

Meredith L. Schwendemann

EDUCATION

- Clemson University**, Clemson, SC **May 2025**
Doctor of Philosophy, Teaching and Learning
Dissertation: Understanding how to cultivate culturally responsive dispositions among district science coordinators and science teachers
Chair: Brooke A. Whitworth
Committee: Julianne Wenner, Luke Rapa, Susan Cridland-Hughes
- Arkansas State University**, Jonesboro, AR **May 2018**
Education Specialist, District Level Administration
- Truman State University**, Kirksville, MO **Aug 2008**
Master of Arts in Education for Secondary Biology
Bachelor of Science in Biology, *Summa Cum Laude* **May 2007**

PROFESSIONAL EXPERIENCE

- Assistant Professor of Science Education** **2025-Present**
Binghamton University, Department of Teaching Learning and Educational Leadership
- Graduate Research Assistant**, SPLENDIT, PAWS, BeakerBox **2022-2025**
Clemson University, College of Education, *Clemson, SC*
- Instructor of Record**, EDEL 4510 Elementary Methods in Science Teaching **Fall 2022**
Clemson University, College of Education, *Clemson, SC*
- Instructional Coach**, K-12 Science **2020-2022**
Greenwood School District 50, *Greenwood, SC*
- Certified Teacher**, Biology I, Biology II, AP Biology **2013-2020**
Emerald High School, Greenwood School District 50, *Greenwood, SC*
- Certified Teacher**, 7th and 8th Grade Science **2008–2013**
Congress Middle School, Park Hill School District, *Kansas City, MO*

CONSULTING EXPERIENCE

- Contracted Writer**, South Carolina **2020-2021**
South Carolina Department of Education
Writer for the *South Carolina College and Career Ready Science Standards 2021*

CERTIFICATIONS

- South Carolina, Professional Certificate** **2013-Present**
Biology, Middle Level Science
Endorsements: R2S, AP Biology, Gifted and Talented
- Missouri, Career Continuous Professional Certificate** **2012-Present**
Biology 9–12, General Science 5–9

PEER REVIEWED PROFESSIONAL PUBLICATIONS

- McCann, S. R., Ruiz, Y. E., **Schwendemann, M. L.**, Whitworth, B. A., & Luft, J. A. (In press). *Identifying how district science coordinators leverage their capital to monitor and promote equity*.
- Luft, J. A., Loureiro, P. A., **Schwendemann, M. L.**, & Whitworth, B. A. (In press). *Out-of-field teaching and professional learning opportunities: Are we supporting our out-of-field teachers?*
- Yonai, E., Roy, A., He, X., **Schwendemann, M.**, Luft, J., & Whitworth, B. (2025). *The value of noticing: What new science teachers' noticing of classroom instruction reveals about their knowledge of science practices*. *Journal of Science Teacher Education*.
- Schwendemann, M. L.**, Cooper, D. J., Hunter, A. D., Wenner, J. A., & Whitworth, B. A. (Submitted). *The relationship between science teacher and district science coordinator demographic match and professional growth plans*.
- Bateman, J. M., **Schwendemann, M.L.**, Whitworth, B. A., & Luft, J. A. (In Revision). *Comparing district science coordinators' communities of practice*. *Journal of Research in Science Teaching*.
- Schwendemann, A. B., Wang, G., **Mertz, M. L.**, McWilliams, R. T., Thatcher, S. L., & Osborn, J. M. (2007). *Aerodynamics of saccate pollen and its implications for wind pollination*. *American Journal of Botany*, 94(8), 1371-1381. <https://doi.org/10.3732/ajb.94.8.1371>

PEER REVIEWED PRACTITIONER PUBLICATIONS

- Schwendemann, M. L.**, Jones, D. A., Wenner, J.A., & Whitworth, B. A. (2025). *Universe in the classroom: A twist on universe in a box*. *Science and Children*.

CONFERENCE PRESENTATIONS

- Roy, A. A., **Schwendemann, M. L.**, Landreth, S. M., Hunter, A. D., Mulholland, K. & Powder, K. (2026). *BeakerBox: Inquiry-based curriculum and outreach supporting South Carolina middle schools*. [Poster Presentation]. Society for Integrative and Comparative Biology. Portland, OR.
- Schwendemann, M. L.**, Tracey, S., Ross, T. A., Whitworth, B. A., & Luft, J. A. (2026). *Exploring the relationship between district science leaders' professional learning and science teachers' implementation of 3D instruction*. [Poster presentation]. Association of Science Teacher Education Annual Meeting, Chicago, IL.
- Roy, A. A., **Schwendemann, M. L.**, He, X., Yonai, E., Luft, J. A., & Whitworth, B. A. (Accepted). *Noticing inclusion in argumentation: New science teachers' perspectives on classroom discourse*. [Paper Presentation]. National Association for Research in Science Teaching Annual Meeting, Seattle, WA.
- Schwendemann, M. L.**, Luft, J. A., Loureiro, P. A. C., & Whitworth, B. A. (2026). *Out-of-field teaching and professional learning opportunities: Are we supporting our out-of-field teachers?* [Paper Presentation]. Association for Science Teacher Education Annual Meeting, Chicago, IL.
- Loureiro, P. A. C., **Schwendemann, M. L.**, Luft, J. A., & Whitworth, B. A. (2025). *Professional learning opportunities and interactions with science leaders of out-of-field science teachers in the United States*. [Paper Presentation]. International Out-of-Field Teaching Across Specialisations (OOFAS) Symposium (Virtual Conference).
- Dixon, M., Garrick, N., Huston, E., Weathers, T., Roy, A., **Schwendemann, M.**, Powder, K. (2025, April). *BeakerBox: Developing interactive activity boxes to teach life sciences in SC middle schools*. [Poster presentation] Clemson University 20th Annual Focus on Creative Inquiry Forum, Clemson, SC.
- Schwendemann, M. L.**, Whitworth, B. A., & Luft, J. A. (2025, Accepted). *Examining Culturally Relevant Dispositions in District Science Coordinators and Science Teachers*. [Work In Progress]

- Round Table Presentation] National Association for Research in Science Teaching 98th Annual Meeting, Washington, DC.
- Schwendemann, M. L.**, Ambrose, K., Whitworth, B. A., & Luft, J. A. (2025). *Examining district science coordinators' conceptualizations of equity*. [Paper Presentation]. Association of Science Teacher Education Annual Meeting, Long Beach, CA.
- Hodge, M. H., Roy, A. A., **Schwendemann, M. L.**, & Whitworth, B. A. (2024). *Is it CER or ERC? How to level up CER for Sense-Making*. [Hands-On Workshop]. National Science Teaching Association National Meeting, New Orleans, LA.
- Schwendemann, M. L.**, Whitworth, B. A., & Luft, J. A. (2024). *Understanding how to cultivate culturally relevant perspectives among district science coordinators and science teachers*. [Poster Presentation]. North Central Region-Association of Science Teacher Educators Conference, Cedar Falls, IA.
- Schwendemann, M. L.** (2024). *Exploring district science coordinators conceptions of equity*. [Poster presentation]. National Association for Research in Science Teaching Annual Meeting, Denver, CO.
- Whitworth, B. A., Bateman, J. M., **Schwendemann, M.**, Singh, K., Ozen, H., Hunter, A., Luft, J.A. (2024) *Exploring district science coordinators learning*. [Paper Presentation] National Association for Research in Science Teaching 97th Annual Meeting, Denver, CO.
- Schwendemann, M. L.**, & Jones, D. A. (2024). *Universe in the classroom: Exploring constellations with a classroom-sized model*. [Hands-On Workshop]. National Science Teaching Association Meeting, Denver, CO.
- Schwendemann, M. L.**, Cooper, D. J., Hunter, A. D., Wenner, J. A., & Whitworth, B. A. (2024). *Mirrors and lenses: How the relationship between science teacher and coordinator demographics impacts professional growth plans* [Poster Presentation]. Association of Science Teacher Education Annual Meeting, New Orleans, LA.
- Hunter, A. D., **Schwendemann, M. L.**, Franks, J. T., & Whitworth, B. A. (2023). *Who loves soda science? I do, I do, I do-oo*. [Hands-On Workshop]. National Science Teaching Association National Meeting, Atlanta, GA.
- Bateman, J. M., **Schwendemann, M.**, Whitworth, B.A., & Luft, J. A. (2023). *Examining changes in district science coordinators communities' of practice*. [Poster presentation]. National Association for Research in Science Teaching Annual Meeting, Chicago, IL.
- Schwendemann, M. L.**, Hunter, A. D., Bateman, J. M., Franks, J. T., & Whitworth, B. A., (2023). *Upcycling science lessons: How to take your beloved lesson and upcycle it to 3D*. [Hands-On Workshop]. National Science Teaching Association National Meeting, Atlanta, GA.
- Schwendemann, M. L.** (2023). *Equity in science education and the role of district science coordinators*. [Round Table Presentation]. Clemson College of Education Graduate Student Research Conference, Clemson, SC.
- Bateman, J. M., Whitworth, B.A., **Schwendemann, M.**, & Luft, J. A. (2023, January 14–20). *District science coordinators communities of practice as a professional learning model*. [Paper presentation]. Association of Science Teacher Education Annual meeting, Salt Lake City, UT.

PROFESSIONAL DEVELOPMENT PROVIDED

- Using Technology to Enhance PBL, SC Midlands Summit** **2016**
- Co-presenter sharing technology tips for implementing Project Based Learning as an instructional strategy
- Spice Up with Sniglets (and other fun activities), Missouri Middle School Association Mid-Winter Conference** **2012**
- Co-presenter sharing quick, engaging classroom activities to reinforce content area vocabulary; shared technology-high and technology-low strategies

- Shake Up Your Bag of Tricks**, *Missouri Middle School Association Conference* **2010**
- Co-presenter sharing classroom strategies to engage students, included activities that could be implemented at a moment's notice with minimal supplies

HONORS & AWARDS

Graduate Student Conference Paper Award V: Implications of Research for Educational Practice, Second Author, *Association of Science Teacher Education*, January 2024

Sandra K. Abell Institute Scholar, *National Association for Research in Science Teaching*, 2023

District Teacher of the Year, *Emerald High School, Greenwood District 50*, 2019-2020

Teacher of the Year, *Emerald High School*, 2015-2016

Senior Award for Excellence in Research, *TSU Biology Department*, 2007

Young Botanist of the Year, *Botanical Society of America*, 2006

SERVICE

Binghamton University, Binghamton, NY

Advisory Committee for Scholarship and Research (ACSR) 2025-Present

- Reviewed 5 Ho Foundation Research Grants for Health Sciences and Technology 2026
- Reviewed 4 Provost Research Grants 2026

Service to the Local Community

Education Advisory Board Member Roberson Museum, Binghamton, NY 2025-Present

Science Fair Judge, Seton Catholic School 2026

Service to the Profession

Reviewer, The Science Teacher NSTA Journal 2025-Present

Reviewer, The Journal of Science Teacher Education 2026-Present

Reviewer, Association for Science Teacher Educators Conference Proposals 2025

Clemson University, Clemson, SC

Writing Time Coordinator, Teaching and Learning Department 2024-2025

Vice President, Association of Science Teacher Educators, Graduate Student Forum 2023-2025

Graduate Student Mentor, College of Education 2023-2025

Reviewer, The Science Teacher NSTA Journal 2024-2025

Reviewer, College of Education Graduate Student Conference Clemson 2024

Reviewer, Association for Science Teacher Educators Conference Proposals 2024

Reviewer, Graduate Student Travel Grant Proposals 2024

Reviewer, National Science Teaching Association Conference Proposals 2024

Reviewer, College of Education Graduate Student Conference Clemson 2023

Reviewer, National Science Teaching Association Conference Proposals 2023

Reviewer, Graduate Student Travel Grant Proposals 2023

Reviewer, National Association of Research in Science Teaching Conference Proposals 2023

Doctoral Program Advisory Committee, Graduate Student Representative 2022-2023

Reviewer, National Science Teaching Association Conference Proposals 2022

Reviewer, Graduate Student Travel Grant Proposals 2022

Reviewer, National Association of Research in Science Teaching Conference Proposals 2022

Emerald High School, Greenwood School District 50, Greenwood, SC	
Teaching Fellows Interviews, CERRA, <i>South Carolina</i>	2020, 2021, 2022
Check and Connect Committee	2019-2020
Science Department Chair	2017-2020
PBIS Committee Co-Sponsor	2015-2020
Interact Club Co-Sponsor	2013-2020
Student Government Association Class Sponsor	2013-2020
Assistant Coach Cross Country and Track & Field	2014-2022
Mentor Teacher	2014-2020
Model Classroom Teacher	2013-2015

Congress Middle School, Park Hill School District, Kansas City, MO	
Middle Level Grading Cadre	2012–2013
Science Cadre Coach	2009–2013
Intramural Sponsor	2008–2013
Mentor	2011–2012
Formative Assessment and Standards-Based Grading Consortium	2010–2011
Ensuring Effective Classroom Instruction Consortium	2009–2010
Budget Committee	2009–2013
Official Basketball Score Keeper	2008–2013
Greater Kansas City Science Fair Judge, Kansas City, MO	2010, 2012
Library Ad Hoc Committee	2010–2012

Truman State University	
Planting Science Mentor, <i>Botanical Society of America</i>	2007–2008

PROFESSIONAL AFFILIATIONS

National Association of Research in Science Teaching	2023-Present
Association for Science Teacher Educators	2022-Present
South Carolina Science Education Leadership Association	2020-2022
Palmetto State Teachers Association	2019-2023
National Science Teachers Association	2008–Present
Phi Beta Kappa	2007–Present

PERSONAL ENRICHMENT

Coaching Conversations	2020
Heartsaver CPR/AED Training	2020
South Carolina Alliance for Black School Educators Conference	2020
CERRA SC Teacher Forum Meeting	2020
SC Teacher Forum Conference	2019
Check and Connect Training	2019
AVID	2019
Furman University Project Based Learning Endorsement	2017-2018
South Carolina Biology I EOC Data Review	2017
AVID APLW One Day Workshop	2017
Lonestar Project Based Learning Workshop Participant	2017

AVID Philadelphia Summer Institute, Implementation High School	2016
National Science Teachers Association National Conference	2016
Portable Advanced STEM Exploration: South Carolina Governor's School	2016
CPR/First Aid Training	2016
Intel Transforming Learning: Learning with One to One	2015
"Building a Bridge to Implement the 2014 South Carolina Academic Standards and Performance Indicators for Science"	2015
Bullying PBIS Workshop	2015
ESOL-WIDA Standards	2014-2015
Greenwood Genetic Center How-to Workshop on Basic Laboratory Procedures	2014
South Carolina Initial Mentor Training	2014
AVID Philadelphia Summer Institute, Science I	2014
Mooresville Graded School District Summer Connection	2014
Technology Workshop, Greenwood 50	2014
Teaching Reading to English Language Learners	2013-2014
South Carolina EdTech Conference	2013
First Aid/CPR/Defibrillator Training	2013
G50/Digital Learning Revolution Professional Learning Workshop	2013

RELATED SCIENCE EXPERIENCE

Mathematical Biology Program, Truman State University **Jan 2005–Jan 2007**

Conducted research with a team of math and biology students and faculty; investigated the aerodynamic features of pollen to further understand the evolution of pollen distribution

Presented poster at 2006 Botany Conference, Chico, CA

Published manuscript, *American Journal of Botany*

Next STEP Undergraduate Research Program, Truman State University **May–Aug 2005**

Measured the effects of a burn program by conducting a survey of the woody vegetation at Big Creek Conservation Area, Adair County, MO

Presented poster at 2006 Missouri Natural Resources Conference, Lake of the Ozarks, MO