Catherine Carol Lewis, Ph.D.

www.lessonresearch.net

PROFESSIONAL PREPARATION

Harvard University	Social Psychology	B.A., 1972
Stanford University	Developmental Psychology, Minor: Japanese	Ph.D., 1979
Harvard University	Postdoctoral: Educational Field Study Methods	1978-79
Duke University	Postdoctoral: Policy Studies	1979-1980

APPOINTMENTS

1999 -	Distinguished Research Scientist, Mills College at Northeastern University School of Education (formerly Mills College), Oakland, CA
2003	Visiting Professor, Tokyo University School of Education. Japan
1988 - 1999	Director of Formative Research, Developmental Studies Center, Oakland, CA
1981 - 1996	Adjunct Assistant to Associate Professor and Research Psychologist, Pediatrics and Psychiatry, University of California, San Francisco
1980 - 1981	Congressional Science Fellow, Legislative Staff to the U.S. Senate Subcommittee on Child and Human Development
1972 - 1974	Researcher and Translator, Japan Research Institute, Tokyo, Japan

SELECTED PEER-REVIEWED PUBLICATIONS

2023 Lewis, C., Friedkin, S., Liebert, S., & Houseman, N., Liebert, S., Ming, N. & Takahashi, A. (2023). Joyful, powerful mathematics for all: School-wide lesson study to support teaching through problem-solving. In E. Anderson (Ed.) *Continuous Improvement: A Leadership Process for School Improvement*, 17-39. Information Age Publishing.

2022 Lewis, C., Takahashi, A., Friedkin, S., Liebert, S., & Houseman, N. (2022). Sustained, effective school-wide Lesson Study: How do we get there? *Vietnam Journal of Education, 6*. https://vje.vn/index.php/journal/article/view/178

2022 Lewis, C., Henrick, E., Friedkin, S., & McGee, S. (2022). Model variation in inquiry processes. In D. Peurach, J.L Russell, L. Cohen-Vogel & W. Penuel (Eds.) *The foundational handbook on improvement research in education* (pp. 347–381). Rowman & Littlefield Publishers.

2017 Lewis, C. & Perry, R. Lesson study to improve fractions learning: A randomized, controlled trial. *Journal for Research in Mathematics Education, 48:2, 261-299.*

2016 Lewis, C. How does lesson study improve mathematics instruction? *ZDM 48*:4, 571-580. DOI: 10.1007/s11858-016-0792-x

2015 Lewis, C. What is improvement science? Do we need it in education? *Educational Researcher*, 44:1, 54-61.

2015 Lewis, C., & Perry, R. (2015). A Randomized trial of lesson study with mathematical resource kits: Analysis of impact on teachers' beliefs and learning community. In E. J. Cai & Middleton (Ed.), *Design, Results, and Implications of Large-Scale Studies in Mathematics Education*. New York: Springer, 133-155.

2014 Lewis, C., & Perry, R. Lesson study with mathematical resources: A sustainable model for locally-led teacher professional learning. *Mathematics Teacher Education and Development, 16*(1), 22-42.

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

2013 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.

2013 Goldsmith, L. T., Doerr, H. M., & Lewis, C. C. (2013). Mathematics teachers' learning: A conceptual framework and synthesis of research. *Journal of Mathematics Teacher Education, 16*(4). doi: 10.1007/s10857-013-9245-4

2012 Lewis, C., Perry, R., Friedkin, S., Fisher, L., Disston, J., & Foster, D. (2012). Building knowledge and professional community through lesson study. In J.M. Bay-Williams (Ed.) *2012 NCTM*. 245-258. Reston, VA: National Council of Teachers of Mathematics.

2012 Lewis, C., Perry, R., Friedkin, S., Roth, J. (2012) Improving Teaching *Does* Improve Teachers: Evidence from Lesson Study. *Journal of Teacher Education*. 63: 5. 368-375. DOI: 10.1177/0022487112446633

2011 Lewis, C., Perry, R., & Friedkin, S. (2011). Using Japanese Curriculum Materials to Support Lesson Study Outside Japan: Toward Coherent Curriculum. . *Educational Studies in Japan: International Yearbook, 6*, 5-19.

2009 Lewis, C., Perry, R., & Hurd, J. Improving mathematics instruction through lesson study: A theoretical model and North American case. *Journal of Mathematics Teacher Education*, *12*:4, 285-304. DOI 10.1007/s10857-009-9102-7

2008 Perry, R. & Lewis, C. What is successful adaptation of lesson study? *Journal of Educational Change,* 10: 4, 365-391. DOI 10.1007/s10833-008-9069-7

2006 Lewis, C., Perry, R. & Murata, A. How Should Research Contribute to Instructional Improvement? The Case of Lesson Study. *Educational Researcher*, *35*:3, 3-14.

2000 Linn, M., Lewis, C., Tsuchida, I., & Songer, N.B., Beyond fourth grade science: Why do US and Japanese students diverge? *Educational Researcher*, 29:3, 4-14.

2004 Murata, A., Lewis, C., and Perry, R. Teacher learning and lesson study: Developing efficacy through experiencing student learning. In D. McDougall. (Ed.). *Proceedings of the twenty-sixth 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. 985 – 992.

2000 Daniel Solomon, Victor Battistich, Marilyn Watson, Eric Schaps, & Catherine Lewis. A Six-District Study of Educational Change: Direct and Mediated Effects of the Child Development Project. *Social Psychology of Education*, *4*:1, 3-51.

2000 Battistich, V., Schaps, E., Watson, M., Solomon, D. & Lewis, C. Effects of the child development project on students' drug use and other problem behaviors. *Journal of Primary Prevention*, April 2000, 1-11.

2000 Linn, M., Lewis, C., Tsuchida, I., & Songer, N.B., Beyond fourth grade science: Why do US and Japanese students diverge?, *Educational Researcher*, 29:3, 4-14.

1997 Lewis, C. & Tsuchida, I. Planned educational change in Japan: The shift to student-centered elementary science. *Journal of Education Policy*, *12:5*, 313-331.

1991 Lewis, C., Pantell, R., Sharp, L. Increasing patient knowledge, satisfaction, and involvement: Randomized trial of a communication intervention. *Pediatrics*, *88*: 2, 351-358.

SELECTED BOOKS AND CHAPTERS

2025 Lewis, C., Takahashi, A., Friedkin, S., Houseman, N. & Liebert, S. (2025). *Teaching powerful problem-solving in math: A collaborative approach through lesson study*. Teachers College Press.

2023 Lewis, C., Ortega, C., Brown, B., Cortez, K. Carter, R. & Friedkin, S. Collaborative lesson research in the San Francisco Bay Area: The learning opportunities provided by public research lessons. In A. Takahashi & G. Wake (Eds.), *The mathematics practitioner's guidebook for collaborative lesson research*, Routledge. https://doi.org/10.4324/9781003375272

2023 Lewis, C., Stoddard, J., Lerner, J. & Sufrin, H. The promise and challenge of school-wide lesson study in the United States. *Paradigma,* Vol. XLIV, May.

2019 Lewis, C., Friedkin, S., Emerson, K., Henn, L. & Goldsmith, L. How does lesson study work? Toward a theory of lesson study process and impact. In R. Huang, A. Takahashi, & J. Da Ponte (Eds.) *Theory and practice of lesson study in mathematics: An international perspective*. Cham, Switzerland: Springer Nature, 13-38.

2015 Lewis, C. What have we learned about lesson study outside Japan? In I. Maitree & P. Wang-Iverson (Eds.), *Lesson study: Challenges in Mathematics Education*, World Scientific Publishing, 141-152.

2013 Lewis, C. How do Japanese teachers improve their instruction? Synergies of lesson study at the school, district, and national levels. Comissioned Paper: National Academy of Sciences, National Research Council Board on Science Education. Washington DC: National Academy Press, http://sites.nationalacademies.org/DBASSE/BOSE/DBASSE_084388 http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.676.3133&rep=rep1&type=pdf

2011 Lewis, C. & Hurd, J. (2011). *Lesson Study Step by Step: How Teacher Learning Communities Improve Instruction.* Portsmouth, NH: Heinemann. (In 8th printing)

2010 Perry, R. & Lewis, C. (2010). Building demand for research through lesson study. In M. K. Stein & C. Coburn (Eds.) *Research and practice in education: Building alliances, bridging the divide.* Lanham, MD: Rowman & Littlefield Publishing Group.

2010 Lewis, C., Akita, K., & Sato, M. Lesson study as a human science. In W. Penuel & K. O'Connor (Eds.). Learning research as a human science. *National Society for the Study of Education Yearbook.* Volume *109* Issue 1, 222-237.

2006 Lewis, C., Perry, R., Hurd, J., & O'Connell, M.P.). Lesson study comes of age in North America. *Phi Delta Kappan, 88*:4, 273-281.

2006 Lewis, C. Lesson study in North America: Progress and challenges. In M. Matoba & M.S. Arani, (Eds.), *Lesson study: International perspective on policy and practice*. Beijing: Education Science Publishing House, 7-36.

2005 Lewis, C. How do teachers learn during lesson study? In P. Wang-Iverson & M. Yoshida (Eds.) Building our understanding of lesson study. Philadelphia: Research for Better Schools, pp 77-84.

2004 Lewis, C., Perry, R. & Hurd, J. (2004). A deeper look at lesson study. *Educational Leadership*, 61:5, 18-23 Lewis, C., Perry, R. & Hurd, J. (2004). A deeper look at lesson study. *Educational Leadership*, 61:5, 18-23.

2004 Lewis, C. Lesson Study. In L.B. Easton (Ed.) *Powerful Designs for Professional Learning*. Oxford OH: National Staff Development Council.

2004 Lewis, C. What is a Science Text? In A. Peacock & A. Cleghorn (Eds.) *Missing the meaning: the development and use of print and non-print learning materials*. NY: Palgrave-Macmillan.

2004 Lewis, C. Japanese Educational Reform: Challenges and Puzzles for U.S. Educators. In R. Tsuneyoshi (Ed.) *Reconsidering Japanese Education: 21st Century Abilities in Japanese Context*. Graduate School of Education, the University of Tokyo.

2004 Murata, A., Lewis, C., and Perry, R. Teacher learning and lesson study: Developing efficacy through experiencing student learning. In D. McDougall. (Ed.). *Proceedings of the twenty-sixth 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. 985 – 992.

2002 Lewis, C. & Tsuchida, I. How Do Japanese and U.S. Elementary Science Textbooks Differ? Depth, Breadth, and Organization of Selected Physical

Science Units. In *National Standards and School Reform in Japan and the United States*, Teachers College, Columbia University. (Chapter 3,p.35-45)

2002 Lewis, C., Tsuchida, I., & Coleman S., The Creation of Japanese and U.S. Elementary Science Textbooks: Different Processes, Different Outcomes. In *National Standards and School Reform in Japan and the United States*, Teachers College, Columbia University. (Chapter 4,p.46 -66)

1998 Lewis, C., & Tsuchida, I. A lesson is like a swiftly flowing river: Research lessons and the improvement of Japanese education. *American Educator*, Winter, 14-17 & 50-52.

1995 Lewis, C. *Educating Hearts and Minds: Reflections on Preschool and Early Elementary Education in Japan*. New York: Cambridge University Press.

SYNERGISTIC ACTIVITIES

1999-present Support for lesson study activities in U.S. and abroad, including invited presentations at: National Science Foundation, National Academy of Sciences, NSF Math Science Partnerships, National Council of Teachers of Mathematics, U.S. Regional Education Labs, national education institutes in France, Singapore, Iceland

2006-present Research-based mathematical toolkits for lesson study on topics including fractions, area of polygons, proportional reasoning at https://lessonresearch.net/resources/content-resources/; courses to support lesson study https://lessonresearch.net/resources/courses/; video and resources on mathematics teaching through problem-solving https://lessonresearch.net/teaching-problem-solving/overview/

2001-present Website: www.lessonresearch.net published in 'Essential Websites for 21st Century Educational Leaders'; average 2500 new visitors per month.

2001-present Development and dissemination of many videos of elementary mathematics and science lesson study in US www.lessonresearch.net and Japan https://lessonresearch.net/resources/content-resources/, including school-wide lesson study https://lessonresearch.net/resources/schoolwide-lesson-study/overview/

2010-present President (2021-2025) and Vice-president (2015-2020), World Association of Lesson Study https://www.walsnet.org/

Present	Editorial Boards: *International Journal of Lesson and Learning Studies*; *Journal of Teacher Education*, *Review of Educational Research*

SELECTED HONORS AND GRANTS

2015	Grant from U.S. Department of Education (NCER-MS) 7/1/ 2015-6/31/2019. Improvement of Elementary Fractions Instruction: A Randomized, Controlled Trial Using Lesson Study and a Fractions Resource Kit. (Principal Investigator, 4 year grant).
2014	Grant from Bill and Melinda Gates Foundation. 11/1/2014-12/30/2018. School-wide Lesson Study (Principal Investigator, 4-year grant).
2014	Review of 643 mathematics professional learning studies identified fractions lesson study trial conducted by Lewis & Perry as one of only two studies to meet scientific criteria of What Works Clearinghouse and positively impact students' mathematical proficiency (Gersten, Taylor, Keys et al., 2014).
2011	Grant from U.S. Department of Education (NCER-MS) 9/1/ 2011-8/31/2014. Focused and Coherent Elementary Mathematics: Japanese Curriculum Resources for U.S. Teachers. (Principal Investigator, 3 year grant).
2011	Grant from U.S. Department of Education (NCER-MS) 9/1/ 2011-8/31/2014. Japanese Structured Problem-Solving as a Resource for U.S. Teachers. (Principal Investigator, 3 year grant).
2012	Grant from Toyota Foundation. 4/1/2012-3/31/2014. "Lesson Study: Development of a University-Regional Model" (Principal Investigator, 2 year grant).
2007	Grant from U.S. Department of Education (IES). "Improving the Mathematical Content Base of Lesson Study." (Principal Investigator, 4 year grant)
2007	National Science Foundation Grant. "Mathematics Teachers' On-the-Job Learning: A Synthesis of Research and Conceptual Frameworks" (Principal Investigator, 2 year grant)

2006	National Science Foundation Grant. “Building a Knowledge Base for Teaching: Design and Test of Research-based Toolkits for Mathematics Lesson Study” (Principal Investigator, 3 year grant)
2004	Selected as Reischauer Fellows Lecturer on Japanese Education. Stanford Program in International and Cross-Cultural Education, Stanford University, Video Distinguished Lecture Series.
2002	National Science Foundation Grant. “Lesson Study: Case Studies of an Emerging Reform.” (Principal Investigator, 3 year grant)
2002	"Outstanding Academic Book Award" from the American Library's Association Choice for 2001, for the volume "Caring Classrooms / Intelligent Schools: The Social Emotional Education of Young Children."
1999	Distinguished Achievement Award, Association of Educational Publishers, for article “The Basics in Japan: The Three C’s.”
1998	National Science Foundation Grant. Spreading Inquiry-Based Science: Case Studies of Promising Models. (Principal Investigator, 3-year grant).
1996	MacArthur/Spencer Professional Development Research Grant: Educational Change and the Role of Teacher Community (Principal Investigator, 3-year grant).
1995	National Science Foundation Grant, Innovations in Science Education: Learning from Case Studies (Principal Investigator, 3-year grant).
1995	*Educating Hearts and Minds* chosen as an outstanding academic book of 1995, American Library Association’s journal *Choice*.
1992	Abe Fellowship. Awarded by the Social Science Research Council, American Council of Learned Societies, and Center for Global Partnership. (2-year fellowship)
1991	Nippon Life Insurance Foundation Grant. Understanding Each Other’s Educational Practice (3 years, Co-Principal Investigator).
1984	Award for Outstanding Research Article of 1984. Society of Comparative and International Educators.

1984	Greta Simpson Award (Department of Psychiatry), University of California, San Francisco.
1980 - 1981	Congressional Science Fellowship, American Association for the Advancement of Science.
1978	First Prize, Japanese Ministry of Education, International Speech Contest of Japanese as a Foreign Language.