher Educators Monograph Series, Volume 1.

Refereed Journal Articles:

Watanabe, T., Takahashi, A., & Barham, A. I. (2019). Implementing school-wide Collaborative Lesson Research in Qatar. *Journal of Institutional Research South East Asia, 17* (2), 47 – 70.

Watanabe, T. (2018) Japanese lesson study in the United States: Looking back and looking ahead. *Educational Designer*, *3* (11). http://preview.educationaldesigner.org/ed/volume3/issue11/article43/index.htm

Watanabe, T. (2015). Visual reasoning tools in action. *Mathematics Teaching in the Middle School, 21* (3), 152–160.

Hillen, A. & Watanabe, T. (2013). Mysterious subtraction: Opportunities to make conjectures. *Teaching Children Mathematics, 20* (5). 294–301.

Watanabe, T. (2013). Double number line diagrams: A visual reasoning tool. *ComMuniCator, 37* (3), 16–18. [Reprinted in *The Nth Degree*, the newsletter for the Northern Nevada Math Council, November 2014, 5–7.]

Watanabe, T. (2012). Tape diagrams: A visual reasoning tool. *ComMuniCator, 37* (2), 24–26. [Reprinted in *The Nth Degree*, the newsletter for the Northern Nevada Math Council, January 2015, 5–7.]

Watanabe, T. (2012). Taking on the challenge of the CCGPS together: Transition standards and their implications, Part 2. *Reflections, 11* (Spring 2012), 7–8.

Watanabe, T. (2012). Taking on the challenge of the CCGPS together: Transition standards and their implications, Part 1. *Reflections, 11* (Winter 2012), 4–7.

Thanheiser, E. Browning, C. A., Moss, M., Watanabe, T., Garza-Kling, G. (2010). Developing mathematical content knowledge for teaching elementary school mathematics. *IUMPST: The Journal, 1 (Content Knowledge)*, December 2010. [www.k-12prep.math.ttu.edu].

Schuster, D. & Watanabe, T. (2010). Measurement informs understanding. *Science and Children, 48*, 53–55.

Watanabe, T. (2010). Let's practice what we preach. *Teaching Children Mathematics, 16* (7), 380–381.

Watanabe, T. (2009). Double number lines: An introduction. *Reflection, 53* (3), 16–18.

Watanabe, T. (2007). Initial treatment of fractions in Japanese textbooks. *Focus on Learning Problems in Mathematics*, 29 (2), 41–60.

Watanabe, T. (2006). Teaching and learning of fractions: A Japanese perspective. *Teaching Children Mathematics*, 12, 368–374.

Lo, J., Watanabe, T., & Cai, J. (2004). The initial development of ratio concepts: An Asian perspective. Mathematics Teaching in the Middle School, *9*, 362–367.

Watanabe, T. & White, D. (2004). Five reasons why classroom teachers should write articles for *TCM*. *Teaching Children Mathematics*, *10*, 243–244.

Reys, B., Lewis, C., Schad, B., Contreras, J., Kirschner, V., Watanabe, T., & White, D. (2004). Top ten ways to strengthen your school mathematics program. *Teaching Children Mathematics, 11*, 5–7.

Watanabe, T. (2003). Lesson study: A new model of collaboration. *Academic Exchange Quarterly, 7* (Winter), 180–184.

Watanabe, T. (2003). Teaching multiplication: An analysis of elementary school mathematics teachers' manuals from Japan and the United States. *Elementary School Journal, 104,* 111–125.

Watanabe, T. (2002). Representations in the Teaching and Learning of Fractions. *Teaching Children Mathematics*, *8*, 457–463.

Watanabe, T. (2002). Learning from Japanese Lesson Study. *Educational Leadership*, *59*, 36–39.

Cai, J., Lo, J. & Watanabe, T. (2002). Intended treatments of arithmetic average in U.S. and Asian school mathematics textbooks. *School Science and Mathematics, 102*, 405–419.

McGinnis, J. R., Kramer, S., Shama, G., Graeber, A., Parker, C., & Watanabe, T. (2002). Undergraduates attitudes and beliefs of subject matter and pedagogy measured periodically in a reform based mathematics and science teacher preparation program. *Journal of Research in Science Teaching, 39*, 713–737.

Watanabe, T. (2001). Mathematics curriculum in the United States of America: Role and future of NCTM *Standards*. *Journal of Japan Society of Mathematical Education*, *83*(12), 35–43.

Watanabe, T. (2001). Anticipating children's thinking: A Japanese approach to instruction." *Mathematics Education Dialogue*.

Watanabe, T. (2001). Content and organization of teachers' manuals: An analysis of Japanese elementary mathematics teachers' manuals. *School Science and Mathematics*, 101, 194–205.

Watanabe, T. (2001). Let's eliminate fraction instruction from primary curriculum. *Teaching Children Mathematics*, *8*, 70–72.

Watanabe, T. (2000). Japanese high school entrance examination. *Mathematics Teacher*, *93*, 30–35.

Watanabe, T. (1999). Anticipating students' reasoning and solutions. *Ohio Journal of School Mathematics*, 39 (Winter), 26–29.

McGinnis, J. R. & Watanabe, T. (1999). The use of research to inform the evaluation of the Maryland Collaborative for Teacher Preparation. *The Journal of Mathematics and Science Collaborative Explorations*, *2*, 91–104.

Watanabe, T., & Huntley, M. A. (1998). Connecting Mathematics and Science in Undergraduate Teacher Education: Voices from MCTP." *School Science and Mathematics*, *98*, 19–25.

Watanabe, T. (1998). Double number lines as a model for helping children make sense of multiplication and division with fractions. *Illinois Mathematics Teacher*, *49* (Spetember), 19–25.

Lo, J. & Watanabe, T. (1996). Developing ratio and proportion schemes: A story of a fifth grader. *Journal for Research in Mathematics Education, 28*, 216–236.

Watanabe, T. (1996). Ben's understanding of one-half. *Teaching Children Mathematics, 2* (April 1996), 460–464.

Watanabe, T. (1996). Coordination of units: A theoretical model. *Hiroshima Journal of Mathematics Education*, vol. 4 (March), 73–88.

Watanabe, T., Hanson, R. & Nowosielski, F. "Morgan's Theorem." *Mathematics Teacher, 89*, 420–423.

Watanabe, T. (1995). Fraction notation: Is it really so simple? *Illinois Mathematics Teacher*, vol. 46 (November), 37–42.

Watanabe, T. (1995). Coordination of units and understanding of simple fractions: Case studies. *Mathematics Education Research Journal, 7*, 160–175.

Watanabe, T. (1993). Number theory with TI MathExplorer. *The Banneker Banner: Official Journal of the Maryland Council of Teachers of Mathematics*, (Spring), 25–26.

Invited Journal Articles:

Watanabe, T. (2010). Ratio, rate, proportion no chigai (Differences among ratio, rate, and proportion). (in Japanese). *Atarashii Sansuu Kenkyuu*, 34–35, June 2010.

Watanabe, T. (2010). Wariai no shido to hyakubunritsu no shido (Teaching and learning of rates and percents). (in Japanese). *Atarashii Sansuu Kenkyuu*, 34–35, May 2010.

Watanabe, T. (2010). Suu no sotaiteki na mikata to shosuu no shisoku keisan (Relative size of numbers and decimal number arithmetic). (in Japanese). *Atarashii Sansuu Kenkyuu*, 44–45, April 2010.

Watanabe, T. (2009). Bunsu no warizan no bunshodai (Word problems involving division of fractions). (in Japanese). *Atarashii Sansuu Kenkyuu*, 38–39, October 2009.

Watanabe, T. (2007). In pursuit of a focused and coherent school mathematics curriculum. *The Mathematics Educator, 17* (1), 2–6.

Watanabe, T. (2007). Deriving parallelogram and triangle formulae: A Japanese perspective. *Reflections*, *52* (3), 24–26.

Watanabe, T. (2007). Mathematics Education in Japan and in the United States: Focusing on the Difference of Languages. (in Japanese). *Kyoshitu-no-Mado*, January 2007.

Watanabe, T. (2006). Do pictures speak 1,000 words? What do students hear? *Reflections, 51* (5), 22–23.

Watanabe, T. (2006). Geometry by Tad. *Reflections, 51* (4), 18–19.

Watanabe, T. (2002). Mathematics standards in the state of Maryland." (in Japanese). In the National Institute of Educational Research, *A study in the improvement of mathematics curriculum: National and/or state curriculum in the United States, England, Germany and France*.

Watanabe, T. (2001). America kara mita nihon no suugaku kyouiku (Japanese mathematics education from an American perspective) (in Japanese) *Joetsu Journal of Mathematics Education, 16*, 10–16.

Watanabe, T. (2000). Standards 2000: Sono haikei to kongo no tenbo (Standards 2000: Its background and future) (in Japanese) *Suugaku Kyouiku, 516*, 101–104.

Watanabe, T. (1998). Mouhitotsu no standards (Another standards). (in Japanese) *Suugaku Kyouiku, 486*, 101–104, May.

Watanabe, T. (1997). Beikoku kyouiku katei kijun kaitei no ugoki (in Japanese). *Suugaku Kyouiku, 477*, 111–114, August.

Refereed Chapters in Books:

Akar, G. K., Watanabe, T. & Turan, N. (in press). Quantitative reasoning as a framework to analyze mathematics textbooks. Akar, G. K., Z. I. O., Arslan, S. & Thompson, P. W. (Eds.) *Quantitative reasoning in mathematics and science education*.

Takahashi, A., Watanabe, T., Matsuda, N. & Fujii, T. (in press). Potential of online/remote experience of Lesson Study: Learning from the IMPULS efforts to provide research lesson observation in a remote setting. In Huang, R., Helgevold, N., Lang, J. and Jiang, H. (Eds.) *Teacher professional learning through lesson study in virtual/hybrid environments: opportunities, challenges, and future directions*.

Watanabe, T. (under review). Ratio, rate, and proportion in Japanese curriculum materials.

Watanabe, T. (2019). Lesson study and textbook revisions: What can we learn from the Japanese case? In R. Huang, A. Takahashi, & J. P. da Ponte (Eds.) *Theory and practice of lesson study in mathematics: An international perspective,* 183 – 200. Cham, Switzerland: Springer.

Watanabe, T., Lo, J. & Son J. (2017). Intended treatment of fractions and fraction operations in mathematics curricula from Japan, Korea and Taiwan. In J. Son, T. Watanabe & J. Lo (Eds.) *What matters? Research trends in international comparative studies in mathematics education*, 33 – 61. Cham, Switzerland: Springer.

Watanabe, T. (2014). Transformation of Japanese elementary mathematics textbooks: 1958–2012. In Y. Li, E. Silver, & S. Li (Eds.). *Transforming mathematics instruction: Multiple approaches and practices*, 199–216. Heidelberg: Springer.

Watanabe, T. (2011). *Shiki*: A critical foundation for school algebra in Japanese elementary school mathematics. In J. Cai & E. Knuth (Eds.) *Early albegraization: A global dialogue from multiple perspectives*, 109 – 124. Heidelberg: Springer-Verlag.

Watanabe, T., Takahashi, A. & Yoshida, M. (2010). Supporting focused and cohesive curricula through visual representations: An example from Japanese textbooks. In B. Reys & R. Reys (Eds.), *Mathematics Curriculum: Issues, Trends, and Future Directions NCTM Seventy-second Yearbook*, 131–144. Reston, VA: NCTM.

Watanabe, T., Takahashi, A., & Yoshida, M. (2008). Kyozaikenkyu: A critical step for conducting effective lesson study and beyond. In F. Arbaugh & P. M. Taylor (Eds.), Inquiry into Mathematics Teacher Education. Association of Mathematics Teacher Educators (AMTE) Monograph Series, Volume 5, 131–142. San Diego: AMTE.

Watanabe, T. (2008). Algebra in elementary school: A Japanese perspective. In C. Greenes (Ed.), *Algebra and algebraic thinking in school math: 70th Yearbook* (NCTM), 183–194.

Invited Chapters in Books:

Watanabe, T. (2022). American middle and high school mathematics textbooks: Current situation and prospects (Original in Japanese, with English translation). In K. Nishimura (Ed.) *Report on the study of global trends in school mathematics textbooks*, 193-197. Japan Textbook Research Center.

Watanabe, T., Lo, J. & Son, J. (2017). Intended treatment of fractions and fraction operations in mathematics curricula from Japan, Korea and Taiwan. In J. Son, T. Watanabe & J. Lo (Eds.) *What matters? Research trends in international comparative studies in mathematics education*, 33 – 61. Heidelberg: Springer.

Watanabe, T. (2011). *Shiki*: A critical foundation for school algebra in Japanese elementary school mathematics. In J. Cai & E. Knuth (Eds.), *Early algebraization: A global dialogue from multiple perspectives*, 109–124. Heidelberg: Springer-Verlag.

Watanabe, T. (2011). Challenges and promises of uncharted water: Lesson study and institutes of higher education. In L. C. Hart, A. Alston, & A. Murata (Eds.), *Learning together: Lesson-study research and practice in mathematics education*, 175–178. Dordrecht: Springer.

Watanabe, T. (2010). Problem centered learning in the Land of the Rising Sun. In A. Reynolds (Ed.), *Problem-centered learning in mathematics*, 200–209. Saarbrucken, Germany: Lambert Academic Publishing.

Watanabe, T. (2006). Issues in teaching and learning of algebra. In Lewis & Takahashi (Eds.), *Learning across boundaries: U.S.-Japan collaboration in mathematics, science and technology education*, 161–177. Oakland: Mills College.

Watanabe, T. & Wang-Iverson, P. (2005). The role of knowledgeable others. In P. Wang-Iverson & M. Yoshida (Eds.) *Building Our Understanding of Lesson Study*, pp. 85–91. Philadelphia, PA: Research for Better Schools.

Takahashi, A., Watanabe, T., Yoshida, M. & Wang-Iverson, P. (2005). Improving content and pedagogical knowledge through *kyozaikenkyu*. In P. Wang-Iverson & M. Yoshida (Eds.) *Building Our Understanding of Lesson Study*, pp. 101–110. Philadelphia, PA: Research for Better Schools.

Mathematics Textbooks

Takahashi, A. & Watanabe, T. (Eds.) *Primary Mathematics International*, Grades K – 2. Chicago, IL: Japan Math Corp.

Refereed Proceedings:

Watanabe, T. (2019). Ratio, rate, and proportional relationships in Japanese curriculum materials. In S. Rezat, L. Fan, M. Hattermann, J. Schumacher & H. Wuschke (Eds.) *Proceedings of the Third International Conference on Mathematics Textbook Research and Development*. 353 – 358, Paderborn, Germany.

Watanabe, T., Reynolds, A. & Lo, J. (1995). A fifth grader's understanding of fractions and proportions. 19th Annual Meeting of the International Group for the Psychology of Mathematics Education, vol. 3, 200–207, Recife, Brazil.

Watanabe, T. (1994). Children's notions of units and mathematical knowledge. In J.P. da Ponte and J.F.Matos (Eds.) Proceedings of the Eighteenth International Conference for the Psychology of Mathematics Education, Lisbon, Portugal.

Watanabe, T. (1993). Construction and coordination of units: Young children's fraction knowledge. In I.Hirabayashi, N.Nohda, K.Shigematsu & F. Lin (Eds.) Proceedings of the Seventeenth International Conference for the Psychology of Mathematics Education, vol 3, 194–201, Tsukuba, Japan.

Lo, J. & Watanabe, T. (1993). Conceptual bases of young children's solution strategies of missing value proportional tasks. In I.Hirabayashi, N.Nohda, K.Shigematsu & F. Lin (Eds.) Proceedings of the Seventeenth International Conference for the Psychology of Mathematics Education, vol 3, 162–169, Tsukuba, Japan.

Non-Refereed Proceedings:

Son, J., Lo, J. J., & Watanabe, T. (2015). Intended treatments of fractions, fraction addition & subtraction in mathematics curricula from Japan, Korea, Taiwan & U.S. In Bartel, Bieda, Putnam, Bradfield & Dominguez (Eds.), *Proceedings of the Thirty-Seventh Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*. 96 - 103. East Lansing, MI: Michigan State University.

Watanabe, T. (2015). Shidou ann sakusei katei ni okeru kyoushi no 5 practices. (5 practices in the process of developing lesson plans (in Japanese)). Proceedings of the 3rd annual Spring Research Conference of the Japan Society of Mathematical Education, 163–168. Tokyo, Japan.

Watanabe, T. (2014). Kyouin yousei katei ni oiteno jugyoukenkyuu no yakuwari: jisshuusei no tsuiseki chousa to nichibei no kyouiku hikaku kenkyuu wo tooshite (Roles of lesson study in mathematics teacher education programs: Through examinations of student teaching in US and Japan (in Japanese)). Proceedings of the 2nd annual Spring Research Conference of the Japan Society of Mathematical Education, 131–134. Tokyo, Japan.

Watanbe, T. (2013). Jugyou kenkyuu no rironnka ni muketa kouseiyouso no tokutei: Kyoukasho wo yori yuukouteki ni tsukau chikara (Identifying components of a theory of lesson study: Developing the ability to use textbooks effectively (in Japanese)). Proceedings of the 1st annual Spring Research Conference of the Japan Society of Mathematical Education, 95–98. Tokyo, Japan.

Simon, M., Saldanha, L, McClintock, E., Akar, G. K., Watanabe, T., & Zambat, I. O. (2007). Understanding students' learning through their activity: Toward a basis for a scientific

approach to task design and sequencing. Proceedings of the Twenty Ninth Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Tahoe, NV: PME-NA.

Lo, J., Cai, J. & Watanabe, T. (2001). A comparative study of the selected textbooks from China, Japan, Taiwan and the United States on the teaching of ratio and proportion concepts. In R. Speiser, C. Maher & C. Walter (Eds.) Proceedings of the Twenty-Third Annual Meeting of North American Chapter of the International Group for the Psychology of Mathematics Education, vol. 1, 509–520, Snowbird, Utah.

McGinnis, J. R., Watanabe, T., Roth-McDuffie, A., Kramer, S. & Shama, G. (1997). The Maryland Collaborative for Teacher Preparation: Making sense of the enactment of reform in the preparation of specialist teachers of mathematics and science. In P. Rubba, P. Keig, & J. Rye (Eds.), Proceedings of the 1997 Association for the Education of Teachers of Science, 326–347. Pensacola, FL: AETS. (ERIC Document Reproduction Service No. ED 405220)

Watanabe, T. (1995). Constructivism, mathematics education, and Christianity. Proceedings of the Association of Christians in Mathematical Sciences.

Watanabe, T. (1995). Incongruity and complexity of young children's understanding of simple fractions. In D. T. Owens, M. K. Reed & G. M. Millsaps (Eds.) Proceedings of the Seventeenth Annual Meeting of North American Chapters of the International Group for the Psychology of Mathematics Education, vol. 1, 390–394, Columbus, Ohio.

Lo, J. & Watanabe, T. (1995). A fifth grader's attempt to expand her ratio and proportion concepts. In D. T. Owens, M. K. Reed & G. M. Millsaps (Eds.) Proceedings of the Seventeenth Annual Meeting of North American Chapter of the International Group for the Psychology of Mathematics Education, vol. 1, 383–389, Columbus, Ohio.

PRESENTATIONS

Refereed Conference Presentations:

"A focused and coherent approach: The case of elementary school maths curriculum." University of Nottingham, CLR Seminar, February, 2022.

"A focused and coherent approach: The case of elementary curriculum in Japan." University of Pennsylvania, April, 2021.

"Critical aspects of lesson study" Presentation at the National Institute of Education, Singapore, May, 2019.

"Treatment of ratio, rate, and proportional relationships in Japanese curriculum." Presentation at the National Institute of Education, Singapore, May 2019.

"From equal groups to proportional reasoning: Multiplicative comparison as the key structure." National Council of Teachers of Mathematics, Annual Meeting. Washington, DC, April, 2018.

"Lesson study and its impacts on curriculum revisions: What can we learn from the Japanese case?" World Association of Lesson Studies, Nagoya, Japan, November, 2017.

"Structures and repeated reasoning: Keys to decimal number teaching and learning." National Council of Teachers of Mathematics, Annual Meeting. San Antonio, April, 2017.

"Intended Treatments of Fractions, Fraction Addition and Subtraction in Mathematics Curriculum from Japan, Korea, and Taiwan." North American Chapter of the International Group for the Psychology of Mathematics Education, Lansing, MI, November 2015.

"Field experiences in mathematics teacher education: A Japanese perspective." Association of Mathematics Teacher Educators, Orlando, FL, February 2015.

"Teaching and learning of fractions from East Asian perspectives: Opportunities and challenges of Common Core." Association of Mathematics Teacher Educators, Orlando, FL, January 2013.

"Tape diagrams and double number line diagrams: Visual reasoning tools." Chicago Regional Meeting of the National Council of Teachers of Mathematics, Chicago, IL, November 2012.

"Challenges and opportunities of Common Core: Fraction teaching and learning." National Council of Teachers of Mathematics, Philadelphia, PA, April 2012.

"Mathematical knowledge for teaching fractions from East Asian perspectives: Opportunities and challenges of Common Core." Association of Mathematics Teacher Educators, Fort Worth, TX, February 2012.

"Challenges and opportunities for teaching and learning of proofs." National Council of Teachers of Mathematics, Indianapolis, IN, April 2011.

"Making sense of multiplying and dividing decimal numbers: Problems, representations, and reasoning." Georgia Mathematics Conference, Rock Eagle, GA, October 2010.

"Making connections among concepts, procedures, representations, and contexts." National Council of Teachers of Mathematics, San Diego, CA, April 2010.

"What do you mean 50% is 0.5? It was 20 earlier!" Georgia Mathematics Conference, Rock Eagle, GA, October 2009.

"Elementary pre-service teachers' active learning experiences in mathematics content course." Callahan, K., Hillen, A., and Watanabe, T. North American Chapter of the International Group for the Psychology of Mathematics Education, Atlanta, GA, September 2009.

"Preservice elementary school teachers' content knowledge in mathematics." Tanheiser, E., Browning, C., Jacobbe, T., Kastberg, S., Moss, M, Lo, J., Noll, J., and Watanabe, T. North American Chapter of the International Group for the Psychology of Mathematics Education, Atlanta, GA, September 2009.

"Making geometry accessible for all through activities: Implications from Japanese textbooks." National Council of Teachers of Mathematics, Washington, DC, April 2009.

"Developing mathematics knowledge for teaching through Japanese curriculum materials." Research Council on Mathematics Learning, Rome, GA, March 2009.

"An examination of pre-service teachers' MKT and mathematical power in content courses." Callahan, K., Hillen, A., & Watanabe, T. Research Council on Mathematics Learning, Rome, GA, March 2009.

"Defining and developing mathematical knowledge for teaching elementary school geometry." Association of Mathematics Teacher Educators, Orlando, FL, February 2009.

"Can 5th graders drive area formulae? Implications from Japanese curriculum materials." Georgia Mathematics Conference, Rock Eagle, GA, October 2008.

"Yours IS to reason! Don't just invert and multiply." Georgia Mathematics Conference, Rock Eagle, GA, October 2008.

"MATH 2008: Numbers and operations." Lacefiled, R., Watanabe, T., Beckman, S., O'Neal, J., and Moch, P., Accepting the STEM challenge: Preparing K-16 students for global competitiveness in the 21st century, Atlanta, GA, September 2008.

"'Geometry' is a verb: Ideas for infusing your geometry instruction with more student activates."" Learning Festival 2008, University of West Georgia, Carrolton, GA, July 2008.

"Variations on a mathematical theme in Japanese and US textbooks." Watanabe, T., American Association for the Advancement of Sciences, San Francisco, CA, February 2007. A paper presented as a part of a symposium.

"Deepening our understanding of lesson study: Role of outside advisor. Watanabe, T., Association of Mathematics Teacher Educators, Irvine, CA, January 2007. A paper presentation.

"Algebra in elementary school: A Japanese perspective." Watanabe, T., Eastern Regional Meeting of the National Council of Teachers of Mathematics, Atlantic City, NJ, October 2006. A paper presentation.

"Got a problem? Let's represent it visually!" Watanabe, T., Georgia Mathematics Conference, Rock Eagle, GA, October 2006. A paper presentation.

"Pictorial presentation of quantities: Tool for developing procedures with conceptual understanding." Watanabe, T., National Council of Teachers of Mathematics, Anaheim, CA, April 2005. A paper presented as a part of a symposium.

"Initial instruction of fractions: A Japanese perspective." Watanabe, T., National Council of Teachers of Mathematics, Philadelphia, PA, April 21-24, 2004.

"The relationships among informal strategies students use in solving problems in proportional situations." Akar, G. K. & Watanabe, T., North American Chapter of the International Group for the Psychology of Mathematics Education, Toronto, Canada, October 2004. A paper presentation.

"Online lesson study: Heresy or promising practice?" Gill, A., Watanabe, T., Sundberg, N., & La Chappell, B. National Staff Development Council, New Orleans, LA, December 2003. A paper presentation.

"Teaching multiplication: An analysis of Japanese elementary school mathematics teachers' manuals." Watanabe, T., National Council of Teachers of Mathematics, Orlando, FL, April 2-4, 2001. A paper presentation.

"Professional development of mathematics teachers: Insights from Japan." Watanabe, T., Beal, S., & Thompson, D., Association of Mathematics Teacher Educators, Costa Mesa, CA, January 19-20, 2001. A paper presentation.

"Research Lessons as Professional Development: What Can We Learn from the Japanese Model?" Beal, S., Thompson, D. & Watanabe, T., National Council of Supervisors of Mathematics, Orlando, FL, April 2-4, 2001. A paper presentation.

"America no sansuu/suugaku karikyuramu (American mathematics curriculum)." Watanabe, T., Japan Society of Mathematical Education, Naruto, Japan, November 25-26, 2000. A paper presentation.

"Japanese mathematics education from a US perspective." Watanabe, T., University of Tsukuba Mathematics Education Research Group, Tsukuba, Japan, August 26, 2000. A paper presentation.

"Teaching multiplication: What can we learn from Japanese teachers' manuals?" Watanabe, T., American Educational Research Association, New Orleans, LA, April 24-28, 2000. A round-table presentation.

"An analysis of elementary school mathematics teachers manuals from Japan." Watanabe, T., National Council of Teachers of Mathematics, Chicago, IL, April 12-15, 2000. A paper presentation.

"An analysis of Japanese elementary mathematics teachers' manuals: Implications to mathematics teacher education." Watanabe, T., Association of Mathematics Teacher Educators, Charlotte, NC, February 10-12, 2000. A paper presentation.

"An in-depth analysis of Japanese elementary school mathematics teachers' manuals: A preliminary report." Watanabe, T., International Group for the Psychology of Mathematics Education. Haifa, Israel, July 25-30, 1999. A poster presentation.

"Representing multiplicative situations (ratios, proportions, percents, and more) using double number lines." Watanabe, T., National Council of Teachers of Mathematics. San Francisco, CA, April 22-24, 1999. A paper presentation.

"Charting the Attitude and Belief Journeys of Teacher Candidates in a Reform-Based Mathematics and Science Teacher Preparation Program." McGinnis, J. R., Watanabe, T., Roth-McDuffie, A., & Kramer, S. American Educational Research Association, San Diego, CA, April 13-17, 1998. A paper presentation.

"The Use of Research to Inform the Evaluation of the Maryland Collaborative for Teacher Preparation." McGinnis, J. R., & Watanabe, T., American Educational Research Association, San Diego, CA, April 13-17, 1998. A paper presentation.

"A Longitudinal Assessment of Teacher Candidates Attitudes and Beliefs in a Reform-Based Mathematics and Science Teacher Preparation Program." McGinnis, J. R., Kramer, S., & Watanabe, T., National Association for Research in Science Teaching, San Diego, CA, April 1998. A paper presentation.

"Modeling good instruction in pre-service mathematics course: Voices of college instructors and their students." Watanabe, T., Association of Mathematics Teacher Educators, Washington, D. C., February 14 -15, 1997. A paper presentation.

"Inconsistencies among fifth grade students' understanding of multiplicative concepts." Watanabe, T., American Educational Research Association, San Francisco, CA, April 1995. A round table presentation.

"Second grade children's schemes to coordinate two units." Watanabe, T., North American Chapter of the International Group for the Psychology of Mathematics Education, Pacific Grove, CA, October 1993. A poster presentation.

"Coordination of units: Young children's construction of multiplicative structures." Watanabe, T., American Educational Research Association, Atlanta, GA, April 1993. A paper presentation.

Invited Presentations:

"Lesson study in Ireland: Where do we go from here." Plenary talk given at Maths Counts 2018, Dublin, Ireland, May, 2018.

"Lesson study in the United States: Looking back and looking forward." Colloquium talk given at the University of Maryland. November, 2016.

"Improving teaching through reflecting on teaching." Keynote address given at the Marshall Cavendish Summer Institute. July, 2016.

"Teaching mathematics through problem-solving: A Japanese model." Workshop given at the Marshall Cavendish Summer Institute. July, 2016.

"Content development through the Common Core." Workshop given at the Marshall Cavendish Summer Institute. July, 2016.

"Developing visual reasoning tools in K-5." Workshop given at the Marshall Cavendish Summer Institute. July, 2016.

"How can we best support 'level 3' professional learning." Presentation at the Site consultancy meeting of Math in Common (with Catherine Lewis, Mills College). Dinuba, California. April, 2016.

"Mathematics teacher education: What can we learn from Japan" Presentation as a part of the symposium, Learning from each other: International perspectives on the mathematics education of teachers," during the Joint Mathematics Meeting, Seattle, WA, January, 2016.

"Shidou ann sakusei katei ni okeru kyoushi no 5 practices." ("5 practices in the process of developing lesson plans" (in Japanese)). The 3rd annual Spring Research Conference of the Japan Society of Mathematical Education, Tokyo, Japan, June 2015.

"Kyouin yousei katei ni oiteno jugyoukenkyuu no yakuwari: jisshuusei no tsuiseki chousa to nichibei no kyouiku hikaku kenkyuu wo tooshite" ("Roles of lesson study in mathematics teacher education programs: Through examinations of student teaching in US and Japan" (in Japanese)). The 2nd annual Spring Research Conference of the Japan Society of Mathematical Education, Tokyo, Japan, June 2014.

"Kyozaikenkyu: A key to conduct lesson study effectively." Florida Center for Research in STEM Conference, Ft. Lauderdale, FL, May 2014.

"Hand-in-Hand: Lesson Study and Problem Solving in Japan." Keynote presentation given at Maths Counts: Insights into Lesson Study, National University of Ireland, Maynooth, Ireland, November 2013.

“Mathematics Education in Japan: Implications in the Era of Common Core.” An invited talk given at the University of North Carolina at Greensboro, Greensboro, NC, October 2013.

“Fraction Teaching and Learning in Japan: In Pursuit of Coherence.” An invited talk given at the University of North Carolina at Greensboro, Greensboro, NC, October 2013.

“Jugyou kenkyuu no rironnka ni muketa kouseiyouso no tokutei: Kyoukasho wo yori yuukouteki ni tsukau chikara” (Identifying components of a theory of lesson study: Developing the ability to use textbooks effectively.” (in Japanese). The 1st annual Spring Research Conference of the Japan Society of Mathematical Education, Tokyo, Japan, June 2013. (Proceedings pp. 95 – 98)

"Suugaku kyoiku no kokusaika: America kara mita nihon no suugaku kyouiku kenkyuu." (Internationalization of mathematics education research: Japanese mathematical education research from an American perspective.) Research Session of the Japan Society of Mathematical Education. Nara, Japan, November 2012.

"Lesson study: Is it 'nice to have' or 'must have'?" Gwinnett County School System Summer Coaches' Workshop, Lawrenceville, GA, July 15, 2011.

"Incorporating the Common Core to your lesson study work." Presentation at the Chicago Lesson Study Conference, Chicago, IL, May 2011

"Teacher-in-charge: Improving teaching practices through lesson study." Workshop presented at the 2011 DeKalb County School System Title I Mathematics Summit, Decatur, GA, January 22, 2011.

"Mathematics teacher education in Georgia." International Workshop on Graduate Programs for Secondary Mathematics and Science Teachers, Tokyo University of Science, Tokyo, Japan, November 2010.

"What qualities are needed for mathematics teachers in the next decades." International Symposium fore Pre- and In-Service Mathematics and Science Teachers. Tokyo University of Science, Tokyo, Japan, November 2010.

"Lesson study and curricular changes: Lesson study in the era of Common Core State Standards." Greenwich Japanese School Lesson Study Open House. Greenwich, CT, November 2010.

"Starting from square one: Reflection on the first 10 years of lesson study in the United States." East Asia Regional Conference on Mathematics Education 5. Tokyo, Japan, August 2010.

"Are we doing lesson study right? Major roles of knowledgeable others." Ninth Annual Lesson Study Conference, Chicago, April 2010.

"Challenges and opportunities for teaching and learning of proof in high schools." Eighth Annual Lesson Study Conference: Building our professionalism through lesson study, Chicago, May 2009.

"*Hatsumon*: The art of crafting good questions." Watanabe, T., American Federation of Teachers Lesson Study Conference, Greenwich, CT, December 2008.

"Multiplication and division of fractions in Japan: When and how." Watanabe, T., International Symposium on Mathematics Teaching and Learning: Teaching and Learning of Fractions in Singapore, Japan, and United States. Chicago, IL, November 2008.

"How to investigate curriculum materials: *Kyozaikenkyu*." Watanabe, T., American Federation of Teachers Lesson Study Conference, Daytona, FL, January 2008.

“Does a picture speak a thousand words: Pictorial representations in Japanese elementary textbooks.” Watanabe, T., 23rd Annual Conference on Teaching and Learning. Illinois Council of Teachers of Mathematics, Southern Region, IL, February 25, 2007. A keynote presentation.

“Reciting formulae is not enough: Deriving area formulae meaningfully.” Watanabe, T., Math Talk, Kennesaw State University, Kennesaw, GA, November 2006.

“Can fifth graders derive area formulae on their own?” Watanabe, T., Students First Conference, Kennesaw State University, Kennesaw, GA, September 2006.

"Division of fractions with understanding: 3 possibilities." Watanabe, T., Students First Conference, Kennesaw State University, Kennesaw, GA, September 2006.

"Laying foundations: Algebra in the Japanese elementary school curriculum." Watanabe, T., NEA TIMSS Video Algebra Study Conference, Leesburg, VA, August 28, 2005. A keynote presentation.

GRANTS AND CONTRACTS

Funded Projects as PI:

"Examining Mathematics Teacher Education Programs in Japan." Center for Excellence in Teaching and Learning, FY 14 Incentive Fund. $8,000. July 2013–June 2014.

"Marietta-KSU Math Science Partnership, Year 2." (Sub-award) Tad Watanabe, Kennesaw State University, from Marietta City Schools, $26,934. July 2010–June 2011.

"Marietta-KSU Math Science Partnership." (Sub-award) Tad Watanabe, Kennesaw State University, Marietta City Schools, $21,000. July 2009–June 2010.

"Deepening Our Understanding of the Georgia Performance Standards through an Analysis of Japanese Curriculum Materials and Other Resources." PI: Tad Watanabe, Kennesaw State University, Center for Excellence in Teaching and Learning, Faculty Learning Community. $681.96, 2006–2007, (additional travel support to be provided to the participants in the 2007-08 school year).

"Instrument Development and Piloting for Investigating Fraction Instruction at the Greenwich Japanese School." PI: Tad Watanabe. Pennsylvania State University College of Education Research Initiation Grant. $8,792. November 2003–August 2004.

"Enhancing Mathematics Content Knowledge of Middle School Mathematics Teachers in Cecil and Harford Counties." PI: Tad Watanabe, co-PI: Wei Sun. Dwight D. Eisenhower Professional Development Program. $96,817. March 2002–May 2003. [I left Towson University at the end of the 2001-02 school year, leaving Dr. Sun as the PI.]

"Enhancing Content Background of Middle School Mathematics Teachers." PI: Tad Watanabe, ExxonMobil Innovation Grant. $3,000. January 2002.

"An Analysis of Japanese Elementary School Mathematics Teachers' Manuals." PI: Tad Watanabe, National Science Foundation Small Grant for Exploratory Research. $30,918, November 1998–October 1999.

"Experiencing Geometry: Enhancing Prospective Elementary and Middle School Teacher's Learning of Geometry Through the Use of Technology." PI: Tad Watanabe, co-PI: Maureen Yarnevich, National Science Foundation Instrumentation and Laboratory Improvement Grant, $42,756 (NSF grant —total project $132,699), September 1, 1998–August 31, 2000.

Funded Projects as Co-PI:

"Teaching and Learning of Average and Proportionality in School Mathematics Curriculum: An International Perspective." PI: Jinfa Cai, University of Delaware, co-PI's: Jane Jane Lo, Cornell University, Tad Watanabe, Towson University, National Academy of Education, $6,000, March 2000–July 2001.

Proposals Submitted but not Funded as PI:

"A cross-sectional examination of prospective elementary teachers' mathematical knowledge for teaching: An exploratory study." PI: Tad Watanabe, co-PI: Amy Hillen, Kadian Callahan, Jose Binongo, and Teresa Banker. Discovery Learning K-12, National Science Foundation. $396,883.

"Developing deep understanding of elementary school mathematics through examination of curriculum materials." PI: Tad Watanabe, co-PI: Marvin Smith, Teacher Quality Professional Development Higher Education Program (UGa), $54,848.83

PROFESSIONAL SERVICE

KENNESAW STATE UNIVERSITY

University:

Operational Work Group 8: Mathematics (2014).

College:

None at this time.

Department or Program:

Early Childhood Education Mathematics Coordinator (2010–2013, 2014–present)
Department Faculty Council (2007–2013)
Search committee for mathematics education position, chair (2007–2008; 2012–2013)
Department Tenure and Promotion Committee, member (2011–2012)
Search committee for mathematics education position, member (2006–2007).
Mathematics Education Committee

AT OTHER INSTITUTIONAL AFFILIATIONS

Towson University

Department:

Mathematics Education Committee
Resource & Evaluation Committees (mentoring new faculty members)

Pennsylvania State University:

University:

Faculty Advisor for the Japanese Friendship Association, 2003–2006.

College:

Curricular Affairs Committee, 2004–2005

Department:

Curricular Affairs Committee, 2003–2006 (chair, 2005–2006).

THE PROFESSION

Service to Journal:

Mathematics Teacher Educator, Editorial Panel member, 2011–2015.
Mathematics Teacher Educator, Reviewer, 2015–present.
Educational Studies in Mathematics, Reviewer, 2009–present.
Journal of Mathematical Behavior, Reviewer, 2009–present
Teaching Children Mathematics, Editorial Panel, 2001–2004.
Teaching Children Mathematics, Department editor, Promising Research, Programs, and Projects, 1998–1999.
Teaching Children Mathematics, Reviewer, 1992–present.
Mathematics Teaching in Middle Schools, Reviewer, 1995–present.
Journal for Research in Mathematics Education, Reviewer, 1992–present.
Mathematical Thinking and Learning, Reviewer, 2004–present.
Banneker Banner, Editor, 2003–2004.

Service to Professional Association:

Association of Mathematics Teacher Educators, Elections & Nominations Committee member: 2006, 2008, 2015–2018.
International Group for the Psychology of Mathematics Education, 2000 – 2001, board member; 2001–2004, secretary.
Association of Mathematics Teacher Educators, 1997 – 2001, board member.
National Council of Teachers of Mathematics, Nominations and Elections Committee, 1998–2000.
American Educational Research Association: SIG Research in Mathematics Education, 1998–2000, Treasurer.

Other Manuscript or Proposal Reviewing Activities (Provide all pertinent details as appropriate related to the reviewing work):

American Educational Research Association, Division C & SIG/RME, 1992–present.
International Group for the Psychology of Mathematics Education, 1992–present.
North American Chapter of the International Group for the Psychology of Mathematics Education, 1992–present.
Association of Mathematics Teacher Educators, 1995–present.

THE COMMUNITY

Professionally-Related Service to the Community:

Advisory Board, International Charter Academy of Georgia. 2017 – current.
Wiser Wednesday, August 2009 – May 2010. Provided mathematics enrichment activities to Grade 5 students at Nicholson Elementary School, Cobb County, GA.
Mathematics Panel, March 2009. A member of panel for the mathematics curriculum committee of Galloway School (Atlanta, GA) and interested teachers and parents.
Advisory Board for Science and Mathematics in Baltimore City Schools, 2000–2002, a member of an advisory board.
Maryland Mathematics Commission, 1999–2002. A member of statewide panel to examine the state's mathematics programs for possible revisions.

Paid and/or Nonpaid Consultation (Provide all pertinent details as appropriate related to the consulting work):

"Study of the Alignment of the 2015 NAEP Mathematics Items at Grades 4 and 8 to the Common Core State Standards (CCSS) for Mathematics." A member of the Expert Panel that reviewed the NAEP items. September 2015.

"Alignment study of standardized tests and CCSS." A project by the Thomas B. Fordham Foundation. A member of review panel that examined the test items. Summer 2015.

"Improvement of Elementary Fractions Instruction: RCT Using Lesson Study and a Fractions Resource Kit." A member of an advisory panel on a USED grant project by Mills College, 2015–present.

"School-based Lesson Study" A collaborator on a Bill and Melinda Gates Foundation grant project by Mills College. 2015–present.

"Essential Mathematics for the Next Generation." A collaborator in the IMPULS (Tokyo Gakugei University) project. Participated in an international symposium, October 2015.

"IMPULS – Qatar University Lesson Study Project." A collaborator in the joint project of IMPULS (Tokyo Gakugei University) and Qatar University.

"Think Tank on Addition and Subtraction of Fractions." An invited member of a meeting organized by the Ontario (Canada) Ministry of Education and Trent University, October 2012.

"NAEP-CCSS Mathematics Panel." A member of the panel assisting the NAEP Validity Study conducted by the American Institute of Research., June 2012.

"Teaching Through Problem-Solving As a Resource for U.S. Elementary Mathematics Teachers." A collaborator on a USED grant project by Mills College, 2011–2014.

"Focused and Coherent Elementary Mathematics: Adapting a Japanese K-2 Curriculum for Use in the United States." A collaborator on a USED grant project by Mills College. 2011–2014.

"AFT Mathematics Curriculum Evaluation Tool." A member of the writing team to develop an evaluation tool that may be used to evaluate the new curriculum materials produced to support the Common Core State Standards.

"Creation and dissemination of upper-elementary mathematics assessment modules." A member of an advisory board for an NSF project by Heather Hills of Harvard University.

"Important Mathematics and Powerful Pedagogy: Deepening Teacher Content Knowledge and Using Lesson Study to Effectively Implement Iowa's High School Mathematics Initiatives (IMP^2)." An outside consultant to a state MSP project by the University of Iowa. 2007–July 2010.

"Resources for Supporting Lesson Study in Mathematics." A member of an advisory panel for a NSF project by the Education Development Center. 2006–present.

"Improving the Mathematical Content Base of Lesson Study: Design and Test of Two Toolkits." A member of an advisory panel for a USED grant project by Mills College. 2007–2011.

"Building a Knowledge Base for Lesson Study." A member of an advisory panel for a NSF project by Mills College. 2006–2009.

Volusia County (FL) School Lesson Study Group. Mathematics content consultant. 2006–present.

Rochester (NY) Lesson Study Group. Mathematics content consultant. 2000–2014.

Paterson (NJ) School #2, Lesson Study Open House. Invited commentator. 2001–2013.

Chicago Lesson Study Group. Invited lecturer & commentator. 2001–present.

"Mathematics Content/Connections" An external evaluator for a grant by the Montgomery County Public Schools, Maryland, 1995–1999.

ADMINISTRATION AND LEADERSHIP
(Roles not Included in the Professional Experience or Professional Service Sections)

KENNESAW STATE UNIVERSITY

Assistant Chair, Department of Mathematics, Kennesaw State University, January 2014 – present.
Responsibilities include scheduling of courses, hiring of part-time faculty members and completing part-time faculty payroll workbooks. Also assist the chair with the annual review of selected faculty.

AT OTHER INSTITUTIONAL AFFILIATIONS

Vice Chairperson, Department of Mathematics, Towson University, 2001–2002.
Responsible for issues related to part-time faculty. Also responsible for evaluating transfer courses.

Director, Graduate Program in Mathematics Education, 2000–2001.
Responsible for every aspect of the master's program in secondary mathematics education.

Associate Director of the Center for Science and Mathematics Education, 1999–2000.
Responsible for supporting the Director with respect to the day to day operation of the center.