CURRICULUM VITAE

LINDA HUTCHISON

College of Education
Department of Secondary Education
Science and Mathematics Teaching Center
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Education

Ph.D. University of Washington, Mathematics Education, Title of Dissertation, "How does prior subject matter knowledge affect the learning of pedagogical content knowledge in a mathematics methods course at the preservice level?" 1992.

A.M. Stanford University, Education, CA Clear Credential in Mathematics, 1986.

B.A. Humboldt State University, Home Economics: Specialty in Consumer Economics, 1978 CA Clear Credential in Home Economics, Physical Education, 1979.

Memberships and Service

National/Regional/State

UW SMTI Representative, NASUGLC/APLU. Spring 2009-present.

NCTM/CAEP SPA reviewer, 2016- Present.

Conference Chair, National Council of Teachers of Mathematics Regional 2001 Conference, Laramie, Wyoming, at UW, August 2001.

Mid-content Research for Education and Learning (McREL) Eisenhower Regional Consortium (ERC) Advisory Committee (Seven state consortium), Wyoming Higher Education Representative, February 2001-September 2005.

Federal Integrated Review of the Wyoming Department of Education, Mathematics Representative, Albany County S.D. #1, 1999.

Mathematics Representative, Wyoming State Superintendent's Common Core Coalition of Knowledge and Skills, May 1998 – 2005.

Content Advisory Committee, 4th and 8th Grade Mathematics WyCAS, Wyoming Department of Education, 1998 – 2006.

Standards Setting Committee, 4th and 8th Grade Mathematics WyCAS, Wyoming Department of Education, June 1999- 2006.

Mathematics Consultant for K-6 Benchmarks/Standards; Mathematics Committee, Albany Co. S.D. #1, January 2000-2003.

Mid-Continental Regional Education Laboratory (McREL) Wyoming Advisory Committee, 1994 – 1999.

Wyoming Mathematics and Science Coalition Committee Member, 1993 – 2000.

WIC Program Chair, Mathematics, Wyoming Interdisciplinary Conference, October 1996.

WIC Co-chair, Conference Scheduling, all disciplines, Wyoming Interdisciplinary Conference, October 1996.

University of Wyoming Representative, Northern Rocky Mountain Educational Research Association (NRMERA), October 1998 – Oct 1999.

International Electronic Journal of Mathematics Education, Editorial Board reviewer.

Wyoming Council of Teachers of Mathematics, ex-officio Executive Council.

American Educational Research Association

National Council of Teachers of Mathematics

Phi Delta Kappa

University

Faculty Dispute Resolution Panel, University of Wyoming, 2014-2017.

College of Education Representative, Academic Planning Committee, University of Wyoming, September 2007-2015.

Chair, Academic Planning Committee, University of Wyoming, 2010-2011

Secondary Education Senator, Faculty Senate, University of Wyoming, September 1999-September 2001; January 2012-2014.

College of Education Representative, University Studies Program Review Committee, University of Wyoming, September 1999-September 2001.

Chair, Quantitative Reasoning Subgroup, University Studies Program Review Committee, University of Wyoming, September 1999-February 2001.

College of Education (COE) Representative, Research Advisory Committee, January 1996 – September 1999.

COE Representative, Academic Information Technology Advisory Committee, University of Wyoming, August 1995 – September 1996.

Committee for evaluation of Instructors, Natural Science Program, 1994 – 2000.

College/Unit

EMAT Program Coordinator (Ph.D. Program Mathematics Education), April 2013-present.

SMTC Advisory Board, College of Education, University of Wyoming, Fall 2013-present

Member, Lantz Professorship Rules/Guideline Development Committee, COE, 2015.

Leadership Council. College of Education, June 2001- December 2011.

Chair Articulation Committee, College of Education, September 2002-2005.

Secondary Education Representative, Undergraduate Education Committee, College of Education, September 1999-2001.

Petition Committee, Undergraduate Education Committee, College of Education, Spring-Summer 2000, Spring 2001.

Chair, Graduate Admissions Committee, Curriculum and Instruction, University of Wyoming, May 1994 – December 1999.

Natural Science Advisory Committee, University of Wyoming, September 1997 – 2002, 2008-2009.

Coordinate teaching of EDEL 1410 Elementary Mathematics Education Seminar. 1998-2002.

Lifelong Learning & Instruction (LLI) Representative, College of Education Media Committee, September 1995 – September 1999.

LLI Representative, College of Education Course Articulation Committee, September 1996 - 1998. Chair, Subcommittee Draft Template, Spring 1998.

Curriculum & Instruction (C&I) Representative, COE Graduate Advisory Council, January 1998 – September 1999.

COE Faculty Representative, University Lab School (Prep) Parent Advisory Council/Site Council, September 1998 – September 2002, Sept 2010-2012.

Parent Representative, University Lab School (Prep) Parent Advisory Council/Site Council, September 2009- 2010.

Wyoming School/University Partnership, Operations Council, September 1997 – 2005.

Masters of Teaching & Learning (MTL) Coordinator, C&I, July 1998 – December 1999.

LLI Representative, COE Placement Computerization Task Force, September 1996 – 1997.

LLI Representative, Undergraduate Committee, School of Education, University of Wyoming, 1994.

Search Committees -- Endowed Chair, Mathematics Education, 2012-2013, 2013-2014 Chair, 2014-2015
Modern Language Education, Chair 2012-2013
Modern Language Education, Co-chair, 2011-2012
Director, SMTC, 2011-2012
Endowed Chair, Mathematics Education, 2008-2009
Director of Natural Science Program, 2004-2005
Director of Teacher Education, 2002, 2008-2009.
Science Education Positions: UW/CC 2006-2007, Chair UW 2007-2008
Educational Studies—Quantitative Reasoning, 2000.
Mathematics/Science Position, 1996 – 1997.
Mathematics/Science Position, 1996.
Educational Inquiry Position, 1996.

Member, Graduate Admissions Committee, Curriculum and Instruction, University of Wyoming, 1993 – 1994, January 2000-September 2001; Spring 2011
Member. Graduate Admissions Committee, Mathematics Education, University of Wyoming, 2010-present.

Professional Experience

2001-December 2011. Head, Department of Secondary Education, College of Education, University of Wyoming. Responsible for administrative duties of a 9 program area (19 concurrent majors) department. Supervision, evaluation of faculty and staff, department budgets, recruitment of departmental faculty, and leadership involving department academic program planning and evaluation.

1999- present. Associate Professor, Secondary Education, College of Education, University of Wyoming. Methods of Teaching Secondary Mathematics I and II, Integrating Computer–Based Technologies in Teaching Mathematics, Quantitative Reasoning for Educators, Using Geometer's Sketchpad in Secondary Mathematics Classrooms, Presidential Awardees Model for Aligning the Standards with Assessment and Instruction, Trends in Mathematics and Science Teaching: Philosophers and Aligning Standards, Quantitative Reasoning for STEM disciplines, Secondary Education Freshman Seminar: Disciplinary Literacies, Curriculum, Evaluation and Assessment in Mathematics Education, Teaching and Teacher Education in Mathematics Education, Colloquium in Doctoral Mathematics Education.

1992–1999. Assistant Professor, Division of Lifelong Learning and Instruction, College of Education, University of Wyoming. Teaching Mathematics in the Elementary School, Methods of Teaching Secondary Mathematics, Integrating Computer–Based Technologies in Teaching Mathematics, Quantitative Reasoning for Educators, Math in the Secondary and Elementary School: Creating Models for the Wyoming Empowerment Outcomes, Assessment in Elementary Mathematics & Science, Assessment in Secondary Mathematics & Science, Elementary Workshop in Implementing the Theories from the Curriculum and Evaluation Standards for School Mathematics, Using Geometer's Sketchpad in Secondary Mathematics Classrooms.

1990-1992. Research Assistant. College of Education, University of Washington. Teacher Education Research Center.

1990, 1991. Instructor, Mathematics Department, University of Washington. Teaching Mathematics to the Middle School Student – Fractions; Teaching Mathematics to the Middle School Student – Proportional Reasoning. These courses were designed to facilitate subject matter knowledge and pedagogical content knowledge gains for practicing middle school teachers.

1988–1990 Teaching Assistant, College of Education, University of Washington. Mathematics in the Elementary School, 1988–1990; Teaching in the Elementary School, 1989–1990; and Teaching in the Secondary School, 1990.

1985–1988 Secondary Mathematics Teacher, Menlo–Atherton High School, Sequoia Union High School District, Atherton, California. Algebra I, Algebra II, Geometry, Business Math, Clothing, Senior Class Advisor.

1981–1985 Grades 4–11 Mathematics Teacher, Pinewood School of Los Altos, Los Altos Hills, California. Honors Geometry, Geometry, Honors Algebra, Algebra I, Pre–Algebra, General Mathematics. Grade levels taught ranged from 4–11. Most frequent grades taught were 7–9. Yearbook Advisor.

1979–1980 Consumer Mathematics Teacher, Bonita High School, Bonita Unified School District, San Dimas, California. Developed and taught a new curriculum for Consumer Mathematics and Singles Living. Coached Girls' Junior Varsity Tennis Team.

Funded Grants and Contracts

2014-2016 Hutchison, L. (PI) & Selden, J. (co-PI) Functions: Common Core and Beyond, Year 2, Higher Education Title II, Part B, Mathematics and Science Partnership Grant, Wyoming Department of Education. $223,382.

2014-2015 Gillis, V. & Hutchison, L. (co-PIs) Superheroes, Stan Lee, and Studying for Success: What does Popular Culture have to do with Research, University of Wyoming American Heritage Center Grant, $2500.

2013-2015 Hutchison, L. (PI) & Spitler, J. (co-PI) Probability and Statistics: Common Core and Beyond, Higher Education Title II, Part B, Mathematics and Science Partnership Grant, Wyoming Department of Education. $239,634.

2010-2012 Hutchison, L.(PI) & Hatfield, L. (co-PI) Ready to Learn Mathematics, Higher Education Title II, Part B, Mathematics and Science Partnership Grant, Wyoming Department of Education. $224,351.

2008-2009. Mayes, R. (PI) and Hutchison, L. (co-PI). Wyoming MSP: Quantitative Reasoning in STEM. NCLB, Higher Education, Part B. $231,073.

2006-2007. Hutchison, L. Facilitating Data-Driven Department Decision Making. Assessment Grant Award. University of Wyoming. $2500.

2005-2006. Hutchison, L. Flittie Sabbatical Augmentation Award. University of Wyoming. $8000.

2005, Spring. Hutchison, L. International Faculty Travel Grant. International Programs, University of Wyoming. $1000.

2005-2006. Hamann, J. and Hutchison, L. "Thinking and Doing Mathematics, Part B—Year 2." No Child Left Behind, Higher Education Title II, Part B, Mathematics and Science Partnership Grant, Wyoming Department of Education. $192,778

2004-2005. Hutchison, L. and Hamann, J. "Thinking and Doing Mathematics, Part B." No Child Left Behind, Higher Education Title II, Part B, Mathematics and Science Partnership Grant, Wyoming Department of Education. $324,469

2002-2007. Hamann, J., Peck, N., Hutchison, L., Steadman, S., Coon, D., "Recruiting, Retaining, and Educating "The Best in the West"". Engineering Schools of the West Grants Initiative. William and Flora Hewlett Foundation. $1,250,000.

2001-2004. McClurg, P., Hutchison, L., and Ipina, L. (Co-PI's). "Improving Middle-Level Mathematics Teaching and Learning: A Statewide Initiative." National Science Foundation (NSF), $1,116,974.

2003-2004. Hutchison, L. "Thinking and Doing Mathematics." Higher Education Title II, Subpart A Teacher/Leader Quality Partnership Grant, Wyoming Department of Education. $197,509.

2002-2004. Hutchison, L. "Superintendent's Coalition for Common Core of Knowledge and Skills- Mathematics, Wyoming Department of Education, Contract, $60,000.

2000-2001. Ellsworth, J. Horsch, E., and Hutchison, L (Co-PI's). "A Mathematics/Science Model: Aligning Standards Based Instruction and Assessment to Enhance and Accelerate Student Achievement in Mathematics and Science, Second Year Continuation. Eisenhower Higher Education Projects, Wyoming Department of Education, $54,700.

2000-2002. Hutchison, L. "Superintendent's Coalition for Common Core of Knowledge and Skills- Mathematics, Wyoming Department of Education, Contract, $60,000.

2000-2001, Hutchison, L. Ipina, L. and Huzurbazar, S. (Co-PI's). "Math Goes Home: A Backpack Project for Parents, Teachers, and Kids." Eisenhower Higher Education

Projects, Wyoming Department of Education. $20,000.

1999-2000. Hutchison, L. "Title 1—Mathematics, Consulting with Wyoming Schools at Risk." Wyoming Department of Education, Federal Title 1 Monies, $25,000.

1999-2000, Ellsworth, J. Horsch, E., and Hutchison, L (Co-PI's). "A Mathematics/Science Model: Aligning Standards Based Instruction and Assessment to Enhance and Accelerate Student Achievement in Mathematics and Science. Eisenhower Higher Education Projects, Wyoming Department of Education, $52,000.

1999-2000. Hutchison, L. "Superintendent's Coalition for Common Core of Knowledge and Skills- Mathematics, Wyoming Department of Education, Contract, $25,000.

1998 - 1999. Hutchison, L. "Superintendent's Coalition for Common Core of Knowledge and Skills- Mathematics, Wyoming Department of Education, Contract, $50,000.

1997-1998. Hutchison, L. "Family Math". Eisenhower Higher Education Projects, Wyoming Department of Education, $7,000.

1995-1996. Hutchison, L. and McClurg, P. "Using Technology to Teach Geometry." Eisenhower Higher Education Projects, Wyoming Department of Education, $15,000.

1994-1995. Hutchison, L. and Sindt, V. "Teaching Mathematics to Middle School Students: Proportional Reasoning", Eisenhower Higher Education Projects, Wyoming Department of Education, $12,516.

1994-95. Sindt, V. and Hutchison, L. "Assessment of Mathematics and Science Project", Eisenhower Higher Education Projects, Wyoming Department of Education, $37,700.

1994-95. Stepans, J. and Hutchison, L. "Triad Project", Eisenhower Higher Education Projects, Wyoming Department of Education, $24,676.05

1993-1994. Hutchison, L. "Teaching Mathematics to Middle School Students: Fractions", Eisenhower Higher Education Projects, Wyoming Department of Education, $12,600.

1993-1994. Sindt, V. and Hutchison, L. "Assessment of Mathematics and Science Project", Eisenhower Higher Education Projects, Wyoming Department of Education, $26,081.

Publications

Books, Chapters and Monographs

Hutchison, L. & Edelman, J. (2014). Literacy in the Mathematics Classroom. In P. Smagorinsky and J. Flanagan (Eds.) Teaching Dilemmas and Solutions in Content-Area Literacy, Grades 6–12, (pp. 81-102). Thousand Oaks, CA: Corwin Press.

Hutchison, L., Buss, A., Ellsworth, J., and Persichitte, K. (2010). Soothing Cerberus: The

Wyoming Odyssey. In L.Erickson and N. Wentworth (Eds.) Tensions in Teacher Preparation: Accountability, Assessment, and Accreditation, (pp. 213-230). Bingley, UK: Emerald Group Publishing, Ltd.

Stepans, J. I. & Hutchison, L. S. (1998). Challenging Students to DO Meaningful Mathematics. Montgomery, AL: Saiwood.

Kleinsasser, A., Bruce, M. A., Berube, W., Hutchison, L. S., & Ellsworth, J. (1998). The beginning professor and Goodlad's simultaneous renewal: Vignettes from Wyoming's School-University Partnership. In A. L. Cole, R. Elijah, & J. G. Knowles (Eds.), The Heart of the Matter: Teacher Educators and Teacher Education Reform, (pp. 289 - 311). San Francisco: Caddo Gap Press.

Hutchison, L. S., & Sindt, V. (Eds.). (1994). Model Programs for the Wyoming Mathematics Empowerment Outcomes. Laramie, WY: Natural Science Program.

Refereed Journal Articles and Published Works in Proceedings

Houseal, A., Gillis, V., Helmsing, M., & Hutchison, L. (2016). Disciplinary literacy through the lens of the Next Generation Science Standards. *Journal of Adolescent & Adult Literacy, 59*, 377-384.

Hutchison, L. (2011). Billiards. In S. J. Greenwald & J. E. Thomley (Eds.) Encyclopedia of Mathematics and Society, (pp. 110-111). Pasadena, CA: Salem Press. Also in (2012). Mathematics in Culture and Society, eBook. Pasadena, CA: Salem Press.

Hutchison, L. (2011). Painting. In S. J. Greenwald & J. E. Thomley (Eds.) Encyclopedia of Mathematics and Society, (pp. 748-750). Pasadena, CA: Salem Press. Also in (2012). Mathematics in Culture and Society, eBook. Pasadena, CA: Salem Press.

Pannell, A. and Hutchison, L. (April 2010). Podcasting for Understanding. Mathematics Teaching in the Middle School. Reston,VA: NCTM.

Hutchison, L. and Ellsworth, J. (2009). Networking our way out of isolation: Mentoring in rural areas. In G. Zimmermann (Ed.), Empowering the Mentor Teachers of the Experienced Mathematics Teacher. Reston, VA: NCTM.

Buss, A. & Hutchison, L. (2009). Less is more: Structuring the content of a middle-level mathematics technology course. In Simonson, M. (Ed), 32nd Annual Proceedings: Volume #1, Association for Educational Communications and Technology, Louisville, KY.

Hutchison, L. S., Ellsworth, J. and Yovich, S. (2000). Third-Grade Students Investigate and Represent Data. Early Childhood Education Journal, 27(4).

Hutchison, L. S. & Rezabek, L. (1999). Distance Learning Options for Mathematics Instruction: Lessons from the Field. Eleventh Annual International Conference on Technology in Collegiate Mathematics Proceedings. New Orleans, LA: Loyola University.

Buss, A., & Hutchison, L. S. (1999). Incorporating LegoDacta® in Teaching Problem Solving to Pre-service Elementary Mathematics Teachers. Eleventh Annual International Conference on Technology in Collegiate Mathematics Proceedings. New Orleans, LA: Loyola University.

Cooney, M., Hutchison, L., & Costigan, V. (1996). From Hitting and Tattling to Communication and Negotiation: The Young Child's Stages of Socialization. Early Childhood Education Journal, 24(1), 23-27.

Kleinsasser, A., Bruce, M.A., Berube, W., Hutchison, L., & Ellsworth, J. (1996). The Beginning Professor and Goodlad's Simultaneous Renewal: Vignettes from Wyoming's School-University Partnership. Teacher Education Quarterly, 23 (3), 37-54.

Hutchison, L S. & Kinholt, S. (1990). Perforated proofs. In J. Firkins (Ed.), *Using Manipulatives to Develop Thoughtful Behavior in the Mathematics Classroom* (pp. 69–77). Washington State Mathematics Council, 1990 Single Topic Edition.

Reports

Hutchison, L. S., Duggan, E., Kinholt, S., Olstad, R. G., & Beal, J. L. (1991). A correlation between the age of preservice teachers and their UWTAS performance (Report No. 91–1). Seattle, WA: University of Washington, Teacher Education Research Center.

Software Evaluation. Arithmetic Teacher, 1990.

Presentations

International

Preparing Teachers for Using Technology: The Relationship Between Required Presentations and Classroom Use. Peer-reviewed research presentation. The 12th International Congress on Mathematics Education, COEX, Seoul, Korea, July 8-15, 2012.

Examining Effective Professional Development Strategies for Implementing Change in Rural mathematics Teaching and Learning: Lessons from New Zealand. Invited presentation for research done while on sabbatical. US-Sino Workshop on Mathematics and Science Education: Common Priorities that Promote Collaborative Research, NSF-Sponsored program collaboratively organized by Middle Tennessee State University, Murfreesboro, TN and Northwest Normal University, Lanzhou, P.R. China. Held in Murfreesboro, TN June 22-27, 2008.

A Day in the Life of a Wyoming Teacher. Presented information to the New Zealand South Island teacher's organization about what the life of a typical Wyoming mathematics teacher would be like. Interviewed Wyoming Presidential Awardees in secondary Mathematics to find a description of their typical day and classes. Otago Maths

Teachers Association, Dunedin, New Zealand. May, 2006.

Improving Middle-Level Mathematics Teaching and Learning. Presented information to College Level mathematics and education faculty concerning the NSF grant for middle-level mathematics. University of Otago Mathematics Seminar. March, 2006.

Incorporating LegoDacta® in Teaching Problem Solving to Pre-service Elementary Mathematics Teachers. Presented with Alan Buss. Presenting pilot study information on the use of LegoDacta® to elementary pre-service teachers. International Conference on Technology in Collegiate Mathematics (ICTCM), New Orleans, LA. November, 1998.

Distance Learning Options for Mathematics Instruction: Lessons From the Field. Presented with Landra Rezabek. Exploration of using a variety of distance technologies and discussing the benefits and consequences of distance technology decisions on teaching mathematics. ICTCM, New Orleans, LA. November, 1998.

National

Common Core and Beyond: An MSP Professional Development Project for Teaching Statistics, Probability, and Functions. Presented with Tracey Gorham Blanco, Mathematics Ph.D. Student, Mathematics Science Partnership Conference, Baltimore, MD, March 2016.

Using Concept Maps for Professional Development. Presented with Tracy Gorham Blanco, Mathematics Education Ph.D. student, Mathematics-Science Partnership Conference, Washington, DC, September 2014.

Art Presented with Dr. Lydia Dambelkalns, National Network of Educational Renewal, Denver, CO, October 2012.

Real Research on Virtual Manipulatives: Strategies for Using Mathematics Technology. Presented with Jenna Edelman, Mathematics Education Ph.D. student. National Council of Teachers of Mathematics Annual Meeting, Philadelphia, PA, April 2012.

Empowering Yourself as Mathematics Mentor. Presented with Judith Ellsworth. National Council of Teachers of Mathematics Annual Meeting, San Diego, CA, April, 2010.

Reflecting upon Pre-service Teaching using Elluminate Meetings: A Rural Partnership Tool? Presented with Marcia Patton and Carol Bryant. National Network for Educational Renewal conference, Seattle, WA, October 2009.

Less is More: Structuring the Content of a Middle-Level Mathematics Technology Course. Presented with Alan Buss. Association for Educational Communications and Technology conference, Louisville, KY, October 2009.

Building the Bridge While the Loaded Bus Is On It. Presented with Marcia Patton and Kay Persichette. Discussion of the Natrona County Professional Learning Community and our proud moments and pitfalls to learn from. National Network for Educational Renewal (NNER) Annual Conference, October, 2007.

Using Lesson Study as a Bridge to Simultaneous Renewal. Presented with Carol Bryant. Exploration of a lesson study project conducted with preservice and in-service UW Lab schoolteachers in mathematics and social studies. National Network for Educational Renewal (NNER) Annual Conference, October, 2007.

Fostering a New Mathematics Education Ph.D.: Arts and Sciences and Education Faculty Working Together. Presented with Michelle Chamberlain and Robert Mayes. Collaborative efforts to foster an innovative Ph.D. in mathematics education. Doctoral Programs in Mathematics Education: Progress in the Past Decade, A National NSF-funded Conference. Kansas City, MO. September 2007.

Middle-Level Mathematics Model for Out-of-Field Teachers: Developing Knowledge. Presented with Judith Ellsworth. Results of the NSF Middle-level Mathematics Grant. National Council of Teachers of Mathematics Research Presession to the Annual Meeting. Anaheim, CA. April 2005

Math Goes Home: Math Backpacks. Presented with Dee Swanson. Results of the Math Backpack Grant. Presented with K/1 teacher to demonstrate how to use math backpacks in the classroom to improve parental understandings of how mathematics can be taught for understanding. National Council of Teachers of Mathematics (NCTM) Annual Meeting, San Antonio, TX. April 2003.

Helping Data Come Alive in Elementary Classrooms: Discovering What Children Know. Presented with Judy Ellsworth and Sharon Yovich. Results of a partnership of two university professors and elementary classroom teacher exploring data . National Council of Teachers of Mathematics (NCTM) Annual Meeting, San Francisco, CA. April 1999.

Beginning Professors and Educational Reform: Conflicts, Contradictions, and Confusions. Invited in collaboration with A. Kleinsasser, M.A. Bruce, and J. Ellsworth. Interactive Symposium, American Education Research Association (AERA), New York, NY. April 1996.

So you taught fractions last week, what did your kids really learn about fractions? Comparison of procedural and conceptual understandings of concepts found in fractions and the implications of using a variety of modes of assessment for these understandings. NCTM Annual Meeting, Boston, MA. April 1995.

A Model Mathematics Program for Elementary School Teachers. Presented the methods component of the NSF funded project at the University of Wyoming. NCTM Annual Meeting, Seattle, WA. March 1993.

Regional

An MSP Project to Improve Secondary Mathematics Teachers' Content Knowledge in Probability and Statistics. Presented a paper with Tracey Gorham Blanco concerning initial grant findings. NRMERA, October 2015.

Calculators in the Elementary Classroom: The State of Wyoming. Presented a paper with Mary Arth concerning survey data of how and when teachers used calculators in Wyoming. Northern Rocky Mountain Educational Research Association (NRMERA), Jackson, WY. October 1999.

Investigating Children's Conceptions of Real Data in the Third-Grade Classroom. Presented with Judy Ellsworth. Analyzed children's conceptions of real data, NRMERA, Pray, MT. October 1998.

Learning for teaching: A case of constructing the bridge between subject matter knowledge and pedagogical content knowledge. Presented a case study of the relationship between subject matter knowledge and pedagogical content knowledge in mathematics. NRMERA, Jackson, WY. October 1997.

Snow Fences and Mathematics. Invited presentation, NCTM Regional Conference, Rapid City, SD. February 1996.

Data Investigations: Presented action research project in collaboration with J. Ellsworth and S. Yovich. NCTM Regional Conference, Rapid City, SD. February 1996.

Data Investigations at the Third Grade. Presented action research project in collaboration with J. Ellsworth and S. Yovich. Wyoming Interdisciplinary Conference (WIC), Laramie, WY. October 1996.

Bridges between mathematical knowledge and learning to teach mathematics at the elementary preservice level. Invited to present paper on the relationship between pedagogical content knowledge and subject matter knowledge for preservice elementary teachers. NCTM Northwest Mathematics Conference, Seattle, WA. October 1995.

Vedauwoo to West Virginia: Creating Interesting Real-Life Problems and Investigations. Invited to present research about how to create environments where children learn and use mathematics. NCTM Eastern Regional Conference, Charleston, WV. November 1994.

Ten Ways You Can Help Your Students Get Ready for Twenty–first Century Mathematics. Presented research–based ideas for experienced K–12 teachers to ensure good mathematics teaching in their classrooms. NCTM Eastern Regional Conference, Pittsburgh, PA. October 1993.

Perforated Proofs. Conducted a workshop on the process of facilitating the student construction of triangle congruence concepts and irrational numbers. NCTM Northwest Mathematics Conference, Richmond, British Columbia. October, 1991.

Proofs with Perforated Paper. Presented a session on the construction of triangle congruence proofs using the perforated ends of computer paper as a manipulative. NCTM Northwest Mathematics Conference, Portland, Oregon. October, 1990.

State/Local

Uncovering the Wyoming, State Mathematics Standards, 8th Mathematics Lost in Transition Institute. Wyoming School University Partnership, Lost in Transition Initiative (April 2014). Presented with R. J. Kost (Park County #1 Curriculum Director).

Probability and Statistics for Secondary Mathematics Teachers, Wyoming Mathematics Articulation Conference, April 2014.

Problem Solving Through Robotics. Presented with Dr. Alan Buss. Modeling of problem-solving activities for K-12 Education using LegoRobotics and MindStorms software. New NXT Robots were a part of the workshop. Participants will engage in a series of Robotics Challenges. E-volution: Innovations in learning environments conference, UW Ellbogen Center for Teaching and Learning, Laramie, WY, September 2011.

Integrating Art and Mathematics: The Escher project. Presented with Dr. Lydia Dambekalns. Discussed the research project from Fall 2010 completed by the mathematics and art methods I students and the Residency results. Dr. Larry Hatfield's Ph.D. mathematics education seminar, Laramie, WY, September 2011.

Examining the Developmental Progression of the Statistics Strand for the Common Core Mathematics Standards. The Common Core Standards Statistics and Probability Standards will be examined across the k-high school continuum to see how the ideas progress developmentally. Questions discussed will include: Are they developmentally appropriate for typical children? Are the Standards systematic in their dealing with statistics and probability? Do the earlier ideas progress students to learning the next ideas? How do they differ from the NCTM Standards or the Wyoming State Standards? Will they prepare students for success in college statistics coursework? 9th Annual Math AND Science Teachers' Conference, Casper WY, January 2011.

Reflecting upon Pre-service Teaching using Elluminate Meetings: A Rural Partnership Tool? Presented with Dr. Leslie Rush. Discussed results of the Elluminate Tool for working with preservice teachers during Residency. Wyoming Partnership Educational Renewal Conference, Casper, WY, October 2009.

Math Science Partnership: QR STEM. Presented with Dr. Robert Mayes. Discussed grant work in the state for QR STEM. Wyoming School Improvement Conference, Cheyenne. WY. Fall 2008.

Thinking and Doing Mathematics & Science Through Engineering. Presented with Dr. Jerry Hamann. To recruit teachers for the second iteration of the grant of the same name by presenting a hands-on engineering, math and science activity. Wyoming School Improvement Conference, Casper, WY. Spring 2005, Fall 2004.

Math Goes Home: Math Backpacks. Presented with Dee Swanson. Results of the Math Backpack Grant. Presented with K/1 teacher to demonstrate how to use math backpacks in the classroom to improve parental understandings of how mathematics can be taught for understanding. Wyoming School Improvement Conference, Casper, WY. Fall 2003.

Meeting Mathematics Standards 9-12. Presented the new standards to administrators and secondary teachers. Wyoming School Improvement Conference, Casper, WY. Fall 2003. Basom/Wear Conference for Educational Leaders, Laramie, WY, Summer 2003.

Meeting Mathematics Standards K-8. Presented the new standards to administrators and elementary and middle school teachers. Wyoming School Improvement Conference, Casper, WY. Fall 2003. Basom/Wear Conference for Educational Leaders, Laramie, WY, Summer 2003.

New Designs for Engineering Education. Presented the Hewlett grant with team members emphasizing how to write cross-college grants. Ellbogen Center for Teaching and

Learning, University of Wyoming. Spring 2003.

Education Seminars for Theory Courses. Presented with Judy Ellsworth. Explored the current status of the curricula for the UW Elementary Education Seminars for Mathematics courses (EDEL 1410, EDEL 1420) with community college professors currently teaching the courses. Wyoming State Math/Stat/Comp. Sci/Physics/Chem Articulation Conference, Casper WY, February 2001.

Thinking About Mathematics Textbook Adoptions. Presented as part of a panel to Torrington, WY parents and educators considering the adoption of a new text for mathematics instruction. Torrington, WY, November 2000.

Exemplary Teachers of Mathematics and Science Aligning Standards. Presented with Judy Ellsworth and Elizabeth Horsch. Explored the "Aligning" grant and how teachers became involved in aligning state and district Standards with assessments. WIC, Casper, WY, October 2000.

Discrete Math in Your Elementary Classroom. Explored discrete mathematics situations appropriate to elementary classrooms. WIC, Cheyenne, WY, October 1999.

Aligning Standards Based Instruction and Assessment. Presented with Judy Ellsworth and Elizabeth Horsch. Explored the grant of the same name and how teachers could become involved. WIC, Cheyenne, WY, October 1999.

Animating Your Geometry Classroom. Presented with Kevin Reins. Explored transformational geometry through animation using Geometer's Sketchpad® and Cabri® Geometry. WIC, Thermopolis, WY. October 1998.

Clearinghouse for Mathematics and Science: What You Should Know. Presented with Joe Stepans, Mary Arth, Kevin Reins, & Ann Akey. Discussed new clearinghouse for Wyoming mathematics and science teachers. WIC, Thermopolis, WY. October 1998.

Problem Solving with K-4 Children in Mind. Demonstrated explorations for K-4 children in collaboration with Judy Ellsworth. WIC, October 1995.

Patty Paper: Geometry Through Folding. Demonstrated a hands-on approach for easy-to-complex geometric concepts using hamburger patty paper in collaboration with Judy Ellsworth. WIC, Casper, WY. October 1994.

From Rodeos to Snow Fences: How to Create Relevant Mathematical Problems. Presented Wyoming-related problems and investigations that teachers could use to help children understand the relevance of mathematics. WIC, Casper, WY. October 1994.

Assessing Learners' Understandings of Probability and Statistics. Invited to present Outcome #3 from the Wyoming Mathematics Empowerment Outcomes to teams of mathematics teachers and administrators from all of the districts in Wyoming at the Wyoming Mathematics Assessment Conference. Casper, WY. March 1994.

Challenging Ways to Think About Mathematics Teaching. Created situations for teachers to explore how to and why to deviate from a textbook-driven curriculum.

Requested by Delta CO School District in collaboration with Judy Ellsworth. All participants were middle school teachers and principals involved in the mathematics curriculum textbook adoption committee. Delta, CO. February, 1994.

Procedural and Structural Understandings of Algebra. Presented research on why students resort to memorizing algebra and the implications of this to understanding mathematics. Participants were all of the principals and district office administrators in the Cherry Creek School District #5, Englewood, CO. October, 1993.

The Assumptions and Implementing the NCTM Standards. Presented to all faculty the assumptions and philosophy behind the National Council of Teachers of Mathematics *Curriculum and Evaluation Standards* document. Discussed what the implementation should look like. Wyoming Center for Teaching and Learning–Laramie, (Prep), October 1993.

So you taught fractions last week, what did your kids really learn about fractions? Presented a comparison of procedural and conceptual understanding of the concepts found in fractions and the implications of using a variety of modes of assessment for these understandings. WIC, Sheridan, WY. October 1993.

The Empowerment Document—What Are the Implications for Mathematics Educators? Discussed the implications of the Wyoming Mathematics Empowerment Document with an emphasis on K–3 teaching and assessment. WIC, Sheridan, WY. October 1993.

Creating Model Mathematics Programs for the Wyoming Empowerment Outcomes. Led a discussion of courses offered through Eisenhower funds under the auspices of the Wyoming Council of Teachers of Mathematics in June 1993. WCTM general meeting and executive meeting, WIC, Sheridan, WY. October 1993.

Integrating and Connecting Mathematics to the Census Data. Presented ideas to experienced middle school mathematics teachers on ways to realize the NCTM standard of connecting mathematics to real–life and other disciplines. Used the census data as an integrating tool. Project Prime, Shoreline School District, Washington. May, 1990.

Professional Workshops Attended

State Collaborative on Assessment and Student Standards—Mathematics SCASS, WY Higher Education Participant, Louisville, KY, Council of Chief State School Officers, February 2014.

Improving Student Learning at Scale Policy Collaborative, WY Higher Education Participant, Los Angeles, CA, National Governors Association, Council of Chief State School Officers, State Higher Education Executive Officers Association, NCSL, November 2013.

How the Common Core will Impact College Readiness and Teacher Education. TaskStream Collaboration Exchange WebCast Seminar. February, 2012.

Assessment Working Group. Psychology of Mathematics Education—North America (PME-NA), Reno NV, November 2011.

Using iClicker in College Classrooms. Ellbogen Center for Teaching Excellence (ECTE), University of Wyoming, February 2010.

Leadership Conference, National Network for Educational Renewal, (NNER), Seattle, WA, June, 2009.

SMTI: NASUGLC Science and Mathematics Teacher Imperative Conference, University of Colorado, Boulder, May, 2009.

How to Recruit Graduate Students: Getting the Results. Graduate and Professional School Enrollment Management Corporation, Atlanta Georgia, March 2009.

Using Writing to Teach in College Classes. Ellbogen Center for Teaching Excellence (ECTE), University of Wyoming, May 2004.

The Power of Accountability to Transform Teaching and Learning. Mid-Continent Research for Education and Learning (McREL), Denver, CO, October 2000.

Teacher Education Discussion. Center for Teaching Excellence (CTE), University of Wyoming, April 2000.

Education Commission of the States. A policy/informational meeting to discuss mathematics and science education convened by Governor Geringer. Cheyenne, WY, March 2000.

The Teaching Gap. Mathematics and Science Faculty and graduate students met on a bi-weekly basis to analyze the TIMMS research via the book "The Teaching Gap." Fall 1999.

NAEP State Meeting. A working session for curriculum experts from 50 states for the development of NAEP questions for mathematics and science. NCTM, ETS. Washington, DC, May 1998.

The Nature and Role of Algebra in the K-14 Curriculum A symposium of all 50 state leaders in mathematics education to consider new curricula materials to address the NCTM Standards. NCTM and MSEB. Washington, D.C., May 1997.

Best of the Best: Great Plains Curriculum Showcase A demonstration of new NSF mathematics curricula, Omaha, NE, August, 1997.

Geometer's Sketchpad: A constructivist geometry program for both the Macintosh and IBM. Berkeley, CA. June 1995.

New Partners...New Purposes High Plains Consortium for Mathematics and Science, Kansas City, MO. September 1993.

Math in the Mind's Eye: A way of teaching mathematics using manipulatives and spatial skills, October 1989.

Peer Coaching: A course designed to teach teachers how to help their peers improve their teaching skills, 1988.

EQUALS in Computer Technology: A course demonstrating how to encourage women and minority involvement in mathematics and computer technology. Lawrence Hall of Science, Berkeley, California, 1986.

Cooperative Learning: A course that emphasizes problem–solving through group work, 1986.

Honors

Outstanding Service to the Profession, College of Education, University of Wyoming, 2015.
Outstanding Advising, College of Education, University of Wyoming,1999, 2012.
Outstanding Teaching, College of Education, University of Wyoming, 1998.