Akihiko TAKAHASHI, Ph.D.
Associate Professor of Mathematics Education
College of Education, DePaul University

EDUCATION

Ph.D. University of Illinois at Urbana-Champaign, Curriculum and Instruction, Secondary Education.
M.S. University of Illinois at Urbana-Champaign, Curriculum and Instruction, Secondary Education.
B.ED. Tokyo Gakugei University, Tokyo, Japan, Mathematics Education.

Positions

2008- Associate Professor of Mathematics Education, DePaul University, College of Education
2008-11 Director of the Asia-Pacific Mathematics and Science Education Collaborative, College of Education, DePaul University
2002-07 Assistant Professor of Mathematics Education, DePaul University, School of Education
1998-02 Doctoral Student at the University of Illinois at Urbana-Champaign
1985-98 Grade 1-6 Teacher, Setagaya Elementary School Affiliated to the Tokyo Gakugei University.

Visiting positions
November 1 2017 – October 31 2022
Honorary Reader of University College London, London United Kingdom
April 2014 – current
Researcher, Tokyo Gakugei University, Tokyo Japan
April 2011- March 2017
Specially Appointed Professor, International Mathematics Teacher Professionalization using, Tokyo Gakugei University, Tokyo Japan
July 20, 2014 – July 26, 2014 and February 11 – March 11, 2012
Visiting Scholar to the Curriculum, Teaching & Learning (CTL) Academic Group of National Institute of Education, Nanyang Technological University, Singapore
January 16, 2012- February 5, 2012
Visiting Professor at Universiti Sains Malaysia, Penang Malaysia

Teaching

Under graduate

EE333	Teaching and Learning Elementary School Mathematics*
MAT110	Elementary Mathematics for Teachers I Special Section**
MAT111	Elementary Mathematics for Teachers II Special Section**
EE384	Elementary Education Capstone*

Graduate

TL416	Teaching and Learning Elementary School Mathematics*
CSG451	Teaching, Learning, Assessing Middle-School Mathematics I***
CSG452	Teaching, Learning, Assessing Middle-School Mathematics II***
MMT401	Mathematical Thinking and Learning in Middle School Mathematics****

Instructor of the Park City Mathematics Institute, Secondary School Teacher Program (2005-2008)
* Offered by the Department of Teacher Education
** Offered by the Department of Mathematical Science
*** Offered by the Curriculum Study Program
**** Part of a Joint program by the College of Education and the Department of Mathematical Science for practicing teacher of mathematics

SELECTED PUBLICATIONS

Edited Volumes

Quaresma, M., Winsløw, C., Clivaz, S., Ponte, J. P. d., Shúilleabháin, A. N., & Takahashi, A. (Eds.). (2018). *Mathematics Lesson Study Around the World*: Springer International Publishing.

Peer-Reviewed Journals in English

Takahashi, A., & McDougal, T. (2016). Collaborative lesson research: maximizing the impact of lesson study. *ZDM, 48*, 513-526. doi:10.1007/s11858-015-0752-x

Takahashi, A. (2016). Recent Trends in Japanese Mathematics Textbooks for Elementary Grades: Supporting Teachers to Teach Mathematics through Problem Solving. *Universal Journal of Educational Research, Vol. 4*(2), 7. doi:10.13189/ujer.2016.040201

Takahashi, A. (2014). The Role of the Knowledgeable Other in Lesson Study: Examining the Final Comments of Experienced Lesson Study Practitioners. *Mathematics Teacher Education and Development*.

Takahashi, A., C. Lewis, et al. (2013). A US lesson study network to spread teaching through problem solving. *International Journal for Lesson and Learning Studies* ***2****(3): 237 - 255*.

Lewis, C. and A. Takahashi (2013). Facilitating curriculum reforms through lesson study. *International Journal for Lesson and Learning Studies* ***2****(3): 207 - 217*.

Lee, Y., & Takahashi, A. (2011). Lesson plans and the contingency of classroom interactions. Human Studies, 34(2), 209-227.

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.

Takahashi, A. & Yoshida, M. (2004). How Can We Start Lesson Study?: Ideas for establishing lesson study communities. *Teaching Children Mathematics*, Volume 10, Number 9. pp.436-443.

Murata, A. & Takahashi, A. (2002). Vehicle to connect theory, research, and practice: How teacher thinking changes in district-level lesson study in Japan. In D. L. Haury (Ed.). *Proceedings of the twenty-fourth annual meeting of North American chapter of the international group of the Psychology of Mathematics Education*. Columbus, OH: ERIC Clearinghouse for Science, Mathematics, and Environmental Education. pp.1879 – 1888.

Peer-Reviewed Journals in Japanese

Takahashi, A. (2013). An investigation of the Nature of Final Comments in Post-Lesson Discussion for Mathematics Lesson Study. *Journal of Japan Society of Mathematical Education. Volume 95, Fall Special Issue*.

Takahashi, A. (2012). Seeking the Common Core State Standards for Mathematics in USA: An Over View. *Journal of Japan Society of Mathematical Education*. Volume XCIV, Number 1.

Takahashi, A. (2011). Investigating Characteristics and Mechanisms of Lesson Study for Improving the Quality of Mathematics Teaching and Learning: Learning from a Decade of Lesson Study Endeavor in the U.S. *Journal of Japan Society of Mathematical Education*. Volume XCIII, Number 12.

Takahashi, A. (2006). Types of Elementary Mathematics Lesson Study in Japan: Analysis of Features and Characteristics. *Journal of Japan Society of Mathematical Education*. Volume LXXXVIII, Number 8.

Takahashi, A. (2001). An Investigation of Problem Solving Activities Using Internet based Pattern Blocks. *Journal of Japan Society of Mathematical Education*. Volume LXXXIII, Number 8 (50-4).

Takahashi, A. (2000). Current Trends and Issues in Lesson Study in Japan and the United States. *Journal of Japan Society of Mathematical Education*. Volume LXXXII, Number 11 (49-6).

Takahashi, A. (1990). A study of Organizing Teaching Materials That Enriches A Viewpoint of Numbers - Making Reference to A West German Textbook That Manipulates Cuisenaire Rods -. *Journal of Japan Society of Mathematical Education.* Volume LXXII, Number 4.

Chapters in Books in English

Clivaz, S., & Takahashi, A. (2018). Mathematics Lesson Study Around the World: Conclusions and Looking Ahead. In M. Quaresma, C. Winsløw, S. Clivaz, J. P. da Ponte, A. Ní Shúilleabháin, & A.

Takahashi (Eds.), *Mathematics Lesson Study Around the World: Theoretical and Methodological Issues* (pp. 153-164). Cham: Springer International Publishing.

Takahashi, A., & McDougal, T. (2018). Collaborative Lesson Research (CLR). In M. Quaresma, C. Winsløw, S. Clivaz, J. P. da Ponte, A. Ní Shúilleabháin, & A. Takahashi (Eds.), *Mathematics Lesson Study Around the World: Theoretical and Methodological Issues* (pp. 143-152). Cham: Springer International Publishing.

Takahashi, A. (2017). Lesson Study: The fundamental driver for mathematics teacher development in Japan, In Kaur, B. & Kwon, O.N. (Eds.), *Professional development of mathematics teachers – An Asian perspective.* New York: Springer.

Takahashi, A. (2015). Systematic Support of Life-Long Professional Development for Teachers through Lesson Study. In B. Sriraman, J. Cai, K. Lee, L. Fan, Y. Shimizu, C. Lim, et al. (Eds.), *The First Sourcebook on Asian Research in Mathematics Education* (Vol. 2, International Sourcebooks in Mathematics and Science Education). Charlotte, NC: Information Age Publishing.

Takahashi, A. (2015). Lesson Study: An Essential Process for Improving Mathematics Teaching and Learning. In M. Inpresitha, M. Isoda, P. Wang-Iverson & B. Yeap (Eds.), *Lesson Study: challenges in mathematics education* (Vol. 3, pp. 51-58). Singapore: World Scientific Co. Pte. Ltd.

Takahashi, A. & McDougal, T. (2014). Implementing a New National Curriculum: A Japanese Public School's Two-Year Lesson-Study Project. In Karp, K. & McDuffie, A. R. (Eds), *Annual Perspectives in Mathematics Education (AMPE) 2014: Using Research to Improve Instruction,* Reston, VA: National Council of Teachers of Mathematics.

Takahashi, A. (2014). Supporting the Effective Implementation of a New Mathematics Curriculum: A case study of school-based lesson study at a Japanese public el elementary school. In Li, Y. & Lappan, G. (Eds), Mathematics Curriculum in School Education, New York: Springer.

Takahashi, A. (2011). The Japanese approach to developing expertise in using the textbook to teach mathematics rather than teaching the textbook. In Li, Y. & Kaiser, G. (Eds), *Expertise in Mathematics Instruction: An international perspective,* New York: Springer.

Takahashi, A. (2011). Jumping into Lesson Study—Inservice Mathematics Teacher Education. In L. C. Hart et al. (Eds.), *Lesson Study Research and Practice in Mathematics Education*, New York: Springer.

Watanabe, T., Takahashi, A., & Yoshida, M. (2010). Focused and Cohesive Curricula through Visual Representations: An Example from Japanese Textbooks, *2010 Yearbook: Contemporary Issues in Mathematics Curriculum.* Reston, VA: National Council of Teachers of Mathematics.

Takahashi, A. & Yoshida, M. (2008). How Can We Start Lesson Study?: Ideas for establishing lesson study communities. In J. Bay-Williams & K. Karp (Ed.). *Growing Professionally: Readings from NCTM Publications for Grades K-8*. Reston, VA: National Council of Teachers of Mathematics.

Takahashi, A. (2007). Lesson Study in North America, In M. Isoda, M. Stephens, Y. Ohara, & T. Miyazaki (Eds.), *Japanese Lesson Study in Mathematics*. Singapore: World Scientific Publishing.

Takahashi, A. (2005). Planning and Writing a Research Lesson, In P. Wang-Iverson & M. Yoshida (Eds.), *Building Our Understanding of Lesson Study*. Philadelphia, PA: Research for Better Schools.

Takahashi, A., Watanabe, T., & Yoshida, M. (2005). Improving Content and Pedagogical Knowledge through Kyozaikenkyu, In P. Wang-Iverson & M. Yoshida (Eds.), *Building Our Understanding of Lesson Study*. Philadelphia, PA: Research for Better Schools.

Books and Chapters in Books in Japanese

Takahashi, A. (2012). Three Keywords for Becoming a Global Citizen. In University of Tsukuba School Education Division (Ed), *Educating Global Citizens*. Tokyo, Japan, Toyokan. (in Japanese)

Takahashi, A. (2005). *Let's Begin a Story with Pattern Blocks*, Tokyo, Japan: Toyokan. (in Japanese)

Tubota, K., Takahashi, A., Yanase,Y. ((1998). *Problem Solving Lessons Using Pattern Blocks for Elementary School Mathematics Part2.* Tokyo, Japan: Toyokan Shyppan. (in Japanese)

Takahashi, A., Yanase,Y. (1997). *Problem Solving Lessons Using Pattern Blocks for Elementary School Mathematics*. Tokyo, Japan: Toyokan Shyppan. (in Japanese)

Takahashi, A. (1995). *Fun Activities for 1st Grade Mathematics*. Tokyo, Japan: Meiji Tosho. (in Japanese)

Translation (Japanese into English)

Fujii, T. & Iitaka S, (Eds.), (2012) *Mathematics International (Grade 1-Grade 9).* Tokyo, Japan: Tokyo Shoseki.

Takahashi, A., Watanabe, T., Yoshida, M., (2008). *English Translation of the Japanese Mathematics Curricula in the Course of Study (Grade 1-9)*, Madison, NJ, Global Education Resources.

Takahashi, A., Watanabe, T., Yoshida, M., (2006). *Lower Secondary School Teaching Guide for the Japanese Course of Study: Arithmetic (Grade 1-6)*, Madison, NJ, Global Education Resources.

Takahashi, A., Watanabe, T., Yoshida, M., (2004). *Elementary School Teaching Guide for the Japanese Course of Study: Arithmetic (Grade 1-6)*, Madison, NJ, Global Education Resources.

Other Publications in English

Huang, R., Takahashi, A., Clivaz, S., Kazima, M.,& Inprasitha, M. (2019). Lesson study in mathematics: Current status and further directions.In B. Sirakov, P. Ney de Souza & M. Viana (Eds.), *Proceedings of the International Congress of Mathematicians* 2018 (ICM 2018) , Rio deJaneiro (Vol. 1,pp.,1141–1172) ,https://doi.org/10.1142/11060.

Takahashi, A., Varas, L., Fujii, T., Ramatlapana, K., & Selter, C. (2017). Topic Study Group No. 49: In-Service Education and Professional Development of Primary Mathematics Teachers. In G. Kaiser (Ed.), *Proceedings of the 13th International Congress on Mathematical Education: ICME-13* (pp. 605-608). Cham: Springer International Publishing.

Takahashi, A. (2015). *Lesson Study: Nice-to-have, or must-have?* Paper presented at the In Pursuit of Quality Mathematics Education for All: 7th ICME - East Asia Regional Conference on Mathematics Education, Cebu City, Philippines.

McDougal, T. & Takahashi, A. (2014) Teaching Mathematics Trough Problem Solving, *Independent Teacher Fall 2014*, National Association of Independent Schools, http://www.nais.org/Magazines-Newsletters/ITMagazine/Pages/Teaching-Mathematics-Through-Problem-Solving.aspx

Takahashi, A. & Fu, B. (2010). *Replicating Exemplary Practices in Mathematics Education among APEC Economies* (APEC Human Resources Development Working Group Report APEC#210-HR-01.4). Retrieved July 31, 2010 from http://publications.apec.org/publication-detail.php?pub_id=1047

Takahashi, A. (2010). *Replicating Exemplary Practices in Mathematics Education among APEC Economies,* Paper presented at the 5th East Asia Regional Conference on Mathematics Education, Tokyo, Japan.

Takahashi, A. (2010). *Prospective and Practicing Teacher Professional Development with Standards*, Paper presented at the APEC Conference on Replicating Exemplary Practices in Mathematics Education in Koh Samui, Thailand.

Takahashi, A. (2008). Beyond Show and Tell: Neriage for Teaching through Problem-Solving - Ideas from Japanese Problem-Solving Approaches for Teaching Mathematics -, Paper presented at the 11th International Congress on Mathematical Education, Monterrey, Mexico

Takahashi, A. (2006). Professional Development through Lesson Study: An American Case. *A Progressive Report on the APEC Project: "A Collaborative Study on Innovation for Teaching and Learning Mathematics in Different Cultures among the APEC Member Economies*". Khon Kaen, Thailand, Center for Research in Mathematics Education, Khon Kaen University

Takahashi, A. (2006). Characteristics of Japanese Mathematics Lessons. *Tsukuba Journal of education Study in mathematics*. Vol. 25, 2006. pp. 37-44.

Takahashi, A., Watanabe, T. & Yoshida, M. (2006). Developing Good Mathematics Teaching Practice through Lesson Study: A U.S. Perspective. *Tsukuba Journal of Education Study in Mathematics*. Vol. 25, 2006. pp. 197-204.

Takahashi, A., Watanabe, T., & Yoshida, M. (2003). Improving the Quality of Lesson Study: Learning to Become Kyozaikenkyu Practitioners. Paper presented at the Lesson Study Conference 2003, Stamford, CT, November 2003. (www.rbs.org)

Takahashi, A. (2003). Planning and Writing a Research Lesson. *Proceedings of Lesson Study Conference 2002: Lesson Study: Collaborative Teacher-Led Professional Development Focused on Student Thinking*. [On line], Available: http://www.rbs.org/lesson_study/conference/2002/papers/takahashi.shtml

Lewis, C., Takahashi, A., Murata, A., & King, E. (2002). *Developing "The Eyes to See Students:" Data Collection During Lesson Study*. Paper presented at the research pre-session of the annual meeting of the National Council of Teachers of Mathematics, San Antonio, April 2003.

Takahashi, A., & Murata, A. (2002). *District-level lesson study: how do Japanese teachers improve their teaching of elementary mathematics?* Paper presented at the research pre-session of the annual meeting of the National Council of Teachers of Mathematics, Las Vegas, April 2002.

Other Publications in Japanese

Takahashi, A. (2005). Learning from Lesson Study in North America I-III, *Weekly Educational Public Opinion* No.902, 903, & 904, Tokyo, Japan, Kyoiku Press. (in Japanese)

Takahashi, A. (2004). The Jyugyo Kenkyu, *Elementary Mathematics Teaching Today*. No.398. Society of Elementary Mathematics Education, Tokyo, Japan, Toyokan. (in Japanese)

Takahashi, A. (2003). Teaching Mathematics through Small-group Instruction is a Good Idea? *Kyoiku Kenkyu (Educational Research)*, No.1220, Tokyo, Japan, Shoto-Kyoiku-Kenkyukai. (in Japanese)

Takahashi, A. (2003). Lesson Study in North America I-III, *Weekly Educational Public Opinion* No.824, 825, & 826, Tokyo, Japan, Kyoiku Press. (in Japanese)

SELECTED PRESENTATIONS

International Conferences

Keynote: Designing Curriculum Material That Facilitates Teaching Mathematics Through Problem Solving, 2018 International Society for Design and Development in Education (ISDDE) International Conference, Galway, Ireland, May 2018

Teacher Preparation at Fuzoku schools: How the basics of Lesson Study are introduced to prospective teachers, World Association of Lesson Studies 2017 International Conference, Nagoya University, Nagoya, Japan, November 2017

When And How Teachers Use Mathematical Knowledge For Teaching, 41st Annual Meeting of the International Group for the Psychology of Mathematics Education (PME 41), National Institute of Education, Singapore, July 2017

The Open-Ended Approach (Keynote and demonstration lessons), Math Counts 2017, National University of Ireland Maynooth, Maynooth, Ireland, March 2017

Critical Process for Supporting Teachers to Establish Professional Communities Using Lesson Study: Case Studies from the Project IMPULS Collaborations with UK, US, and Qatar (Plenary Session Chair and presenter), World Association of Lesson Studies 2016 International Conference, University of Exeter, United Kingdom, September 2016

Mechanism for Supporting Teacher Learning in Collaborative Lesson Research (CLR) World Association of Lesson Studies 2016 International Conference, University of Exeter, United Kingdom, September 2016

Collaborative Lesson Research (CLR): Maximizing the impact of Lesson Study, 13th International Congress on Mathematical Education 2016 Topic Study Group 49, Hamburg, Germany, July 2016

Teaching through Problem Solving to promote Mathematical Thinking (Keynote and demonstration lessons), Math Counts 2016, University College Dublin, Belfield, Dublin, Ireland, April 2016

Teaching through Problem-Solving (TtP) - A Japanese Approach for Teaching Mathematics -, Annual Meeting of World Educational Research Association (WERA), Washington DC, April, 2016

Collaborative Lesson Research: Maximizing the impact of Lesson Study (Plenary lecture), World Association of Lesson Studies 2015 International Conference, Khon Kaen University, Thailand, November 2015

Use of LessonNote, a tablet-based application, for nurturing lesson study leaders -A case from the IMPULS- Qatar University project-, World Association of Lesson Studies 2015 International Conference, Khon Kaen University, Thailand, November 2015

Lesson Study: Nice-to-have or must-have (Keynote Address), 7th East Asia Regional Conference on Mathematics Education (EARCOME7), Cebu City, Philippines, May 2015.

How can Lesson Study make an impact on student learning of mathematics? , World Association of Lesson Studies 2014 International Conference, Indonesia University of Education, Bandung, Indonesia, November 2014

A Tablet-Based Application for Supporting Effective Lesson Study, 6th East Asia Regional Conference on Mathematics Education (EARCOME6), Prince of Songkla University, Phuket Campus, Phuket, Thailand, March 2013.

A U.S. Lesson Study Network to Spread Teaching Through Problem-Solving, World Association of Lesson Studies 2012 International Conference, Expert Seminar, Nanyang Girls High School, Singapore, November 2012

School-Based Lesson Study at a Japanese Elementary School, World Association of Lesson Studies 2012 International Conference, Nanyang Technological University, Singapore, November 2012

Developing Tools and Artifacts for supporting Lesson Study and Instructional Improvement, World Association of Lesson Studies 2012 International Conference, Nanyang Technological University, Singapore, November 2012

Beyond Show and Tell: Neriage for Teaching through Problem Solving - Ideas from Japanese Problem Solving Approach for Teaching Mathematics – University Sains Malaysia, Penang, Malaysia (January 2012)

Replicating Exemplary Practices in Mathematics Education among APEC Economies, 5th East Asia Regional Conference on Mathematics Education, Tokyo, Japan, August 2010.

Prospective and Practicing Teacher Professional Development with Standards, APEC Conference on Replicating Exemplary Practices in Mathematics Education in Koh Samui, Thailand, March 2010.

Good Practices on Capacity Building in Mathematics for Teacher Education, Forum on Best Practices on Human Resource Capacity Building in Science and Mathematics Education, Makati City, Metro Manila, Philippines, November 2009.

Promoting Collaboration for Initiating World Class University: Research, Resources, and Programs, International Seminar And Workshop on World Class University (ISWCU2009), Yogyakarta State University, July 2009.

*Beyond Show and Tell: Neriage for Teaching through Problem-Solving - Ideas from Japanese Problem-Solving Approaches for Teaching Mathematics -,*11th International Congress on Mathematical Education, Monterrey, Mexico, July 2008.

Keynote: Implementing Lesson Study in Schools in Singapore, Symposium on Lesson Study in Mathematics Organized by Association of Mathematics Educators together with Curriculum, Teaching & Learning and Mathematics & Mathematics Education and Academic Groups (NIE/NTU), Singapore, May 2008.

Teaching mathematics through problem solving for primary grades, Mathematics Teachers Conference 2008 at the National Institute of Education, Singapore, May 2008.

Teaching mathematics through problem solving for lower secondary grades, Mathematics Teachers Conference 2008 at the National Institute of Education, Singapore, May 2008.

Keynote: Improving Teaching and Learning Mathematics through Lesson Study, XL National Congress of the Mexican Mathematical Society, Monterrey, Mexico, October, 2007.

Keynote: Developing Mathematical Thinking through Problem Solving, APEC International Symposium on Innovation and Good Practice for Teaching and Learning Mathematics through Lesson Study Khon Kaen, Khon Kaen, Thailand, August 2007.

Keynote: Implementing Lesson Study in Schools and Districts in North America, APEC International Symposium on Innovation and Good Practice for Teaching and Learning Mathematics through Lesson Study Khon Kaen, Khon Kaen, Thailand, June 2006.

Keynote: Characteristics of Japanese Mathematics Lessons, APEC-Tsukuba International Conference: Innovative Teaching of Mathematics through Lesson Study, Tokyo, Japan, January 2006.

Developing Good Mathematics Teaching Practice Through Lesson Study: A U. S. Perspective, APEC-Tsukuba International Conference: Innovative Teaching Mathematics through Lesson Study, Tokyo, Japan, January 2006.

National Conferences

Keynote: Teaching Math through Problem Solving and Collaborative Lesson Research - Supporting Students to become independent learners -, Supporting Productive Struggle Conference Lewis-Clark State College, Lewiston, ID, June 2018.

Key ideas for effective professional development: Purposeful classroom observation and non judgmental data collection, Mathematics and Science Research Institute (MSRI) Critical Issues in Mathematics Education (CIME) workshop series*,* Berkeley, CA, Feb 2016.

Teaching through Problem Solving to develop Concepts in the Context, National Council of Teachers of Mathematics (NCTM) 88th Annual Meeting, San Diego CA on April 2010.

What we learned through lesson study: Ideas to design lessons for all, National Council of Teachers of Mathematics (NCTM) 87th Annual Meeting, Washington DC on April 2009.

Neriage: An Essential Piece of a Problem-Based Lesson, National Council of Teachers of Mathematics (NCTM) 86th Annual Meeting, Salt Lake City, UT on April 2008.

Rational Lesson Study in Pre-Service Secondary Mathematics Teacher Preparation: Alternative Models of Student Teaching, Association of Mathematics Teacher Educators Twelfth Annual Conference, Tulsa, OK, January 2008.

Multiply? Divide? Representing Quantitative Relationships Using the Number Line, National Council of Teachers of Mathematics (NCTM) 85th Annual Meeting, Atlanta, GA, April 2007.

Conducting Instructional Material Investigation during Lesson Study to Improve Teachers' Pedagogical and Mathematical Content Knowledge, 39th Annual Conference National Council of Supervisors of Mathematics Education (NCSM): Leadership in Mathematics Education, Atlanta, GA, April 2007.

To Develop a Lesson Plan for Lesson Study, National Council of Teachers of Mathematics (NCTM) 84th Annual Meeting, St. Louis, MO, April 2006.

Assessing Students' Learning through the Lesson Study Approach, National Council of Teachers of Mathematics (NCTM) 84th Annual Meeting, St. Louis, MO, April 2006.

A Demonstration Lesson (Part 1-3), 38th Annual Conference National Council of Supervisors of Mathematics Education (NCSM): Leadership in Mathematics Education, St. Louis, April 2006.

Lesson Planning: Ideas from Japanese Mathematics Teaching, Mathematics and Science Research Institute (MSRI) Workshop: The Mathematical Knowledge for Teaching (K-8): Why, What, and How?, Pacific Grove, CA, May 2005.

Reflections on Lesson Study: Implications for Preservice and Inservice, Association of Mathematics Teacher Educators (AMTE) Seventh Annual Conference, Dallas, TX, January, 2005.

Supporting Lesson Study as Facilitators, Association of Mathematics Teacher Educators (AMTE) Seventh Annual Conference, Dallas, TX, January, 2005.

Rigidity and Flexibility of Lesson Study, National Council of Teachers of Mathematics (NCTM) 83rd Annual Meeting, Anaheim, CA, April 2005.

Learning to Develop a Detailed Lesson Plan for Conducting Lesson Study Effectively, National Council of Teachers of Mathematics (NCTM) 82nd Annual Meeting, Philadelphia, PA, April 2004.

Three Major Forms Of Japanese Lesson Study: Rigidity and Flexibility of Lesson Study, National Council of Teachers of Mathematics (NCTM) Research Presession, Philadelphia, PA, April 2004.

Lesson Study and Teachers' Knowledge Development: Collaborative Critique of a Research Model and Methods. Annual Meeting of American Educational Research Association (AERA) Division K, Section 7, Chicago, IL, April 2003.

Lesson Study in Preservice Education: Exploration of Four Program Models, Annual Meeting of American Educational Research Association (AERA) Division K, Section 5, Chicago, IL, April, 2003.

Improving Mathematics Teaching and Learning through Lesson Study, National Council of Teachers of Mathematics (NCTM) 81st Annual Meeting, San Antonio, TX, April 2003.

Teacher Development through Examination of Practice, National Council of Teachers of Mathematics (NCTM) Research Presession, San Antonio, TX, April, 2003.

A Framework for the Preparation of Secondary Mathematics Teachers, Association of Mathematics Teacher Educators (AMTE) Seventh Annual Conference, Atlanta GA, January, 2003.

District-level Lesson Study in Japan, National Council of Teachers of Mathematics Central Regional Conference, Paducah, KY, October, 2002.

Lesson Study: An Alternative Perspective on Value and Validity in Educational Research? Annual Meeting of American Educational Research Association (AERA) Division K: Section 5, New Orleans, April 2002.

Lesson Study as a Medium for Professional Development, National Council of Teachers of Mathematics (NCTM) 80th Annual Meeting, Las Vegas, NV, April 2002.

District-level Lesson Study: How Do Japanese Teachers Improve Their Teaching of Elementary Mathematics? National Council of Teachers of Mathematics (NCTM) Research Presession, Las Vegas, NV, April 2002.

Regional and State Conferences

Keynote: Quality Lesson Study in mathematics using the ideas of Collaborative Lesson Research (CLR) and teaching math through problem solving, 33rd Annual Conference On Teaching Mathematics at John A Logan College, Carterville, IL February 2018.

Examine the Teaching of Addition of Fractions with Unlike Denominators through Problem Solving, National Council of Teachers of Mathematics 2017 Regional Conference & Exposition Chicago, IL, November 2017.

Kyozai Kenkyu: An essential piece for designing lessons, Lesson Study Conference at William Paterson University, Paterson NJ March 2008.

Keynote: Teaching through Problem Solving: A Japanese Approach for Understanding Mathematics, Ontario Association for Mathematics Education Leadership Conference 2008, Toronto, Ontario, Canada, February 2008.

Keynote: The Teaching Gap, Ontario Association for Mathematics Education 2005 Annual Conference, Toronto, Ontario, Canada, May 2005.

What is Lesson Study, Ontario Association for Mathematics Education 2005 Annual Conference, Toronto, Ontario, Canada, May 2005.

Lesson Study in North America, Northwest Regional Education Laboratory Lesson Study Leaders Symposium, Olympia WA, May 2005.

Keynote: Lesson Study in North America, 2005 Iowa Council of Teachers of Mathematics Annual Conference, February 2005.

Teachers Improving Teaching and Learning through Lesson Study, Research for Better Schools Regional Conference, Philadelphia, PA, February 2005.

Lesson Study: A Way to Improve Teaching and Learning Mathematics. The Metropolitan Mathematics Club Conference of Workshops 2003, Lincolnshire, IL, January 2004.

Japanese Lesson Study: An Effective Way to Improve Mathematics Teaching and Learning, Fifth Annual Chicago Symposia Series on Excellence in Teaching Mathematics and Science: Research and Practice, Chicago, IL, March, 2003

PROFESSIONAL ACTIVITIES

Grants

- Takahashi, A. 2018 (Co-PI) PI: Lewis, C.
  School-wide Lesson Study
  Bill & Melinda Gates Foundation. OPP1115207
  Award Period: 0.5 years (Sep. 2018 - Dec. 2018)
  Award Amount: $43,793.00
- Takahashi, A. 2017 (Co-PI) PI: Lewis, C.
  School-wide Lesson Study
  Bill & Melinda Gates Foundation. OPP1115207
  Award Period: 0.5 years (Dec. 2017 - Jun. 2018)
  Award Amount: $87,007.00
- Takahashi, A. 2014 (Co-PI) PI: Lewis, C.
  School-wide Lesson Study
  Bill & Melinda Gates Foundation. OPP1115207
  Award Period: 3 years (Nov. 2014 - Nov. 2017)
  Award Amount: $2,840,620
- Takahashi, A. 2011 (Co-PI) PI: Lewis, C.
  Focused and Coherent Elementary Mathematics: Japanese Curriculum Resources for U.S. Teachers.
  U. S. Department of Education, Institute of Education Sciences Grant. R305A110500
  Award Period: 3 years
  Award Amount: $1,494,236
- Takahashi, A, 2010 (PI)
  Content-Focused Professional Development with Lesson Study
  Illinois Board of Higher Education (IBHE), Fiscal year 2010 NCLB - Improving Teacher Quality State Grant Program.
  Award Period: 2 years
  Award Amount: $296,429
- Takahashi, A, 2009 (PI)
  Support of Asia-Pacific Economic Cooperation's Human Resources Development Working Group
  U.S. Department of Education.
  Award Period: June 2009
  Award Amount: $51,348
- Takahashi, A, 2009 (PI)
  Preparation of an APEC guide to using Lesson study in mathematics
  U.S. Department of Education.
  Award Period: 1 year
  Award Amount: $15,220
- Takahashi, A, 2008 (PI)
  Japanese teaching guide for mathematics, grades 1-6
  U.S. Department of Education.
  Award Period: 1 year

Award Amount: $18,000

- Takahashi, A, 2007 (PI)
  The lesson study institute for scale-up lesson study
  McDougal Family Foundation
  Award Period: 3 year
  Award Amount: $148,431
- Takahashi, A, 2007 (PI)
  What makes a teacher education program last?: The case of Chicago lesson study
  Spencer Foundation
  Award Period: 1 year
  Award Amount: $38,154
- Takahashi, A, 2004 (PI)
  The lesson study institute for scale-up lesson study
  McDougal Family Foundation
  Award Period: 3 year
  Award Amount: $65,000
- Takahashi, A, 2003 (PI)
  Impact of three major forms of lesson study in Japan
  Small Research Grants awarded by the Institute for Teacher Development and Research
  Award Period: 1 year
  Award Amount: $5,000

Service and Collegiality

Media Contribution

- American RedioWorks, *A different approach to teacher learning: Lesson study* by Emily Hanford, August 27, 2015
- New York Times Magazine, *Why Do Americans Stink at Math?* by Elizabeth Green, July 23, 2014

National Advisory Board

- Lesson Study: Case Studies of an Emerging Reform (NSF Grant No. 0207259, 3 years)
- Building a Knowledge Base for Teaching: Design and Test of Research-based Toolkits for Mathematics Lesson Study (NSF Grant No. 0633945, 3 years)
- Resources For Supporting Lesson Study in Mathematics (NSF Grant No. 0554527, 3 years)
- Improving the Mathematical Content Base of Lesson Study: Design and Test of Two Research-based Toolkits (Grant CFDA R305A from Institute of Education Sciences, US Department of Education, 4 years)
- Lesson Study Communities Project in Secondary Mathematics, Education Development Center supported by NSF. (2002-2005)

Editorial Panel

- Arithmetic Education, Journal of Japan Society of Mathematical Education (JSME). (2001-present)
- Research in Mathematical Education, Journal of Japan Society of Mathematical Education (JSME). (2003-present)

Reviewer

Journal for Research in Mathematics Education, National Council of Teachers of Mathematics (2010)

International Collegial Activities

- Co-Editor of Mathematics Lesson Study around the World - Theoretical and methodological issues Springer International Publishing AG, Switzerland (in press)
- Co-Editor of Theory and Practices of Lesson Study in Mathematics: An international perspective, Springer (under review)
- Co-Chair of Topic Study Group 49: In-service education and professional development of primary mathematics teachers at the 13th International Congress on Mathematical Education, Hamburg, Germany July 2016

- Co-Chair of Discussion Group 7: Improving Teacher Professional Development Through Lesson Study at the 12th International Congress on Mathematical Education, Seoul, Korea, July 2012
- World Association of Lesson Studies (WALS) Executive Council Member (November 2016-)
- World Association of Lesson Studies (WALS) Council Member (November 2011-)
- Lesson Study Session Coordinator*,* 5th East Asia Regional Conference on Mathematics Education, Tokyo, Japan, August 2010.
- Project Overseer of APEC HRD 01/2009A, 21st Century Mathematics and Science Education for All in the APEC Region: Strengthening Developing Economies and Gender Equity Through Standards, Assessments, and Teachers (January 2009 – December 2010)
- Co-chair of the APEC Conference on Replicating Exemplary Practices in Mathematics Education in Koh Samui, Thailand (March 8 – March 12, 2010)
- Member of the Scientific Committee of Laboratoire Lausannois Lesson Study (3LS), HEP Vaud, Lausanne, Switzerland (January 2014 -)
- Specialist, A collaborative study on innovations for teaching and learning mathematics in different cultures among the Asia-Pacific Economic Cooperation (APEC) Member Economies, A project of the Asia-Pacific Economic Cooperation (2006-2010)
- Co-Investigator, Empirical Study on Developing Mathematics Teaching Proficiency through Lesson Study in Japan and the United States, funded by the Japan Society for the Promotion of Science, Grant-in-Aid for Science Research, Basic Research 18300266 (2006-2008)
- Co-Investigator, Cross-cultural Research on Lesson Study in Mathematics Teacher Education, funded by the Japan Society for the Promotion of Science, International Cooperative Research Program (2004-2006)
- Co-Investigator, Japan-US Comparative Study of Lesson Study in Mathematics Education, funded by the Japan Society for the Promotion of Science, Grant-in-Aid for Science Research, Basic Research 15300260 (2003-2005)

<u>Supporting Schools</u>

- Augustus H. Burley Elementary School, Chicago, IL
- Brentano Math & Science Academy, Chicago, IL
- Cesar E. Chavez Multicultural Academic Center Elementary School, Chicago IL
- Dr. J Prieto Math and Science Academy, Chicago, IL
- Helen C. Peirce School Of International Studies, Chicago, IL
- James G. Blaine Elementary School, Chicago, IL
- Oakland Unified School District, Oakland, CA
- San Francisco Unified School District, San Francisco, CA
- South Shore Fine Arts Academy, Chicago, IL
- Lake View High School, Chicago, IL
- Latin School of Chicago, Chicago, IL
- Rosalyn Yalow Charter School, Bronx, NY