MARGARET L. NIESS

STEM Education, College of Education

Oregon State University, Corvallis, Oregon 97331

<https://education.oregonstate.edu/emeritus-faculty>

Telephone: (541) 752-5454

***Educational and Employment Background***

**Education**

Ph.D. 1980 Oregon State University (Corvallis, OR)

Major: Mathematics Education

Minors: Mathematics

Integrated Science

(Statistics and Computer Science)

Dissertation Area:

Computers in Learning/Teaching Mathematics

M.S. 1966 Oregon State University (Corvallis, OR)

General Science/Mathematics Education

B.S. 1965 Oregon State University (Corvallis, OR)

General Science/Mathematics Education

**Professional Work Experience**

2018 – present **Professor Emeritus,** College of Education

*As of December 1, 2018*

2013 – 2018 **Professor Emeritus**, College of Engineering OSU. Computer Science Online PostBacc Program

*Responsibilities include assessing project plans to improve Online Post-Bac CS degree program instruction. The assessment focus on determining the successes of the program in meeting its goals and objectives. The instructional strategies focus on moving to student-centered instruction.*

2003 – 2013 **Professor Emeritus of Science and Mathematics Education**, College of Science, OSU. Faculty member in Science and Mathematics Education 0.5 FTE.

*Responsibilities include teaching graduate and undergraduate courses in the teacher preparation; designing an online Masters degree program for K-12 teachers to integrate technology; advising graduate students, major professor and service on graduate committees for masters and doctoral students; co-PI on NSF Grant; PI on Oregon Department of Education grant; performance of scholarly research.*

3/2000 – 5/2003 **Director of Science and Mathematics Teacher Preparation, Professor of Science & Mathematics Education**, Science and Mathematics Education, College of Science, OSU.

*Responsibilities include directing the preservice teacher preparation program; teaching of graduate and undergraduate courses in the teacher preparation program; advising graduate students, major professor and service on graduate committees for masters and doctoral students; performance of scholarly research.*

7/1991 – 3/2000 **Department** **Chair and Professor with tenure** (7/93-2001), **Associate Professor with tenure** (7/91-6/93), Science and Mathematics Education, College of Science, OSU.

*Responsibilities include departmental administration; teaching of graduate courses in teaching methods/strategies, curriculum, and instructional technology in math and science teaching in the Professional Teacher Education Program (MAT) and MS and Ph.D. programs in Science Education and Mathematics Education; advising of graduate students; major professor and service on graduate committees for masters and doctoral students; performance of scholarly research and curriculum development.*

10/1989 - 6/1991 **Department** **Chair and Associate Professor with tenure (86-91),** Science, Mathematics and Computer Science Education, College of Education, OSU**.**

*Responsibilities include half-time departmental administration; teaching mathematics education and computer science education courses (graduate and undergraduate); advising of undergraduate students; major professor and service on graduate committees for masters and doctoral students; performance of scholarly research and curriculum development.*

7/1986 - 10/1989 **Associate Professor with Tenure**, Science, Mathematics and Computer Science Education, College of Education, OSU.

*Responsibilities include teaching computer science education and mathematics education courses (graduate and undergraduate); updating and revising computer science education program; advising undergraduate students; supervision of masters and doctoral students and performance of scholarly research.*

9/1988 - 12/1988 **Sabbatical Study Leave**

*Review and revise all course material for computer science education program; work on two books for publication, preparation with newest technological applications to provide more up-do-date instruction in classes at OSU*

3/1981 - 7/1986 **Assistant Professor of Mathematics and Computer**

**Science Education**, Science, Mathematics and Computer Science Education, College of Education, OSU.

*Responsibilities include developing a computer science education program, education applications of computers, instructional strategies for teaching with computers, mathematics education (graduate and undergraduate), science and mathematics education junior class advisor; coordinator of Oregon Junior Science and Humanities Symposium.*

9/1980 - 3/1981 **Assistant Professor of Mathematics Education, Split appointment in School of Education and College of Science, OSU School of Education:**

*Fall and Winter term 0.5 FTE, Spring term 0.25 FTE; College of Science: Fall and Winter term 0.5 FTE in Department of Mathematics, Spring term 0.25 FTE in Department of Computer Science and 0.5 FTE appointment in Department of Mathematics. Responsibilities include teaching courses about instructional strategies for teaching with computers; undergraduate mathematics courses; FORTRAN programming; coordinator of Oregon Junior Science and Humanities Symposium. Department of Science and Mathematics Education freshman and sophomore advisor*.

9/1979 - 8/1980 **Graduate Teaching Assistant**, Science and

Mathematics Education, School of Education, OSU. *Responsibilities included teaching mathematics courses for Saudi Arabian Masters' students; secondary methods course for science and mathematics education majors; supervision of student teachers, freshman and sophomore advisor for Science and Mathematics Education.*

1/1966 - 9/1977 **Mathematics Teacher** at multiple schools/multiple levels:

*• Chemeketa Community College, Salem, Oregon (1973-77);*

*• Oregon State Men's Penitentiary (1976-77);*

*• Oregon State Men's Correctional Institution (1976-77);*

*• Linn-Benton Community College, Albany, Oregon (1972-73);*

*• Clarke Junior High School, Athens, Georgia (1970-71);*

*• Portland Community College, Portland, Oregon (1968-69);*

*• Cedar Park Junior High School, Beaverton, Oregon (1966-68);*

*• Wilson High School, Portland, Oregon (1966)*

***Scholarship and Creative Work***

**Publications**

* Referred Publications

**Books**

**Niess, M. L.** & Gillow-Wiles, H. W. (Eds.) (2021).*Handbook of Research on**Transforming Teachers’ Online Pedagogical Reasoning for Teaching K-12 Students in Virtual Learning Environments.* Hershey, PA: IGI Global., 664 pages. DOI: 10.4018/978-1-7998-7222-1

**Niess, M. L.** (2019). *Blended Online Learning and Instructional Design for TPACK: Emerging Research and Opportunities.* Hershey, PA: IGI Global.

**Niess, M. L.,** Angeli, C, & Gillow-Wiles, H. (Eds.) (2019). *Handbook of Research on TPACK in the Digital Age*. Hershey, PA: IGI Global, 490 pages.

**Niess, M. L.** (2017). *Technological Pedagogical Content Knowledge (TPACK) Framework for K-12 Teacher Preparation: Emerging Research and Opportunities* (pp. 1-173). Hershey, PA: IGI Global. DOI: 10.4018/978-1-5225-1621-7

**Niess, M. L**., Driskell, S. O., & Hollebrands, K. (Eds.) (2016), *Handbook of Research on Mathematics Teacher Education in the Digital Age.*

**Niess, M. L.** & Gillow-Wiles, H. W. (Eds.) (2015).*Handbook of Research on Teacher Education in the Digital Age.* Hershey, PA: IGI Global.

Ronau, C. R., Rakes, C. R., & **Niess, M.L**. (Eds.)(2012). *Educational Technology, Teacher Knowledge, and Classroom Impact: A Research Handbook on Frameworks and Approaches*. Hershey, PA: IGI Global.

**Niess, M. L**. & Lee, J. K. (2009). *2007 Microsoft Office System: A Resource for Teachers*, New York: John Wiley & Sons, 260 p.

**Niess, M. L.,** Lee, J.K., Kajder, S. B. (2008). *Guiding Learning with Technology*, New York: John Wiley & Son, 358 p.

Ley, J., **Niess, M. L**., & Rigg, C. (2007). *ICT4U Middle School Spreadsheets*, The Woodlands, TX: ICT4U Education, LLC.

**Niess, M.L**., Erickson, D. K., & Higgins, K. (2003). Revision of 7th Edition of *Helping children learn mathematics*. New York: John Wiley & Sons (ISBN 0-471-36785).

**Niess, M.L.** (1988). *Computer education: A beginning*. Kendall/Hunt. (ISBN 0-8403-4889-4). 418 p.

**Niess, M.L.** (1988). *A BASIC introduction to computers*. Kendall/Hunt. (ISBN 0-8403-5006-6). 389 p.

**Moore, M.L.** (1986). *Logo discoveries: Problems for numbers, words and lists*. Palo Alto, CA: Creative Publications. 1986. 84 p.

**Moore, M.L.** (1986). *Logo discoveries: Problems for recursion*. Palo Alto, CA: Creative Publications. 1986. 86 p.

**Moore, M.L.** (1986). *Logo discoveries: Value pack*. (All six *Logo Discoveries* books packaged as one.) Palo Alto, CA: Creative Publications. 480 p.

**Moore, M.L.** (1985). *Logo discoveries: Investigating numbers, words and lists*. Palo Alto, CA: Creative Publications. 81 p.

**Moore, M.L.** (1985). *Logo discoveries: Investigating recursion*. Palo Alto, CA: Creative Publications. 82 p.

**Moore, M.L.** (1985). *Computer problems of the week: Exploring logo graphics*. Palo Alto, CA: Creative Publications. 84 p.

**Moore, M.L.** (1984). *Logo discoveries.* Palo Alto, CA: Creative Publications. 74 p.

**Moore, M.L.** (1984). *Geometry problems for logo discoveries*. Palo Alto, CA: Creative Publications. 73 p.

**Moore, M.L.** (1982). *Mathematics in vocational education*. Oregon Department of Education. p. 114.

**Chapter in Book**

* **Niess, M.L.** & Gillow-Wiles, H. (2021). Developing teachers’ knowledge for teaching in virtual contexts: Lessons from the pandemic of 2020-2021. In Niess & Gillow-Wiles (Eds.)*Handbook of Research on**Transforming Teachers’ Online Pedagogical Reasoning for Teaching K-12 Students in Virtual Learning Environments* (pp. 643-664)*.* Hershey, PA: IGI Global. DOI: 10.4018/978-1-7998-7222-1.ch031
* Gillow-Wiles, H. & **Niess, M.L.** (2021). Is there recess on Mars: Developing a sense of belonging in online learning. In Niess & Gillow-Wiles (Eds.)*Handbook of Research on**Transforming Teachers’ Online Pedagogical Reasoning for Teaching K-12 Students in Virtual Learning Environments* (pp. 1-18)*.* Hershey, PA: IGI Global. DOI: 10.4018/978-1-7998-7222-1.ch001
  + - * **Niess, M.L.** & Gillow-Wiles, H. (2021). Online Instructional Strategies for Enhancing Teachers' TPACK: Experiences, Discourse, ad Critical Reflection. In Management Association, I. (Ed.) *Research Anthology on Developing Effective Online Learning Courses* (pp. 326-348).edited by Information Resources Management Association. IGI Global. http://doi: 10.4018/978-1-7998-8047-9.ch019

2015-preset

* **Niess, M. L.** & Gillow-Wiles, H. (2019). Experience, critical reflections and discourse: Transforming teachers’ TPACK. In Niess, Angeli & Gillow-Wiles (Eds.) *Handbook of Research on TPACK in the Digital Age*. Hershey, PA: IGI Global.
* Gillow-Wiles, H. & **Niess, M.L.** (2019). Engaging a workbench dialectic inquiry model in an online master's degree program: TPACK development through communities of inquiry. In Niess, Angeli & Gillow-Wiles (Eds.) *Handbook of Research on TPACK in the Digital Age*. Hershey, PA: IGI Global.
* Harrington, R., Driskell, S. O., Johnston, C. J. , Browning, C. & **Niess, M.L.** (2019). TPACK: Breakthroughs in Research and Practice. Originally published in M. L. Niess, S. Driskell, & K Hollebrands (Eds), *Handbook of Research on Mathematics Teacher Education in the Digital Age.* Hershey, PA: IGI Global. Information Resources Management Association (IRMA), pages 324-346.
* **Niess, M. L.** (2019). Teachers’ Knowledge for the Digital Age. *Oxford Research Encyclopedia of Education.*

Subject: Curriculum and Pedagogy, Professional Learning and Development, Education, Change, and Development, Research and Assessment Methods, Educational Theories and Philosophies, Technology and Education Online Publication Date: Jul 2019 DOI:10.1093/acrefore/9780190264093.013.364

* **Niess, M. L.** (2018). Online learning trajectory for knowledge-building communities to reframe inservice teachers' TPACK. In Information Resources Management Association (Ed.), *Teacher training and professional development: Concepts, methodologies, tools, and applications* (pp. 839-862). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-5631- 2.ch037
* **Niess, M. L.** (2018). Looking to the future in transforming inservice teachers' TPACK through online continued learning. In Information Resources Management Association (Ed.), *Teacher training and professional development: Concepts, methodologies, tools, and applications* (pp. 2163-2176). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-5631- 2.ch103
* **Niess, M. L.** (2018). Applying the TPACK learning trajectory in blending practical teaching experiences with online community of learners' explorations. In Information Resources Management Association (Ed.), *Teacher training and professional development: Concepts, methodologies, tools, and applications* (pp. 1346-1366). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-5631-2.ch061
* **Niess, M. L.** (2018). Introduction to teachers’ knowledge–of–practice for teaching with digital technologies: A technological pedagogical content knowledge (TPACK) framework. In Information Resources Management Association (Ed.), *Teacher training and professional development: Concepts, methodologies, tools, and applications* (pp. 145–159). Hershey, PA: IGI Global.
* **Niess, M. L.** (2018). Scaffolding Subject Matter Content With Pedagogy and Technologies in Problem-Based Learning With the Online TPACK Learning Trajectory. In *Teacher Training and Professional Development: Concepts, Methodologies, Tools, and Applications* (pp. 914-931). IGI Global.
* Driskell, S. O., Bush, S. B., Ronau, R. N., **Niess, M. L.,** Rakes, C. R., & Pugalee, D. K. (2018). Mathematics education technology professional development: Changes over several decades. In Information Resources Management Association (Ed.), *Teacher training and professional development: Concepts, methodologies, tools, and applications* (pp. 115- 144). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-5631-2.ch006
* **Niess, M.** **L.** (2017). Online teacher education: Transforming teachers’ knowledge for teaching with digital technologies. In: Tatnall, A. and Webb, M. E. (Eds) *Tomorrow’s Learning: Involving Everyone – Learning with and about technologies and computing. WCC 2017. AFIP Advances in Information and Communication Technology, 515, 355-365* Springer, Cham. <https://doi.org/10.1007/978-3-319-74310-3_37>
* **Niess, M. L.** & Gillow-Wiles, H. (2017). Innovative Instructional Strategies for An Online Community of Learners: Reconstructing Teachers’ Knowledge. In Marin & Polly (Eds.), *Handbook of Research on Teacher Education and Professional Development*, pp. 499-526.
* **Niess, M. L.** (2016). Transforming teachers’ knowledge for teaching with technologies: An online learning trajectory instructional approach. In Herring, Koehler, & Mishra (Eds.) *Handbook of Technological Pedagogical Content Knowledge, 2nd Edition* (328 pages).
* **Niess, M. L.** & Gillow-Wiles, H. (2016). Mathematics teachers’ knowledge-of-practice with technologies in an online masters’ program. In M. L. Niess, S. Driskell, & K Hollebrands (Eds), *Handbook of Research on Mathematics Teacher Education in the Digital Age.* Hershey, PA: IGI Global,
* Gillow-Wiles, H. & **Niess, M. L.** (2016). A Reconstructed Conception of Learner Engagement in Technology Rich Online Learning Environments. In M. L. Niess, S. Driskell, & K Hollebrands (Eds), *Handbook of Research on Mathematics Teacher Education in the Digital Age.* Hershey, PA: IGI Global
* Harrington, R., Driskell, S. O., Johnston, C. J. , Browning, C. & **Niess, M.L.** (2016). Technological Pedagogical Content Knowledge: Preparation and Support of Mathematics Teachers. In M. L. Niess, S. Driskell, & K Hollebrands (Eds), *Handbook of Research on Mathematics Teacher Education in the Digital Age.* Hershey, PA: IGI Global
* Driskell, S. O., Bush, S. B., Ronau, R. N., **Niess, M. L.,** Pugalee, D. (2016). Trends in Mathematics Education Technology Professional Development. In M. L. Niess, S. Driskell, & K Hollebrands (Eds), *Handbook of Research on Mathematics Teacher Education in the Digital Age.* Hershey, PA: IGI Global
* **Niess, M. L.**  & Roblyer, M. D. (2016). Chapter 11. Teaching and learning with technology in mathematics and science. In M.D. Roblyer (Ed), *Integrating Educational Technology into Teaching, 7th Edition*, Boston, MA: Pearson, 305-331.
* Gillow-Wiles, H. & **Niess, M.L.** (2015). Engaging google docs to support collaboration and reflection in online teacher education. In M. L. Niess, & H. Gillow-Wiles (Eds). *Handbook of Research on Teacher Education in the Digital Age,* Hershey, PA: IGI Global, 635- 662.
* Bush, S. B., Dirskell, S. O., **Niess, M. L**., Pugalee, D., Rakes, C. R., & Ronau, R.N. (2015). The impact of digital technologies in mathematics pre-service teacher preparation over four decades. *Handbook of Research on Teacher Education in the Digital Age.* Hershey, PA: IGI Global, *1-27.*
* **Niess, M. L.**  (2015). Transforming teachers’ knowledge: Learning trajectories for advancing teacher education for teaching with technology. In C. Angeli & N. Valanides (Eds.), *Technological Pedagogical Content Knowledge: Exploring, Developing and Assessing TPCK*, Springer, 19-40.
* **Niess, M. L.** (2014). Leveraging dynamic and dependable spreadsheets focusing on algebraic thinking and reasoning. In D. Polly (Ed.), *Cases on Technology Integration in Mathematics Education*. Hershey, PA: IGI Global, 1-23.
* **Niess, M.****L.** (2014). Chapter 2. Learning and teaching mathematics. *Learning Mathematics in Elementary and Middle Schools: A Learner-Centered Approach.* Book written by Cathcart, W. G., Potheir, Y. M., Vance, J. H. & Bezuk, N. S. Boston, MA: Pearson, 22-54.
* Gillow-Wiles, H., & **Niess, M.** (2014). A systems approach for integrating multiple technologies as important pedagogical tools for TPACK. In L. Liu & D. Gibson (Eds.), *Research Highlights In Technology And Teacher Education* *2014,* Waynesville, NC: AACE, 51-58.
* **Niess, M. L.** (2012). Re-thinking pre-service mathematics teachers’ preparation: Technological, pedagogical and content knowledge (TPACK). In D. Polly, C. Mims, & K. Persichitte (Eds.), *Developing Technology-Rich, Teacher Education Programs: Key Issues.* Hershey, PA: IGI Global, 316-336.
* **Niess, M. L.** (2012). Teacher knowledge for teaching with technology: A TPACK lens. In R. R. Ronau, C. R. Rakes, & M. L. Niess (Eds.), *Educational Technology, Teacher Knowledge, and Classroom Impact: A Research Handbook on Frameworks and Approaches*. Hershey, PA: IGI Global.
* Ronau, R. N., Rakes, C. R., **Niess, M. L.,** Wagener, L., Pugalee, D., Browning, C., Driskell, S. O., & Mathews, S. M. (2010). New directions in the research of technology-enhanced education. In J. Yamamoto, C. Penny, J. Leight, & S. Winterton (Eds.), *Technology leadership in teacher education: Integrated solutions and experiences*. Hershey, PA: IGI Global. 263-297.
* Niess, M. L.& Walker, J. M. (2010). Digital video in mathematics education. In Bull, G…L. & Bell, L. (Eds). *Teaching with Digital Video*, Eugene, OR: International Society for Technology in Education.
* **Niess, M. L.,** Ronau, R. N., Driskell, S. O, Kosheleva, O., Pugalee, D., Weinhold, M. W. (2009). Technological Pedagogical Content Knowledge (TPCK): Preparation of Mathematics Teachers for 21st Century Teaching and Learning. In F. Arbaugh & P. M. Taylor (Eds.), *Inquiry into Mathematics Teacher Education.* Association of Mathematics Teacher Educators (AMTE) Monograph Series, 5 (143-156). January 2009.
* **Niess, M. L.** & Mack, A. J. (2009). Visual Thinking, Visual Data and Mathematics Education. In Pederson, J. E. & Finson, K. (Eds), *Visual Data: Understanding and Applying Visual Data to Research in Education*, (pp. 107-123). Netherlands: Sense Publishing.
* Ronau, R. N., **Niess, M. L.,** Browning, C., Pugalee, D., Driskell, S. O., & Harrington, R. (2008). Framing the research on digital technologies and student learning in mathematics.  In L. Bell, L. Schrum, & A. D.Thompson (Eds.), *Framing research on technology and student learning in the content areas: Implications for educators* (pp. 13-31). Charlotte, NC: Information Age Publishing.
* **Niess, M. L.** (2008). Guiding preservice teachers in developing TPCK. In Silverman, AACTE Committee on Innovation and Technology (Eds.).  *Handbook of Technological Pedagogical Content Knowledge (TPCK) for Educators*, New York: Routledge, p. 223-250.
* Pattivisan, S., & **Niess, M. L.**  (2008). Mathematical problem solving processes of Thai gifted students. *Creativity, and Talent Development in Mathematics*, (pp. 185-207). Charlotte, NC: Information Age Publishing.
* **Niess, M. L.** (2002). Preparing teachers to teach science and mathematics with technology. In Watson, D. & Andersen J. (Eds), *Networking the Learner: Computers in Education,* Kluwer Academic Publishers*,* 689-697.
* Downes, T., **Niess, M. L.,** Albion, P. R., Biering, K., Bishop, P., Burgan, O.,Cannings, T., James, M., Jobe, H., Lawrence, V., Loveless, A. Ollila, M., van Os, T., Volotinen, T., Withanage, D. (2002). Models of teacher development for the integration of ICTs in the classroom. In Watson, D. & Andersen J. (Eds), *Networking the Learner: Computers in Education,* Kluwer Academic Publishers, 917-924.

**Niess, M. L.** & Scholz, J. M. (1999). Incorporating subject matter specific teaching strategies into secondary science teacher preparation. In Lederman, N. G. & Gess-Newsome, J. (Eds) *Examining Pedagogical Content Knowledge: The Constructs and Its Implications for Science Education*, Kluwer Press.

**Niess, M. L.** (1995). The teacher's role in a problem-centered, interdisciplinary mathematics, science, and technology course. In Tinsley, D. & Watson, D. (Eds) *Integrating Information Technology Into Education*, 264-267.

**Niess, M. L.** (1995). Forecast: A change in the mathematics classroom. In *Computers in Education: Pedagogical and Psychological Implications*, Bulgarian Academy of Science, International Federation of Information Processes (ISBN: 954-88534-02-3), p. 205-217.

**Moore, M.L.** (1985). Preparing teachers to teach about computers and computing. In *Run: Computer Education*,(2nd ed.) Wadsworth Publishers. Reprinted from Resources in Education. 4 pages.

Roberts, R.S. & **Moore, M.L.** (1984). Programming microcomputers as part of the problem solving process in NCTM (Ed.). *National Council of Teachers of Mathematics 1984 Yearbook*. Reston, VI: NCTM, p. 162-170.

**International/National Publications**

* Rakes, C. R., Ronau, R. N., Bush, S. B., Driskell, S. O., Pugalee, D., **Niess, M. L.** (2020) Mathematics Achievement and Orientation: A Systematic Review and Meta-Analysis of Education Technology, Educational Research Review.
* **Niess, M. L.,** & Rooker, T. L. (2019). Redesigning Online Computer Science for Student-Centered Problem-Based Learning, *International Journal of Quality Assurance in Engineering and Technology Education (IJQAETE), 7(1), 11-20.* DOI: 10.4018/IJQCSSE.2019010102
* **Niess, M. L**. (September, 2019). Foreword. In T. D. Neimann and U. M. Stelson (Eds), *Challenges and Opportunities in Global Approaches to* Education. Hershey, PA: IGI Global, 334 pages.
* **Niess, M**. (2019). Experiences, Discourse and Critical Reflections Reveal an Innovative Online Instructional Combination. In K. Graziano (Ed.), Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 2499-2507). Las Vegas, NV, United States: Association for the Advancement of Computing in Education (AACE). Retrieved March 25, 2019 from <https://www.learntechlib.org/primary/p/208001/>.
* **Niess, M.** (2019). Supporting Instructors in Redesigning Online Instruction Toward Student-Centered, Problem Based Learning. In K. Graziano (Ed.), Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 504-508) Las Vegas, NV, United States: Association for the Advancement of Computing in Education (AACE). Retrieved March 25, 2019 from <https://www.learntechlib.org/primary/p/207689/>.
* Tatar, E., Aldemir, R., & **Niess, M. L.**  (2018). Teaching geometry in the 21st century: Investigating teachers’ technological pedagogical content knowledge Levels. *Journal of Computers in Mathematics and Science Teaching (JCMST), 37*(2), 111-129.
* Niess, M. L., & Gillow-Wiles, H. (2017). Expanding teachers’ technological pedagogical reasoning with a systems pedagogical approach. *Australasian Journal of Educational Technology*, 33(3), 77-95.
* Niess, M. L., & Gillow-Wiles, H. (2015). Learning trajectory for transforming teachers’ knowledge for teaching mathematics and science with digital image and video technologies in an online learning experience.  *Journal of Digital Learning in Teacher Education, 31*(1), 5-17, 864-871. Awarded article of the year 2015 with potential for impact and contribution innovativeness, and generalizability or usability*.*
* Ronau, R. N., Rakes, C. R., Bush, S. B., Driskell, S. O., Niess, M. L., Pugalee, D. (2015). The quality of mathematics education technology literature.  *Journal of Multi Disciplinary Evaluation, 11*(24), 12-36. <http://journals.sfu.ca/jmde/index.php/jmde_1>
* **Niess, M. L**. & Gillow-Wiles, H. (2014). Transforming science and mathematics teachers’ technological pedagogical content knowledge using a learning trajectory instructional approach. *Journal of Technology and Teacher Education (JTATE), 22*(4), 497-520*.*
* Ronau, R. N., Rakes, C. R., Bush, S. B., Driskell, S. O., Niess, M. L., Pugalee, D. (2014). A survey of mathematics education technology dissertation scope and quality: 1968-2009. *American Educational Research Journal: Teaching, Learning and Human Development, 51,* 974-1006.
* Staus, N., Gillow-Wiles, H, & **Niess, M. L.** (2014). TPACK development in a three –year online master’s program: How do teacher perceptions align with classroom practice? *Journal of Technology and Teacher Education (JTATE), 22*(3), 333-360*.*
* **Niess, M. L.**, & Gillow-Wiles, H. (2013). Developing asynchronous online courses: Key instructional strategies in a social metacognitive constructivist learning trajectory. *The Journal of Distance Education, 27*(1), 1-23*.*Available online at[**http://www.jofde.ca/index.php/jde**](http://www.jofde.ca/index.php/jde) **Awarded 2013 Journal of Distance Education Editor’s Award, March 2014.**
* **Niess, M. L.** (2013). Central component descriptors for levels of technological pedagogical content knowledge. Special issue on Technological Pedagogical Content Knowledge. *Journal of Educational Computing Research, 48*(2), 173-198.
* Niess, M. L., & Gillow-Wiles, H. (2013). Advancing K-8 teachers’ STEM education for teaching interdisciplinary science and mathematics with technologies, *Journal of Computers in Mathematics and Science Teaching* (JCMST)*, 32*(2), 219-245.
* **Niess, M. L.** (March- April, 2012). HMH: Algebra 1 App for iPad. *Learning and Leading with Technology, 44-45*.
* Ronau, R. N, Rakes, C. R., Bush, S. B., **Niess, M. L.,** Pugalee, D., & Driskell, S. (2011). Research brief: Using calculators for teaching and learning mathematics. National Council of Teachers of Mathematics. Reston VA: NCTM. Posted September 30, 2011 at <http://www.nctm.org/news/content.aspx?id=31192>.
* **Niess, M. L.** (2011).Product review: Cabanga. *Learning and Leading with Technology.*
* **Niess, M. L.** (2011). Investigating TPACK: Knowledge growth in teaching with technology. *Journal of Educational Computing Research, 44*(3), p. 299-317.
* **Niess M. L.,** van Zee, E., & Gillow-Wiles, H. (2010-11). Knowledge growth in teaching mathematics/science with spreadsheets: Moving PCK to TPACK through online professional development.  *Journal of Digital Learning in Teacher Education, 27*(2), p. 42-52*.*

**Niess, M. L.** & Walker, J. M. (2010). Guest editorial: Digital videos as tools for learning mathematics. *Contemporary Issues in Technology and Teacher Education*, *10*(1). Retrieved from <http://www.citejournal.org/vol10/iss1/mathematics/article1.cfm>

* **Niess, M. L**., Ronau, R. N., Shafer, K. G., Driskell, S. O., Harper S. R., Johnston, C., Browning, C., Özgün-Koca, S. A., & Kersaint, G. (2009). Mathematics teacher TPACK standards and development model. *Contemporary Issues in Technology and Teacher Education* [Online serial], *9*(1). Retrieved from <http://www.citejournal.org/vol9/iss1/mathematics/article1.cfm>
* **Niess, M. L.** & Walker, J. M. (2009). This rock ‘n’ roll video teaches math. *Learning and Leading with Technology, 36*(8), 36-37.
* **Niess, M.** L., Sadri, P., Lee, K. (2008) Mathematical Explorations: Variables and Spreadsheets Connect with Real World Problems, *Mathematics Teaching in the Middle School.*

**Niess, M. L.** (2008). Teaching with technology: Standards for Mathematics Teachers, *AMTE Connections*, Fall, p. 5-7.

**Niess, M. L**. (2008). Knowledge needed for teaching with technologies – Call it TPACK, *AMTE Connections*, Spring, p. 9-10.

**Niess, M. L.** (Dec/Jan, 2007-08). Dynamic Visualization, *Learning and Leading With Technology*, *35*(4), 29-31.Pativisan, S., & **Niess, M. L.** (2007). Mathematical Problem Solving Processes of Thai Gifted Students.  *Mediterranean Journal for Research in Mathematics Education, 6*(3), 47

**Niess, M. L.** (2007). Hotmath Homework Help, *Learning and Leading With Technology, 35*(2), 42-43.

* **Niess, M. L.,** Sadri, P., & Lee, K. (2008)Variables and dynamic spreadsheets connect with real world problems, *Mathematics Teaching in the Middle School*, National Council of Teachers of Mathematics Journal, *13*(7), p. 423-431.
* Pativisan, S. & **Niess, M. L.** (2007). Mathematical Problem Solving Processes of Thai Gifted Students, Mediterranean, *Journal for Research in Mathematics Education (Special Issues), 6*(1 & 2).
* Liu, P. & **Niess, M. L.** (2006). An Exploratory Study College Students’ View of Mathematical Thinking in a Historical Approach Calculus Course, *Mathematical Thinking and Learning, 8*(4), 373-406
* **Niess, M. L**. (2006) Preparing Teachers to Teach Mathematics With Technology, *Contemporary Issues in Technology and Mathematics Teacher Education*, *6*(2).
* **Niess, M. L.** (Spring 2006). Spreadsheets as Tools for Building Mathematical Connections. *Connections*, AMTE online publication, Volume 25, Issue 2, p.12-14.
* **Niess, M. L.** (2005). Preparing Teachers to Teach Science and Mathematics With Technology: Developing a Technology Pedagogical Content Knowledge. *Teaching and Teacher Education*, 21, p. 509-523.
* Niess, M. L. (2005). Scaffolding Math Learning with Spreadsheets, *Learning and Leading with Technology, 32*(5), p. 24-25, 48.
* Niess, M. L. (2002). Exploring Linear Equations with Technology. *Learning and Leading with Technology*, 30(2), p. 32*.*
* Bell, R. L, Niess, M. L., Bell, L (Dec/Jan 2001-02 ). El Niño did it: Climate phenomena model integrating technology with teaching science and mathematics, *Learning and Leading with Technology* , 29(4), p. 18-26.
* **Niess, M. L.** (2001). Research Into Practice: A Model for Integrating Technology in Preservice Science and Mathematics Content-Specific Teacher Preparation, *School Science and Mathematics, 101*(2), p. 102-109.
* Manogue, C. A., Siemens, P. J., Tate, J., **Niess, M. L.,** Wolfer, A. J., & Browne, K. (March, 2001). Paradigms in Physics – A New Upper Division Curriculum, *American Journal of Physics*, *69*, p 978-980.
* **Niess, M. L.** & Lederman, N. G. Solutions to Problems from the Previous Century, *School Science & Mathematics*, 100(3), pp 163-166.
* **Niess, M. L.** & Lederman, N. G. Problems From the Previous Century, *School Science & Mathematics*, 100(2), pp 109-110.
* Hannaway, K.J., Hannaway, D. B., Shuler, P.E., **Niess, M. L.,** Griffith, S., Fick, G. W., & Allen, V.G. (1999). World Wide Web Curriculum Design Using National Collaboration, *Journal of Natural Resources and Life Sciences Education*, Vol.28, p. 59-62.
* Gfeller, M.K, **Niess, M. L**., & Lederman, N. G. (May, 1999) Preservice Teachers’ Use of Multiple Representations in Solving Arithmetic Mean Problems. *School Science and Mathematics, 99*(5), p. 250-255.

**Niess, M. L.** (January/February, 1999). Integrating Technology into Math Instruction, *Media and Methods*, p. 26-27.

Lederman, N. G. & **Niess, M. L.** (1998). The Language and Practice of Reform: We are All on the Same Page, But are We Reading Different Books? *Ellipse, 7*(2), p. 1-2,7.

* **Niess, M. L.** (Nov., 1998). The computer spreadsheet: A useful tool for learning to solve equations. *Learning and Leading with Technology*, 23(3), pp 22- 27.
* **Niess, M. L.** (Dec./Jan, 1996-97). Lines and angles: Using geometer's sketchpad to construct knowledge. *Learning and Leading with Technology*
* Erickson, D. K. & **Niess, M. L.**. (Winter, 1996). Focusing on NCTM's standards: Teacher's choices and decisions related to student achievement in middle school mathematics. *Research in Middle Level Education.,* *19*(2), p. 23-42.
* **Niess, M. L.** (December/January, 1994-95). Analyzing and interpreting graphs in the middle grades: Bottles and beyond. *The Computing Teacher, 22*(4), p. 27-29.
* Ahmed, A. & **Niess, M. L.** (November, 1994). Logo programming and students' thought processes. *Computer Education,* No. 78, p.19-23.
* **Niess, M. L.** (1994). The expert mathematician: A revision of fastmath. *Mathematics Teaching In The Middle School,* 1(1), p.80-82.
* **Niess, M. L.** (1993). Forecast: Changing mathematics curriculum and increasing pressure for higher level thinking skills*. The Arithmetic Teacher,* 41(2), 129-135.
* **Niess, M. L.** (1993). Technology focuses the mathematics curriculum on higher level thinking skills. In Johnson, D. C. & Samways, B. (Eds) *Informatics and Changes in Learning (*p. 133-141). Amsterdam: Elsevier Science Publishers.
* **Niess, M. L.** (1992). Seeing stars in a mathematical microworld*. The Computing Teacher, 20*(2), p. 36-39.
* **Niess, M. L.** (1992). Mathematics and M&Ms. *The Computing Teacher, 20*(1), 29-31.
* **Niess, M. L.** & Erickson, D. K. (1992). *The Oregon mathematics teachers of middle school mathematics project: A curriculum development and leader training project for middle school math teachers*. Corvallis, OR: Oregon State University (ERIC Document Reproduction Service No. ED 349 170.
* **Niess, M. L.** (1992). Winds of change. *The Computing Teacher, 19*(6), 32-35.
* **Niess, M. L.** (1991). Computer-using teachers in a new decade. *Education and Computing, 7,* p. 151-156.
* **Niess, M. L.** (1990). Preparing computer-using educators in a new decade. *The Computing Teacher, 18*(3), p. 10-15.
* **Niess, M. L.** (1990). Models that teach about the computer: AppleWorks and ProDOS, the computer's memory and disk storage. *The Computing Teacher, 17*(1), p. 8-12.
* **Niess, M. L.** (1990) Preparing computer-using educators for the '90s.  *Journal of Computing in Teacher Education, 7*(2), p. 10-14.
* **Niess, M. L.** (1989). Models that teach about the computer: Logo, the computer's memory, and disk storage. *The Computing Teacher, 16* (9), p.15-16,47.
* **Niess, M. L.** (1989). Models that teach about the computer: Disk storage and retrieval. *The Computing Teacher, 16(*8), 24-26.
* **Niess, M. L.** (1989). Models that teach about the computer: The computer's memory. *The Computing Teacher, 16*(7), p. 35-37,55.
* **Niess, M. L.** (1988). Logo learning tools and motion geometry. *Journal of Computers in Mathematics and Science Teaching, 8*(1), p. 17-24.
* **Niess, M. L.** (1988). Logo learning tools build informal geometry ideas: Part II. *The Computing Teacher, 15*(9), p. 22-28.
* **Niess, M. L.** (1988). Logo learning tools build informal geometry ideas: Part I. *The Computing Teacher, 15*(8), p.11-15.

Jongejan, T., Moursund, D. & **Niess, M. L.** (1987). ICCE teacher education committee: Some thoughts on preparation of regular classroom teachers, computer science teachers and computer coordinators. *SIG Bulletin*, *3*(4), 38-42.

**Moore, M.L.** (1985). Logo: The teacher's training and education. *AEDS Monitor*, 23(9&10), p.34-35.

**Moore, M.L.** (1984). Preparing teachers to teach about computers and computing. *AEDS Monito*r. Reprinted from *Resources in Education*. November/December, 19-22.

* **Moore, M.L.** (1984). Preparing computer-using educators. *The Computing Teacher,* *12*(2) 48-54.
* Billstein, R. & **Moore, M.L.** (1983). Recursion, recursion*. The Computing Teacher, 11*(4), p. 46-47.
* Burger, W.F., Jenkins, L., **Moore, M.L.** & Musser, G. (1983). Preparing
* elementary teachers to teach mathematics: A coordinated approach. *The Arithmetic Teacher*. April, p. 21-22.
* **Moore, M.L.** (1983). A recursion excursion with a surprising discovery. *The Computing Teacher, 11*(4), p. 49-52.
* **Moore, M.L.** Karel the robot evaluation. (1982). *The Computing Teacher, 4*, p. 2.

**Editorials for *School Science and Mathematics***

**Niess, M. L.** & Lederman, N. G. A Split Half Sayonara. *School Science and Mathematics, 101(*5), p 221-225.

Lederman, N. G. & **Niess, M. L.** What’s Good for the Goose is Good for the Gander. *School Science and Mathematics*, *101(*4), p. 165-167.

Lederman, N. G. & **Niess, M. L.** Curriculum and Instruction: Whose Life Is This Anyway? *School Science and Mathematics*, *101*(3), p. 113-116.

Lederman, N. G. & **Niess, M. L.** An Attempt to Anchor Our Moving Targets. *School Science and Mathematics*, *101(*2), p. 57-60.

Lederman, N. G. & **Niess, M. L.** Not-So-Common “Common” Knowledge. *School Science and Mathematics*, *101(1*), p. 1-4.

Lederman, N. G. & **Niess, M. L.** Shooting at Moving Targets *School Science and Mathematics*, 100(8), p. 401-404.

Lederman, N. G. & **Niess, M. L.** Technology for Technology’s Sake or for the Improvement of Teaching and Learning?, *School Science and Mathematics*, *100(7*), p. 345-348.

Lederman, N. G. & **Niess, M. L.** What Goes Around Comes Around, *School Science and Mathematics*, *100(*6), p. 277-279.

Lederman, N. G. & **Niess, M. L.** Publishing in a Professional Journal: For Reasons of Tenure or just Plain Spreading the Word, *School Science and Mathematics*, *100(*5), p. 225-228.

Lederman, N. G. & **Niess, M. L.** Abracadabra Abacus, *School Science and Mathematics*, *100(*4), p. 169-171.

Lederman, N. G. & **Niess, M. L.** Problem Solving and Solving Problems: Inquiry About Inquiry, *School Science and Mathematics*, *100(*3), p. 113-116.

Lederman, N. G. & **Niess, M. L.** If You Fail to Plan, Are you Planning to Fail? *School Science and Mathematics*, *100(*2), p. 57-60.

Lederman, N. G. & **Niess, M. L.** Putting the Cart Before the Horse. *School Science and Mathematics*, *100(*1), p. 1-3.

Lederman, N. G. & **Niess, M. L.** Training College Teachers *School Science and Mathematics*, *99(*8), p. 413-417.

Lederman, N. G. & **Niess, M. L.** Is It Live or Is It Memorex? *School Science and Mathematics*, *99(*7), p. 357-359.

Lederman, N. G. & **Niess, M. L.** Publishing: A Game or Process with Integrity?. *School Science and Mathematics, 99(*5), p. 225-228.

Lederman, N. G. & **Niess, M. L.** Here’s Looking at You, Kid. *School Science and Mathematics*, q*99*(4), p. 169-172.

Lederman, N. G. & **Niess, M. L.** Rubric’s Cube. *School Science and Mathematics*, *99*(2), p. 113-115.

Lederman, N. G. & **Niess, M. L.** Preparing Our Teachers For Virtual Reality. *School Science and Mathematics, 99(*1), p. 1-3.

Lederman, N. G. & **Niess, M. L.** Separate and Not Equal. *School Science and Mathematics, 98*(8), p. 409-411.

Lederman, N. G. & **Niess, M. L.** Formally Clearing the Air: A Response to Simmons and Colleagues, *School Science and Mathematics*, *98*(7), p. 357-360.

Lederman, N. G. & **Niess, M. L.** 5 Apples + 4 oranges = ?, *School Science and Mathematics*, *98*(6), p. 281-284.

Lederman, N. G. & **Niess, M. L.** Publishing in *School Science and Mathematics*: An update? *School Science and Mathematics*, *98*(5), p. 225-227.

Lederman, N. G. & **Niess, M. L.** Survival of the fittest, *School Science and Mathematics*, *98*(4), p. 169-172.

Lederman, N. G. & **Niess, M. L.** Intelligent solutions to our society’s problems, or how many politicians does it take to change a light bulb? *School Science and Mathematics*, *98*(3), p. 113-115.

Lederman, N. G. & **Niess, M. L.** What’s in style? *School Science and Mathematics*, *98*(2), p. 57-59.

Lederman, N. G. & **Niess, M. L.** How informed are informal educators? *School Science and Mathematics*, *98*(1), p. 1-3.

Lederman, N. G. & **Niess, M. L.** Action research: Our actions may speak louder than our words!, *School Science and Mathematics*, *97*(8), p. 397-399.

Lederman, N. G. & **Niess, M. L.** Less is More? More or less, *School Science and Mathematics*, *97*(7), p. 341-282.

Lederman, N. G. & **Niess, M. L.** Necessary but not sufficient, *School Science and Mathematics*, *97*(5), p. 225--226.

Lederman, N. G. & **Niess, M. L.** Publishing in *School Science and Mathematics*: Up close and personal, *School Science and Mathematics*, *97*(4), p. 169-171.

Lederman, N. G. & **Niess, M. L.** Professors, the profession, and professing to be professional *School Science and Mathematics*, *97*(3), p. 113-115.

Lederman, N. G. & **Niess, M. L.** Integrated, interdisciplinary, or thematic instruction? Is this a question or is it questionable semantics? *School Science and Mathematics*, *97*(2), p. 57-58.

Lederman, N. G. & **Niess, M. L.** The nature of science: Naturally? *School Science and Mathematics, 97*(1), p. 1-2.

Lederman, N. G. & **Niess, M. L.** Problem “less” research: “Less” is not more!, *School Science and Mathematics, 96*(8), p. 393-394.

Lederman, N. G. & **Niess, M. L.**. Faulty towers, *School Science and Mathematics*, *96*(7), p. 337-338.

Lederman, N. G. & **Niess, M. L.** Changing hands, but the tradition continues: A message from your new editors, *School Science and Mathematics*, *96*(6), p. 281.

**Regional Publications**

**Niess, M. L.** (1989). Children and computers*. The Gilbert House Children's Museum, Newsletter*, April/May, 2.

**Moore, M.L.** (1986). President's corner. *NCCE Newsletter*, May, 2.

**Moore, M.L.** (1986). President's corner. *NCCE Newsletter*, January, 2.

**Moore, M.L.** (1985). President's corner. *NCCE Newsletter*, November, 2.

**Unpublished**

**Niess, M.L.** & Erickson, D. K, et al. 1991. TOMTOMS Oregon Trail of mathematics: The Oregon Math Teachers of Middle School project. Oregon State University.

**Moore, M.L.** 1980. Effects of selected mathematical computer games on achievement and attitude toward mathematics in university entry-level algebra. Unpublished doctoral dissertation, Department of Science and Mathematics Education, Oregon State University. 1980.

**Invited and Peer Reviewed Presentations, Paper Proceedings and Workshops**

**International/National**

**2020-2021**

* **Niess, M.,** Parham-Mocello, J, Erwig, M. (2021, March). *Reframing Middle School Mathematics Teachers’ TPACK for Teaching A New Computer Science Curriculum: Researcher-Practitioner Partnership, Board Games, and Virtual Teaching Experiences.*Full paper at the Online Annual Society for Information Technology and Teacher Education (SITE).
* Parham-Mocello, J, Erwig, M, **Niess, M.** (2021). *Teaching CS Middle School Camps in a Virtual World*, 2021 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC),1, pg 1-4.

**2018-2019**

* **Niess, M. L.** (August 2019). *Online Strategies Enhancing Mathematics Teacher Knowledge for the Digital Age: Discourse and Critical Reflection.* Paper presented and published The Mathematics Education for the Future Proceedings of the 15th International Conference: Theory and Practice: An Interface or a Great Divide? Edited by Alan Rogerson and Janina Morska, Maynooth University, Kildare, Ireland, Aug 4-9, 2019.
* **Niess, M.** (2019, March).*Experiences, discourse and critical reflections reveal an innovative online instructional combination*. Full paper at the Annual Society for Information Technology and Teacher Education (SITE) Conference, Las Vegas, NV.
* **Niess, M.** (2019, March). Blending practical experiences and online learning experiences. In Y. Jin & T. Foulger (Chairs), *Multiple perspectives on applying the TPACK framework in teacher education*. Panel discussion conducted at the Annual Society for Information Technology and Teacher Education (SITE) Conference, Las Vegas, NV.
* **Niess, M.** (2019, March).*Redesigning online instruction toward student-centered, problem based learning.* Brief paper at the Annual Society for Information Technology and Teacher Education (SITE) Conference, Las Vegas, NV.
* **Niess, M.** & Roschelle, **J.**  (2018, November). *Transforming teachers’ knowledge for teaching mathematics with technologies through online knowledge-building communities*. Keynote presentation at North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA), Greenville, South Carolina,

**2016-2017**

* Niess, M. L. & Rooker, T. L. (April 30, 2017) *Student Centered Problem Based Learning Approach: Redesigning An Online Computer Science*. Paper presentation at American Education Research Association (AERA) 2017 Annual Conference at San Antonio, Texas.
* Niess, M. L. (May 1, 2017). Chair for the Ro*undtable Session Promoting* Engagement: Teaching and Learning with Digital Means. SIG Technology as an Agent of Change in Teaching and Learning Session. American Education Research Association (AERA) 2017 Annual Conference at San Antonio, Texas.
* Gillow-Wiles, H. & Niess, M.L. (March 9, 2017).  *Development of Social Presence in an Online Master’s Degree program: Engaging a Workbench Dialectic Inquiry Model*. Paper presentation at Society for Information Technology and Teacher Education (SITE) 2017 Annual Conference, Austin, TX.
* Niess, M. L. (March 8, 2017). SITE Joint SIG Symposia: A Collaboration Between the K-12 Online Learning SIG and Distance Learning SIG: How Higher Education and K-12 Online Learning Research Can Impact Each Other. Panel member presentation at Society for Information Technology and Teacher Education (SITE) 2017 Annual Conference, Austin, TX.

**2015-2016**

* Niess, M.L. & Gillow-Wiles, H. (July 29, 2016). *Pedagogical Explorations Integrated With Practical Experiences Transforming Teachers’ Knowledge*. Paper presentation at International Congress on Mathematical Education (ICME-13), Hamburg, Germany.
* Niess, M. L. & Gillow-Wiles, H. (June 29, 2016). *Learning Trajectory For Transforming Teachers’ Knowledge Teaching Mathematics And Science With Digital Image And Video Technologies In An Online Learning Experiences*. Invited paper presentation at International Society for Information Technology Annual Conference, Denver, CO. Awarded paper of the year.
* Niess, M. L. (March 25, 2016). *Blending Pedagogical Examinations and Discourse with Teachers’ Practical Experiences for TPACK Transformation*. Paper presentation at Society for Information Technology and Teacher Education (SITE) 2016 Annual Conference, Savannah, GA. Paper award for the TPACK SIG of the conference.
* Niess, M. L. (March 24, 2016). *TPACK and a Systems Pedagogical Understanding.* Technological Pedagogical Content Knowledge Symposium at Society for Information Technology and Teacher Education (SITE) 2016 Annual Conference, Savannah, GA.
* Gillow-Wiles, H. & Niess, M. L. (March 24, 2016). Re-*Characterizing Learner Engagement with Technology in an Online Mathematics Education MS*. Paper presentation at Society for Information Technology and Teacher Education (SITE) 2016 Annual Conference, Savannah, GA.

**2014-2015**

* **Niess, M. L.** (September 16-21, 2015). *Transforming Teachers’ Technological Pedagogical Content Knowledge for Teaching Mathematics with Technology Through Online Professional Development*. Paper presentation, Mathematics Education for the Future Project Conference, Catania, Sicily, Italy.
* **Niess, M.L.** & Gillow-Wiles, H. (April, 2015). *Transforming Technological Pedagogical Knowledge: Teachers’ Thinking With A Systems Pedagogical Tool.* Paper presentation, American Education Research Association (AERA) 2015 Annual Conference, Chicago, IL.
* Gillow-Wiles, H. & **Niess, M. L.** (April, 2015). *Characterizing Engagement with Technology as a Pedagogical Tool in Developing Teachers’ TPACK*. Roundtable presentation, American Education Research Association (AERA) 2015 Annual Conference, Chicago, IL.
* Gillow-Wiles, H. & **Niess, M. L.** (March 2-5, 2015). *Engaging Google Docs in Suport of an Online Collaborative, Community of Learners Instructional Strategy.* Paper presented at Society for Information Technology and Teacher Education (SITE)2015 Annual Conference, Las Vegas, NV.

**2013-2014**

* **Niess, M. L.,** & Gillow-Wiles, H. (April 5, 2014). Transforming Teachers’ Knowledge of Practice for Teaching with Technologies: An Online Learning Progression. Poster session, American Education Research Association (AERA) 2014 Annual Conference, Philadelphia, PA.
* Ronau, R. N., Pugalee, D. K., Bush, S., Niess, M. L., & Driskell, S. (April 5, 2014). A Survey of Mathematics Education Technology Dissertation Scope and Quality: 1968-2009. Roundtable presentation, American Education Research Association (AERA) 2014 Annual Conference, Philadelphia, PA.
* Gillow-Wiles, H. & Niess, M. L. (April 3, 2014). Engaging Multiple Digital Technologies as a Foundation for an Online Learning Trajectory. Roundtable presentation, American Education Research Association (AERA) 2014 Annual Conference, Philadelphia, PA.
* Niess, M. L. (April 6, 2014). Pedagogical Approaches to Teacher Professional Development on the Use of Technology, Discussant, American Education Research Association (AERA) 2014 Annual Conference, Philadelphia, PA.
* Niess, M. L., & Gillow-Wiles, H. (March 2014). Knowledge-of-Practice for Teaching with Technologies: Pedagogically-focused Experiences and Reflections. Paper presented at Society for Information Technology and Teacher Education (SITE) 2014 Annual Conference, Jacksonville, FL.
* Gillow-Wiles, H, & Niess, M. L. (March 2014). A Systems Approach for Integrating Multiple Technologies as Important Pedagogical Tools for TPACK. Paper presented at Society for Information Technology and Teacher Education (SITE) 2014 Annual Conference, Jacksonville, FL. Thompson TPACK Award 2014.
* **Niess, M.L.**  (November 6-7, 2013). Leveraging dynamic spreadsheets to focus on algebraic thinking and reasoning. Workshop at National Council of Mathematics 2013 Regional Conference, Louisville, Kentucky.

**2012-2013**

* **Niess, M. L.,** & Gillow-Wiles, H. (August 2013). Using Digital Images to Develop Social Presence in Online Teacher Professional Development. European Association for Research on Learning and Instruction (EARLI), Munich, Germany.
* **Niess, M. L.** , & Gillow-Wiles, H. (2013). Transforming Teachers’ Knowledge Using a Learning Trajectory Instructional Approach Focused on Student Thinking with Technologies. American Education Research Association 2013 Annual Conference, San Francisco, CA. Nominated for best paper award.
* Gillow-Wiles, H., & **Niess, M. L**. (April 2013). Developing Algebraic Reasoning with Dynamic Spreadsheets through an Online Learning Trajectory Approach. American Education Research Association 2013 Annual Conference, San Francisco, CA.
* **Niess, M. L.,** & Gillow-Wiles, H. (Paper presented in March 2013). Learning Trajectory for Transforming Teachers’ Knowledge for Teaching Mathematics and Science with Digital Image and Video Technologies, Society for Information Technology and Teacher Education (SITE) 2013 Annual Conference, New Orleans, LA.
* Gillow-Wiles, H, & **Niess, M. L.** (March 2013). Using Multiple Digital Technologies in an Online MS Program to Develop TPACK, Society for Information Technology and Teacher Education (SITE) 2013 Annual Conference, New Orleans, LA.
* Gillow-Wiles, H., & **Niess, M. L.** (November 2012).*Developing Teachers’ Algebraic Reasoning Skills With Spreadsheet Technology In An Online Educational Environment****.*** Proceedings of the 34th Annual Meeting of the International Group for the North American Chapter of the International Group for the Psychology of Mathematics Education, Kalamazoo, Michigan, p. 563.

**2011-2012**

* Niess, M. L. (2012). *Central Component Descriptors for Levels of Technological Pedagogical Content Knowledge.* Video presentation at the 13th Annual ISSEI conference at the University of Cyprus, July 2-6, 2012.
* Niess, M. L., & Gillow-Wiles, H. (2012). *Key Instructional Strategies in Support of a Community of Learners in an Online Master’s Program Directed Toward Developing Technological Pedagogical Content Knowledge.* Paper presented for Society of Information Technology and Teacher Education (SITE) Annual Conference, Austin TX.
* Driskell, S. O., Ronau, R. N., Rakes, C. R., Bush, S. B., **Niess, M. L.,** Pugalee, D. (October 2011). *Research in mathematics educational technology: Current trends and future demands.*  Paper presented for North American Chapter of the International Group for the Psychology of Mathematics Education, Reno, Nevada.
* Gillow-Wiles, H., & Niess, M. L. (October 2011). *Reification and abstraction: developing mathematical content knowledge through discourse around algebraic reasoning and proof.* Paper presented for North American Chapter of the International Group for the Psychology of Mathematics Education, Reno, Nevada.
* Niess, M. L. & Pugalee, D. K. (August 2011). *Assessing k-8 teachers’ knowledge for teaching with technology: A complex problem needing a comprehensive assessment system*. Paper presented for International Symposium Elementary Maths Teaching Conference, Prague, Czech Republic.

**2010-2011**

* **Niess, M. L**., van Zee, E., Gillow-Wiles, H., & Staus, N. (April 2011). *Instructional strategies for high level learning engaging a community of learners in online master’s program in mathematics and science education.* Paper presented at American Educational Research Association (AERA) Annual Conference, New Orleans, LA.
* **Niess, M. L.** & Pugalee, D. K. (April 2011). *A comprehensive approach to assessing TPACK as an interdisciplinary construct*. Roundtable presentation at American Educational Research Association (AERA) Annual Conference, New Orleans, LA.
* **Niess, M. L.,** van Zee, E., Gillow-Wiles, H., & Staus, N. (March 2011). *Advancing k-8 teachers’ STEM education for teaching interdisciplinary science and mathematics with technologies*. Paper presented for Society of Information Technology and Teacher Education (SITE) Annual Conference, Nashville, TN.
* **Niess, M. L.,** Staus, N., & Gillow-Wiles, H. (March 2011). *Global positioning systems (gps), motion detectors and spreadsheets enhance k-8 teachers’ mathematics proficiency in the contest of mathematical functions.* Paper presented for Society of Information Technology and Teacher Education (SITE) Annual Conference, Nashville, TN.
* **Niess, M. L.,** van Zee, E., Jansen, H.,Gillow-Wiles, H., & Staus, N.. (March 2011). *Probeware and web-design communication enhance k-8 teachers’ scientific proficiency in the context of thermal phenomena.* Paper presented for Society of Information Technology and Teacher Education (SITE) Annual Conference, Nashville, TN.

**2009-2010**

* **Niess, M. L.** (May, 2010). *Using classroom artifacts to judge teacher knowledge of reform-based instructional practices that integrate technology in mathematics and science classrooms.* Paper presentation for American Educational Research Association (AERA) Annual Conference, Denver, CO.
* **Niess, M. L.,** van Zee, E., Johnston, T, Gillow-Wiles, H. (May, 2010). *Knowledge growth in teaching mathematics/science with technology: Moving PCK to TPACK in online professional development.* Paper presentation for American Educational Research Association (AERA) Annual Conference, Denver, CO.
* **Niess, M. L.** (April, 2010). *Knowledge growth in teaching with technology: extending PCK to TPACK and implications for teacher education*. Center for the Mathematics and Science Education Seminar, University of Mississippi, Oxford, MS.

**2008-2009**

* **Niess, M. L.** (April 24, 2009). Scaffolding Student Development of Dynamic Spreadsheets as a Mathematics Learning Tool. A one-hour gallery workshop. National Council of Teachers of Mathematics Conference, Washington DC.
* Stohl Lee, H., Hollebrands, K., Ives, S., Smith, R., Bower, J., & **Niess, M. L.** (April 22, 2009). Technology Pedagogy and Content Knowledge for Mathematics Teachers. Speaker in the symposium in the Research Presession for National Council of Teachers of Mathematics Conference, Washington DC.
* **Niess, M. L.** (April 15, 2009). Investigating TPACK. A discussant for this research paper session. American Education Research Association, San Diego, CA.
* Johnston, T. L. & **Niess, M.L.** (April 15, 2009). Master’s Degree Program in Mathematics Teacher Professional Development Leadership: Supporting Teachers in Rural Schools. Paper presentation for American Educational Research Association (AERA) Annual Conference, San Diego, CA.
* **Niess, M. L.** (Mar 25, 2009 and Apr 6, 2009). TPACK: The Total Package for Teaching with Technology. A one-hour Webnair Guest Lecture through the Wiley Faculty Network.
* **Niess, M. L.** (Mar 5, 2009). Teaching with Digital Video in the Mathematics Classroom. A one-hour presentation at the Society of Information Technology and Teacher Education (SITE) Annual Conference, Charleston. SC.
* **Niess, M. L.,** Driskell, S., Johnston, C., Harrington, R, Browning, C. (Mar. 5, 2009) Mathematics Teacher TPACK Standards and Revising Teacher Preparation. A one-hour panel presentation at the Society of Information Technology and Teacher Education (SITE) Annual Conference, Charleston, SC.

**Niess, M. L.** (Nov 5, 2009 and Nov 6, 2009). TPACK: The Total Package for Teaching with Technology. A one-hour Webnair Guest Lecture through the Wiley Faculty Network.

* **Niess, M. L**. (Oct. 10, 2009. Spreadsheets and Mathematics, a 60 minute workshop at Northwest Math Conference in Portland, OR.

**2007-2008**

* **Niess, M. L.** (July 2, 2008). Harry Potter’s Secret Magic for Unfogging Math Challenges with Spreadsheets, a 60 minute workshop at National Educational Computing Conference in San Antonio, TX.
* **Niess, M. L.** (June 30, 2008). Developing Teachers’ Technological Pedagogical Content Knowledge (TPCK) with Spreadsheets, a research presentation at National Educational Computing Conference in San Antonio, TX.
* **Niess, M. L.** (April 10, 2008). Scaffolding Student Development of Dynamic Spreadsheets as a Mathematics Learning Tool, a 90 minute Gallery Workshop, at National Council of Teachers of Mathematics Conference in Salt Lake City, UT.
* **Niess, M. L.** (March 24, 2008). Evolution of Preparing Preservice and Inservice Teachers in Teaching Mathematics and Science With Appropriate Technologies. Paper presented as part of the panel for Technological Pedagogical Content Knowledge (TPCK): A Conceptual Framework with Examples for Integrating Technologies into Teacher Education. American Education Research Association, New York, NY.
* **Niess, M. L.** (March 6, 2008). Mathematics Teachers Developing Technology, Pedagogy and Content Knowledge (TPACK). Paper presentation for the Society of Information Technology and Teacher Education (SITE) Annual Conference, Las Vegas, NV.
* **Niess, M. L.** (November, 2007) Scaffolding Students’ Learning of Mathematics Building Dynamic Spreadsheets, conference workshop at School Science and Mathematics, Indianapolis, IN.

**2006-2007**

**Niess, M. L.** (July 30-August 1, 2007). Dynamic Spreadsheet Tools for Learning Mathematics, 20 hour workshop for Solano County Office of Education, Fairfield, CA.

**Niess, M. L.** (April 21, 2007). Preparing Teachers to Teach Mathematics with Technology the Recognition of AMTE’s Technology Position Statement, a 90-minute workshop for the Spring Conference of the North Carolina Association of Mathematics Teacher Educators, Chapel Hill, NC.

* **Niess, M. L.** (June 27-29, 2007). Mathematics Teachers Developing Technological Pedagogical Content Knowledge (TPCK), paper presentation for IMICT2007, Boston, MA.
* **Niess, M. L.,** Lee, K., & Sadri, P. (April 9-13, 2007). Dynamic Spreadsheets as Learning Technology Tools: Developing Teachers’ Technology Pedagogical Content Knowledge (TPCK), paper presentation for the American Education Research Association Annual Conference, Chicago, IL.
* **Niess, M. L.** (March 30, 2007). Teachers for the Future: Blind Luck or Purposeful Planning. Keynote panel with Jerry Willis and John Park. Ian Gibson as moderator, for the Society of Information Technology and Teacher Education (SITE) Annual Conference, San Antonio, TX.
* **Niess, M. L.** (March 26-30, 2007). Developing Teacher’s TPCK for Teaching Mathematics With Spreadsheets, paper presentation for the Society of Information Technology and Teacher Education (SITE) Annual Conference, San Antonio, TX.
* **Niess, M. L.** (March 24, 2007). Scaffolding Students' Learning of Mathematics Building Dynamic Spreadsheets, 90 minute Gallery Workshop for National Council of Teachers of Mathematics Annual Conference, Atlanta, GA.
* **Niess, M. L.** (January 2007). Preparing Teachers to Teach Mathematics with Technology, a 3- hour pre-conference workshop for the Association of Mathematics Teacher Educators Annual Conference, Irvine, CA.
* **Niess, M. L.** (January 2007). Professional Development that Supports and Follows Mathematics Teachers in Teaching with Spreadsheets, a 1-hour presentation for the Association of Mathematics Teacher Educators Annual Conference, Irvine, CA.

**2005-2006**

* **Niess, M. L.** (April 26-29, 2006). Guiding Student Learning of Mathematics With Spreadsheets, 90-minute workshop at the National Council of Teacher of Mathematics, Anaheim, CA.
* **Niess, M. L.** (April 10, 2006). Technology as an Agent of Change, discussant for a session, American Education Research Association Annual Conference, San Francisco, CA.
* **Niess, M.L.,** Suharwoto, G., Lee, K., Sadri, P. (April 9, 2006). Guiding Inservice Mathematics Teachers in Developing Technology Pedagogical Content Knowledge (TPCK): Paper presented at the annual Meeting of the Annual Educational Research Association, San Francisco, CA.
* **Niess, M. L.** (March 23, 2006). Key Research Questions for Information Technology in the Core Disciplines: Mathematics Education Perspective, Presentation at the Society for Information Technology and Teacher Education Annual Conference, Orlando, FL.
* **Niess, M. L.** (March 22, 2006). Digital Stories Across the Curriculum: Opportunities and Challenges: Mathematics Education Perspective, Presentation at the Society for Information Technology and Teacher Education Annual Conference, Orlando, FL.
* **Niess, M. L.** (January 2006). Developing and Implementing a Technology Pedagogical Content Knowledge (TPCK) for Teaching Mathematics with Technology, a 3- hour pre-conference workshop for the Association of Mathematics Teacher Educators Annual Conference, Tampa, FL
* **Niess, M. L.** (November 2005) Guiding Students’ Learning of Mathematics While Designing and Creating Dynamic Spreadsheets, School Science and Mathematics Annual Conference, Dallas, TX.
* **Niess, M. L.,** Suharwoto, G., & Lee, K. ( November 2005) Professional Development Focused on Technology Pedagogical Content Knowledge, School Science and Mathematics Annual Conference, Dallas, TX.

**Niess, M. L.** (October 2005) Scaffolding Students’ learning in Algebra and Pre-algebra with Spreadsheets, a 90 minute workshop at the Northwest Mathematics Annual Conference, Portland, OR.

**2004-2005**

* **Niess, M. L.,** Suharwoto, G., & Lee, K. (June 2005). Guiding Student Learning of Mathematics with Spreadsheets, workshop presentation for the National Education Computing Conference, Philadelphia, PA.
* **Niess, M. L.** (April 7-9, 2005). Scaffolding Student Learning of Mathematics With Spreadsheets, National Council of Teacher of Mathematics, Anaheim, CA.
* Gfeller, M. K. & **Niess, M. L.** (April 14, 2005). An Investigation of Tenth Grade Students’ Views of the Purposes of Geometric Proof. Individual presentation for American Educational Research Association, Montreal, Canada.
* **Niess, M. L.** (January 28, 2005). Prepare Teachers to Scaffold Student Learning Math with Spreadsheets, poster presentation for American Mathematics Teacher Educators conference in Dallas, TX.
* **Niess, M. L.** (January 27, 2005) Preparing Mathematics Teachers to Teach With Technology, Chair of Pre-Conference Workshop for American Mathematics Teacher Educators conference in Dallas, TX.
* **Niess, M. L.** (October 21-23, 2004). The Case of the Missing Mathematics Tool: The Computer, Workshop at the School Science and Mathematics Annual Conference, Atlanta, GA.
* **Niess, M. L.** (April 22-24, 2004). The Case of the Missing Mathematics Tool: The computer, Computer workshop at the National Council of Teachers of Mathematics Annual Conference, Philadelphia, PA.
* **Niess, M. L.** (January 23, 2004). Guiding Preservice Teachers’ Development of a Technology-enhanced Pedagogical Content Knowledge for Teaching Mathematics. Computer Lab Session for Eighth Annual Conference of Association of Mathematics Teacher Educators (AMTE), San Diego, CA.
* Erickson, D. K., **Niess, M. L**., Beauchman, M.L. (January 30, 2004). From Isolation to Collaboration: Guiding Preservice Mathematics Teacher Toward Student Higher Level Thinking and Conceptual Understanding. Session for Eighth Annual Conference of Association of Mathematics Teacher Educators (AMTE), San Diego, CA.

**2002-2003**

* **Niess, M. L.** (April 9-12, 2003). The Case of the Missing Mathematics Tool: The computer Spreadsheet. Computer workshop at the National Council of Teachers of Mathematics Annual Conference, San Antonio, Texas
* **Niess, M. L.** (January 30, 2003). Motivating and Preparing Preservice Teacher to Teach Mathematics with Technology. Computer Lab Session for Seventh Annual Conference of Association of Mathematics Teacher Educators (AMTE), Atlanta, Georgia.
* Erickson, D. & **Niess, M. L.** (January 30, 2003). Building SHARING Communities with Middle Level (5-10) Mathematics Teachers. Session for Seventh Annual Conference of Association of Mathematics Teacher Educators (AMTE), Atlanta, Georgia.
* Enochs, L. G & **Niess, M. L.** (October 16-19, 2002)Assessment of the Status of Graduate of a Science and Mathematics 5th Year Teacher Licensure Program: Rural Teacher Retention Factors in Oregon. 94th Annual National Rural Education Association Conference, Portland, OR.
* **Niess, M. L.** (October 10-11, 2002). Integrating Geometer’s Sketchpad and Hands-on Activities to Explore Geometric concepts and Relationships. One hour session the Northwest Council For Computer Education Conference, Portland OR.
* **Niess, M. L.** (October 10-11, 2002). Integrating Spreadsheet Exploration in Algebra: Solving Problems, Explaining Patterns, and Analyzing Data. One hour session the Northwest Council For Computer Education Conference, Portland OR.

**2001-2002**

* **Niess, M. L.** (April, 2002). Spreadsheet Explorations in Algebra: Solving Problems, Explaining Patterns & Analyzing Data. Computer workshop at the National Council of Teachers of Mathematics Annual Conference, Las Vegas, NV.
* **Niess, M. L.** (March, 2002). Spreadsheet Explorations in Algebra: Solving Problems, Explaining Patterns & Analyzing Data. Three hour workshop at the Northwest Council For Computer Education Conference, Seattle, WA.

**Niess, M. L.** (October, 2001). Teaching Mathematics in the 21st Century. Keynote presentation for the SHARING Communities in Mathematics Education at Oregon State University, LaSells Conference Center.

**Niess, M. L.** (October, 2001). Where do we go from here? The closing presentation for the SHARING Communities in Mathematics Education at Oregon State University, LaSells Conference Center.

**2000-2001**

* **Niess, M. L.** (July 2001). (July-August, 2001) Preparing Teachers to Teach Science and Mathematics With Technology. Paper proceedings at the International Federation of Information Processing (IFIP) World Computing Conference, Copenhagen, Denmark.

**Niess, M. L.** [rapporteur] (August 2001). Preparing Teachers to Teach with Technology at the International Federation of Information Processing (IFIP) World Computing Conference, Copenhagen, Denmark.

* **Niess, M. L.** (April, 2001). The Case of the Missing Mathematical Tool: The Computer Spreadsheet. A workshop presented at the National Council of Teachers of Mathematics Annual Conference in Orlando, FL.
* **Niess, M. L.** (January, 2001) Publishing in *School Science and Mathematics*. Session at Association of Education of Teachers of Science, 5th Annual Conference in Costa Mesa, CA.
* **Niess, M. L.** & Erickson, D. K. (January, 2001). Incorporating Distance Delivery in Preservice and Inservice Mathematics Teacher Education. Session at Association of Mathematics Teacher Education, 5th Annual Conference in Costa Mesa, CA.
* Erickson, D.K., **Niess, M. L.** Lederman, N. G, Flick, L. (January, 2001). A 5th Year Preservice Teacher Education Model: Benefits and Problems in a Subject Specific Secondary Teacher Education Program. Session at Association of Mathematics Teacher Education, 5th Annual Conference in Costa Mesa, CA.

**Niess, M. L.** (September, 2000). Integrating Technology with Mathematics Education. Session at the Teachers of Teachers of Mathematics Annual Conference, Oregon State University, Corvallis, OR.

**1999-2000**

**Niess, M. L.** (October, 1999). Spreadsheets: An Essential Tool in Teaching and Learning Middle Level Mathematics. Session at the 38th Annual NW Math Conference, Portland, OR.

**1998-1999**

* **Niess, M. L.** (April, 1999). The Case of the Missing Mathematical Tool: The Spreadsheet. An invited extended session for National Council of Teachers of Mathematics Annual Conference, San Francisco, CA.
* **Niess, M. L.** (March, 1999). The Case of the Missing Mathematical Tool: The Spreadsheet. A three-hour workshop for Northwest Council For Computer Education Conference, Seattle, WA.

**Niess, M. L.** [discussant] (February, 1999). Creating New Coalition for Change in SCDEs (Schools, Colleges and Departments of Education. Symposium where Harry, V., Sanders, J., McCullough, J., Grejda, G., Ritter, M. Presented papers. Fifty-first Annual Meeting of American Association of Colleges of Teacher Education, Washington D. C.

* **Niess, M. L.** (October, 1998). Weather to Merge Mathematics and Science: Blowing Away Tradition. Joint Conference of NCTM Central Regional and SSMA Annual, Louisville, KY.
* Lederman, N. G. & **Niess, M. L.** (October, 1998). Publishing in *School Science and Mathematics*: Up Close and Personal. Joint Conference of NCTM Central Regional and SSMA Annual, Louisville, KY.
* Lederman, N. G. & **Niess, M. L.** (October, 1998). Integrated, Interdisciplinary, or Thematic Instruction: What is Our Position? Joint Conference of NCTM Central Regional and SSMA Annual, Louisville, KY.

**1997-98**

* **Niess, M. L.** (June, 1998). Technology: An Essential Tool in Teaching and Learning Mathematics. National Educational Computing Conference, San Diego, CA.
* **Niess, M. L.** (June, 1998). Effects of El Nino: Analyzing and Interpreting the Climate Data. National Educational Computing Conference, San Diego, CA.
* **Niess, M. L.** (April, 1998). Integrating Technology in Teaching Mathematics. Keynote address for Spring meeting of Association of Mathematics Teachers of Northern Pennsylvania, Grove City. PA.
* **Niess, M. L.** (April, 1998). Global Warming: Examine the Evidence in an Interdisciplinary Investigation. An invited extended session for National Council of Teachers of Mathematics Annual Conference, April 2-4, 1998, Washington D. C.
* **Niess, M. L.** (July, 1997). Technology: An Essential Tool in Teaching and Learning Mathematics. An invited presentation for National Education Computing Conference, July 1, 1997, Seattle. WA.
* **Niess, M. L.** & Merickel, M (July, 1997). Integrating Computer Technology in Teaching and Learning: A Systemic Problem. Invited paper for National Educational Computing Conference. July 1, 1997. Seattle, WA.

**1996-97**

* **Niess, M. L.** & Merickel, M. (March, 1997). Project CONNECT: Integrating State-of-the Art Technologies in Education. A presentation for the Northwest Council for Computer Education Annual Conference, March 28, 1997, Portland, OR.
* **Niess, M. L.** (March, 1997). Technology: An Essential Tool in Teaching and Learning Mathematics. A three-hour workshop for the Northwest Council for Computer Education Annual Conference. March 26, 1997, Portland, OR.

Wells, E. & **Niess, M. L.** (January, 1997). Navigating Networks of Educators with Computer Technology. National High School Association Annual Conference, Portland, OR. January 26, 1997.

* **Niess, M. L.** (November 1996). An Integrated Science and Math Experience with US Climate Data. Joint Conference on Teaching Science and Math Creating Math and Science Links, Little Rock, AK. November 9, 1996.

**Niess, M. L.** (October 1996). Preparing to Teach in Middle School. Oregon Middle Level Conference. Eugene, OR. October 11, 1996.

**Niess, M. L.** (October 1996). Graphing Calculators and Computers: Appropriate Tools in Middle School Math. Northwest Mathematics Conference, Portland, OR. October 10, 1996.

Niess, M. L. (October, 1996). The Math Test: Improving Oregon's Grade. OSU Business Forum Luncheon, Portland, OR, October 8, 1996.

**Niess, M. L.** (October, 1996). Current Trends and Issues in K-12 Math Instruction. An hour presentation for the Beaverton School District Mathematics Curriculum Review Project. Beaverton, Oregon, October 2, 1996.

**Niess, M. L.** (August, 1996). Project CONNECT: Question of Global Warming. A two-hour workshop for Science and Mathematics Investigative Learning Experiences (SMILE) sessions at Oregon State University, August 2, 1996, 3:00-5:00.

**1995-96**

**Niess, M. L.** (June, 1996). Investigating US Weather Data: An Engaging Integrated Math Experience. Three hour workshop in the Institute for Teachers of Grades 8-12 of Portland Public Schools. Held at Franklin High School, June 19, 1996, 1230-330, Portland, OR.

**Niess, M. L.** (May, 1996). Using MS Works Spreadsheets. Taught two sixth grade classes at St. Mary's Elementary School, Beaverton, Oregon.

**Niess, M. L.** (May, 1996). OSU Middle Level Endorsement Program. Conference for Mid-Level Teacher Education, Oregon Middle Level Association, Willamette University, Salem, OR.

**Niess, M. L.** (April, 1996). Institutionalizing Gender Equity in a Teacher Education Department. Paper presentation on panel titled: Institutional Change, Equity, and Teacher Education: Oxymoron or the Wave of the Future? American Educational Research Association (AERA) annual conference, New York, NY.

* **Niess, M. L.** (April, 1996). Investigating US Weather Data: An Engaging Integrated Math Experience. Presentation at National Council of Teachers of Mathematics Annual Conference, San Diego, CA.

**Niess, M. L.**, Lederman, N. G., Erickson, D.K. (January 13, 1996). The Fifth-Year Graduate Preservice Teacher: Juggler in the Circus of Teacher Preparation. Association for Education of Teacher in Science (AETS) Annual meeting, Seattle, WA.

**Niess, M. L.** & Wells, E. (December 16, 1995). Project CONNECT. Oregon Datafication Conference, Oregon State University, Corvallis, OR.

**Niess, M. L.** (October, 1995). Sixth Graders and M&M Spreadsheets. Taught two sixth grade classes at St. Mary's Elementary School, Beaverton, Oregon.

**Niess, M. L.** (October, 1995). Technology Quakes Mathematics: Building Better Bridges to Traverse Pre-Algebra, Algebra, and Geometry. Presentation for the Northwest Mathematics Conference, Seattle, WA.

**Niess, M. L.** (October, 1995). Electronic Journals: Helping Preservice Teachers Reflect About Integration of Technology. Presentation for Oregon Education Research Association Annual Meeting, Corvallis, OR.

**Niess, M. L.** (August, 1995). Connecting Mathematics: Technology as the Bridge. Six hour workshop for Renton School District. Renton, Washington.

**1994-95**

* **Niess, M. L.** (April, 1995). Weather Data Analysis: An Integrating Theme for Mathematics, Science, Geography, and Language Arts. Presentation at National Council of Teachers of Mathematics Annual Conference, Boston, MA.
* Scholz, J.M. & **Niess, M. L.** (April, 1995). Professional Development for Mid-level Mathematics. A paper presented at the Annual Meeting of the American Education Research Association (AERA) in San Francisco, CA.

**Niess, M. L.** (April, 1995). Teaching with Technology. Presentation at Highland View Technology Fair, Corvallis, OR.

* **Niess, M. L.** (March, 1995). Connecting Mathematics: Technology as the Bridge. Six-hour workshop for Northwest Council for Computer Education 24th Annual Conference, Bellevue, WA.
* **Niess, M. L.** (March, 1995). Technology, Probability, and Statistics: Math Connections. One hour session for Northwest Council for Computer Education 24th Annual Conference, Bellevue, WA.
* Moursund, D., **Niess, M. L.** & Jongejan, T. (March, 1995). Past, Present, Future - Education Will Never Be the Same Again. One hour keynote session for Northwest Council for Computer Education 24th Annual Conference, Bellevue, WA.

**Niess, M. L.** (January, 1995). Integrating Technology in Teaching Mathematics in Elementary School. Demonstration teaching in four different classes (each 1 hour), first grade, second grade, third grade and fourth grade. Philomath Elementary School with teachers from Kings Valley Elementary and Blodgett Elementary involved in a Teach-About day. Philomath, OR.

**Niess, M. L.** (November, 1994). Enhancing Reflection via Video Preparation and Presentation. Session presented at Oregon Educational Research Association 1994 Annual Meeting, Portland, OR.

**Niess, M. L.** (November, 1994). Teacher Beliefs Concerning Implementation of Technology in the Teaching of Mathematics and Science. Session presented at Oregon Educational Research Association 1994 Annual Meeting, Portland, OR.

* **Niess, M. L.** Lederman, N. G., & DeWitt, C.L. (October, 1994). "Weather" to Merge Math and Science: Blowing Away Tradition. Session presented at National Science Teachers Association Area Convention, Portland, OR.

**Niess, M. L.** (July, 1994). Realities of Teaching with Technology. Session presented at Oregon State System of Higher Education Technology in Teaching Summer Workshop, Corvallis, OR.

**1993-94**

* **Niess, M. L.** (1994). Problem-Centered, Interdisciplinary Mathematics, Science and Technology: The Teacher's Role in a New Approach. A paper presented and published, October, 1994, at the International Federation of Information Processing (IFIP) Conference, Barcelona, Spain.
* **Niess, M. L.** & Higgins, K. M. (1994). Teacher Education Collaboration Supporting Oregon's 21st Century School Reform. A paper presented as part of a collaborative session titled The Many Faces of School/University Collaboration at the Annual Meeting of the American Education Research Association (AERA) in New Orleans, Louisiana.

**Niess, M. L.**, Lederman, N. G., & DeWitt, C.L. (October, 1994). "Weather" to Merge Math and Science: Blowing Away Tradition. Session presented at National Science Teachers Association Area Convention, Portland, OR.

**Niess, M. L.** (1994). Learning from our teaching mistakes. A session at Teamwork '94, Oregon State University, Corvallis, OR.

* **Niess, M. L.** (February, 1994). Earth, air, fire and water: A SMILE integrated science and math experience for *all* students. Extended session presented at Western Regional Conference of National Council of Teachers of Mathematics, San Francisco, CA.

**Niess, M. L.** (October, 1993). Analyzing real-world data using spreadsheets with graphing capabilities. A workshop and session presented at Northwest Mathematics Conference, Portland, OR.

**Niess, M. L.** (July, 1993). I can graph the data easily, but what does the graph say? A session presented at Oregon 2000 '93 Conference, Corvallis, OR.

**1992-93**

* **Niess, M. L.** (1993). Technology focuses the mathematics curriculum on higher level thinking skills. Proceedings for the International Federation of Information Processing (IFIP) Conference, Gmunden, Austria.
* **Niess, M. L.** (1993). Technology quakes mathematics. A paper presented and published March, 1993 at the Tenth International Conference on Technology and Education, Boston, Massachusetts.
* **Niess, M. L.** (April, 1993). Weather: Winds of change with calculators, spreadsheets and graphing packages. Workshop presented at National Council of Teachers of Mathematics (NCTM) Annual Conference, Seattle, WA.
* **Niess, M. L.** (April, 1993). Forecasting a change in the weather. Session presented at the National Council of Teacher of Mathematics Conference (NCTM), Seattle, WA.

**Niess, M. L.** (April, 1993) Can you eat M&Ms & use a computer at the same time. Session presented at The Association for Women in Science, Oregon State University, Corvallis, OR.

* **Niess, M. L.** (January, 1993). I can graph the data, but what does the graph say? Session presented at the Northwest Council for Computer Education Conference, Portland OR.

Merickel, M., **Niess, M. L.** Apple, L., & Gaty, T. Authentic middle level programs: Integrating teamwork and business partners to better understand technology. Session presented at the Oregon Middle Level Conference, Eugene, OR.

Merickel, M. & **Niess, M. L.** (November, 1992). Authentic teaching through teamwork, partnerships and integrated programs. Session presented at Work Now and In the Future Conference, Northwest Regional Educational Laboratory, Portland, OR.

**Niess, M. L.** (November, 1992). Integrating science and mathematics at in the secondary schools. Seminar presented at Western Oregon State College, Division of Natural Sciences and Mathematics weekly seminar, Monmouth, OR.

**Niess, M. L.** (October, 1992). Problem posing - using your locality to motivate interest. Session presented at the Thirty First Northwest Mathematics Conference, Spokane, WA.

**Niess, M. L.** & Merickel, M. (October, 1992). Integrating mathematics, science and technology: Teacher knowledge structures. Session presented at Oregon Educational Research Association Annual Meeting, Portland, OR.

**Niess, M. L.** (September, 1992). Teaching for critical thinking. Session presented for International GTA Workshop at Oregon State University, Corvallis, OR.

**Niess, M. L.** (July, 1992). Winds of change. Session presented at Oregon 2000 Technology Conference, Corvallis, Oregon.

**Niess, M. L.** (July, 1992). Robots: Movie fiction to science technology. Session presented at DaVinci Days, Corvallis, Oregon.

**1991-92**

* **Niess, M. L.** (1991). Computer-using teachers in a new decade. Paper presented and published in proceedings for International Federation of Information Processing (IFIP) Working Conference, Alesund, Norway.

**Niess, M. L.** (June, 1992). Science and math academies for rural teachers (SMART). Coordinated a two-day presentation at Oregon Small Schools Summer Institute, Western Oregon State College.

* Erickson, D. & **Niess, M. L.** (April, 1992). TOMTOMS: beating to the drums of change in middle school mathematics curriculum and teaching. A paper presented at the Annual Meeting of American Educational Research Association, San Francisco.
* Erickson, D. & **Niess, M. L.** (April, 1992). The kids: Weaving connecting themes and technology into middle school math. A workshop presented at the Annual Meeting of the National Council of Teachers of Mathematics, Nashville.
* Erickson, D. & **Niess, M. L.** (March, 1992). Middle school kids: Past, present, and future. Workshop presentation at the Western Regional Conference of the National Council of Teachers of Mathematics Conference, Eugene.

**Niess, M. L.** & Erickson, D. (March, 1992). Math teachers: Will there be enough? Session presentation at Math for a Changing World program, Corvallis.

**Niess, M. L.** (March, 1992). The state of science and math education in Oregon. Member of panel presentation sponsored by Oregon State University Sigma XI, Corvallis.

* **Niess, M. L.** (February, 1992). Weathering the change to higher order thinking skills. One-hour presentation at the Northwest Council for Computer Education Twenty-first Annual Conference, Tacoma, Washington.
* **Niess, M. L.** (February, 1992). Weathering the change to higher order thinking skills. Three-hour workshop presentation at the Northwest Council for Computer Education Twenty-first Annual Conference, Tacoma, Washington.
* **Niess, M. L.** (October, 1991). Forecast: Weather change, increasing pressure for higher level thinking skills. One-hour presentation at the Northwest Mathematics Conference, British Columbia, Canada.

**Niess, M. L.** (October, 1991). Average what? A keynote presentation for The Oregon Mathematics Teachers of Middle School Conference, Corvallis.

**Niess, M. L.** (October, 1991). What wonderful weather! A 90-minute workshop presented at The Oregon Mathematics Teachers of Middle School Conference, Corvallis.

**Niess, M. L.** (September, 1991). Forecast: Winds of change. Eighteenth Annual Teachers Of Teachers of Mathematics Conference, Marylhurst College.

**Niess, M. L.**, Lederman, N & Latz, M. (August, 1991). Soaps or Science? A one-week, three-hour per day workshop for middle level students. Saturday Academy, Corvallis, Oregon.

**Niess, M. L.** (August, 1991). Fractals and logo. A three-hour workshop presented at Oregon State University with Eisenhower state grant project, Corvallis.

**Niess, M. L.** (July, 1991). Data analysis and higher order thinking. A two-hour presentation (conducted twice) at the Summer '91 SMART Regional Academy held at Oregon State University. Northwest Regional Educational Laboratory, Corvallis.

**Niess, M. L.** (July, 1991). Rural science teacher education partnerships. A 1-1/2 hour presentation at the Summer '91 SMART Regional Academy held at Oregon State University. Northwest Regional Educational Laboratory, Corvallis.

**Niess, M. L.** (July, 1991). Teaching with journals and portfolios. A two-hour presentation at the Summer '91 SMART Regional Academy held at Oregon State University. Northwest Regional Educational Laboratory, Corvallis.

**Niess, M. L.** (July, 1991). Shortage of teachers in Oregon. A panel presentation at Oregon Teacher Standards and Practices Commission board meeting Silver Creek Falls.

**1990-91**

**Niess, M. L.** (May, 1991). Software potpourri. A three-hour workshop presented at Oregon State University with Eisenhower state grant project, Corvallis.

**Niess, M. L.** (May, 1991). What is a robot? A one-hour presentation (conducted twice) for first graders at Harding Elementary School, Corvallis,.

**Niess, M. L.** (April, 1991). Preparing teachers for the 1990s. Invited paper for Technology and Teacher Education Conference, Greenville, North Carolina.

**Niess, M. L.** (April, 1991). Robotics: search for reality in fiction. Featured speaker at Northwest Council for Computer Education, Portland.

**Niess, M. L.** (April, 1991). Hypercard and mathematics. Three-hour workshop presented at the Northwest Council for Computer Education, Portland.

**Niess, M. L.** (April, 1991). Forecast: Weathering change, increasing pressure for higher level skills: A unit integrating spreadsheets with graphing packages. A three-hour workshop presented at Oregon State University with Eisenhower state grant project, Corvallis.

**Niess, M. L.** (March, 1991). Yes, spreadsheets in the mathematics classroom: An introduction to spreadsheets. A three-hour workshop presented at Oregon State University with Eisenhower state grant project, Corvallis.

**Niess, M. L.** (March, 1991). Teacher shortage in Washington. One-hour presentation at Washington State University, College of Education, Pullman, Washington.

**Niess, M. L.** (February, 1991). Mathematics classrooms in the year 2000. Workshop presented at the Oregon Mathematics Conference for Oregon Administrators, Lincoln City, Oregon.

* **Niess, M. L.** (October, 1990). Weaving computers and calculators into the fabric of mathematics. Workshop presentation at the twenty-ninth Annual Northwest Mathematics Conference, Portland, Oregon.

**Niess, M. L.** (July, 1990). Robots: Science fiction to science technology, a three-hour presentation as part of GS 444X/544X Very Visual Science for Elementary Teachers, Oregon State University, Corvallis.

**Niess, M. L.** (July, 1990). Robots in fiction and reality, DaVinci Days, Corvallis, Oregon.

**1989-90**

**Niess, M. L.** (March, 1990). Computers in the elementary mathematics curriculum. A ten-hour workshop, Department of Defense Dependents Schools (DoDDs), Lakenheath Air Force Base, Lakenheath, England.

**Niess, M. L.** (March, 1990). Computers in the secondary mathematics curriculum. A ten-hour workshop, Department of Defense Dependents Schools, Lakenheath Air Force Base, Lakenheath, England.

* **Niess, M. L.** (March, 1990). Computer science: Where does it belong in education? A Panel presentation, Northwest Council for Computer Education Conference, Eugene, Oregon.
* **Niess, M. L.** (March, 1990). Middle school mathematics: Moving from the 1890s and settling in the 1990s. A six-hour workshop, Northwest Council for Computer Education Conference, Eugene, Oregon.

**Niess, M. L.** (February, 1990). Math microworlds. A three-hour workshop, Oregon Eisenhower Title II workshops, Oregon State University, Corvallis.

* **Niess, M. L.** (October, 1989). Logo-rithms. An 80-minute workshop, Northwest Mathematics Conference, Seattle, Washington.

**Niess, M. L.** (August, 1989). Panel presentation: Implementing NCTM standards and Oregon comprehensive curriculum goals. Teachers of Teachers of Mathematics (TOTOM) Conference, Marylhurst College, Portland, Oregon.

**Niess, M. L.** (August, 1989). Robotics: Science fiction to science technology. A three-hour NASA workshop for summer session course entitled Science Technology and Society, Oregon State University, Corvallis, Oregon.

**Niess, M. L.** (July, 1989). Robotics in your future. DaVinci Days, Corvallis, Oregon.

**1988-89**

* **Niess, M. L.** (June, 1989). Preparing computer-using educators in 1989. A paper presentation for National Education Computer Conference, Boston, Massachusetts.

**Niess, M. L.** (May, 1989). Robotics in your future: Why logo? One-hour presentation to student body of South Hadley Middle School, South Hadley, Massachusetts.

* **Niess, M. L.** (March, 1989). Preparing computer using educators: An update on competencies. A paper presentation for Sixth International Conference on Technology and Education, Orlando, Florida.

**Niess, M. L.** (March, 1989). Robotics: Science fiction to science technology. A one-hour presentation for Oregon Junior Science and Humanities Symposium, Corvallis, Oregon.

* **Niess, M. L.** (February, 1989). Computer literacy: Portrait of an education. A one-hour presentation, Eighteenth Annual Northwest Council for Computer Education Conference, Seattle, Washington.
* **Niess, M. L.** (February, 1989). What you need is a picture hanger! A one-hour presentation for the Eighteenth Annual Northwest Council for Computer Education Conference, Seattle, Washington.
* **Niess, M. L.** (February, 1989). Computer literacy: Portrait of an education. A six-hour workshop for the Eighteenth Annual Northwest Council for Computer Education Conference, Seattle, Washington.
* **Niess, M. L.** (February, 1989). Designing math microworlds. A panel presentation following a 20-minute individual presentation. Panel members included M. Niess, I. Charischak, R. Carter. West Coast Logo Hands on Technology Conference, Los Angeles, California.
* **Niess, M. L.** (February, 1989). Meet the leaders. West coast logo hands on technology conference, Los Angeles, California.
* **Niess, M. L.** (February, 1989). What does it mean to facilitate logo? A panel presentation following a 20-minute individual presentation. Panel members included M. Niess, S. Burrows, M. Watt. West Coast Logo Hands on Technology Conference, Los Angeles, California.

**1987-88**

**Niess, M. L.** (April and May, 1988). Robotics: Science fiction to science technology. Three one-hour assembly presentations at Cheldelin Middle School, Corvallis, Oregon.

**Niess, M. L.** (November, 1987). Logo: A computer science perspective. A ten hour workshop at Educational School District 112, Vancouver, Washington.

* **Niess, M. L.** (October, 1987). Informal geometry: Logo with other manipulatives. Northwest Mathematics Conference, Portland, Oregon.

**1986-87**

**Niess, M. L.** (May, 1987). Use of logo in middle school mathematics. A ten hour workshop at Educational Service District 113, Olympia, Washington.

**Niess, M. L.** (April, 1987). Problem solving and understanding third generation robotics development. Two one-hour workshops for Oregon Museum of Science and Industry, Portland, Oregon. April 16, 1987.

**Niess, M. L.** (April, 1987). Use of logo in middle school mathematics. A ten hour workshop for Educational Service District 113, Olympia, Washington.

* **Niess, M. L.** (March, 1987). Logo, BASIC, Pascal and the curriculum. A two-hour workshop and a one-hour presentation at Alberta Teacher's Association Computer Council Fifth Annual Conference, Edmonton, Alberta, Canada.

**Niess, M. L.** (March, 1987). Kids in a logo environment: From the teacher's and student's perspective. Invited speaker to the Second West Coast Logo and Telecommunications Conference, Los Angeles.

**Niess, M. L.** (March, 1987). The computer science curriculum: Connecting logo, BASIC, and Pascal. Invited speaker to the Second West Coast Logo and Telecommunications Conference, Los Angeles.

**Niess, M. L.** (March, 1987). Meet the leaders. Invited speaker to The Second West Coast Logo and Telecommunications Conference, Los Angeles.

**Niess, M. L.** (March, 1987). Now I get it! Invited speaker to the Second West Coast Logo and Telecommunications Conference, Los Angeles.

* **Niess, M. L.** (February, 1987). Integrating logo, BASIC and Pascal for the computer science curriculum. A one-hour presentation for the Northwest Council for Computer Education Conference, Portland, Oregon.
* **Niess, M. L.** (February, 1987). Logo: A computer science perspective. A six hour workshop for the Northwest Council for Computer Education Conference, Portland, Oregon.

**Niess, M. L.** (December, 1986). Teaching adults about computers. A two-hour workshop at Linn-Benton Community College, Albany, Oregon.

**1985-86**

* Moore, M. L. (April, 1986). Mixing logo AND geometry in upper elementary school mathematics classrooms. A one-hour presentation, National Council for Teachers of Mathematics Conference, Washington, D.C.
* Moore, M. L. (February, 1986). Issues in teacher education. A panel at the Northwest Council for Computer Education Conference, Seattle, Washington.
* Moore, M. L. (February, 1986). Modeling recursion in logo. Northwest Council for Computer Education Conference, Seattle, Washington.

Moore, M. L. (December, 1985). Third generation robots. Junction City High School, Junction City, Oregon.

Moore, M. L. (December, 1985). Keyboarding in the elementary schools. Computer Coordinating Council, Linn-Benton Educational Services District, Albany, Oregon.

Moore, M. L. (November, 1985). Designing a logo environment. A two-hour panel presentation. West Coast Logo Conference an invited speaker, Los Angeles, California.

Moore, M. L. (November, 1985). Meet the leaders. A one-hour session at the West Coast Logo Conference, Los Angeles, California.

Moore, M. L. (November, 1985). Recursion: How can I teach it? A two-hour presentation at the West Coast Logo Conference as invited speaker, Los Angeles, California.

Moore, M. L. (November, 1985). Do's and don'ts of classroom applications. A one-hour presentation at the West Coast Logo Conference as invited speaker.

Moore, M. L. (October, 1985). Models for recursion in Logo. Computers and Mathematics Education Conference, Bend, Oregon.

Moore, M. L. (August, 1985). Solving problems with robots. Fourth Annual Extending the Human Mind: Computers in Education Summer Conference, University of Oregon, Eugene, Oregon.

**1984-85**

Moore, M. L. (April, May, 1985). Robot demonstration, Wilson Elementary School, Corvallis, Oregon.

Moore, M. L. (April, 1985). Robots at large! Playful Learning Conference Keynote, Oregon State University.

Moore, M. L. (April, 1985). Who's in charge, you or the robot? Honor Core, Crook County High School, Prineville, Oregon.

* Moore, M. L. (February, 1985). Teacher certification; Models for multiple recursion. Two presentations at the Northwest Council for Computer Education Conference, Eugene, Oregon.

Moore, M. L. (January, 1985). Computers in the elementary classroom. A six-hour workshop at Whitworth College, Spokane, Washington.

Moore, M. L. (November, 1984). Robotics in the classroom. Association for Women in Science, Oregon State University, Corvallis, Oregon.

Moore, M. L. (November, 1984). Logo. A six hour workshop for Hesperia School District, Hesperia, California.

Moore, M. L. (October, 1984). Logo. A six hour workshop for Educational Service District 118, Olympia, Washington.

Moore, M. L. (October, 1984). Logo A six hour workshop for Educational Service District 189, Mt. Vernon, Washington.

* Moore, M. L. (October, 1984). Logo and geometry. A workshop for the Northwest Mathematics Conference, Eugene, Oregon.

Moore, M. L. (September, 1984). Logo. A three hour workshop, given three times. Special Education Conference, Eastern Montana State, Billings, Montana.

**1983-84**

* Moore, M. L. (June, 1984). Teacher certification panel. National Educational Computing Conference, St. Louis.
* Moore, M. L. (June, 1984). Computer using educators competency research. National Educational Computing Conference, St. Louis.
* Moore, M. L. (June, 1984). Logo in the classroom: Are there some problems? National Educational Computing Conference.

Moore, M. (May, 1984). Logo. A three hour workshop at Catlin Gable School, Portland, Oregon.

Moore, M. L. (May, 1984). You, your child and a computer. Computer Fair, Philomath Middle School, Philomath, Oregon.

* Moore, M. L. & Burger, W. (April, 1984). Logo and geometry: Preservice elementary teachers. National Council of Teachers of Mathematics Annual Conference, San Francisco, California.

Moore, M. L. (April, 1984). Robots and Logo. Weekend College, Division of Continuing Education workshop. Portland, Oregon.

Moore, M. L. (March, 1984). Humans and robots: Who's in control? Oregon Junior Science and Humanities Symposium, Corvallis, Oregon.

* Moore, M. L. (February, 1984). Logo and geometry; Recursion! Two six-hour workshops. Northwest Council for Computer Education Conference, Eugene, Oregon.

Moore, M. L. (February, 1984). Using robots to teach problem solving; teaching logo. Two presentations and keynote for banquet of high school winners. Rocky Mountain Computer Conference. Missoula, Montana.

Moore, M. L. (December, 1983). Teaching Logo in elementary schools. Punahou Schools, Punahou, Hawaii.

Moore, M. L. (November, 1983). Recursion. Computer Conference at the University of Montana, Missoula, Montana.

Moore, M. L. (November, 1983). Robots in the curriculum. Computer Conference at the University of Montana, Missoula, Montana.

Moore, M. L. (November, 1983). Learning Logo. Computer Conference at the University of Montana, Missoula, Montana

Moore, M. L. (November, 1983). Learning with robots. Linn Benton Computer Conference, Albany, Oregon.

Moore, M. L. (October, 1983). Robotics. Black Colleges Conference, Portland, Oregon.

* Moore, M. L. (October, 1983). Teaching Logo. The twenty-second Northwest Mathematics Conference, Seattle, Washington.

Moore, M. L. (September, 1983). Logo and geometry. Teachers of Teachers of Mathematics Conference, Marylhurst College, Portland, Oregon.

Moore, M. L. (September, 1983). Teaching elementary mathematics using available software. Corvallis School District Inservice, Corvallis, Oregon.

Moore, M. L. (August, 1983). Computers in the elementary curriculum, six-hour workshop. Oregon Math Leaders Conference, Marylhurst, Portland, Oregon.

Moore, M. L. (August, 1983). Teaching elementary mathematics with manipulatives and computers. Mead School District Workshop Inservice, Spokane, Washington.

Moore, M. L. (August, 1983). Introduction to computers. An inservice workshop for Corvallis School District teachers, Corvallis, Oregon.

Moore, M. L. (August, 1983). Introduction to Logo. An inservice workshop for Corvallis School District teachers.

Moore, M. L. (August, 1983). Computers are a part of the elementary classroom. Oregon Math Leaders Conference, Marylhurst, Portland, Oregon.

**1982-83**

* Moore, M. L. (June, 1983). Elementary teacher education including Logo in teaching informal geometry. National Educational Computing Conference, Baltimore, Maryland.

Moore, M. L. (May, 1983). Teaching math in vocational classes. A workshop for North Clackamas School District, Portland, Oregon.

Moore, M. L. (May, 1983). Introduction to Logo workshop. Centennial School District, Portland, Oregon.

Moore, M. L. (May, 1983). Teaching Logo with robots. Elementary Teacher Inservice, Sunrise Elementary School, Albany, Oregon.

Moore, M. L. (April, 1983).Teaching Logo with robots to fifth graders, demonstration with 25 fifth grade students. State Board of Higher Education, Western Oregon State College, Monmouth, Oregon.

* Moore, M. L. (April, 1983). Incorporating computers with manipulatives. National Council of Teachers of Mathematics Annual Conference, Detroit, Michigan.

Moore, M. L. (April, 1983). Logo and the elementary school. Teacher Education Division of School of Education, University of Oregon Dean's Conference held at Inn of the Spanish Head, Lincoln City, Oregon.

Moore, M. L. (April, 1983). Robotics and Logo. Corvallis School District resource teachers.

Moore, M. L. (April, 1983). Computer and 4-H, keynote address. Conference for 4-H Computer Fun Day, Corvallis, Oregon.

* Moore, M. L. (March, 1983). Teaching elementary mathematics using computers. A one-hour presentation, Sixth Annual Computers in Education Conference, Seattle Pacific University, Seattle, Washington.
* Moore, M. L. (March, 1983). Teachers, geometry and Logo. A one-hour presentation, Sixth Annual Computers in Education Conference, Seattle Pacific University, Seattle, Washington.
* Moore, M. L. (March, 1983). Teachers, geometry and Logo. A three-hour workshop. Sixth Annual Computers in Education Conference, Seattle Pacific University, Seattle, Washington.
* Moore, M. L. (March, 1983). Elementary application. A three-hour workshop. Sixth Annual Computers in Education Conference, Seattle Pacific University, Seattle, Washington.

Moore, M. L. (March, 1983). Logo workshop. A seven-hour workshop. Everett School District teachers, Everett, Washington.

Moore, M. L. (March, 1983). Move that turtle, a demonstration. Oregon Junior Science and Humanities Symposium, Oregon State University, Corvallis, Oregon.

Moore, M. L. (February, 1983). What should teachers know to teach with and about computers? Panel member, Northwest Council for Computer Education Conference, Oregon State University, Corvallis, Oregon.

Moore, M. L. (January, 1983). Teaching Logo in the elementary schools. Lincoln County teachers, Newport, Oregon.

Moore, M. L. (January, 1983). Computers in education. Epsilon Pi Tau Initiation Banquet Keynote address, Oregon State University.

Moore, M. L. (November, 1982). Using the book, Mathematics in Vocational Education. The Dalles Educational Services District teachers of vocational courses, The Dalles, Oregon.

Moore, M. L. (November, 1982). Planning for progress: Math education K-12. Panel member, Centennial School District, Portland, Oregon.

* Moore, M. L. (November, 1982). Why teach Logo at the junior high level. Twenty-first Northwest Mathematics Conference, Portland, Oregon.
* Moore, M. L. (November, 1982). Why teach Logo at the elementary level. Twenty-first Northwest Mathematics Conference, Portland, Oregon.

Moore, M. L. (September, 1982). Elementary mathematics with manipulatives, calculators and computers: Teachers of Mathematics Conference, Marylhurst College, Portland, Oregon.

Moore, M. L. (September, 1982). Logo and mathematics education, a demonstration. Teachers of Teachers of Mathematics Conference, Marylhurst College, Portland, Oregon.

Moore, M. L. (September, 1982). Math Workshop. Regional Coordinator Meeting Vocational Coordinators for State of Oregon.

Moore, M. L. (July, 1982). Educational applications of microcomputers. Corvallis Rotary Club. Corvallis, Oregon.

**1980-82**

* Moore, M. L. (June, 1982). Helping teachers teach elementary mathematics with microcomputers, calculators and manipulatives. National Educational Computing Conference, Baltimore, Maryland.

Moore, M. L. (May, 1982). Playful learning with computers in the elementary school. Playful Learning Conference. Oregon State University, Corvallis, Oregon.

Moore, M. L. (February, 1982). Teaching with computer--why should you? Oregon City School District Inservice, Oregon City, Oregon.

Moore, M. L. (February, 1982). Milliken math program K-8: Learning and doing math the Milliken Way. Workshop for Corvallis School District resource teachers.

Moore, M. L. (August, 1981). Classroom applications with computers. Corvallis School District 509J Administrators Inservice.

Moore, M. L. (February, 1981). A practical approach in using the microcomputer for instruction and management, two one-hour presentations. Oregon Association of Secondary School Administrators, Eugene, Oregon.

Moore, M. L. (October, 1980). Mathematical computer games in university entry-level algebra. Oregon Educational Research Association.

**Regional/State**

**Niess, M. L.** & Gillow-Wiles, H. (April 11, 2013). Building Education Bonds Among Learners in Blackboard. Presentation at the Oregon State University Ecampus 2013 Faculty Forum.

**Niess, M. L.** (2008). *Spreadsheets and Math: Explore strategies and ideas for guiding students in designing and creating dynamic spreadsheets as mathematical tools to explore and extend algebra and pre-algebra problems*. Invited workshop for 47th Annual NW Math Conference, Portland, OR, October 10, 2008.

**Niess, M. L.** & Sadri, P. (June 2007) *Analysis of Teachers’ Understanding of Spreadsheet Dependability Teacher Interviews.*  Technical Report Number CS07-60-05, Oregon State University, Corvallis, OR.

**Niess, M. L.** (October, 1995). Assessing the Status of Integration of Technology in Math and Science. Invited paper for Oregon Education Research Association Annual Meeting, Corvallis, OR.

**Niess, M. L.** Lederman, N.G., & Scholz, J.M. (October, 1995). The Fifth-year Graduate Preservice Teacher: Juggler in the Circus of Teacher Preparation. Invited paper for Oregon Education Research Association Annual Meeting, Corvallis, OR.

**Niess, M. L.** (1985). Solving problems with robots. Invited paper for Fourth Annual Extending the Human Mind: Computers in Education Summer Conference, *Proceedings of the Fourth Annual Extending the Human Mind: Computers in Education*, (University of Oregon, Eugene, Oregon), 196-200.

**Grants and Contracts**

**Project Director/Principal Investigator or Co-PI**

Perham-Mocello, J., Erwig, M. , & **Niess, M.**  (9/1/2019 – 8/31/2022. Child’s Play: Learning Computer Science Through Tabletop Games, National Science Foundation, Award No. 1923628,$1,000,000.

**Niess, M. L. (**September 2013-August 2014). Scaling the Post-Bacc CS On-Line Degree in the Second Year: Assessing the Online Program. Electrical Engineering and Computer Science and Oregon State University Ecampus support. $26,947.

**Niess, M. L.** (August 2008-December 2011). Central Oregon Consortium for Using Technology to Enhance Science and Mathematics Learning in Grades K-8. Oregon Department of Education ESEA Title IIB MSP. $892,317.

**Niess, M. L.** (September 2007-December 2008). ITR: Collaborative Research Continuation – outreach portion $50,000.

**Niess, M. L.** (February 27, 2004- September, 2008). Preparing Middle School Teachers to Teach Mathematics. Oregon Department of Education No Child Left Behind Grant, $1, 073,000.

**Niess, M. L.** (October, 2003 – December 2006) ITR: Collaborative Research: Dependable End-User Software Grant (NSF: 0325273, CCR-ITR Medium (Group)), co-PI in charge of educational outreach, $300,000 for outreach portion.

**Niess, M. L.** (September 2003- July 2004). Redmond School District (Madras, OR) and Oregon State University, Science and Mathematics Collaboration, $34,000.

**Niess, M. L.** (September 2002-July 2003). Grant Community School (Salem, OR) and Oregon State University , Science and Mathematics Collaboration, $16,500.

**Niess, M. L.** (September 2001 - July 2002). Grant Community School (Salem, OR) and Oregon State University , Science and Mathematics Collaboration, $15,500.

**Niess, M. L.** (July 2001 – June 2002). Technology Upgrade for Weniger 222. Technology Resource Fee Funds Allocation of $60,000.

**Niess, M. L.** (August, 2000 – July, 2003). Murdock Foundation Award for Master Teachers, $300,000.

**Niess, M. L.** (March, 2000 – September, 2000). LL Stewart Faculty Development award of $2200 for developing videos for the Distance Delivery Algebra Course for Midlevel Teachers.

**Niess, M. L.** (September, 1999- June, 2000). Developing Distance Delivery Algebra Course for Midlevel Teachers. OSU Statewide, Project Director, $15,000.

**Niess, M. L.** (September, 1999- June, 2000). Preparing teachers to integrate technology in teaching mathematics. Sweet Home School District, Project Director, $10,000.

**Niess, M. L.** (August, 1999 - December, 2000). Recruiting High Demand Teachers: Math, Chemistry, and Physics. Dwight D. Eisenhower Mathematics and Science Educational Improvement Program, Oregon State System of Higher Education, Project Director, $40,000.

**Niess, M. L.** (August, 1999 - December, 2000). Retraining Mathematics Teachers to Teach in the Midlevel (Grades 3-10). Dwight D. Eisenhower Mathematics and Science Educational Improvement Program, Oregon State System of Higher Education, Project Director, $36500.

**Niess, M. L.** (January, 1996-December, 1997). Model Middle Level (Grades 5-10) Teacher Preparation Program, Dwight D. Eisenhower Mathematics and Science Educational Improvement Program, Oregon State System of Higher Education, Project Director, $120,000.

Hannaway, D. B. & **Niess, M. L.** (September, 1995 - September, 1998). A National Forage and Grasslands Curriculum for the WWW. US Department of Agriculture Challenge Grants Program, $79,969.

**Niess, M. L.** (July, 1995 - March, 1996). Distance Learning Applications: Exploring Our Oceans, Throughout Oregon, Dwight D. Eisenhower Mathematics and Science Educational Improvement Program, Oregon State System of Higher Education, Project Director, $40,000.

**Niess, M. L.** (May, 1995-December, 1997). Project CONNECT (Connecting Oregon: Navigating Networks of Educators with Computer Technology), US West Foundation grant, May, 1995-May, 1997, Project Director, $300,000.

**Niess, M. L.** (November 1995-November 1996). Teaching Excellence Advancing Mathematics and Science Project, National Science Foundation Planning Grant, Project Director, $50,000.

**Niess, M. L.** (September 1994-June, 1995). Interactive distance delivery teaching techniques, LL Stewart Faculty Development Award, Oregon State University, Project Director, $2200.

**Niess, M. L.** (January, 1993 - September, 1994). Endorsement preparation for non-math endorsed teachers with mid-level school teaching assignments, Dwight D. Eisenhower Mathematics and Science Education Improvement Program, Oregon State System of Higher Education, Project Director, $64,000.

**Niess, M. L.** (July 1, 1992 - September, 1993). Articulating a balance between college preparation and workforce curriculum in the CAM, Oregon State System of Higher Education, Project Director, $11,494.

**Niess, M. L.** & Merickel, M. (July 1, 1992 - December, 1993). Applied academic approaches to curricula from middle school through higher education, Oregon State System of Higher Education, Project Co-Director, $32,308.

**Niess, M. L.** (September, 1992 - January, 1992). CD-Rom classroom Applications, LL Stewart Faculty Development, Project Director, $2200.

**Niess, M. L.** & Merickel, M. (January, 1992- December, 1993). Mathematics/science/technology teacher retraining, Oregon State System of Higher Education, Project Co-Director, $122,903.

**Niess, M. L.** (September, 1990 - June, 1992). Middle school mathematics curriculum development effectiveness, Action Alliance for Educational Excellence, Project Director, $1000.

**Niess, M. L.** (September, 1989 - August, 1991). Curriculum development and leader training project for middle school teachers of mathematics, grades 6 through 8, U. S. Department of Education, Dwight D. Eisenhower Discretionary Program, (Award number R168D90164), Project Director, $179,734.

**Niess, M. L.** (September, 1988 - September, 1989). Reevaluation of computer-using educators guideline competencies: A Delphi research project, Northwest Council for Computer Education, Project Director, $2000.

**Moore, M.L.** (January, 1986 - June, 1986). Reevaluation of course to match research competencies for preparing computer using educators, LL Stewart Faculty Development Award, Oregon State University, Project Director, $1800.

**Moore, M.L.** (September, 1985 - June, 1986). Inservice software evaluation techniques research, Action Alliance for Educational Excellence, Project Director, $1000.

**Moore, M.L.** (September, 1983 - June, 1984). Development of computer using educator guidelines. Northwest Council for Computer Education, Project Director, $1000.

**Moore, M.L.** (January, 1981 - December, 1982). Infusing microcomputers, calculators, and manipulatives in elementary mathematics. US Department of Education, Pre-college Teacher Development in Science program, Project Director, $40,000.

## Additional Grant Participation

(February 2012 – October 2013. Physics in Medicine: Active Learning Tools for Undergraduate Physics Courses: A Joint Collaboration of STEM Scientists and Medical Experts. Portland State University NSF grant. **External Evaluator.**

(September 2007-August 2009). CPATH CB: Building a Platform for Learning, NSF grant $400,000, **evaluator** of curriculum built in the program. Learner Centered Approach to Computer Science Education

(July 2001 – December, 2002). Teaching Mathematics For Understanding: Sharing Communities Of Mathematics Teachers, **Co-PI** for grant where Dianne Erickson is Principal Investigator, $54,690.

(September 1999 - December 2002). Graduate Teaching Fellows in K12 Schools, National Science Foundation, **Coordinate** preparation in science education, Project Director: Dan Arp, $1,500,000.

(July, 1997- July, 1999). Mentor Project for Teacher Education Equity Project, National Science Foundation grant to Washington Research Institute. **Mentor** for Clarion University to assist in the institutionalization of gender equity issues in teacher preparation program. Project Director: Jo Sanders.

(May, 1997-July, 2000). Paradigms in Physics: Reforming Upper-Division Physics, National Science Foundation. **External Evaluator.** Project Director: Corrine Manogue.

(September, 1997-September 1998). Probability Park, Dwight D. Eisenhower Mathematics and Science Educational Improvement Program, Oregon State System of Higher Education, Member of Design team. Project Director: Robby Robson.

(January, 1996-July, 1997). US West Teacher Network Project, US West Foundation grant for Oregon Teacher Network. Received $2500 to **guide OSU's participation** with the other state teacher preparation institutions. Project Director: Sam Miller.

(August, 1994-December, 1995). Teacher Education Equity Project, National Science Foundation grant to CASE/CUNY Graduate Center, New York, NY. S**ubcontract** award to Oregon State University of $1500 to produce a Gender Equity Conference. Cooperation with K. Higgins, School of Education. Project Director: Jo Sanders.

(September, 1993-December, 1996). Oregon Integrated Mathematics and Science Curriculum Frameworks. U. S. Department of Education award to Oregon Department of Education. **Mathematics Teacher Education Task Force leader** ($20,000).

(September, 1991 - July, 1993). Creating and implementing an integrated math/science course at the secondary level, Oregon State System of Higher Education's Dwight D. Eisenhower Mathematics and Science Program, **Project Coordinator**, $60,037.

(September, 1990 - July 1993). Science mathematics alliance for rural teachers (SMART), Northwest Regional Educational Laboratory's grant from US Department of Education, **Oregon SMART Director.**

(January, 1991- September, 1991). Ten curriculum workshops for high school teachers. Oregon State System of Higher Education's Dwight D. Eisenhower Mathematics and Science Program, (Project Director: Dianne Erickson) **assist project director**, $19,500.

(January, 1990 - September, 1990). Ten curriculum workshops for middle school teachers. Oregon State System of Higher Education's Dwight D. Eisenhower Mathematics and Science Program, (Project Director: Dianne Erickson) **assist project director**, $16,305.

(January, 1989 - August, 1989). Focus on quantitative literacy in the schools, National Science Foundation. (Project Director: Kris Warloe), **facilities organizer**.

(September, 1988 - September, 1989). Improving math methods instruction: Development of instructional packages and mathematics resource teaching laboratory, (Project Director: Dianne Erickson) **assist project director**, $25,000.

(January, 1982 - July, 1982). A methodology for basic mathematical skills improvement in vocational secondary projects. Oregon Department of Education, (Project Director: Larry Kenneke) **curriculum writer.**

(1980-81, 1981-82, 1982-83, 1983-84, 1985-86). Oregon Junior Science and Humanities Symposium. National Academy of Sciences, (Project Director: Thomas Evans) **Symposium Coordinator**.

**Film Work**

*The Robotic Revolution*, National Geographic Film. Previewed, November, 1986. Teaching with students using robots is included in the film.

**Doctoral Student Dissertations Completed: Service as Major Professor**

Jim Hoag, (August 2008). Student Reasoning in Spreadsheet Errors.

Rachel Harrington, (June 2008). The Development of Pre-Service Teachers’ Technology Specific Pedagogy.

Pejmon Sadri, (June 2008). Teaching Mathematics for Understanding: Intentions and Practices of an Expert Middle School Mathematics Teacher in the Context of a Reformed-based Curriculum.

Lee, KwangHo, (December 2006). Teacher’s Knowledge of Middle School Students’ Mathematical Thinking in Algebra Word Problem Solving, PHD in Mathematics Education at OSU.

Johnston, Tina, (June 2006). Pushing into Advanced Mathematics Classes: A Grounded Theory Study of Ability Grouping in Middle Level Mathematics Classes, PHD in Mathematics Education at OSU.

Pativasan, Supattra, (June 2006). Mathematical Problem Processes of Thai Gifted Students, PHD in Mathematics Education at OSU.

Suharwoto, Gogot, (June 2006). Mathematics Preservice Teachers' Development of TPCK in Subject-Specific, Technology Integrated Teacher Preparation Program, PHD in Mathematics Education at OSU.

Beauchman, Molly (June 2006).The Knowledge Base and Instructional Practices of Highly Qualified Experienced Secondary Mathematics Teachers, PHD in Mathematics Education at OSU.

Gfeller, Mary (June 2004). Tenth Grade Geometry Students Understanding of Proofs, PHD in Mathematics Education at OSU.

Zaman, Naeem (June 2003). Strategies Utilized in Computer Problem Solving and Object-Oriented Programming, PHD in Science Education at OSU.

Liu, Po-Hung (June 2003). The Relationship of a Problem –Based Calculus Course and Students’ Views of Mathematical Thinking, PHD in Mathematics Education at OSU.

Singmuang, Chauwan (June 2002). Thai Preservice Middle School Mathematics Teachers’ Subject Matter Knowledge and Knowledge of Students’ Conceptions of Division of Rational Numbers with Respect to Their Classroom Practices, PHD in Mathematics Education at OSU.

Averbeck, P. J. (June 2001) Student Understanding of Function sand the Use of the Graphing Calculator in a College Algebra Course, PHD in Mathematics Education at OSU.

Hajebi, Mojgan (June 2001) Effectiveness of Integration of Internet Technologies in Support of Teaching and Learning Computer Science Programming, PHD in Science Education at OSU.

Buckreis, W. F. (June 2000) Elementary Mathematics Teacher Subject Matter Knowledge and its Relationship to Teaching and Learning, PHD in Mathematics Education at OSU.

Cho, Cheong-soo (June 2000) A Korean Elementary Teacher’s Beliefs about Teaching and Learning and Its Impact on Interactions and Norms in Mathematics Classrooms, PHD in Mathematics Education at OSU.

Barton, S. D. (June 1996) Graphing Calculators in College Calculus: An Examination of Teachers’ Conceptions and Instructional Practice. PHD in Mathematics Education at OSU.

Fan, Tai-Sheng (June 1996) Prediction of Academic Achievement for College Computer Science Majors in the Republic of China, PHD in Science Education at OSU.

Howell, K. (June 1996) The Culture of Undergraduate Computer Science Education: Its Role of Promoting Equity Within the Discipline. PHD in Science Education at OSU.

Scholz, Janet M. June 1996) Relationships Among Preservice Teachers; Conceptions of Geometry, Conceptions of Teaching Geometry and Classroom Practices, PHD in Mathematics Education at OSU.

Ahmed, A. M. (June 1993) Student Thought Processes While Engaged in Computer Programming. .PHD in Science Education at OSU.

Cave, L. M. (June 1993) The Relationship of Teacher Behaviors and Characteristics to Critical Thinking Skills Among Middle Level Students, PHD in Mathematics Education at OSU.

Lwo Lwun-Syin (June 1992) Effects of Individualized Examples and Personalized Contexts in Computer Based Adaptive Teaching of Algebra Word Problems. PHD in Science Education at OSU .

Freeman, G. L. (June 1991) Effects of a Written Intervention on the State Anxiety of New Mathematics Teachers, PHD in Mathematics Education at OSU.

Van Cleave M. E., (June 1991) Beliefs and Classroom Practices of Teachers Who Persist in the Use of Graphing Calculators in the Teaching of High School Algebra, PHD in Mathematics Education at OSU.

# Masters Students Dissertations Completed: Service as Major Professor

Kouton, A. E. J. (June 1997) Evaluation of the Implementation of Benin New Elementary Science Curriculum, MS in Science Education at OSU.

**Research in Progress**

* Design of computer science middle school curriculum
* for teaching in postbacc computer science program
* Instructional strategies for teaching online graduate work for inservice teachers
* Online Graduate MS Professional Development Program for K-12 Teachers
* Preparing teachers to teach with technology: Toward a development of a pedagogical content knowledge integrating technology

***Teaching Since Retirement***

**2012-2013**

SED 521 Teaching Math/Science with Image and Video Technologies (3), Taught online Spring

SED 520 Integrating Technologies and Literacy in Learning Math/Science (3), Taught online Winter & Summer

SED 597 Professional Development In Mathematics And Science Education (3), Taught online Fall

SED 593/594 Advanced Strategies Science/Mathematics (3), Taught online Fall

SED 522 Dynamic Spreadsheets in Teaching Math/Science (3), Taught online Summer

**2011-2012**

SED 521 Teaching Math/Science with Image and Video Technologies (3), Taught online Spring

SED 522 Dynamic Spreadsheets in Teaching Math/Science (3), Taught online Spring

SED 593/594 Advanced Strategies Science/Mathematics (3), Taught online Fall, Winter

SED 581 Professional Development And Practicum In Mathematics (3), Taught online Winter & Summer

SED 588 Mathematics Curriculum (3), Winter

SED 597 Professional Development In Mathematics And Science Education (3), Taught online Fall

SED 589 AT/Developing Geometric Reasoning and Modeling, Summer 2-week institute

SED 599 T/Developing Models of Physical Phenomena, Summer 2-week institute

**2010-2011**

SED 595 Assessment And Evaluation (3) Taught online Spring

SED 589 Integrating Technology in Curriculum through Action Research, Taught online Spring

SED 522 Dynamic Spreadsheets in Teaching Math/Science (3), Taught online Spring, Summer

SED 581 Professional Development And Practicum In Mathematics (3), Taught online Spring

SED 589 AT/ Visible Thinking and Student Learning, Taught online Winter

SED 520 Integrating Technologies and Literacy in Learning Math/Science (3), Taught online Winter

SED 597 Professional Development In Mathematics And Science Education (3), Taught online Fall

SED 589 AT/Developing Geometric Reasoning and Modeling, Taught online Summer

**2009-2010**

SED 595 Assessment And Evaluation (3), Taught online Spring

SED 589 Integrating Technology in Curriculum through Action Research, Taught online Spring

SED 522 Dynamic Spreadsheets in Teaching Math/Science (3), Taught online Spring, Summer

SED 581 Professional Development And Practicum In Mathematics (3), Taught online Spring

SED 520 Integrating Technologies and Literacy in Learning Math/Science (3), Taught online Winter

SED 589 AT/ Visible Thinking and Student Learning, Taught online Winter

SED 593/594 Advanced Strategies Science/Mathematics (3), Taught online Fall

SED 597 Professional Development In Mathematics and Science Education (3), Taught online Fall

SED 588 Mathematics Curriculum (3), Taught online Summer

SED 589 Problem Solving and Math Discourse Summer 2-week institute

SED 589 Exploring Math Relationships Summer 2-week institute

**2008-2009**

SED 595 Assessment And Evaluation (3). Taught online Fall 2008

SED 588 Mathematics Curriculum (3). Taught online Winter 2009

SED 589 Dynamic Spreadsheets as Learning Tools in Science and Mathematics (3). Taught online Spring 2009

SED 597 Professional Development In Mathematics And Science Education (3). Taught online Spring 2009

SED 595 Assessment And Evaluation (3). Taught online Summer 2009

SED 588 Mathematics Curriculum (3). Taught online Summer 2009

**2007-2008**

SED 520 Integrating Technology & Literacy In Learning Math & Science (3). Taught online Summer 2007, Fall 2007.

SED 597 Professional Development In Mathematics And Science Education (3). Taught online Spring 2008.

SED 595 Assessment And Evaluation (3). Taught online Winter, 2008 and Summer, 2008.

SED 581 Professional Development And Practicum In Mathematics (3). Taught online Summer, 2008

SED 589 Advanced Strategies: Mathematics (3). Taught online Summer, 2008

**Course Designed ECampus for Online Delivery**

# SED 520 Integrating Technology & Literacy in Learning Math & Science

SED 521 Teaching Math/Science with Image and Video Technologies

SED 522 Dynamic Spreadsheets as Learning Tools in Science and Mathematics

SED 581 Professional Development And Practicum In Mathematics

SED 588/SED 598 Mathematics/Science Curriculum

SED 593/594 Advanced Teaching Strategies in Science/Mathematics

SED 595 Assessment And Evaluation

SED 597 Professional Development In Mathematics And Science Education

***Professional Service***

**Professional Organization Membership**

• Oregon Secondary Teaching License, valid through Aug. 11, 2016

• Georgia Life Time Secondary Mathematics Teaching License, valid for life

• Association of Mathematics Teacher Educators (AMTE), 1999- present

• School Science and Mathematics Association (SSMA), 1995 – present

• American Education Research Association (AERA), 1989 – present

* Society for Information Technology and Teacher Education (SITE), 2003-present

• International Federation of Information Processing, Working Group 3.5 and 3.1,

1991-present

• International Society for Technology Education (ISTE), 1986-2018

• National Council of Teachers of Mathematics (NCTM), 1978-2000

• Northwest Council For Computer Education (NCCE), 1981-2000

• Oregon Council of Teachers of Mathematics (OCTM), 1981-2003

• Phi Delta Kappa, 1980-2000

• Phi Kappa Phi, 1977- 2000

• Teachers of Teachers of Mathematics, 1981-2000

• American Mathematical Association, 1981-84

**Professional Organization Activities**

**Offices**

* Past Chair (2013-2012) Chair (2013-2014), Vice Chair (2012-2013), Program Chair (2011-2012), Technology as an Agent of Change in Teaching and Learning, SIG with American Educational Research Association.
* Chair, Association of Mathematics Teacher Educators (AMTE); Chair Nominations and Elections Committee (2013-2014);Technology Committee, (2004-08). Committee Developed the Board Approved Position Statement: Preparing Teachers To Use Technology To Enhance The Learning Of Mathematics: A Position of the Association of Mathematics Teacher Educators.
* Vice President of Teacher Education Council, Society for Information Technology and Teacher Education (SITE) (2007- 2010).
* Chair, Mathematics SIG, Society for Information Technology and Teacher Education (SITE) (2004-07)

• Board of Directors, School Science and Mathematics (2002-05)

• Phi Kappa Phi, OSU Chapter, Past President (1986-87); President (1985-86); President-elect (1984-85); member, Scholarship Committee (1981-82); Chair, Faculty Nominations Committee, (1982-83), member Scholarship Committee (1990-91), member Scholarship Committee (1992-93), Chair Scholarship Committee (1999-00)

• Northwest Council For Computer Education (NCCE), Past President (1986-87); President (1985-86); President Elect (1984-85); College/University Representative; (1983-85); Conference Program Chair, (1983); Conference Chair (1985); Member 1981-present

• Phi Delta Kappa, OSU Chapter, vice-president for membership, 1981-83

**Editorial Responsibilities**

* *Learning and Leading with Technology*, Mathematics Section Editor. July, 1995-present
* *School Science and Mathematics*, Co-Editor with N. Lederman, July, 1996-July 2001
* *The Computing Teacher*, Mathematics Section Editor. July, 1991-June, 1995
* *Special Interest Group: Teacher Education*, a publication for the International Council for Computer Education, 1985-88

**Committee Work: National/International**

* American Educational Research Association (AERA) Technology as an Agent of Change in Teaching and Learning (TACTL) Special Interest Group Chair (2013-2014), Vice Chair (2012-2013), Program Chair (2011-2012).
* School Science and Mathematics Association (SSMA) Finance Committee member, 2011-2014.
* Association of Mathematics Teacher Education (AMTE) Nominations and Elections Committee member, 2011-2014, Committee Chair 2013-2014.
* Society for Information Technology and Teacher Education (SITE) Teacher Education Council Vice President, 2008-2010.

• Society for Information Technology and Teacher Education (SITE) Mathematics Education Committee Chair, 2004-2008.

• Association of Mathematics Teacher Education (AMTE) Program Committee Member, 2009-2010.

• Association of Mathematics Teacher Education (AMTE) Technology Committee Chair, 2004-08.

• Association of Mathematics Teacher Educators Electronic Communications Committee Chair, 2003-04.

• National Council of Teachers of Mathematics Illuminations Advisory Committee member, 9/2002 – 9/2003.

• Technology Program Chair for National Council of Teachers of Mathematics, Year 2000 Annual Conference, Chicago, IL, April, 2000.

• National Educational Computing Conference ’99, Math/Science Curriculum Strategies Proposals, Chair committee reviewing math and science proposals for possible acceptance, Nov. 1998.

• Clarion University Integration of Gender Equity in Teacher Education, Mentor, 1997-99.

• International Federation of Information Processing, chair of focus group, presented a paper. Working Conference, Integrating Technology in Secondary Mathematics. Villard De Lones, France, October, 1997.

• International Federation of Information Processing, chair of focus group at Working Group 3.1 and 3.5 Joint Working Conference, Integrating Technology in Education in Developing Countries, Harare, South Africa, August, 1997.

• National Educational Computing Conference ’98 Math/Science Curriculum Strategies Proposals, Chair committee reviewing 50 proposals for possible acceptance, Nov. 1997.

• International Federation of Information Processing, chair of focus group at Working Group 3.1 Working Conference, Barcelona, Spain, October, 1994.

• International Federation of Information Processing, conference planning team for the World Conference for the Education Working Group to be held in June, 1994.

• Association of Computing Machinery, Elementary and Secondary Schools Subcommittee of the Curriculum Subcommittee member, 1985-86.

• International Council for Computer Education (ICCE), Teacher Education Subcommittee member, 1984-86.

**Referee and Reviewer**

**Book Publishers**

* Pearson Publishing, reviewed and edited chapter for Mathematics Methods textbook, 2013
* International Society for Technology in Education, Manuscript review for *Spreadsheet Magic in the Elementary Classroom, 2000*
* Lawrence Erlbaum Associates, Inc, 1995
* Macmillan Publishing Company, manuscript reviewer, 1991, 1993
* Wm. C. Brown Publishers, manuscript reviewer, 1990
* Brooks Cole Publishing Co., manuscript reviewer, 1986-87, 1990-9
* Houghton Mifflin Publishing Co., manuscript reviewer, 1986-87
* Franklin Beedle & Associates Publishing Company, manuscript reviewer, 1984, 1985, 1986, 1987
* Wadsworth Publishing Company, manuscript reviewer, 1984, 1985, 1986, 1987, 1988, 1989

**Journal/Conference Paper/Software Review**

* *Computers &* Education,2015-present
* Journal *of Teacher Education*, 2010-present
* *American Education Research Association,* 2010- present; selected as peer reviewer each year
* *Society for Information Technology & Teacher Education*, 2004- present
* *School Science and Mathematics*, Journal and Conference, 2000- present
* *EAIT -Education and Information Technologies*, 2015- present
* *CITE – Math* Contemporary Issues in Technology and Teacher Educator Journal- Math, 1993- present
* *Journal of Distance Education*, 2013- present
* *Journal of Research in Mathematics Education*, 2009 – present
* *Teaching and Teacher Education*, 2008- present
* National Educational Computing Conference Proposal Review Chair for Learning Environment/Math theme/strand,1997-present
* Distance Education Software Reviewer, Campbell-Kibler Associates, Inc., 1999, 2000, 2001
* National Educational Computing Conference proposal reviewer 1985-present
* *Mathematics Teaching in the Middle Grades*, 1996-present
* *Learning and Leading with Technology*, 1992- present
* *Educational Researcher,* Research News and Comments Section, 1997
* *The Computing Teacher*, 1985, 1986, 1987, 1988, 1989
* *Media & Methods*, 1999 - panel of judges for evaluation of science and math software

**Grant Proposal Reviewer for National Organizations**

* National Science Foundation, proposal reviewer 1981, 1984, 1985, 1986, 2000
* U.S. Department of Education, grant reviewer, 1981-82, 1990, 1992.

**Presider/Discussant at National Conferences**

* American Education Research Association, Discussant, Presider 2006, 2007, 2009
* National Educational Computing Conference, conference session presider, 1989
* National Council for Teachers of Mathematics, presider for convention sessions 1981-82
* National Junior Science and Humanities Symposium, presider and judge, 1982-84

**Committee Work: Regional/State**

• Oregon Math Summit, Chair of Summit, Oregon State University, Oct, 1997.

• PASS Project lead assessor, Oregon State System of Higher Education, collegial review of performance assessments, 1995-1997.

**Oregon Educational Act for the 21st Century Implementation**

* Oregon Math Summit, Chair of Summit, Summit held at Oregon State University, Oct, 1997.
* Standard Setting for CIM Outcome: Thinking, Oregon Department of Education, September 25-27, 1994
* Standard Setting for CIM Outcome: Apply Math and Science, Oregon Department of Education, May 25-27, 1994

**Oregon State University Service**

|  |  |  |
| --- | --- | --- |
| 2017-2018  2009-2014 | * Chair of Computer Science Post-Bac Program Review Team * Past President of the Faculty Senate Committee * Commencement Marshal | |
| 2008-09 | * Faculty Recognition and Awards Committee (Faculty Senate) Chair * OSU Retired Association (Membership Services Committee) * Past Presidents of the Faculty Senate Committee | |
| 2007-08 | * Faculty Economic Welfare and Retirement Committee (Faculty Senate) Chair * OSU Retired Association (Membership Services Committee) * Past Presidents of the Faculty Senate Committee * Commencement Marshal | |
| 2006-07 | * Faculty Economic Welfare and Retirement Committee (Faculty Senate) member * OSU Retired Association (Membership Services Committee) * Past Presidents of the Faculty Senate Committee * Commencement Marshal | |
| 2005-06 | * Faculty Economic Welfare and Retirement Committee (Faculty Senate) member * Search Committee member for PK-20 Seamless Education Position * Past Presidents of the Faculty Senate Committee * Commencement Marshal | |
| 2004-05 | * Faculty Senate Executive Committee * Graduate Admissions Committee member (Faculty Senate) * Administrative Appointments Committee member (Faculty Senate) * OSU Campus Planning Committee member * Past Presidents of the Faculty Senate Committee * Commencement Marshal | |
| 2003-04 | * Faculty Senate Executive Committee * Graduate Admissions Committee member (Faculty Senate) * Administrative Appointments Committee member (Faculty Senate) * OSU Campus Planning Committee member * Past Presidents of the Faculty Senate Committee * Commencement Marshal | |
| 2002-03 | * Screening Committee for University President * Faculty Senate Executive Committee * Graduate Admissions Committee member (Faculty Senate) * Faculty Senate Executive Committee * Graduate Admissions Committee member (Faculty Senate) * Search Committee member for Director of Budget & Fiscal Planning * Administrative Appointments Committee member (Faculty Senate) * OSU Campus Planning Committee member * Beaver Open House Representative for Dept. * Teaching and Learning Task Force for Education * Past Presidents of the Faculty Senate Committee * Commencement Marshal | |
| 2001-02 | * Graduate Admissions Chair (Faculty Senate) * Commencement: Graduate column marshal * OSU Campus Planning Committee member * Graduate Admissions Committee member (Faculty Senate) * Search Committee member for Director of Budget & Fiscal Planning * Beaver Open House Representative for Dept. * Past Presidents of the Faculty Senate Committee * College of Science Senator, Faculty Senate (term ends 2002) | |
| 2000-01 | * Design Team for Education member (led by George Copa) * Graduate Admissions Committee Chair (Faculty Senate) * Graduate Admissions Task Force Committee member * University Accreditation Steering Committee member * University NCAA Accreditation Committee member * OSU Campus Planning Committee member * Commencement: Doctoral degree column marshal * University Scholarship Committee member * Past Presidents of the Faculty Senate Committee * College of Science Senator, Faculty Senate (term ends 2002) * Committee to review Committee on Committees, member, Faculty Senate | |
| 1999-2000 | * Bylaws and Nominations Committee Chair (Faculty Senate) * Graduate Admissions Committee member (Faculty Senate) * Screening Committee for Interim Dean College of Science * Search Committee for Director of SMILE, Member * Commencement: Doctoral degree column marshal * Athlete Petition for Exemption, Faculty review committee member * OSU Faculty Senate Officer Immediate Past President (1999) * Internal Budget Allocation Work Group - Members: Arnold (chair), Dalrymple, Farber, Hashimoto, Horne, Niess, Spector) * Advisory Internal Budget Allocation Committee (Faculty Senate), * Past Presidents Committee, Faculty Senate, Chair |
| 1998-99 | * OSU Faculty Senate Officer: President (1998) * Internal Budget Allocation Work Group - Members: Arnold (chair), Dalrymple, Farber, Hashimoto, Horne, Niess, Spector) * Advisory Internal Budget Allocation Committee (Faculty Senate), Chair * President’s Cabinet (university), member * Undergraduate Education Council, member * Assessment of Teaching Task Force (Faculty Senate) Chair, report approved by Faculty Senate, October, 1998 * Athletic Advisory Committee Chair (97-98), Member (96-97) * Member of Board for AAUP (representing the Faculty Senate) * Commencement: Doctoral degree column marshal |
| 1997-98 | * OSU Faculty Senate Officer: President-Elect (1997) * President’s Cabinet (university), member * Undergraduate Education Council, member * Assessment of Teaching Task Force (Faculty Senate) Chair, report approved by Faculty Senate, October, 1998 * Athletic Advisory Committee Chair (97-98), Member (96-97) * Member of Board for AAUP (representing the Faculty Senate) |
| 1996-97 | * OSU Faculty Senate Officer: Executive Committee representative from Senate - Served as Executive Committee Liaison to Curriculum Council, Advancement in Teaching, Administrative Appointments Committee, Instructional Development and Technology Committee * Advancement in Teaching Committee (Faculty Senate) Member of the Committee until election as President Elect of Faculty Senate * Search Committee for Director of Summer Session and Precollege Programs, Member * Commencement: Undergraduate column marshal |
| 1994-95 | * College of Science Senator, Faculty Senate; Service ended when elected to Executive Committee of the Faculty Senate * Instructional Media Committee (Faculty Senate);Chair (93, 94) and Member (92-94) * Instructional Technology Innovation Center Advisory Board (university), member * Academic Computing Subcommittee of the University Computing Steering Committee, member * Commencement: College of Science column marshal |
| 1993-94 | * Instructional Media Committee (Faculty Senate);Chair (93, 94) and Member (92-94) * Instructional Technology Innovation Center Advisory Board (university), member * Academic Computing Subcommittee of the University Computing Steering Committee, member * Commencement: College of Science column marshal |
| 1992-93 | * Instructional Media Committee (Faculty Senate);Chair (93, 94) and Member (92-94) * Instructional Technology Innovation Center Advisory Board (university), member * Academic Computing Subcommittee of the University Computing Steering Committee, member * Screening Committee University Computing Services positions * Commencement: College of Science column marshal |
| 1991-92 | * Instructional Computing Subcommittee, member |
| 1990-91 | * University Curriculum Committee, member * Commencement marshal, College of Education |
| 1989-90 | * Screening Committee for positions in University Computing Services member * University Curriculum Committee, member * Commencement marshal, College of Education |
| 1989-88 | * University Curriculum Committee, member |
| 1987-88 | * University Computer Committee, Chair (85-87), Member (83-87) |
| 1986-87 | * Interdisciplinary Task Force, President's Long Range Plan, member * University Computer Committee, Chair (85-z87), Member (83-87) |
| 1984-85 | * Search Committee for Director of Milne Computer Center, member * University Computer Committee, Chair (85-87), Member (83-87) |

**College/Department Committees (at OSU)**

1999-2002 Deans Advisory Committee member, College of Science

1999 Interim Dean for College of Science, Screening Committee member

1999 Teaching Awards Committee (Carter, Boedker, Horne) member

1993-2000 Coordinator for Science and Mathematics Teacher Preparation Program, Professional Teacher Education Program

1996-2003 Teacher Education Committee, Professional Teacher Education Program

1996 College Promotion and Tenure Committee

1991-93 Chair of Teacher Education Coordinators for Implementation of Teacher Preparation Program, Professional Teacher Education Program

1989-90 Member, Teacher Education Committee to write Master of Arts in Teaching (MAT) Category I proposal

1990 Member, Ad Hoc Committee on Governance of the Education Major, College of Education

1989 Member, Screening Committee for Instructional Technology position, College of Education

1989-91 Member, Promotion, Tenure & Faculty Welfare Committee, College of Education

1989-91 Member, Instructional Technology Committee, College of Education

1987-88 Member, Graduate Core Subcommittee, College of Education

1984-86 Member, Personnel Committee, College of Education

1983-89 Computer Coordinator, Department of Science, Mathematics and Computer Science Education

1983-85 Chair, Computer Education Advisory Committee, College of Education

1982-84 Member, Professional Development Committee, College of Education

**Additional University Service (at OSU)**

2000 Chair Scholarship Committee, Phi Kappa Phi

1998 Instructor, Odyssey course for new students at OSU (Fall, ALS 111)

1998 Reader, Honors College Admission

1997-99 Teaching Mentor, College of Engineering Faculty for Improvement of Teaching

1998 Member, American Association of University Professors Board

1997-98 Member, Curriculum Committee for Teacher Preparation Program

1995-86 Lead Writer, National Council for the Accreditation of Teacher Education report

1995-97 Chair, Middle Level (grades 5-10) Teacher Preparation Program

1994-95 Member, Emerging Scholar Faculty Awards, Phi Kappa Phi

1994-96 Chair and Member of Curriculum Committee for Council of Education Licensure Faculty

1991-93 Chair, Professional Teacher Education Coordinating Committee

1992-93 Member, Scholarship Committee, Phi Kappa Phi

1990-91 Member, Scholarship Committee, Phi Kappa Phi

1986-87 Past President, Phi Kappa Phi

1985-86 President, Phi Kappa Phi

1984-85 President-elect, Phi Kappa Phi

1981-82 Chair, Faculty Nominations Committee, Phi Kappa Phi

**Professional Honors and Awards**

2016 TPACK SIG at SITE Award: Paper award. Niess, M. L. & Gillow-Wiles, H. (March 2016). Blending Pedagogical Examinations and Discourse with Teachers’ Practical Experiences for TPACK Transformation.

2016 Niess, M. L.,& Gillow-Wiles, H. (2015). Learning trajectory for transforming teachers’ knowledge for teaching mathematics and science with digital image and video technologies in an online learning experience.  *Journal of Digital Learning in Teacher Education, 31*(1), 5-17, 864-871. Awarded the article of the year 2015 with potential for impact and contribution innovativeness, and generalizability or usability***.***

2014 2014 George G. Mallison Distinguished Service Award from the School Science and Mathematics Association. Awarded November 6-8, 2014.

2014 2013 Journal of Distance Education Editor’s Award, March 2014.Niess, M. L. , & Gillow-Wiles, H. (2013). Developing asynchronous online courses: Key instructional strategies in a social metacognitive learning trajectory. *The Journal of Distance Education, 27*(1), 1-73*.*Available online at[**http://www.jofde.ca/index.php/jde**](http://www.jofde.ca/index.php/jde)

2014 Thompson TPACK Award at SITE 2014: Paper award. Gillow-Wiles, H, & Niess, M. L. (March 2014). A Systems Approach for Integrating Multiple Technologies as Important Pedagogical Tools for TPACK (SITE) 2014 Annual Conference, Jacksonville, FL.

2011 Outstanding paper award: Niess, M. L., van Zee, E., Gillow-Wiles, H., & Staus, N. (March 2011). *Advancing k-8 teachers’ STEM education for teaching interdisciplinary science and mathematics with technologies*. Paper presented for Society of Information Technology and Teacher Education (SITE) Annual Conference, Nashville, TN.

2001 Alumni Scholarship named for Margaret L. Niess - endowed scholarship in the Department of Science and Mathematics Education. Each year a $1000 scholarship is provided to a preservice mathematics education student, donated by Bryce Hixson

2000 D. Curtis Mumford Faculty Service Award, Oregon State University

1995 Loyd Carter award for outstanding and inspirational teaching, College of Science, Oregon State University

1995 Recognition for Advancing Gender Equity and Awareness, American Association of Colleges of Teacher Education (AACTE)

1993 Burlington Resources Foundation Faculty Achievement Award, Oregon State University

1978 Phi Delta Kappa Honor Society, Oregon State University

1965 Phi Kappa Phi Honor Society, Oregon State University