

Daniel Showalter

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Education

PhD in Mathematics Education, Ohio University (2011–2014)

MS in Mathematics, Ohio University (2009–2011)

BS in Mathematics, Urbana University (2000–2002)

University Teaching Experience

Eastern Mennonite University, Harrisonburg, VA	2015–present
Assistant/Associate Professor of Mathematics, Department of Mathematical Sciences	
Ohio Valley University, Vienna, WV	2012–2015
Adjunct Professor of Mathematics, Department of Mathematics	
Ohio University, Athens, OH	2009–2015
Instructor/Visiting Assistant Professor, Department of Mathematics	

Related Teaching Experience

University of South Carolina: IMMERSE Instructor	2022–present
Instructor of 2 professor cohorts in quantitative methodology for rural education research	
MathPath, Lewis and Clark College, Portland, OR	2015, 2021
Instructor (two 1-week courses)	
The College of William & Mary, Williamsburg, VA	2014
Instructor for Korean Nobel Project through the Center for Gifted Education (6-day program)	
Upward Bound Summer College Preparatory Academy, Athens, OH	2012–2014
Instructor for Precalculus, Calculus (three 6-week summer programs)	

Grants and Awards

John M. Smith Award for Distinguished College or University Teaching (2021). Mathematical Association of America: Virginia, Maryland, DC Section.

National Science Foundation grant for Robert Noyce Teacher Scholarship Program (NOYCE, #2050250) (2021–2025, \$1.1 million). “STEM Teachers Applying Restorative Justice in Education Together”. Co-PI.

Excellence in Teaching Award: Tenured Professor Category, EMU (2020). Peer nominations and a selection committee of faculty/administration. \$500 prize.

EMU Summer Teaching Grant (2019, 1K). “Beyond Normal Statistics.”

Virtual Library of Virginia Course Redesign Grant (2019–2020, 2K). “Python Jubilee”.

National Science Foundation grant for Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM, #1741937) (2018–2022, 650K). “STEM Scholars Engaging in Local Problems”. Co-PI.

National Science Foundation grant for Improving Undergraduate STEM Education: Education and Human Resources (IUSE: HER, #1611713) (2016–2019, 300K). “Faculty-Led Institutional Transformation for Teaching Diverse Learners in STEM”. Co-PI.

American Educational Research Association’s Institute on Statistical Analysis for Education Policy: Math Education and Large Datasets (2016). Washington, DC, 7% acceptance rate.

American Educational Research Association’s Institute on Statistical Analysis for Education Policy: Causal Inference (2013). Washington, DC, 15% acceptance rate.

First place, New Threats to Freedom Essay Contest (2011). *Embracing failure in the mathematics classroom*. \$5,000 prize.

Graduate Associate Outstanding Teaching Award, Ohio University (2010). One of four recipients from all departments based on student nomination, panel interview, and curriculum review. \$500 prize.

Peer-Reviewed Journal Publications

- Showalter, D. A. (2021). Attitudinal changes in face-to-face and online statistical reasoning learning environments. *Journal of Pedagogical Research*, 5(2). doi: 10.33902/JPR.2021269257
- Showalter, D. A., & Mullet, L. (2017). Sniffing out the secret poison: Selection bias in educational research. *Mid-Western Educational Researcher*, 29(3).
- Showalter, D. A. (2017). To math or not to math: The algebra-calculus pipeline and postsecondary mathematics remediation. *Journal of Experimental Education*, 85(4) doi: 10.1080/00220973.2017.1299080.
- Showalter, D. A., Wollett, C., & Reynolds, S. (2014). Teaching a high-level contextualized mathematics curriculum to adult basic learners. *Journal of Research and Practice for Adult Literacy, Secondary, and Basic Education*, 3(2), 21–34.
- Showalter, D. A. (2013). Place-based mathematics: A conflated pedagogy? *Journal of Research in Rural Education*, 28(6), 1–13. Retrieved from <http://jrre.psu.edu/articles/28-6>.
- Howley, C., Showalter, D., Klein, R., Sturgill, D., & Smith, M. (2013). Rural math talent, now and then. *Roeper Review*, 35, 102–114.
- Howley, A., Showalter, D., Howley, M. D., Howley, C. B., Klein, R., & Johnson, J. (2011). Challenges for place-based mathematics pedagogy in rural schools and communities in the United States. *Children, Youth and Environments*, 21(1), 101–127.

Editor-Reviewed Publications

- Tian, J., Kishbaugh, T.L., Barge, S., & Showalter, D. (2022). STEM scholars engaging in local problems. *Proceedings of the American Society for Engineering Education, USA*.
- Showalter, D., Klein, R., Johnson, J., & Hartman, S.L. (2019). *Why rural matters 2018–19: The time is now* [Policy report]. Arlington, VA: Rural School and Community Trust. Available from www.ruraledu.org
- Showalter, D. (2019). Replacing torture tests with broccoli quizzes. *Journal for Research and Practice in College Teaching [Special issue: Innovative teaching personal essays]*, 3(2), 160-165.
- Kishbaugh, T.L., Cessna, S., Leaman, L., & Showalter, D. (2019). Seeking to improve retention through teaching strategies and peer tutoring. In *Increasing Retention of Under-Represented Students in STEM through Affective and Cognitive Interventions*. Washington, DC: ACS Books.
- Christophel, J., & Showalter, D. (2019). Color coding. *EBSCO research starters*. [Online encyclopedia article]. Birmingham, AL: EBSCO Science Reference Center.
- Chupp, B., Huff, A., & Showalter, D. (2019). Sampling vs. census. *EBSCO research starters*. [Online encyclopedia article]. Birmingham, AL: EBSCO Science Reference Center.
- Miller, J., & Showalter, D. (2019). String-oriented symbolic language. *EBSCO research starters*. [Online encyclopedia article]. Birmingham, AL: EBSCO Science Reference Center.
- Showalter, D., Klein, R., Johnson, J., & Hartman, S.L. (2017). *Why rural matters 2015–16: Understanding the changing landscape* [Online report]. Arlington, VA: Rural School and Community Trust. Available from www.ruraledu.org
- Showalter, D. A. (2015). The game that does it all [Back Page: Favorite Lesson, April Issue]. *Mathematics Teacher*. Reston, VA: National Council of Teachers of Mathematics.
- Showalter, D. A. (2015). *Measures of college and career readiness: A literature review* [Report reviewed by the Institute of Education Sciences]. Calverton, MD: Regional Education Laboratory-Mid Atlantic.
- Howley, C., Howley, A., & Showalter, D. (2015). Leaving or staying home: Belief systems and paradigms in rural education. In T. Stambaugh & S. Wood (Eds.), *Best practices for serving gifted students in rural settings*. Waco, TX: Prufrock Press.
- Driver, D., & Showalter, D. (2015). Euler paths. *EBSCO mathematics research starters*. [Online encyclopedia article]. Birmingham, AL: EBSCO.
- Pinter, S., & Showalter, D. (2015). Systems ecology. *EBSCO mathematics research starters*. [Online encyclopedia article]. Birmingham, AL: EBSCO.

- Salas Fajardo, M., & Showalter, D. (2015). Calculating area: Parallelograms. *EBSCO mathematics research starters*. [Online encyclopedia article]. Birmingham, AL: EBSCO.
- Voellinger, T., & Showalter, D. (2015). Calculating area: Composite figures. *EBSCO mathematics research starters*. [Online encyclopedia article]. Birmingham, AL: EBSCO.
- Zhu, S., Lebar, M., & Showalter, D. (2015). Sequences. *EBSCO mathematics research starters*. [Online encyclopedia article]. Birmingham, AL: EBSCO.
- Showalter, D. (2014, July). Rethinking growth in rural schools. *Daily Yonder*. Available at <http://www.dailyyonder.com/rethinking-growth-rural-schools/2014/07/01/7460>
- Johnson, J., Showalter, D., Klein, R., & Lester, C. (2014). *Why rural matters 2013–14: The condition of rural education in the 50 states* [Online report]. Arlington, VA: Rural School and Community Trust. Available from www.ruraledu.org
- Klein, R., & Showalter, D. (2012). Where's the math? In J. Diez-Palomar & C. Kanés (Eds.), *Family and community in and out of the classroom: Ways to improve mathematics' achievement*. Universitat Autònoma de Barcelona, Spain: Servei de Publicacions.
- Strange, M., Johnson, J., Showalter, D., & Klein, R. (2012). *Why rural matters 2011–12: Statistical indicators of the condition of rural education in the 50 states* [Online report]. Arlington, VA: Rural School and Community Trust. Available at <http://files.ruraledu.org/wrm2011-12/WRM2011-12.pdf>
- Showalter, D. (2011). Asia, eastern. In S. Greenwald & J. Thomley (Eds.), *Encyclopedia of mathematics and society* (Vol. 1, pp. 68–70). Pasadena, CA: Salem.

Other Publications

- Foley, G. D., Butts, T. R., Phelps, S. W., & Showalter, D. A. (2017). *Advanced quantitative reasoning: Mathematics for the world around us, Revised Edition*. Austin, TX: AQR Press.
- Showalter, D. & Howley, C. (2016). *Mathematics instruction for paraprofessionals* [Set of 12 modules]. Dayton, OH: Ohio Partnership for Excellence in Paraprofessional Preparation.
- Foley, G. D., Butts, T. R., Phelps, S. W., & Showalter, D. A. (2015). *Advanced quantitative reasoning: Mathematics for the world around us, Texas Edition*. Austin, TX: AQR Press.
- Showalter, D. A. (2014). *Estimating the causal effect of high school mathematics coursetaking on placement out of postsecondary remedial mathematics*. Available from ProQuest Digital Dissertations (Accession number: ohiou1395226381).
- Foley, G. D., Butts, T. R., Phelps, S. W., & Showalter, D. A. (2014). *Advanced quantitative reasoning: Mathematics for the world around us, Common Core Edition*. Austin, TX: AQR Press.
- Know Your Numbers. (2014). App for Iphone and Ipad that helps patients understand and practice the math involved in diabetes self-care. On Apple Store.

Selected Presentations (*Invited)

- *Showalter, D. (2022, Jul.). *An introduction to place-based education*. Institute in Measurement Methodology in Rural STEM Education. University of South Carolina College of Education.
- *Showalter, D. (2022, Jul.). *Scales and operationalization*. Institute in Measurement Methodology in Rural STEM Education. University of South Carolina College of Education.
- *Showalter, D. (2020, Aug.). *Storytelling through data: COVID-19*. Presented for the Arts and Education Series of the Virginia Mennonite Retirement Community, Harrisonburg, VA.
- Showalter, D. (2019, June). *Small is beautiful: Leveraging the small size of departments to make rapid cultural changes*. Presented at the biannual meeting of the Association of Christians in the Mathematical Sciences, Indiana Wesleyan, Marion, IN.
- Showalter, D. (2019, Jan.). *Changes in student attitudes and understanding within a statistical reasoning learning environment*. Presented at the annual Joint Mathematical Meetings, Baltimore, MD.
- Showalter, D. (2017, Nov.). *Improving retention of underrepresented STEM majors through embedded tutoring*. Presented at the MD-DC-VA regional meeting of the MAA, Christopher Newport University, Newport News, VA.

- *Canavan, B., Showalter, D., Forkenbrock, J., & Bissonnette, J. (2017, June). *Rural education: We're stronger together (Capitol Hill briefing)*. House Rural Education Caucus. Presented in Rayburn House Office Building, Washington, DC.
- *Showalter, D., Klein, R., Johnson, J., & Hartman, S.L. (2017, Apr.). *Capitol Hill briefing on Why Rural Matters 2015–16*. Presented in a Senate meeting room of the Capitol building, Washington, DC.
- *Showalter, D. (2017, Jan.). *Rural education in Florida: Then and now*. Inaugural speaker for the Institute for the Advancement of Research, Innovation, and Practice in Rural Education: University of Central Florida, Orlando, FL.
- *Showalter, D. (2016, Aug.). *Measuring college readiness*. Webinar presented to the Mid-Atlantic Regional Educational Lab's Rural Student College Readiness Research Alliance.
- *Showalter, D. (2016, July). *Postsecondary readiness in rural schools*. Presented at a Cross-RELS conference held on postsecondary readiness. Nashville, TN.
- *Showalter, D. (2015, Oct.). *From data to action: Seeking equity for children in high-poverty rural areas*. Presented at a Flash Seminar at Eastern Mennonite University, Harrisonburg, VA.
- *Showalter, D., & Klein, R. (2015, Mar.). *Why rural matters, why Appalachia matters*. Presented at a university seminar on Poverty and Wealth, Ohio University, Athens, OH.
- Showalter, D. (2015, Jan.). *Do high school mathematics courses prepare students for college placement tests?* Presented at the annual Joint Mathematical Meetings, San Antonio, TX.
- Showalter, D. (2014, Oct.). *Public data, propensity scores, and a puzzling pipeline*. Presented at the Ohio sectional MAA meeting, Wittenberg University, Springfield, OH.
- Showalter, D., & Sturgill, D. (2014, Oct.). *Advanced quantitative reasoning: Mathematics for informed citizenship*. Presented at the annual meeting of the National Network for Educational Renewal, Cincinnati, OH.
- *Showalter, D., & Klein, R. (2014, Sept.). *Myths and omissions in rural STEM education*. Keynote speech at the annual Appalachian Ohio Mathematics and Science Teaching Research Symposium, Ohio University, Athens, OH.
- *Showalter, D. (2014, Sept.). *The current state of rural education across the nation*. Webinar presented to i3 (Investing in Innovation fund) grantees, hosted by the U.S. Department of Education.
- *Showalter, D., & Klein, R. (2014, July). *Capitol Hill briefing on Why Rural Matters 2013–14*. Presented in a Senate meeting room of the Capitol building, Washington, DC.
- *Showalter, D., Hernandez, S., Richard, A., & Kennedy Manzo, K. (2014, May). *Rural reporting: Another country?* Presented at the 67th national seminar of the Education Writers Association, Vanderbilt University, Nashville, TN.
- Showalter, D. (2013, Oct.). *The plight of the unmathed*. Presented at the annual meeting of the Ohio Council of Teachers of Mathematics, Dayton, OH.
- Showalter, D. (2013, Aug.). *Connect the dots in Common Core style*. Presented at the annual GeoGebra Dynamic Mathematics North American Conference, Miami University, Oxford, OH.
- Foley, G., & Showalter, D. (2013, Apr.). *Advanced Quantitative Reasoning: Meaningful mathematics for high school seniors*. Presented at the annual meeting of the National Council of Teachers of Mathematics, Denver, CO.
- *Showalter, D. (2013, Feb.). *Freirean problem-posing through three mysterious laws of nature*. Presented at a meeting of the Ohio University Council of Teachers of Mathematics, Athens, OH.
- Showalter, D. (2012, Oct.). *Place-based statistics education: Harvesting data in our backyard*. Presented at the annual meeting of the Ohio Council of Teachers of Mathematics, Columbus, OH.
- Keger, E., Sturgill, D., Smith, M., & Showalter, D. (2012, Oct.). *From Berlin to Beijing: Five secrets for teaching mathematics*. Presented at the annual meeting of the Ohio Council of Teachers of Mathematics, Columbus, OH.
- *Showalter, D., Johnson, J., & Klein, R. (2012, Oct.). *The past, present, and future of rural education: Trends, challenges, and opportunities*. Presented at the annual meeting of the National Rural Education Association, Cincinnati, OH.

- *Showalter, D. (2012, July). *The future of rural education in Virginia: Trends, challenges, and opportunities*. Presented at the annual meeting of the Virginia Department of Education, Williamsburg, VA.
- Showalter, D. (2011, June). *Cloudy textbook, sunny GeoGebra*. Presented at the annual GeoGebra Midwest Regional Conference, Miami University, Oxford, OH.
- Klein, R., & Showalter, D. (2010, Oct.). *Place-based practices in rural mathematics instruction: A select cross-case comparison study*. Presented at the annual North American meeting of the Psychology of Mathematics Education, Columbus, OH.

Selected Professional Development Delivered

- Advanced Quantitative Reasoning: Online Webinar (2015, Oct.) *Foundations of teaching probability and statistics*. High school teachers.
- Advanced Quantitative Reasoning: Online Webinar (2015, Aug.) *Some tips on effective interactive teaching and inquiry-based learning*. High school teachers.
- Upward Bound Summer College Preparatory Academy, Ohio University (2014, June). *Navigating the intricacies of Upward Bound instruction*. Upward Bound instructors and administrators.
- Advanced Teacher Capacity Workshop, Ohio University (2014, Feb.). *How can you recognize normally-distributed data in the real world?* High school teachers.
- Cincinnati Public Schools (2014, Feb.). *Understanding and teaching statistics*. High school teachers.
- Voinovich School of Leadership and Public Affairs (2013, Oct.). *Analyzing education data with Tableau*. Data analysts and GIS specialists.
- Columbus City Schools (2013, Aug.). *Advanced quantitative reasoning*. High school teachers.
- Southeast Ohio Math Teacher Circle (2013, Aug.). *Exploding dots: Basic ring theory*. K–8 teachers.
- Department of Teacher Education, Ohio University (2013, July). *Quantifying uncertainty and analyzing trends*. High school teachers.
- Stevens Literacy Center, Ohio University (2013, Feb.). *Implementing a contextualized curriculum for adult numeracy*. Adult basic education instructors.
- Department of Teacher Education, Ohio University (2012, Aug.). *Modeling and spatial reasoning*. High school teachers.
- Boat of Knowledge STEM Program, Ohio University (2011, Aug.). *Discrete dynamical systems*. Science, technology, and engineering faculty and graduate students.

Professional and Institutional Service

- Reviewer**, (2021) National Science Foundation S-STEM Review Panel
- Panelist**, (2020) National Science Foundation S-STEM Review Panel
- Panelist**, (2018) IES National Center for Education Research Review Panel
- Reviewer**, (2018), *British Education Research Journal*
- Guest speaker**, (May 2018), Eastern Mennonite High School, in Advanced Placement Calculus class.
- Presenter**, (May 2018), Valley Scholars program.
- Faculty Liaison**, (2017–present), China Visiting Scholars program
- Guest speaker**, (May 2017), Harrisonburg High School, in two sophomore-level Advancement Via Individual Determination (AVID) classes.
- Advisor**, (2016–2017), Master’s research project
- Advisor**, (2015–present), EMU Computer Programming Contest group
- Mentor**, (Fall 2016), Mentor for EMU Journey Conversations group
- Speaker**, (Nov 2016), EMU Chapel, “What’s Love Got to Do With It?”
- Reviewer**, (2014–2015), *Journal of Research in Rural Education*
- Reviewer**, (2014), *American Journal of Education*
- Judge**, (2015), *Moody’s Mega Math (M^3) Challenge*. (modeling contest organized by the Society for Industrial and Applied Mathematics)