

Jennifer Nickell Lovett
Assistant Professor of Mathematics Education
Department of Mathematical Sciences
Middle Tennessee State University
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EDUCATION

- 2016 **Ph.D., Mathematics Education**
North Carolina State University, Raleigh, NC
Chair: Hollylynne S. Lee
Dissertation: The Preparedness of Preservice Secondary Mathematics Teachers to Teach Statistics: A Cross-Institutional Mixed Methods Study
- 2007 **M.A.T., Mathematics**
Miami University, Oxford, OH
- 2005 **B.S., Mathematics Education 7 – 12**
 B.A., Mathematics and Statistics
Miami University, Oxford, OH

UNIVERSITY EXPERIENCE

- 2016 – Present **Middle Tennessee State University, Murfreesboro, TN**
Assistant Professor of Mathematics Education, Department of Mathematical Sciences
- 2013 – 2015 **North Carolina State University, Raleigh, NC**
Mathematics Education Instructor, Department of STEM Education
- 2014 – 2015 Teaching Assistant, Department of Statistics

K – 12 TEACHING EXPERIENCE

- 2007 – 2012 **Lakota West Freshman School, West Chester, OH**
High School Mathematics Teacher
- 2008 – 2012 Associate Mathematics Department Head
Instructional Technology Representative
- 2005 – 2007 **Edgewood Middle School, Trenton, OH**
Middle School Mathematics Teacher

HONORS & AWARDS

- 2015 – 2016 **Friday Institute Graduate Student Fellow**, Friday Institute for Educational Innovation, NC State University

2015 – 2016	Norman Anderson – J. Conrad Glass, Jr. Graduate Fellowship , NC State University
2015	National Leadership Technology Initiative (NTLI) Award , Association of Mathematics Teacher Educators
2015	College of Education Dissertation Support Award , NC State University
2015	1st Place Poster at Graduate Research Symposium in Education, NC State University
2014	Thank-a-Teacher Award , NC State University
2012 – 2013	University Graduate Fellowship , North Carolina State University
2006 – 2007	Alberta Wolfe Fellowship , Miami University
2005	Mathematics Education Trust CAPE Award , National Council of Teachers of Mathematics
2005	H.C. Christofferson Mathematics Education Award , Miami University
2003	Pi Mu Epsilon, Honor Society , Miami University

SCHOLARSHIP

Refereed Journal Articles

- McCulloch, A. W., Whitehead, A., **Lovett, J. N.**, & Whitley, K. (In Press). Tuning out the world with noise-cancelling headphones. *Mathematics Teacher*.
- Lovett, J. N.**, & Lee, H. S. (Accepted). Incorporating multiple technologies into teacher education: A case of developing preservice teachers' understanding in teaching statistics with technology. Submitted to *Contemporary Issues in Technology and Technology Education*.
- Lee, H. S., Doerr, H. M., Tran, D., & **Lovett, J. N.** (2016). The role of probability in developing learners' models for simulation approaches to inference. *Statistics Education Research Journal*.
- Lovett, J. N.**, & Lee, H. S. (2016). Making sense of data: Context matters. *Mathematics Teaching in the Middle School*, 21(6). 338-346.
- Wanko, J. J., & **Nickell, J. V.** (2013). Reinforcing geometric properties with shapedoku puzzles. *Mathematics Teacher*, 107(3), 188-194.

Refereed Book Chapters

- Maloney, A. P., Confrey, J., Ng, D., & **Nickell, J.** (2014). Learning trajectories for interpreting the K-8 CCSS-M: Middle grades statistics standards as an example. In K. Karp & A. R. McDuffe (Eds.), *Annual perspectives in mathematics education 2014: Using research to improve instruction* (pp.23-34). Reston, VA: NCTM.

Refereed Proceedings

- Lovett, J. N.**, & McCulloch, A. W. (2016). Preservice teachers' development of an understanding of function using different metaphors. In *Proceedings of the Thirty-eighth annual meeting of the North American Chapter of Psychology of Mathematics Education*, Tucson, AZ.
- Lee, H. S., Tran, D., **Nickell, J.** & Doerr, H. M. (2015). Simulation approaches for informal inference: Models to develop understanding. In K. Krainer & N. Vondrova (Eds.),

Proceedings of the Ninth Congress of the European Society for Research in Mathematics Education (pp.707-714). Prague, Czech Republic. Retrieved from <https://hal.archives-ouvertes.fr/hal-01287093/document>

- Nickell, J.** (2015). Incorporating technology to enhance teacher education lessons and preservice teachers' learning. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2015* (pp. 2453-2459). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).
- Thrasher, E., Starling, T., **Lovett, J. N.**, Doerr, H. M., & Lee, H. S. (2015). The influence of a graduate course on teachers' self-efficacy to teach statistics. In T. G. Bartell, K. N. Bieda, R. T. Putnam, K. Bradfield, & H. Dominguez (Eds.), *Proceedings of the Thirty-seventh annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 447-454). East Lansing, MI: Michigan State University.

Non-Refereed Publications

- Chandler, K., Fortune, N., & **Lovett, J. N.**, & Scherrer, J. (2016). What should Common Core assessments measure? *Kappan*, 97(5), 60-63. Retrieved <http://www.kappancommoncore.org/what-should-common-core-assessments-measure/>
- Edwards, M. T., & **Nickell, J.** (2014). Teaching students about functions with DynaGraphs. *MTMS Blog: Blogarithm*. Retrieved from <http://www.nctm.org/Publications/Mathematics-Teaching-in-Middle-School/Blog/Teaching-Students-about-Functions-with-Dynagraphs/>
- Lee, H. S., & **Nickell, J.** (2014). How a curriculum may develop technological statistical knowledge: A case of teachers examining relationships among variables using Fathom. In K. Makar, B. de Sousa & R. Gould (Eds.), *Sustainability in statistics education. Proceedings of the Ninth International Conference on Teaching Statistics (ICOTS9, July 2014) Flagstaff, Arizona, USA*. Voorburg, The Netherlands: International Statistical Institute.
- Nickell, J.**, & Lee, H. S. (2014). Designing opportunities for students to reason about the relationship between sources and structures of data. In K. Makar, B. de Sousa & R. Gould (Eds.), *Sustainability in statistics education. Proceedings of the Ninth International Conference on Teaching Statistics (ICOTS9, July 2014) Flagstaff, Arizona, USA*. Voorburg, The Netherlands: International Statistical Institute.
- Nickell, J.** (2012). Word clouds in math classrooms. *Mathematics Teaching in the Middle School*, 17(9), 564–566.
- Nickell, J.** (2007). Technology tips: Useful online and teacher production tools of the Geometer's Sketchpad. *Mathematics Teacher*, 100(8), 565-567.

MANUSCRIPTS UNDER REVIEW/IN PREPARATION

- Lee, H. S., Avineri, T., **Lovett, J. N.**, Gibson, T., & Kellogg, S. (In Preparation). Scaling professional development for mathematics and statistics teachers through massive open online courses. To be submitted to *Journal of Technology and Teacher Education*.

- Lovett, J. N.** & Lee, H. S. (Under Review). New standards require teaching more statistics: Are preservice secondary mathematics teachers ready? Submitted to *Journal of Teacher Education*.
- Lovett, J. N.**, & Lee, H. S. (Under Review). The nature of technology-enabled learning opportunities that can develop preservice teachers' technological pedagogical statistical knowledge. Submitted to *School of Science and Mathematics Journal*.

PRESENTATIONS

Invited Presentations

- Lovett, J. N.** (July 2016). *Rethinking how statistics is taught in mathematics classrooms*. **Invited featured presentation** at the 30th annual High Schools That Work Staff Development Conference, Louisville, KY.
- Lee, H. S., **Lovett, J. N.**, Peter, S., Franklin, C. (April 2016). *Teacher development in statistics education: A critical examination of how teachers' experiences impact their knowledge beliefs, and practices for teaching statistics*. **Invited presentation** at the annual National Council of Teachers of Mathematics Research Conference, San Francisco, CA.
- Nickell, J.** (May 2015). *Incorporating technology to enhance preservice teachers' statistical reasoning and TPACK*. **Invited webinar** presentation for the Association of Mathematics Teacher Educators.
- Nickell, J.** (March 2015). *Incorporating technology to enhance teacher education lessons and preservice teachers' learning*. **Invited featured research paper** presented at the annual international conference of the Society for Information Technology and Teacher Education, Las Vegas, NV. Paper presented was based on the National Technology Leadership Initiative Fellowship Award.

International

- Avineri, T. A., Lee, H. S., Tran, D. **Lovett, J. N.**, & Gibson, T. (July 2016). *Design and impact of MOOCs for mathematics teachers*. Paper presented at the 13th International Congress on Mathematics Education. Hamburg, Germany.
- Lee, H. S., Tran, D., **Nickell, J.**, & Doerr, H. M. (February 2015). *Simulation approaches for informal inference: Models to develop understanding*. Paper presented at the 9th Congress of European Research in Mathematics Education, Prague, Czech Republic.
- Lee, H., & **Nickell, J.** (July 2014). *How a curriculum may develop technological statistical knowledge: A case of teachers examining relationships among variables using Fathom*. Paper presented at the International Conference on Teaching Statistics, Flagstaff, AZ.
- Nickell, J.**, & Lee, H. (July 2014). *Designing opportunities for students to reason about the relationship between sources and structures of data*. Paper presented at the International Conference on Teaching Statistics, Flagstaff, AZ.

National

- Lovett, J. N.** Gibson, T. (April 2017). *MOOC-Eds: Free online professional development on your schedule*. Session presented at the annual conference of the National Council of Teachers of Mathematics, San Antonio, TX.

- Strayer, J. E., **Lovett, J. N.**, Matuszewski, A. L. (April 2017). *Using simulations to make inferences: Come learn how!* Session presented at the annual conference of the National Council of Teachers of Mathematics, San Antonio, TX.
- Lovett, J. N.** (February 2017). *Increasing the preparation of preservice secondary teachers to teach statistics.* Session presented at the annual conference of the Association of Mathematics Teacher Educators, Orlando, FL.
- McCulloch, A. W., **Lovett, J. N.**, & Edgington, C. (February 2017). *Developing preservice teachers' understanding of function using a machine metaphor applet.* Session to be presented at the annual conference of the Association of Mathematics Teacher Educators, Orlando, FL.
- Lovett, J. N.**, McCulloch, A. W. (November 2016). *Preservice teachers' development of an understanding of function using different metaphors.* Poster presented at the annual conference of the North American Chapter of Psychology of Mathematics Education, Tucson, AZ.
- Lovett, J. N.** (April 2016). *Preparedness of preservice secondary mathematics teachers to teach statistics.* Session presented at the annual National Council of Teachers of Mathematics Research Conference, San Francisco, CA.
- McCulloch, A., Lee, H. S., Hollebrands, K., Chandler, K., & **Lovett, J. N.** (January 2016). *Preparing teachers to plan and implement technology-based algebra tasks using open access tools.* Session presented at the annual conference of the Association of Mathematics Teacher Educators, Irvine, CA.
- Thrasher, E., **Lovett, J. N.**, Starling, T., Doerr, H. M., & Lee, H. S. (November 2015). *Influence of a graduate course on teachers' self-efficacy to teach statistics.* Paper presented at the annual conference of the North American Chapter of Psychology of Mathematics Education, East Lansing, MI.
- Lee, H. S., Doerr, H. M., Jacob, B., Starling, T. T., Pulis, T., Tran, D., **Nickell, J.**, & Thrasher, E. (April 2015). *Development of teachers' statistical reasoning and confidence in teaching statistics.* Session presented at the annual National Council of Teachers of Mathematics Research Conference, Boston, MA.
- Nickell, J.**, Lee, H. S., & Doerr, H. M. (April 2015). *Teachers' visual representations of a simulation approach to inference.* Poster presented at the annual National Council of Teachers of Mathematics Research Conference, Boston, MA.
- Whitely, K., **Nickell, J.**, Whitehead, A., & McCulloch, A. (April 2015). *Modeling noise-cancelling headphone with trigonometric functions.* Session presented at the annual meeting of the National Council of Teachers of Mathematics, Boston, MA.
- Nickell, J.** (February 2015). *Incorporating technology to enhance teacher education lessons and preservice teachers' learning.* Session presented at the annual conference of the Association of Mathematics Teacher Educators, Orlando, FL.
- Thrasher, E., **Nickell, J.**, & Keene, K. A. (February 2015). *The gas problem: Preservice teachers approaches to mathematical modeling in methods courses.* Session presented at the annual conference of the Association of Mathematics Teacher Educators, Orlando, FL.
- Cayton, C., Sherman, M., McCulloch, A., **Nickell, J.**, & Chandler, K. (April 2014). *Technological tasks, cognitive demand in secondary classrooms and teacher education.* Session presented at the annual National Council of Teachers of Mathematics Research Conference, New Orleans, LA.

- Lee, H. S., Bos, B., Ozgun-Koca, A., **Nickell, J.**, & Chandler, K. (February 2014). *Supporting teachers in developing technology-based mathematics tasks*. Session presented at the annual conference of the Association of Mathematics Teacher Educators, Irvine, CA.
- Chandler, K., Avineri, T., & **Nickell, J.** (May 2013). *Developing informal inference in the middle grades through exemplary tasks*. Poster presented at the United States Conference on Teaching Statistics, Raleigh, NC.
- Maloney, A., Confrey, J., Avineri, T., Ng, D., & **Nickell, J.** (May 2013). *Using learning trajectories to interpret the Common Core Math Standards*. Session presented at the United States Conference on Teaching Statistics, Raleigh, NC.
- Nickell, J.**, & Carlin, K. (April 2010). *Promoting higher-level geometric thinking through constructions and writing assignments*. Session presented at the annual meeting of the National Council of Teachers of Mathematics, Indianapolis, IN.
- Harper, S. R., Driskell, S. O. & **Nickell, J.** (April 2008). *Exploring probabilities by simulating card games using Fathom*. Session presented at the annual meeting of the National Council of Teachers of Mathematics, Salt Lake City, UT.
- Nickell, J.**, Harper, S. R. & Driskell, S. O. (April 2008). *Using technology-based projects to foster geometric thinking in the middle grades*. Session presented at the annual meeting of the National Council of Teachers of Mathematics, Salt Lake City, UT.
- Nickell, J.**, Sosko, S. & Broering, A. (April 2005). *Math worth skipping cartoons for: Have a kids mathematics conference!* Session presented at the annual meeting of the National Council of Teachers of Mathematics, Anaheim, CA.

Regional/State

- Lovett, J. N.** (September 2016). *Transforming how statistics is taught in middle grades*. Session presented at the annual conference of the Tennessee Mathematics Teachers Association, Murfreesboro, TN.
- Chandler, K., Whitehead, A., & **Nickell, J.** (November 2014). *"There's an app for that!" Geometer's Sketchpad on the iPad*. Session presented at the regional conference of the National Council of Teachers of Mathematics, Richmond, VA.
- Nickell, J.**, Chandler, K., & Whitehead, A. (November 2014). *Developing students' abilities to describe and reason about data*. Session presented at the regional conference of the National Council of Teachers of Mathematics, Richmond, VA.
- Chandler, K., Cayton, C., & **Nickell, J.** (October 2014). *Designing technological tasks*. Session presented at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Nickell, J.** & Whitehead, A. (October 2014). *Understanding measurement units of data*. Session presented at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Whitehead, A., & **Nickell J.** (October 2014). *Using measurement tasks to foster statistical thinking*. Session presented at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Carlin, K., & **Nickell, J.** (November 2013). *Flip your classroom! Give it a try for a chapter!* Session presented at the regional conference of the National Council of Teachers of Mathematics, Louisville, KY.

- Nickell, J.,** Chandler, K., Bell, A., & Leak, M. (November 2013). *New teacher resources: Games*. Session presented at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Nickell, J.,** & Chandler, K. (November 2013). *Stats & CCSSM. Where to begin?* Session presented at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Nickell, J.,** & Maloney, A. (November 2013). *Navigating middle school statistics learning in CCSS-M*. Session presented at the regional conference of the National Council of Teachers of Mathematics, Louisville, KY.
- Chandler, K., & **Nickell, J.** (October 2013). *How to use GSP on the iPad*. Session presented at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Panorkou, N., Confrey, J., & **Nickell, J.** (October 2012). *Unpacking shapes and angles in the CCSS-M*. Session presented at the annual meeting of the North Carolina Council of Teachers of Mathematics, Greensboro, NC.
- Nickell, J.,** & Carlin, K. (November 2009). *Promoting higher level thinking in a geometry classroom through constructions, projects and writing assignments*. Session presented at the annual meeting of the Ohio Council of Teachers of Mathematics, Cincinnati, OH.

TEACHING

Middle Tennessee State University

MATH 3320 Teaching Math Grades 5-8
YOED 4400 Residency II

North Carolina State University

EMS 204 Introduction to Mathematics Education
EMS 480 Teaching Mathematics with Technology

COLLABORATIVE SCHOLARLY ACTIVITIES

External

Co-Designer

2016	Teaching Mathematics with Technology MOOC-Ed
2015	Teaching Statistics Through Data Investigations MOOC-Ed

PROFESSIONAL SERVICE

Field of Mathematics and Statistics Education

2014 – 2017 **Associate Editor**, Statistics Education Web (STEW)

Proposal Reviewer

2015 International Congress on Mathematics Education

2015 – Present	Psychology of Mathematics Education North American Chapter Annual Conference
2014 – Present	Association of Mathematics Teacher Educators Conference National Council of Teachers of Mathematics Research Conference
2016 – Present	Manuscript Referee Journal of Teacher Education Journal of Research in Mathematics Education NCSM Journal of Mathematics Educational Leadership School Science and Mathematics Ohio Journal of School Mathematics
2014	Statistics Education Research Journal
2013 – Present	Teaching Children Mathematics
2011 – Present	Mathematics Teacher Mathematics Teaching in the Middle School
2012 – 2014	Graduate Student Advisor , North Carolina Council of Teachers of Mathematics: Kappa Chapter
2004 – 2005	President , Miami University Council of Teachers of Mathematics
2003 – 2004	Vice President , Miami University Council of Teachers of Mathematics

Middle Tennessee State University

Departmental Service

Mathematics Education Curriculum Group
Undergraduate Program Policy Committee
TMTA Contest Committee

College of Basic and Applied Sciences Service

University Service

PROFESSIONAL AFFILIATIONS

Psychology of Mathematics Education – North American Chapter
Association of Mathematics Teacher Educators
National Council of Teachers of Mathematics
American Statistical Association
School of Science and Mathematics Association
Tennessee Mathematics Teachers Association
Middle Tennessee Mathematics Teachers