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~~ EDUCATION AND WORK EXPERIENCE ~~

EDUCATION

May 2010

University of Missouri, Columbia, MO

Ph.D., Curriculum and Instruction (emphasis Mathematics Education, content concentration Mathematics)

Articulated Learning Trajectories Related to the Development of Algebraic

Thinking that Follow from Patterning Concepts in Middle Grades Mathematics

Committee: Dr. Douglas A. Grouws (chair), Dr. Robert E. Reys, Dr. James E. Tarr, Dr. Oscar Chavéz, and Dr. Jay P. Scribner

May 2002

Western Illinois University, Macomb, IL

M.S., Mathematics

May 2000

Western Illinois University, Macomb, IL

B.S., Mathematics and Political Science

PROFESSIONAL EXPERIENCE

2016-present

University of Nevada, Las Vegas (Las Vegas, NV)

Associate Professor, Department of Teaching and Learning

Graduate Coordinator, Department of Teaching and Learning

Teach undergraduate and graduate courses in mathematics education. Conduct research in mathematics education, specifically in curriculum content analyses, and secondary preservice and in-service mathematics teachers misconceptions of mathematics concepts. Advise students in the Ph.D. program in mathematics education. Advise students in the M.Ed. and M.S. programs in mathematics education and Graduate Licensure Programs in Secondary Education. Serve on committees of M.S., M.Ed., and Ph.D. students in other departments (e.g., Mathematics, Educational Psychology). Coordinate post-baccalaureate licensure and masters degree programs in the Department of Teaching and Learning.

2009-2015

University of Nevada, Las Vegas (Las Vegas, NV)

Assistant Professor, Department of Teaching and Learning (formerly Curriculum & Instruction)

Teach undergraduate and graduate courses in mathematics education. Conduct research in mathematics education, specifically in curriculum content analyses, and secondary preservice and in-service mathematics teachers misconceptions of mathematics concepts. Advise students in the Ph.D. program in mathematics education. Advise students in the M.Ed. and M.S. programs in mathematics education and Graduate Licensure Programs in Secondary Education. Serve on committees of M.S., M.Ed., and Ph.D. students in other departments (e.g., Mathematics, Educational Psychology)

- 2008-2009** **Western Kentucky University (Bowling Green, KY)**
Assistant Professor, Department of Mathematics and Computer Science
Taught undergraduate courses in mathematics for preservice elementary and middle school teachers. Conducted research in areas of curriculum content analyses, and problem solving abilities and strategies of preservice elementary and middle grades mathematics teachers.
- 2004-2008** **University of Missouri (Columbia, MO)**
Graduate Research Assistant and Graduate Teaching Assistant, Departments of Educational Leadership and Policy Analysis; and Learning, Teaching, and Curriculum. Doctoral Fellow, Center for the Study of Mathematics Curriculum.
Conducted research on Alternative Teacher Certification Programs in the State of Missouri. Conducted research on alignment of state mathematics standards documents nationwide. Taught elementary methods courses for preservice elementary mathematics teachers. Assisted in the delivery of coursework for preservice secondary mathematics teachers, and professional development for in-service secondary mathematics teachers.
- 2002-2004** **Cottey College (Nevada, MO)**
Assistant Professor, Department of Mathematics
Taught mathematics courses to undergraduate students, including College Algebra, Trigonometry, and Calculus I, II, and III.
- Summers 2003 and 2004** **The Johns Hopkins Univeristy Center for Talented Youth (Lafayette College Campus, Easton, PA)**
Instructor, Mathematics Modeling (Mathematical Excursions)
Taught a course on mathematics modeling to students in Grades 7-11. Topics included mathematics of politics, mathematics of apportionment, mathematics of fair division, mathematics of fractal geometry, and general problem solving situations and strategies.
- 2000-2002** **Western Illinois Univeristy (Macomb, IL)**
Graduate Assistant and Graduate Teaching Assistant, Department of Mathematics
Taught Intermediate Algebra courses. Assisted with preparation and delivery of professional development with in-service mathematics teachers. Tutored middle and high school students through America Counts program.
- 2000-2002** **Spoon River Community College (Macomb, IL)**
Adjunct Instructor, Department of Mathematics
Taught mathematics courses including Developmental Mathematics, and Beginning and Intermediate Algebra.

~~ SCHOLARSHIP ~~

REFEREED JOURNAL PUBLICATIONS

Olson, T. A., & Olson, M. (2016). Is there an app for that? *Teaching Children Mathematics*, 23(3), 136-137.

Olson, T. A. (2016). Preservice Secondary Teachers Perceptions Of College-Level Mathematics Content Connections With The Common Core State Standards for Mathematics. *Investigations in Mathematics Learning*, 8(3), 1-15.

Stohlmann, M., Maiorca, C., & **Olson, T. A.** (2015). Preparing preservice secondary teachers to teach mathematical modeling with the common core state standards. *The Mathematics Educator*, 24(1), 21-43.

Olson, T. A., & Olson, M., & Capen, S. (2014). The Common Core standards for mathematical practice: Teachers initial perceptions and implementation considerations. *The NCSM Journal of Mathematics Education Leadership*, 15(2), 11-20.

Olson, T. A., & Olson, M. (2012-2013). The importance of context in presenting fraction problems to help students formulate models and representations as solution strategies. *The NCSM Journal of Mathematics Education Leadership*, 14(2), 38-47.

Olson, T. A., Regis, T. P., & Papick, I. J. (2010). Pattern problems in middle grade mathematics curricula. *Investigations in Mathematics Learning*, 2(3), 1-23.

Papick, I. J., **Olson, T. A.**, & Regis, T. P. (2010). Analyzing numerical and geometric pattern problems in middle grade mathematics curricula. *Investigations in Mathematics Learning*, 2(3), 24-42.

BOOKS AND BOOK CONTRIBUTIONS

Bezuk, N., Bay-Williams, J., Clements, D. H., Martin, W. G., Aguirre, J., Boerst, T., ... White, D. Y. (In Press). *AMTE Standards for Mathematics Teacher Preparation*. Association of Mathematics Teacher Educators.

Olson, T. A., Olson, M., & Slovin, H. (2015). *Putting essential understanding of ratios and proportions into practice in grades 6-8*. Reston, VA: National Council of Teachers of Mathematics.

Olson, T. A. (2014). Articulated learning trajectories: A framework for mathematical content analyses. In A. P. Maloney, J. Confrey, & K. H. Nguyen (Eds.), *Learning over time: Learning trajectories in mathematics education* (pp. 187-226). Charlotte, NC: Information Age Publishing.

Olson, T. A., & Roderick, N. R. (2012). Beyond the common denominator: Exposing semiotic (dis)unity in mathematics textbooks. In H. Hickman & B. J. Porfilio (Eds.), *The new politics of the textbook: A project of critical examination and resistance* (pp. 151-162). Rotterdam, Netherlands: Sense.

Reys, B., Dougherty, B., **Olson, T.**, & Thomas, A. (2012). Common core state standards for middle grades mathematics: Implications for curriculum and instruction. In C. Hirsch, G. Lappan, & B. Reys (Eds.), *Curriculum issues in an era of common core state standards for mathematics* (pp. 33-45). Reston, VA: National Council of Teachers of Mathematics.

Olson, T. A., Papick, I. J., & Regis, T. P. (2009). Some Perspectives on Patterns in Middle School Mathematics Curricula. In V. Akis (Ed.), *Essays on Mathematics and Statistics* (pp. 155-168). Athens, Greece: Athens Institute for Education and Research.

Reys, B. J., Dingman, S., **Olson, T.**, Sutter, A., Teuscher, D., & Chval, K. (2006). Analysis of number and operation grade-level learning expectations in state standards documents. In B. J. Reys (Ed.), *The Intended Mathematics Curriculum as Represented in State-Level Curriculum Standards: Consensus or Confusion?* (pp. 15-57). Charlotte, NC: Information Age Publishing.

Sandall, B., Olson, M., & **Olson, T.** (2006). *Algebra Practice*. Quincy, IL: Mark Twain Media, Inc.

Sandall, B., Olson, M., & **Olson, T.** (2006). *Algebra II Practice*. Quincy, IL: Mark Twain Media, Inc.

Sandall, B., Olson, M., & **Olson, T.** (2006). *Geometry Practice*. Quincy, IL: Mark Twain Media, Inc.

Sandall, B., Olson, M., & **Olson, T.** (2006). *Pre-Algebra Practice*. Quincy, IL: Mark Twain Media, Inc.

Olson, T. (2004). A beginning teacher's testimonial. In M. F. Chappell, J. F. Schielack, & S. Zagorski (Eds.), *Empowering the beginning teacher of mathematics in elementary school* (p. 21). Reston, VA: National Council of Teachers of Mathematics.

REFEREED CONFERENCE PUBLICATIONS

Teuscher, D., Kasmer, L., **Olson, T.**, & Dingman, S. (2016). Geometric transformations in new U.S. middle grades textbooks: Validity of mathematics. *Paper presented at the 13th International Congress on Mathematics Education*. Hamburg, Germany.

Olson, T., Olson, J., Olson, M., Capen, S., Shih, J., Adkins, A., DeVaul, L. & Thomas, A. (2015). Exploring 1:1 Tablet Technology Settings: A Case Study Of The First Year Of Implementation In Middle School Mathematics Classrooms. In D. Slykhuis & G. Marks (Eds.) *Proceedings of Society for Information Technology & Teacher Education International Conference 2015* (pp. 2802-2807). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).

Olson, T. A., & Olson, M. (2015). Investigations into mathematics teachers' propositional logic capabilities. In M. Che & K. Adolphson (Eds.), *Proceedings of the Research Council on Mathematics Learning 42nd Annual Meeting* (pp. 50-57). Las Vegas, NV: Research Council on Mathematics Learning.

Lamberg, T., Lakey, P., Kepplemann, E., **Olson, T.**, & Shih, J. (2015). Nevada mathematics project: Evolution of a statewide professional development partnership. In M. Che & K. Adolphson (Eds.), *Proceedings of the Research Council on Mathematics Learning 42nd Annual Meeting* (pp. 101-108). Las Vegas, NV: Research Council on Mathematics Learning.

Olson, T. A., Olson, M., Slovin, H., & Venenciano, L. (2014). Task alignment to the common core: How our solution lens matters. In G. T. Matney & M. S. Che (Eds.), *Proceedings of the Research Council on Mathematics Learning 41st Annual Meeting* (pp. 191-199). San Antonio, TX: Research Council on Mathematics Learning.

Olson, T. A., & Olson, M., & Capen, S. (2013). Perceptions of the standards of mathematical practice and plans for implementation. In S. Reeder & G. Matney (Eds.), *Proceedings of the Research Council on Mathematics Learning 40th Annual Meeting* (pp. 93-100). Tulsa, OK: Research Council on Mathematics Learning.

Olson, T. A., & Olson, M. (2012). Examining the role of instruction in mathematics to prepare preservice teachers for mathematics instruction in grades 7-9. In S. Reeder (Ed.), *Proceedings of the Research Council on Mathematics Learning 39th Annual Meeting* (pp. 67-74). Charlotte, NC: Research Council on Mathematics Learning.

Olson, T. A., & Olson, M. (2012). Preservice teachers' perceptions of where instruction in college courses emphasizes connections to middle grades mathematics. In L. R. Van Zoest, J.-J. Lo, & J. L. Kratky (Eds.), *Proceedings of the 34th annual meeting of the North American Chapter of the*

International Group for the Psychology of Mathematics Education (p. 790). Kalamazoo, MI: Western Michigan University.

Olson, T. A., & Olson, M. (2011) Comparing secondary teachers' models for and perceptions of their solutions involving fractions and algebraic structures. In L. R. Wiest & T. Lamberg (Eds.), *Proceedings of the 33rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol. VII, pp 1233 – 1242). Reno, NV: University of Nevada, Reno.

Sjostrom, M. P., Olson, M., & **Olson, T. A.** (2010). An examination of the understanding of three groups of preservice teachers on fraction worded problems. In P. Brosnan, D. B. Erchick, & L. Flevares (Eds.), *The proceedings of the 32nd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (Vol. VI, pp. 1139-1147). Columbus, OH: The Ohio State University.

OTHER PUBLICATIONS

Barlow, A. T., & **Olson, T. A.** (2016). Comments from the editors. *The NCSM Journal of Mathematics Education Leadership*, 17(2), 1-2.

Barlow, A. T., & **Olson, T. A.** (2016). Comments from the editors. *The NCSM Journal of Mathematics Education Leadership*, 17(1), 1-2.

Barlow, A. T., & **Olson, T. A.** (2015). Comments from the editors. *The NCSM Journal of Mathematics Education Leadership*, 16(2), 1-2.

Olson, T. A. (2012). “Meaningful” Brownell discussions with graduate students. *Connection points: The Newsletter of the Research Council on Mathematics Learning*, 37(2), 4-6.

Olson, T. A., & Olson, M. (2013). Teachers’ perceptions of and plans for implementation of the standards for mathematical practices found in the common core state standards for mathematics. *Proceedings of the 11th Annual Hawaii International Conference on Education*. Honolulu, HI: HICE.

Olson, T. A., & Olson, M. (2012). When are key mathematical concepts, grade 7-12, explored in preservice secondary mathematics teacher preparation? *Proceedings of the 10th Annual Hawaii International Conference on Education* (pp. 565-572). Honolulu, HI: HICE.

Olson, T. A. (2011). Examining how the enacted and assessed curriculum can be informed by studies of the textbook curriculum using the articulated learning trajectory construct. *Proceedings of the 9th annual Hawaii International Conference on Education* (pp. 546-551). Honolulu, HI: HICE.

Lee, M. H., **Olson, T. A.**, & Scribner, J. P. (2006, May). *Exploring alternative teacher certification policy and practice through an examination of novice science teachers*. Paper presented at the STEM-ACT Conference on Alternative Certification of Science Teachers, Arlington, VA. Available at <http://www.stemtec.org/act>

MANUSCRIPTS

Olson, T. A., & Olson, M. (revise and resubmit). Who is the better kicker? *Mathematics Teacher*.

Olson, T. A., & Ito, T. (revise and resubmit). Calculus connections to common core geometry. *MathAYMATIC Educator*.

REFEREED CONFERENCE PRESENTATIONS

International Conferences

Teuscher, D., Kasmer, L., **Olson, T.**, & Dingman, S. (2016, July). *Isometries in new U.S. middle grades textbooks: How are isometries and congruence related?* Paper presented at the 13th International Congress on Mathematical Education. Hamburg, Germany.

Olson, T. A., & Olson, M. (2015, March). *Exploring 1:1 tablet technology settings: A case study of the first year of implementation in middle school mathematics classrooms.* Presentation at the Society for Information Technology and Teacher Education 26th International Conference. Las Vegas, NV.

Olson, T. A., & Olson, M. (2013, January). *Teachers' perceptions of and plans for implementation of the standards for mathematical practices found in the common core state standards for mathematics.* Paper Presented at the 11th Annual Hawaii International Conference on Education. Honolulu, HI.

Olson, T. A. & Olson, M. (2012, October). *Preservice teachers' perceptions where instruction in college courses emphasizes connections to middle grades mathematics.* Poster Presented at the 34th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Kalamazoo, MI.

Olson, T. A., & Olson, M. (2012, January). *When are key mathematical concepts, grade 7-12, explored in preservice secondary mathematics teacher preparation?* Paper presented at the 10th Annual Hawaii International Conference on Education, Honolulu, HI.

Olson, T. A. & Olson, M. (2011, October) *Comparing secondary teachers' models for and perceptions of their solutions involving fractions and algebraic structures.* Paper presented at the 33rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Reno, NV.

Olson, T. A. (2011, January). *Examining how the enacted and assessed curriculum can be informed by studies of the textbook curriculum using the articulated learning trajectory construct.* Paper presented at the 9th annual Hawaii International Conference on Education, Honolulu, HI.

Olson, T. A., & Olson, M. (2011, January). *Comparing preservice teachers' view of the importance of understanding fractions with their ability to adequately explain solutions to word problems involving fractions.* Paper presented at the 9th annual Hawaii International Conference on Education, Honolulu, HI.

Sjostrom, M. P., Olson, M., & **Olson, T. A.** (2010, October). *An examination of the understanding of three groups of preservice teachers on fraction worded problems.* Paper presented at the 32nd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Columbus, OH.

Papick, I. J., **Olson, T. A.**, & Regis, T. P. (2007, June). *Some perspectives on patterns in middle school mathematics curricula.* Paper presented at the Athens Institute for Educational Research (ATINER) International Conference on Mathematics and Statistics, Athens, Greece.

National Conferences

Olson, T. A., & Adkins, A. B. (2016, January). *Case-study reflections of inservice teachers on coursework in the use of technology in mathematics classrooms.* Presentation at the Twentieth Annual Conference of the Association of Mathematics Teacher Educators (AMTE), Irvine, Ca.

Dingman, S., Teuscher, D., **Olson, T.**, & Kasmer, L. (2015, April). *CCSSM-aligned middle grades textbooks: How do they compare?* Poster presentation at the 2015 NCTM Research Conference, Boston, MA.

Maiorca, C., & **Olson, T. A.** (2015, April). *Making mathematics more relevant through integrated STEM*. Presentation at the 2015 NCTM Annual Meeting & Exposition, Boston, MA

Olson, T. A., Olson, M., Slovin, H. (2015, April). *Building middle grades ratio, proportion, and proportional reasoning essential understandings*. Presentation at the 2015 NCTM Annual Meeting & Exposition, Boston, MA

Olson, T. A., Teuscher, D., Dingman, S., & Kasmer, L. (2015, April). *Shifting opportunities to teach and learn in common core “aligned” textbooks: Implications for depth and equity*. Presentation at the National Council of Supervisors of Mathematics 47th Annual Conference, Boston, MA.

Lamberg, T., Lakey, P., Keppleman, E., **Olson, T.**, & Shih, J. (2015, February). *Nevada mathematics project: Evolution of a statewide professional development partnership*. Presentation at the Research Council on Mathematics Learning 42nd Annual Meeting, Las Vegas, NV.

Maiorca, C., & **Olson, T.** (2015, February). *Investigations into teachers’ perspectives on mathematical modeling*. Presentation at the Research Council on Mathematics Learning 42nd Annual Meeting, Las Vegas, NV.

Olson, T. A., & Olson, M. (2015, February). *Investigations into mathematics teachers’ propositional logic capabilities*. Presentation at the Research Council on Mathematics Learning 42nd Annual Meeting, Las Vegas, NV.

Kasmer, L., Dingman, S., **Olson, T. A.**, & Teuscher, D. (2015, February). *Transformational geometry in new middle grades textbooks: What do teachers need to know?* Presentation at the Association of Mathematics Teachers Educators Nineteenth Annual Conference, Orlando, FL.

Olson, M., **Olson, T. A.**, Slovin, H., Venenciano, L., & Olson, J. (2015, February). *Connecting ones own solution strategy with teaching mathematics: Impressions from prospective teachers*. Presentation at the Association of Mathematics Teachers Educators Nineteenth Annual Conference, Orlando, FL.

Olson, T. (2014, April). *Implementing strategic use of tools in teaching for algebraic readiness in middle and early high school*. Presentation at the National Council of Teachers of Mathematics Annual Meeting’s Saturday Program for Louisiana and Arkansas Educators, New Orleans, LA.

NCTM Professional Development Services Committee. (2014, April). *NCTM PDS committee: Building mathematics learning communities using NCTM reflection guides*. Presentation at the National Council of Teachers of Mathematics Annual Meeting, New Orleans, LA.

Stohlmann, M., Maiorca, C., & **Olson, T.** (2014, April). *The mathematics of casino/hotel management*. Presentation at the National Council of Teachers of Mathematics Annual Meeting, New Orleans, LA.

Olson, T. A., Olson, M., Slovin, H., & Venenciano, L. (2014, February). *Task alignment to the common core: How our solution lens matters*. Presentation at the Research Council on Mathematics Learning 41st Annual Meeting, San Antonio, TX.

Kasmer, L. A., Teuscher, D., Dingman, S., **Olson, T. A.**, & Gadd, C. (2014, February). *Alignment of new middle grades mathematics textbooks: What should teachers (preservice and inservice)*

understand? Presentation at the Association of Mathematics Teacher Educators (AMTE) Eighteenth Annual Conference, Irvine, CA.

Olson, T. A., Olson, M., & Olson, J. (2014, February). *Comparing preservice teachers' ratings of the effectiveness of their explanations of word problems involving fractions with researchers' ratings of their explanations*. Presentation at the 17th Annual Meeting of the American Association of Behavioral and Social Sciences (AABSS), Las Vegas, NV.

Olson, T. A., Shih, J., Thomas, A., DeVual, L., & Adkins, A. B. (2014, February). *iPad apps utilized in middle school mathematics classrooms with a 1:1 setting*. Presentation at the Association of Mathematics Teacher Educators (AMTE) Eighteenth Annual Conference, Irvine, CA.

Olson, T. A. & Olson, M. (2013, March). *Perceptions of the standards of mathematical practices and plans for implementation*. Presentation at the Research Council on Mathematics Learning 40th Annual Meeting, Tulsa, OK.

Olson, T. A. & Shih, J. (2013, January). *A framework for in-service teacher content analyses of textbooks regarding the CCSSM content standards*. Presentation at the Association of Mathematics Teacher Educators Seventeenth Annual Conference, Orlando, FL.

Newton, J., Dingman, S., Teuscher, D., Kasmer, L., Reys, B., **Olson, T.**, et al. (2012, April). *Investigations into Common Core State Standards for Mathematics (CCSSM)*. Presentation at the Research Pre-session of the National Council of Teachers of Mathematics Annual Meeting, Philadelphia, PA.

Olson, T. A., & Olson, M. (2012, March). *Examining the role of instruction in mathematics to prepare preservice teachers for mathematics instruction in grades 7-9*. Paper presented at the Research Council on Mathematics Learning 39th Annual Meeting, Charlotte, NC.

AMTE Communications Task Force. (2012, February). *Exploring a communication structure for connecting AMTE members*. Presentation at the Association of Mathematics Teacher Educators Sixteenth Annual Conference, Fort Worth, TX.

Olson, T. A. (2011, April). *Articulated learning trajectories: A method for examining the textbook curriculum*. Presentation at the Research Pre-session of the National Council of Teachers of Mathematics Annual Meeting, Indianapolis, IN.

Olson, T. A., & Shih, J. C. (2011, January). *Articulated learning trajectories in middle-grades mathematics textbooks: Implications for teacher education programs and coursework*. Presentation at the Association of Mathematics Teacher Educators Fifteenth Annual Conference, Irvine, CA.

Shih, J., **Olson, T. A.**, & MacDonald, S. (2011, January). *Elementary mathematics education content and methods courses: Alignment among institutions' programs*. Presentation at the Association of Mathematics Teacher Educators Fifteenth Annual Conference, Irvine, CA.

Olson, T. A., Marchionda, H., Moody, V., Tassell, J. L., & Weidemann, W. (2010, January). *Mathematics Content Courses for Elementary and Middle Grades Teachers: Identifying the Necessary and the Sufficient*. Presentation at the Association of Mathematics Teacher Educators Fourteenth Annual Conference, Irvine, CA.

Tassell, J. L., Marchionda, H., & **Olson, T. A.** (2010, January). *Moving Beyond Word Problems: What is True Problem Solving?* Presentation at the Association of Mathematics Teacher Educators Fourteenth Annual Conference, Irvine, CA.

Olson, T. A., Regis, T. P., Papick, I. J. (2008, January). *Perspectives on the Exploration of Patterns in Middle School Mathematics Curricula and Related Implications for Teacher Education.* Presentation at the Association of Mathematics Teacher Educators Twelfth Annual Conference, Tulsa, OK.

Lannin, J., Chval, K., Arbaugh, A., Appova, A., Nivens, R., **Olson, T.**, & Pomerence, S. (2007, January). *Studying alternative certification in mathematics: A tale of two research projects.* Presentation at the Association of Mathematics Teacher Educators Eleventh Annual Conference, Irvine, CA.

Nivens, R. A., **Olson, T. A.**, Teuscher, D., & Regis, T. (2006, April). *Applying navigations series activities in your class.* Presentation at the National Council of Teachers of Mathematics Annual Meeting, St. Louis, MO.

Teuscher, D., Sutter, A., Reys, B., Dingman, S., & **Olson, T.** (2006, April). *An analysis of state frameworks: Computation of numbers and role of calculators.* Presentation at the National Council of Teachers of Mathematics Annual Meeting, St. Louis, MO.

Reys, B. J., Dingman, S., **Olson, T.**, Sutter, A., & Teuscher, D. (2006, April). *Examining state-level mathematics curriculum frameworks: What is the national number and operation curriculum in the United States?* Presentation at the National Council of Supervisors of Mathematics 38th Annual Conference, St. Louis, MO.

Reys, B. J., Lappan, G., Kim, O., Dingman, S., Teuscher, D., Sutter, A., **Olson, T.**, et al. (2006, April). *The U.S “national” curriculum: Analysis of state mathematics standards.* Presentation at the Research Pre-session of the National Council of Teachers of Mathematics Annual Meeting, St. Louis, MO.

Reys, B., Dingman, S., **Olson, T.**, Sutter, A., & Teuscher, D. (2006, January). *Examining state-level mathematics curriculum frameworks: What is the national number and operation curriculum in the US?* Presentation at the Association of Mathematics Teacher Educators Tenth Annual Conference, Tampa, FL.

Regis, T., Teuscher, D., **Olson, T.**, & Nivens, R. (2006, January). *For doctoral students: Continuing to grow... working together to do so.* Presentation at the Association of Mathematics Teacher Educators Tenth Annual Conference, Tampa, FL.

Regional, State, and Local Conferences

Olson, T. A., Olson, M., & Sjoström, M. P. (2011, January). *Examining explanations provided in solving worded fraction problems: Comparing the thinking of pre-service teachers to those of students in grade 5.* Poster Presented at the 2011 Hawaii Educational Research Association Conference, Honolulu, HI.

Olson, M., Olson, J., & **Olson, T. A.** (2010, September). *Formative assessment in a networked classroom.* Presentation at the Mathematics Education: Connecting Research to Practice Conference, Bakersfield, CA.

Olson, M., Olson, J., & **Olson, T. A.** (2010, September). *Results and discussions of a two-year research project using TI-Navigator in middle grades mathematics instruction.* Presentation at the Mathematics Education: Connecting Research to Practice Conference, Bakersfield, CA.

Olson, M., Olson, J., & **Olson, T. A.** (2010, September). *Using the TI-Nspire to identify and explore definitional considerations among quadrilaterals through the examination of midpoint quadrilaterals*. Presentation at the Mathematics Education: Connecting Research to Practice Conference, Bakersfield, CA.

Nivens, R., & **Olson, T.** (2008, November). *From one graduate program into two different colleges*. Presentation at the Fourth Annual Conference of the Appalachian Association of Mathematics Teacher Educators, Williamsburg, KY.

Regis, T. P., Nivens, R., **Olson, T.**, & Teuscher, D. (2006, September). *Using Navigations activities with data analysis and probability*. Presentation at the Regional Conference of the National Council of Teachers of Mathematics, Chicago, IL.

Dingman, S. & **Olson, T.** (2005, December). *State curriculum standards: What do they tell us about fraction concepts and computation?* Presentation at the Missouri Council of Teachers of Mathematics Annual Meeting, Columbia, MO.

OTHER CONFERENCE PRESENTATIONS

International Conferences

Olson, T. A. (2012, October) *Analyzing Intended Mathematical Experiences in Various Mathematics Education Literature Sources*. Presentation at the DIME Working Group (WG2): Collaborating to Investigate Lived and Living Mathematical Experiences at the 34th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Kalamazoo, MI. Invited.

National, Regional, Local Conferences

Olson, T. A. (2016, August). *Students and teachers as problem solvers in a modern world*. Keynote presentation at the Northwest Nevada Math and Science Conference, Reno, NV. Invited.

Olson, T. A. & Shih, J. (2012, February). *Regarding iPad/FUSE textbook use and emerging research*. Presentation at the Center for Study of Mathematics Curriculum Research Conference, Phoenix, AZ. Invited.

Olson, T. A., & Shih, J. (2010, November). *Articulated learning trajectories and the enacted curriculum*. Poster presented at the Conference on Research on the Enacted Curriculum, Tampa, FL.

Olson, T. A. & Regis, T. P. (2009, February). *Pattern problems in middle grades mathematics teacher education*. Poster presented at the CSMC Curriculum Research Conference, Phoenix, AZ.

Regis, T., Papick, I., & **Olson, T.** (2007, February). *Some perspectives on patterns in middle school mathematics curricula*. Poster presented at the CSMC Curriculum Research Conference, Phoenix, AZ.

Olson, T. & Nivens, R. (2006, February). *Over a century of curriculum goods at your disposal*. Poster presented at the CSMC Curriculum Research Conference, Phoenix, AZ.

Olson, T. (2005, February). *Analysis of state mathematics curriculum documents: Fraction concepts*. Poster presented at the CSMC Curriculum Research Conference, Mesa, AZ.

GRANTS, GRANT PROPOSALS, AND SCHOLARSHIPS

Funded and Pending, by Date

Keppelmann, E. (PI), Lakey, P. (Co-PI), Lamberg, T. (Co-PI), & **Olson, T.A.** (Co-PI). (Submitted, December 2016). *Nevada mathematics project – Secondary science/math integration*. Nevada Department of Education Mathematics and Science Partnership Program, \$90,518, January 2017 – May 2018.

Olson, T. A. (PI), Stohlmann, M. (Co-PI), & Bellomo-Warren, C. (Co-PI). (awarded, January 2017). *Transitions in mathematics for middle school – Cohort II*. Nevada Collaborative Teaching Improvement Program (NeCoTIP) through the U.S. Department of Education, \$271,543, January 2017 – September 2018.

Olson, T. A. (PI), Dingman, S., (PI), Teuscher, D. (PI), & Kasmer, L. (PI). (awarded, September 2016). *Collaborative research: Investigating middle grades mathematics teachers' curricular reasoning*. National Science Foundation Core R & D Programs, \$1,090,283, September 2016 – August 2019.

Olson, T. A. (PI), Stohlmann, M. (Co-PI), & Bellomo-Warren, C. (Co-PI). (awarded, January 2016). *Transitions in mathematics for middle school*. Nevada Collaborative Teaching Improvement Program (NeCoTIP) through the U.S. Department of Education, \$281,000, January 2016 – September 2017.

Lamberg, T. (PI), Keppelman, E. (Co-PI), Lakey, P. (Co-PI), & **Olson, T. A.** (Co-PI). (awarded, January 2016). *Nevada mathematics project – Phase III*. Nevada Department of Education Mathematics and Science Partnership Program, \$400,535, January 2016 – May 2017.

Shih, J. (PI), **Olson, T. A.** (Co-PI), & Bellomo-Warren, C. (Co-PI). (awarded, January 2016). *Part 2: Intuitive thinking in K-2 mathematics*. Nevada Department of Education Mathematics and Science Partnership Program, \$280,000, January 2016 – May 2017.

Shih, J. (PI), Trakas, D. (Co-PI), Bellomo-Warren, C. (Co-PI), & **Olson, T. A.** (Co-PI). (awarded, January 2016). *Developing mathematical modeling: Numbers and operations*. Nevada Department of Education Mathematics and Science Partnership Program, \$280,000, January 2016 – May 2017.

Olson, T. A. (PI), & Bellomo-Warren, C. (Co-PI). (awarded, January 2015). *Blending technology and statistics education for conceptual understanding (Grades 6-12)*. Nevada Collaborative Teaching Improvement Program (NeCoTIP) through the U.S. Department of Education, \$88,987, January 2015 – September 2016.

Lamberg, T. (PI), Keppelman, E. (Co-PI), Lakey, P. (Co-PI), **Olson, T. A.** (Co-PI), Shih, J. (Co-PI), Negrete, S. (PI), Cramer, J. (Co-PI), Baer, T. (Co-PI), Gleissner, K. (PI), & Fadness, C. (PI). (submitted, December 2014). *Nevada mathematics project – Phase II*. Nevada Department of Education Mathematics and Science Partnership Program, \$285,516, January 2015 – May 2016.

Schiemer, K. (PI), Shih, J. (PI), Bellomo-Warren, C. (Co-PI), **Olson, T. A.** (Co-PI), Stohlmann, M. (Co-PI). (submitted, December 2014). *Intuitive thinking in K-3 mathematics*. Nevada Department of Education Mathematics and Science Partnership Program, \$422,319, January 2015 – May 2016.

Lamberg, T. (PI), Keppelman, E. (Co-PI), Lakey, P. (Co-PI), **Olson, T. A.** (PI), Shih, J. (Co-PI), Lin, E. (Co-PI), Negrete, S. (PI), Cramer, J. (Co-PI), Baer, T. (Co-PI), Gleissner, K. (PI), & Fadness, C. (PI). (awarded, January 2014). *Nevada mathematics project*. Nevada Department of Education Mathematics and Science Partnership Program, \$295,006, January 2014 – May 2015.

Johnson, E. (PI), Schiemer, K. (Co-PI), **Olson, T. A.** (PI), Shih, J. (Co-PI), & Bellomo, C. (Co-PI). (awarded, January 2013). *Strategies to achieve results and the Common Core State Standards for*

Mathematics (STARs and the CCSS-M). Nevada Department of Education Mathematics and Science Partnership Program, \$232,029, January 2013 – July 2014.

Olson, T. (PI), Skramstad, E. (Co-PI), & Bellomo-Warren, C. (Co-PI). (awarded, January 2013). *Entry to transformation (E2T): Implementing blended learning in mathematics*. Nevada Collaborative Teaching Improvement Program (NeCoTIP) through the U.S. Department of Education, \$163,767, July 2013 – September 2014.

Johnson, E. (PI), **Olson, T. A.** (PI), Shih, J. (Co-PI), & Bellomo, C. (Co-PI). (awarded, January 2011). *Common core summer institute: Las Vegas (C2SI: Las Vegas)*. Nevada Department of Education Mathematics and Science Partnership Program, \$127,964, January 2012 – July 2013.

Olson, T. A. (PI), & Bellomo-Warren, C. (Co-PI). (awarded, January 2010). *Teaching with Technology for Algebraic Content Knowledge Development*. Nevada Collaborative Teaching Improvement Program (NeCoTIP) through the U.S. Department of Education, \$93,197, January 2010 – September 2011.

Submitted, not funded

Dingman, S. (PI), Kasmer, L. (PI), **Olson, T. A.** (PI), Teuscher, D. (PI). (submitted, October 2014) *Collaborative research: Investigating middle grades mathematics teachers' curricular reasoning and the connection to mathematical knowledge for teaching*. National Science Foundation Discovery Research K-12 Program, \$500,000, September 2015 – August 2017.

Dingman, S. (PI), Kasmer, L. (PI), **Olson, T. A.** (PI), & Teuscher, D. (PI). (submitted, December 2013). *Collaborative research: Middle grades mathematics curriculum analysis: Strengthening teachers' curricular reasoning*. National Science Foundation Discovery Research K-12 Program (NSF DRK-12), \$430,000, September 2014 – August 2016.

Vallett, D. (PI), Barrington-Brown, D. (Co-PI), **Olson, T. A.** (Co-PI), & Stephen, H. (Co-PI). (submitted, December 2013). *STEM teacher enhancement and preparation for under-served populations*. National Science Foundation Discovery Research K-12 Program (NSF DRK-12), \$450,000, September 2014 – August 2016.

Olson, T. A. (PI), & Bellomo-Warren, C. (Co-PI). (submitted, November 2013). *Digital elementary learning tools: Math facts and mathematical understanding*. Nevada Collaborative Teaching Improvement Program (NeCoTIP) through the U.S. Department of Education, \$72,000, July 2013 – September 2014

Olson, M. (PI), **Olson, T. A.** (PI), Brandon, P. (Co-PI), Olson, J. (Co-PI), Shih, J. (Co-PI), Slovin, H. (Co-PI), & Venenciano, L. (Co-PI). (submitted, December 2012). *Collaborative research: Enhancing the ability of teachers to take action on formative assessment feedback (Project TAFA)*. National Science Foundation Discovery Research K-12 Program (NSF DRK-12), \$3,000,000, September 2013 – August 2017.

Nasoz, F. (PI), Hartley, K. (Co-PI), Horsford, S. (Co-PI), **Olson, T.** (Co-PI), & Shih, J. (Co-PI). (submitted, October 2012). *ITEST strategies: Achieving early math proficiency with visual and interactive learning technology*. National Science Foundation DRL – ITEST, \$1,199,768, July 2013 – June 2016.

Olson, M. (PI), Shih, J. (PI), Olson, J. (Co-PI), & **Olson, T. A.** (Co-PI). (submitted, January 2012) *Collaborative research: Enhancing the ability of teachers to take action on formative assessment feedback (Project TAFA)*. National Science Foundation Discovery Research K-12 Program (NSF DRK-12), \$3,000,000, September 2012

Olson, M. (PI), **Olson, T. A.** (PI), Im, S. (Co-PI), Olson, J. (Co-PI), & Shih, J. (Co-PI). (submitted, January 2011). *Enhancing the Ability of Teachers to Take Action on Formative Assessment Feedback (Project TAFE)*. National Science Foundation Discovery Research K-12 Program (NSF DRK-12), \$3,469,494, August 2011 – July 2016.

Competitive Travel and Scholarship Grants and Awards, by Institution

Center for the Study of Mathematics Curriculum – Research Group Grant

- ◆ Dingman, S. (PI), Kasmer, L. (Co-PI), **Olson, T. A.** (Co-PI), & Teuscher, D. (Co-PI). (awarded, October 2012). *Enactment of CCSSM priority research agenda: Curriculum materials development/revision process*. Center for the Study of Mathematics Curriculum. \$15,000, October 2012 – June 2013.
- ◆ **Olson, T. A.** (PI), Shih, J. (Co-PI), Meyer, D. (Co-PI), & Thomas, A. (Co-PI). (awarded, October 2012). *Enactment of CCSSM priority research agenda: Teachers' use of supplemental and digital materials*. Center for the Study of Mathematics Curriculum. \$7,000, October 2012 – June 2013.

University of Nevada, Las Vegas - University Faculty Travel Committee

- ◆ Travel grant to present at the Annual meeting of the Association of Mathematics Teacher Educators, February 8-11, 2017, in Orlando, FL (\$630, awarded November 2016)
- ◆ Travel grant to present at the Annual Meeting of the Association of Mathematics Teacher Educators, February 6-8, 2014, in Irvine, CA (\$1000, awarded December 2013).
- ◆ Travel grant to present at the Annual Meeting of the Association of Mathematics Teacher Educators, January 23-26, 2013, in Orlando, FL (\$990, awarded December 2012).
- ◆ Travel grant to present at the Hawaii International Conference on Education and the Hawaii Educational Research Association, January 4-8, 2011, in Honolulu, HI (\$1000, awarded December 2010)

~~ TEACHING ~~

COURSES TAUGHT

Number	Title	Type (Credits)	Dates
<i>Doctoral Courses - UNLV</i>			
CIG 720	Principles in Learning Mathematics	Seminar	Fall 2013
CIG 786	Individual Instruction in Education	Independent Study (3 credits)	Summer 2011- Summer 2012
CIG 791	Internship in Curriculum and Instruction	Independent Study (3 credits)	Spring 2012
<i>Masters Courses - UNLV</i>			
CIG 620	Principles of Learning Mathematics	Seminar (3 credits)	Falls 2010- 2016
CIE 620	Topics in Elementary School Mathematics	Seminar (1 credit)	Summers 2012-2013
CIS 620	Topics in Secondary School Mathematics	Seminar (1 credit)	Summers 2012-2013
CIS 622	Instructional Methods in Middle School Mathematics	Methods (3 credits)	Springs 2010- 2012

CIS 624	Instructional Methods in Secondary Mathematics Education	Methods (3 credits)	Falls 2009-2011
CIE 627	Technology Applications in Elementary Mathematics	Methods/Seminar (3 credits)	Springs 2012-2014
CIS 628	Technology Applications in Secondary Mathematics	Methods/Seminar (3 credits)	Springs 2010-2014
CIE 629	Curriculum Development in Elementary School Mathematics	Seminar (3 credits)	Summers 2010-2012
CIS 629	Curriculum Development in Secondary School Mathematics	Seminar (3 credits)	Summers 2010-2013
CIG 689	Curriculum and Instruction Seminar – Matheamtics Education	Independent Study (3 credits)	Summer 2012, Fall 2012
CIG 697	C&I Culminating Experience	Independent Study (1 credit)	2010-2013
CIG 786	Individual Instruction in Education	Independent Study (3 credits)	Falls 2012-2013

Undergraduate Courses - UNLV

EDEL 433	Teaching Elementary School Mathematics	Methods (3 credits)	Summer 2010
EDMS 453 / CIS 553M	Teaching Middle School Mathematics	Methods (3 credits)	Spring 2010
EDSC 453 / CIS 553S	Teaching Secondary Mathematics	Methods (3 credits)	Fall 2009, Fall 2012

Previous Institutions

Western Kentucky University

MATH 211	Mathematics for Elementary Teachers I	Lecture (3 credits)	Fall 2008
MATH 212	Mathematics for Elementary Teachers II	Lecture (3 credits)	Spring 2009
MATH 411	Problem Solving for Elementary and Middle School Teachers	Lecture and Interactive Video Service (3 credits)	Spring 2009

Cottey College

MAT 101	Intermediate Algebra	Lecture (3 credits)	Fall 2002- Spring 2004
MAT 103	College Algebra	Lecture (3 credits)	Fall 2002- Spring 2004
MAT 104	Trigonometry	Lecture (3 credits)	Spring 2003
MAT 201	Calculus I	Lecture (3 credits)	Spring 2003
MAT 202	Calculus II	Lecture (3 credits)	Falls 2002- 2003
MAT 203	Calculus III	Lecture (3 credits)	Spring 2004

Spoon River Community College, Macomb Campus

MAT 011	Developmental Mathematics	Lecture (3 credits)	Spring 2002
MAT 015	Beginning Algebra	Lecture (3 credits)	Fall 2000- Spring 2002
MAT 060	Intermediate Algebra	Lecture (3 credits)	

Previous Institutions, as Teaching Assistant

Missouri TDP 4310	Learning & Teaching Geometry in the Elementary School	Methods (3 credits)	Winter 2007
Western Illinois MATH 099N	Intermediate Algebra	Lecture (3 credits)	Spring 2000- Fall 2000

ADVISING AND SUPERVISION

Doctoral Advising

Completed:

- ◆ Cynthia Kimball. Ph.D. workforce education, Department of Teaching and Learning. Committee member.
- ◆ Cat Maiorca. Ph.D. student in mathematics education, Department of Teaching and Learning. Committee member.

In Progress:

- ◆ Aaron Harris. Ph.D. student in mathematics education. **Co-Chair**. Dissertation proposal in progress.
- ◆ Charles Allen. Ph.D. Student in mathematics education. **Co-Chair**. Dissertation proposal in progress.
- ◆ Qingmin Shi. Ph.D. candidate in teacher education. Committee member. Dissertation in progress.
- ◆ Lina Zang. Ph.D. student in teacher education. **Co-Chair**. Dissertation in progress.
- ◆ Derek Fialkiewicz. Ph.D. student in mathematics education. **Co-Chair**. Dissertation proposal in progress.
- ◆ Dawn Lockett. Ph.D. Student in mathematics education. **Chair**. Dissertation proposal in progress.
- ◆ Taro Ito. Ph.D. student in mathematics education. Committee member. Dissertation in progress.
- ◆ Scott MacDonald. Ph.D. student in mathematics education. Committee member. Coursework in progress.

Masters Advising

- ◆ Courtney Fox, M.S. – Mathematics, December 2013. Committee member. *The Integration of Mathematics and Science: A Plan for a High School Integrated Pre-Calculus and Physics Course.*
- ◆ Tina Larios, M.S. – Mathematics, December 2012. Committee member. *Flipping the classroom: An evaluation of the effect on student achievement and motivation.*
- ◆ Jessica Diaz, M.Ed. – Educational Psychology, December 2012. Committee member.
- ◆ Matthew Michaelson, M.S. - Mathematics, May 2012. Committee member. *An investigation of the pedagogical implications of the conceptual difficulties of learning and teaching the principle of mathematical induction.*

- ◆ Megan Swallia, M.S. - Mathematics, May 2012. Committee member. *Readiness for college level mathematics courses: A survey of prerequisites for a second semester precalculus class.*
- ◆ Advisor to 41 (completed) M.Ed. students since 2009.
- ◆ Advisor to 23 (current) M.Ed. students.

~~ SERVICE ~~

COMMITTEE AND OTHER ACTIVITIES

Professional Community

2014	National Council of Supervisors of Mathematics: Digital Learning Initiative Committee. Member.
2013-2016	National Council of Teachers of Mathematics: Professional Development Services Committee. Member.
2013-2014	Association of Mathematics Teacher Educators: Communications Committee. Chair.
2013-2016	Research Council on Mathematics Learning: Conference Committee. Member.
2012-2013	National Council of Teachers of Mathematics inaugural volume of <i>Annual Perspectives in Mathematics Education</i> : Editorial Panel. Member.
2004-present	Center for the Study of Mathematics Curriculum (NSF-funded Center for Learning and Teaching). Alumni Fellow.
2012-2013	Association of Mathematics Teacher Educators: Communications Committee. Member.
2012	Preparing to Teach Mathematics with Technology (North Carolina State University NSF-funded project), Technology Using Mathematics Teacher Educators (Cohort IV). Member.
2011	Association of Mathematics Teacher Educators: Communications Task Force. Member.
2006-2008	Association of Mathematics Teacher Educators: Constitution and By-Laws Committee. Member.
2005-2007	Association of Mathematics Teacher Educators: Membership Committee. Member.
2013	<i>Research Council on Mathematics Learning Annual Meeting</i> . Reviewer.
2013	<i>Proceedings of the Research Council on Mathematics Learning Annual Meeting</i> . Reviewer.
2011-present	<i>Journal of Mathematics Teacher Education</i> . Reviewer.
2010-present	<i>Journal of Teacher Education</i> . Reviewer.
2010-present	<i>Investigations in Mathematics Learning</i> . Reviewer.

2011-present	<i>Mathematics Teaching in the Middle School</i> . Reviewer.
2011-present	<i>Teaching Children Mathematics</i> . Reviewer.
<i>Regional, State, and Local Community</i>	
2012-present	Board of Directors, Nevada Mathematics Council. Member.
2012-present	University of Nevada Mathematics Council – Las Vegas. Faculty Advisor.
2012	Nevada Chapter of the American Statistical Association Poster Competition. Judge.
2011-present	Nevada STEM Stakeholders Committee. Member.
2011-present	Board of Directors, Southern Nevada Mathematics Council. Member.
2011	Mathematics Course Changes Focus Group, Clark County School District. Member.
2010	Expert Mathematics Committee, Clark County School District. Member.
<i>University-Level</i>	
2014-present	University By-Laws Committee. College of Education Representative.
2011, 2013, 2014	Spring Commencement, UNLV: Faculty Marshal
2010, 2013	Winter Commencement, UNLV: Faculty Marshal
<i>College-Level</i>	
2014-present	Constitution and By-Laws Committee. Department of Teaching and Learning Representative.
<i>Department-Level</i>	
2014-present	Constitution and By-Laws Committee. Chair .
2011	Committee on Designing the Future of the Teaching and Learning Department, UNLV. Member.
2011-2012	Search Committee for STEM Education Faculty, Department of Teaching & Learning, UNLV. Member.
2010-present	Masters Studies Committee, Department of Teaching & Learning, UNLV. Member.
2010-present	Secondary Program Committee, Department of Teaching & Learning, UNLV. Member.
2009-present	Mathematics Content Interest Group, Department of Teaching & Learning, UNLV.

2008-2009 Graduate Committee, Department of Mathematics and Computer Science, WKU. Member.

2008-2009 Mathematics Education Committee, Department of Mathematics and Computer Science, WKU. Member.

PROFESSIONAL MEMBERSHIPS

- ◆ Association of Mathematics Teacher Educators (AMTE)
- ◆ National Council of Teachers of Mathematics (NCTM)
- ◆ National Council of Supervisors of Mathematics (NCSM)
- ◆ Research Council on Mathematics Learning (RCML)
- ◆ School Science and Mathematics Association (SSMA)

HONORS AND AWARDS

- ◆ High Flyer Excellence in Teaching Award (2007), University of Missouri, College of Education
- ◆ Most Inspirational Teacher Recognition (2002), Western Illinois University for coursework taught at Spoon River Community College