

CURRICULUM VITAE

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

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

EMPLOYMENT HISTORY

2008 - Current Associate Professor of Mathematics Education, DePaul University, College of Education
 2008 - 2011 Director of the Asia-Pacific Mathematics and Science Education Collaborative, College of Education, DePaul University
 2002 - 2007 Assistant Professor of Mathematics Education, DePaul University, School of Education
 1998 - 2002 Doctoral Student, University of Illinois at Urbana-Champaign
 1985 - 1998 Teacher of Grades 1-6, Setagaya Elementary School, affiliated with Tokyo Gakugei University

Visiting Positions

Nov. 2017 – Oct. 2022	Honorary Reader, University College London, United Kingdom
April 2014 – Ongoing	Researcher, Tokyo Gakugei University, Japan
April 2011- March 2017	Specially Appointed Professor, Tokyo Gakugei University, Japan
July 2014 & Feb. - March 2012	Visiting Scholar to the Curriculum, Teaching & Learning (CTL) Academic Group of National Institute of Education, Nanyang Technological University, Singapore
Jan 2012 - Feb 2012	Visiting Professor, Universiti Sains Malaysia, Malaysia

Courses Taught At DePaul University

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****

* 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

Other Teaching Experience

Instructor of the Park City Mathematics Institute, Secondary School Teacher Program (2005-2008)

SELECTED PUBLICATIONS**Book**

Takahashi, A. (2021). *Teaching Mathematics Through Problem-Solving: A Pedagogical Approach from Japan*: Routledge.

Edited Volumes

Huang, R., Takahashi, A., da Ponte, J. (Eds.). (2019). *Theory and Practice of Lesson Study in Mathematics: An International Perspective*, Springer International Publishing. DOI: 10.1007/978-3-030-04031-4

Quaresma, M., Winsløw, C., Clivaz, S., da Ponte, J. P., Ni Shúilleabháin, & Takahashi, A. (Eds.). (2018). *Mathematics Lesson Study around the World: Theoretical and Methodological Issues*, Springer International Publishing. DOI: 10.1007/978-3-319-75696-7

Peer-Reviewed Journals Published in English

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

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*, 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*, 16, 4-21.

Takahashi, A., Lewis, C. & Perry, R. (2013). A U.S. lesson study network to spread teaching through problem solving. *International Journal for Lesson and Learning Studies*, 2(3), 237-255.

Lewis, C. & Takahashi, A. (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*, 5, 131-142.

Takahashi, A. & Yoshida, M. (2004). How can we start lesson study?: Ideas for establishing lesson study communities. *Teaching Children Mathematics*, 10(9), 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* (pp.1879 – 1888). Columbus, OH: ERIC Clearinghouse for Science, Mathematics, and Environmental Education.

Peer-Reviewed Journals Published 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*, 95(Fall Special Issue).

Takahashi, A. (2012). Seeking the Common Core State Standards for mathematics in USA: An overview. *Journal of Japan Society of Mathematical Education*, 94(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*, 93(12).

Takahashi, A. (2006). Types of elementary mathematics lesson study in Japan: Analysis of features and characteristics. *Journal of Japan Society of Mathematical Education*, 88(8).

- Takahashi, A. (2001). An investigation of problem solving activities using internet based pattern blocks. *Journal of Japan Society of Mathematical Education*, 83(8).
- Takahashi, A. (2000). Current trends and issues in lesson study in Japan and the United States. *Journal of Japan Society of Mathematical Education*, 82(11).
- 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*, 72(4).

Chapters in Books Published in English

- Takahashi, A. (2019). Using school-wide collaborative lesson research to implement standards and improve student learning: Models and preliminary results. In R. Huang, A. Takahashi, & J. da Ponte (Eds.), *Theory and Practice of Lesson Study in Mathematics: An International Perspective*. Springer International Publishing. DOI: 10.1007/978-3-030-04031-4
- Clivaz, S., & Takahashi, A. (2018). Mathematics lesson study around the world: Conclusions and looking ahead. In M. Quaresma, C. Winslow, S. Clivaz, J. P. da Ponte, A. Ni Shuilleabhain, & A. Takahashi (Eds.), *Mathematics Lesson Study Around the World: Theoretical and Methodological Issues* (pp. 153-164). Springer International Publishing. DOI: 10.1007/978-3-319-75696-7
- Takahashi, A., & McDougal, T. (2018). Collaborative Lesson Research (CLR). In M. Quaresma, C. Winslow, S. Clivaz, J. P. da Ponte, A. Ni Shuilleabhain, & A. Takahashi (Eds.), *Mathematics Lesson Study Around the World: Theoretical and Methodological Issues* (pp. 143-152). Springer International Publishing. DOI: 10.1007/978-3-319-75696-7
- Takahashi, A. (2017). Lesson Study: The fundamental driver for mathematics teacher development in Japan. In B. Kaur & O. N. Kwon (Eds.), *Professional Development of Mathematics Teachers: An Asian Perspective*. New York: Springer. DOI: 10.1007/978-981-10-2598-3_1
- 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, & K. Subramaniam (Eds.), *The First Sourcebook on Asian Research in Mathematics Education: China, Korea, Singapore, Japan, Malaysia and India*. 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 Volume 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 K. Karp & A. R. McDuffie (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 elementary school. In Y. Li, & G. Lappan (Eds.), *Mathematics Curriculum in School Education*. Springer. DOI: 10.1007/978-94-007-7560-2
- Takahashi, A. (2011). The Japanese approach to developing expertise in using the textbook to teach mathematics rather than teaching the textbook. In Y. Li, & G. Kaiser (Eds.), *Expertise in Mathematics Instruction: An International Perspective*. Springer.
- Takahashi, A. (2011). Jumping into lesson study: In-service mathematics teacher education. In L. C. Hart, A. S. Alston, & A. Murata (Eds.), *Lesson Study Research and Practice in Mathematics Education*. Springer. DOI: 10.1007/978-90-481-9941-9
- 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 (Eds.), *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 Published in Japanese

- Takahashi, A. (2012). Three keywords for becoming a global citizen. In University of Tsukuba, School Education Division (Eds.), *Educating Global Citizens*. Tokyo, Japan: Toyokan.
- Takahashi, A. (2005). *Let's Begin a Story with Pattern Blocks*. Tokyo, Japan: Toyokan.
- Tubota, K., Takahashi, A., & Yanase, Y. (1998). *Problem Solving Lessons Using Pattern Blocks for Elementary School Mathematics: Part 2*. Tokyo, Japan: Toyokan Shuppan.
- Takahashi, A., & Yanase, Y. (1997). *Problem Solving Lessons Using Pattern Blocks for Elementary School Mathematics*. Tokyo, Japan: Toyokan Shuppan.
- Takahashi, A. (1995). *Fun Activities for 1st Grade Mathematics*. Tokyo, Japan: Meiji Tosho.

Translations (Japanese into English)

- Fujii, T., & Majima, H. (2020). *New Mathematics for Elementary School* (A. Takahashi & T. Watanabe, Trans.). Tokyo: Tokyo Shoseki.
- Fujii, T. & Itaka S. (Eds.). (2012). *Mathematics International (Grade 1 - Grade 9)* (A. Takahashi, Trans.). 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 English Publications

- 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: Rio de Janeiro 2018 (Volume 1: Plenary Lectures)* (pp: 1141-1172). World Scientific Publishing Company. <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). Springer International Publishing.
- Takahashi, A. (2015). *Lesson study: Nice-to-have, or must-have?* Presented at 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 through problem solving. *Independent Teacher (Fall 2014)*. National Association of Independent Schools. Retrieved from <http://www.nais.org/Magazines-Newsletters/ITMagazine/Pages/Teaching-Mathematics-Through-Problem-Solving.aspx>
- Takahashi, A. & Fu, B. (2010). Prospective and practicing teacher professional development with standards. *Replicating Exemplary Practices in Mathematics Education among APEC Economies*. APEC Human Resources Development Working Group Report. 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*. Presented at the 5th East Asia Regional Conference on Mathematics Education, Tokyo, Japan.
- Takahashi, A. (2010). *Prospective and Practicing Teacher Professional Development with Standards*. Presented at the APEC Conference on Replicating Exemplary Practices in Mathematics Education, 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*. 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*, 25, 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*, 25, 197-204.
- Takahashi, A., Watanabe, T., & Yoshida, M. (November, 2003). *Improving the Quality of Lesson Study: Learning to Become Kyozaikenkyu Practitioners*. Presented at the Lesson Study Conference 2003, Stamford, CT.
- 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*. Retrieved from http://www.rbs.org/lesson_study/conference/2002/papers/takahashi.shtml
- Lewis, C., Takahashi, A., Murata, A., & King, E. (April, 2003). *Developing "The Eyes to See Students:" Data Collection During Lesson Study*. Presented at the Research Pre-session of the Annual Meeting of the National Council of Teachers of Mathematics, San Antonio.
- Takahashi, A., & Murata, A. (April, 2002). *District-level Lesson Study: How Do Japanese Teachers Improve Their Teaching of Elementary Mathematics?* Presented at the Research Pre-session of the Annual Meeting of the National Council of Teachers of Mathematics, Las Vegas.

Other Japanese Publications

- Takahashi, A. (2005). Learning from lesson study in North America I-III. *Weekly Educational Public Opinion* 902, 903, & 904.
- Takahashi, A. (2004). The jyugyo kenkyu. *Elementary Mathematics Teaching Today*, 398.
- Takahashi, A. (2003). Teaching mathematics through small-group instruction is a good idea? *Kyoiku Kenkyu (Educational Research)*, 1220.
- Takahashi, A. (2003). Lesson study in North America I-III. *Weekly Educational Public Opinion*, 824, 825, & 826.

SELECTED PRESENTATIONS

International Conferences

- Takahashi, A. (June, 2019). *Lesson study, teaching through problem solving and Neriage: a virtuous circle*. Keynote presented at the 46e Colloque COPIRELEM – Lausanne, Lausanne, Switzerland.
- Takahashi, A. (May, 2018). *Designing curriculum material that facilitates teaching mathematics through problem solving*. Keynote presented at the 2018 International Society for Design and Development in Education (ISDDE) International Conference, Galway, Ireland.
- Takahashi, A. (November, 2017). *Teacher preparation at fuzoku schools: How the basics of Lesson Study are introduced to prospective teachers*. Presented at the World Association of Lesson Studies 2017 International Conference, Nagoya University, Nagoya, Japan.

- Takahashi, A. (July, 2017). *When and how teachers use mathematical knowledge for teaching*. Presented at the 41st Annual Meeting of the International Group for the Psychology of Mathematics Education (PME 41), National Institute of Education, Singapore.
- Takahashi, A. (March, 2017). *The open-ended approach*. Keynote and demonstration lessons at Math Counts 2017, National University of Ireland Maynooth, Maynooth, Ireland.
- Takahashi, A. (September, 2016). *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 at the World Association of Lesson Studies 2016 International Conference, University of Exeter, United Kingdom.
- Takahashi, A. (September, 2016). *Mechanism for supporting teacher learning in Collaborative Lesson Research (CLR)*. Presented at the World Association of Lesson Studies 2016 International Conference, University of Exeter, United Kingdom.
- Takahashi, A. (July, 2016). *Collaborative Lesson Research (CLR): Maximizing the impact of lesson study*. Presented at the 13th International Congress on Mathematical Education 2016, Topic Study Group 49, Hamburg, Germany.
- Takahashi, A. (April 2016). *Teaching through problem solving to promote mathematical thinking*. Keynote and demonstration lessons at Math Counts 2016, University College Dublin, Dublin, Ireland.
- Takahashi, A. (April, 2016). *Teaching through Problem-Solving (TiP): A Japanese approach for teaching mathematics*. Presented at the Annual Meeting of World Educational Research Association (WERA), Washington D.C.
- Takahashi, A. (November, 2015). *Collaborative Lesson Research: Maximizing the impact of lesson study*. Plenary lecture at the World Association of Lesson Studies 2015 International Conference, Khon Kaen University, Thailand.
- Takahashi, A. (November, 2015). *Use of LessonNote, a tablet-based application, for nurturing lesson study leaders: A case from the IMPULS Qatar University project*. Presented at the World Association of Lesson Studies 2015 International Conference, Khon Kaen University, Thailand.
- Takahashi, A. (May, 2015). *Lesson study: Nice-to-have or must-have*. Keynote address at the 7th East Asia Regional Conference on Mathematics Education (EARCOME7), Cebu City, Philippines.
- Takahashi, A. (November, 2014). *How can lesson study make an impact on student learning of mathematics?* Presented at the World Association of Lesson Studies 2014 International Conference, Indonesia University of Education, Bandung, Indonesia.
- Takahashi, A. (March, 2013). *A tablet-based application for supporting effective lesson study*. Presented at the 6th East Asia Regional Conference on Mathematics Education (EARCOME6), Prince of Songkla University, Phuket Campus, Phuket, Thailand.
- Takahashi, A. (November, 2012). *A U.S. lesson study network to spread Teaching through Problem-Solving*. Expert Seminar presented at the World Association of Lesson Studies 2012 International Conference, Nanyang Girls High School, Singapore.
- Takahashi, A. (November, 2012). *School-based lesson study at a Japanese elementary school*. Presented at the World Association of Lesson Studies 2012 International Conference, Nanyang Technological University, Singapore.
- Takahashi, A. (November 2012). *Developing tools and artifacts for supporting lesson study and instructional improvement*. Presented at the World Association of Lesson Studies 2012 International Conference, Nanyang Technological University, Singapore.
- Takahashi, A. (January, 2012). *Beyond show and tell: Neriage for teaching through problem solving: Ideas from Japanese problem solving approaches for teaching mathematics*. Presented at the University Sains Malaysia, Penang, Malaysia.

- Takahashi, A. (August, 2010). *Replicating exemplary practices in mathematics education among APEC economies*. Presented at the 5th East Asia Regional Conference on Mathematics Education, Tokyo, Japan.
- Takahashi, A. (March, 2010). *Prospective and practicing teacher professional development with standards*. Presented at the APEC Conference on Replicating Exemplary Practices in Mathematics Education in Koh Samui, Thailand.
- Takahashi, A. (November, 2009). *Good practices on capacity building in mathematics for teacher education*. Presented at the Forum on Best Practices on Human Resource Capacity Building in Science and Mathematics Education, Makati City, Metro Manila, Philippines.
- Takahashi, A. (July, 2009). *Promoting collaboration for initiating world class university: Research, resources, and programs*. Presented at the International Seminar And Workshop on World Class University (ISWCU2009), Yogyakarta State University, Yogyakarta, Indonesia.
- Takahashi, A. (July, 2008). *Beyond show and tell: Neriage for Teaching through Problem-Solving - Ideas from Japanese problem-solving approaches for teaching mathematics*. Presented at the 11th International Congress on Mathematical Education, Monterrey, Mexico.
- Takahashi, A. (May, 2008). *Implementing lesson study in schools in Singapore*. Keynote presented at the 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.
- Takahashi, A. (May, 2008). *Teaching mathematics through problem solving for primary grades*. Presented at the Mathematics Teachers Conference 2008 at the National Institute of Education, Singapore.
- Takahashi, A. (May, 2008). *Teaching mathematics through problem solving for lower secondary grades*. Presented at the Mathematics Teachers Conference 2008 at the National Institute of Education, Singapore.
- Takahashi, A. (October, 2007). *Improving teaching and learning mathematics through lesson study*. Keynote presented at the XL National Congress of the Mexican Mathematical Society, Monterrey, Mexico.
- Takahashi, A. (August, 2007). *Developing mathematical thinking through problem solving*. Keynote presented at the APEC International Symposium on Innovation and Good Practice for Teaching and Learning Mathematics through Lesson Study, Khon Kaen, Thailand.
- Takahashi, A. (June, 2006) *Implementing lesson study in schools and districts in North America*. Keynote presented at the APEC International Symposium on Innovation and Good Practice for Teaching and Learning Mathematics through Lesson Study, Khon Kaen, Thailand.
- Takahashi, A. (January, 2006). *Characteristics of Japanese Mathematics Lessons*. Keynote presented at the APEC-Tsukuba International Conference: Innovative Teaching of Mathematics through Lesson Study, Tokyo, Japan.
- Takahashi, A. (January, 2006). *Developing good mathematics teaching practice through lesson study: A U.S. perspective*. Presented at the APEC-Tsukuba International Conference: Innovative Teaching Mathematics through Lesson Study, Tokyo, Japan.

National Conferences

- Takahashi, A. (June, 2018). *Teaching math through problem solving and Collaborative Lesson Research: Supporting students to become independent learners*. Keynote presented at the Supporting Productive Struggle Conference Lewis-Clark State College, Lewiston, ID.
- Takahashi, A. (February, 2016). *Key ideas for effective professional development: Purposeful classroom observation and non-judgmental data collection*. Presented at the Mathematics and Science Research Institute (MSRI) Critical Issues in Mathematics Education (CIME) workshop series, Berkeley, CA.

- Takahashi, A. (April, 2010). *Teaching through Problem Solving to develop concepts in the context*. Presented at the National Council of Teachers of Mathematics (NCTM) 88th Annual Meeting, San Diego, CA.
- Takahashi, A. (April, 2009). *What we learned through lesson study: Ideas to design lessons for all*. Presented at the National Council of Teachers of Mathematics (NCTM) 87th Annual Meeting, Washington D.C.
- Takahashi, A. (April, 2008). *Neriage: An essential piece of a problem-based lesson*. Presented at the National Council of Teachers of Mathematics (NCTM) 86th Annual Meeting, Salt Lake City, UT.
- Takahashi, A. (January, 2008). *Rational lesson study in pre-service secondary mathematics teacher preparation: Alternative models of student teaching*. Presented at the Association of Mathematics Teacher Educators Twelfth Annual Conference, Tulsa, OK.

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 years
 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 years
 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 to the Discipline

Media Contributions

Green, E. (July 23, 2014). Why Do Americans Stink at Math? *The New York Times Magazine*.
<https://www.nytimes.com/2014/07/27/magazine/why-do-americans-stink-at-math.html>

National Advisory Boards

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 Panels

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 - Present)

World Association of Lesson Studies (WALS) Council Member (November 2011- Present)

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 Lausannoise Lesson Study (3LS), HEP Vaud, Lausanne, Switzerland (January 2014 - Present).

Specialist for 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 for the 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 for the 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).

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Affiliated Schools

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