




Dr. Emily M. Walter

She/Her/Hers

CONTACT

 2555 E San Ramon Ave.
M/S SB 73
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 1-515-681-8118

 emwalter@gmail.com

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PROFESSIONAL APPOINTMENTS

- 2018 - present** Director, STEM Education Center
California State University - Fresno
The Center has 3 areas of emphasis within STEM: Undergraduate student success, K-12 outreach, and Faculty Collaboration. We work to incubate new projects and support faculty professional development, as well as knit together STEM student success projects at Fresno State.
- 2021 - present** Associate Professor of Biology
California State University - Fresno
I am a tenured Biology faculty member and Director of the STEM Education Center at CSU-Fresno. In my position, I do university-level strategic planning, run a research lab with undergraduate and graduate students, & teach science and science education courses.
- 2015 - 2021** Assistant Professor of Biology
California State University - Fresno
- 2013 - 2015** Post-Doctoral Research Associate
Western Michigan University







EDUCATION

- 2013** PhD Learning, Teaching, and Curriculum
University of Missouri - Columbia, MO, USA
Expertise in STEM Education, Higher Education, and Systemic Change
- 2008** M.S. Biology
Western Illinois University - Moline, IL, USA
- 2007** Graduate Certificate, Zoo and Aquarium Studies
Western Illinois University - Moline, IL, USA
- 2004** B.S. Biology; Minor in Spanish
Iowa State University - Ames, IA, USA





EXPERTISE AND SKILLS

-  Award-Winning Instructor in Biology, Science Education, and Ed Research Methods with 19 years experience
-  Extensive Knowledge of Evidence-Based Pedagogies in postsecondary STEM, including training grad students and future K-12 teachers
-  \$3.8M in Funded Projects in STEM Student Success, including Data Analysis, Data Management, & Evaluation
-  International and Culturally-Relevant Advocacy for Solving Global Issues through STEM and Higher Ed Innovation



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PROFESSIONAL ACTIVITIES



Research on Organizational Change, Postsecondary STEM Education, and STEM Diversity, Equity and Inclusion

(select published titles below)

- Secret Sauce: Southeast Asian Culture as a Lens for Culturally Responsive Teaching in Undergraduate Biology; Paper presented at the National Association for Research in Science Teaching, Denver, CO. 2024. G
- oing beyond the Content: Impact of a Values Affirmation Writing Exercise on Historically Marginalized Populations in an Undergraduate Majors' Biology Course. Paper presented at the National Association for Research in Science Teaching, Vancouver, BC, Canada. 2022.
- Navigating the Barriers to Adoption and Sustained Use of Active Learning. 2020.
- Pedagogical insights emerging from Egyptian STEM teacher education professional development: An international collaborative self study. Talk presented at the International Conference on Science and Technology Education. Porto, Portugal. 2021.
- An Exploratory Study of What Different Theories Can Tell Us About Change. Transforming Institutions: Accelerating Systemic Change in Higher Education. Pressbooks. 2021.
- Suddenly Online: Exploring Postsecondary Teaching, Attitudes, Technology, and Faculty Mental Well-Being. 2022.



Leadership of System-Wide Change Initiatives

- Co-Chair, 2023-2025 University-wide HIPS Data Team
- Chair, Provost's High Impact Practice Initiatives; 2018 - 2020
- PI or Co-PI on \$3.7M in Change Initiative Projects at CSU Fresno, many of which span the entire institution OR multiple institutions in California
- Data management, analysis, and selection of key metrics
- Team leadership and task management



Grant Panel Work and Evaluation

- I frequently serve on NSF panels (IUSE, S-STEM) focused on reviewing 8-12 proposals tied to student success in STEM
- I am an expert in both quantitative and qualitative methods in STEM Ed as well as instrument development & valuation
- I've evaluated 4 multi-million dollar grants from the NSF



Support for Women and Girls in STEM

- Mentor to 31 undergraduate and graduate students who have been in my research lab; many of whom were women and/or people of color
- Gadget Girls Lego League Coach, 2021 - present: Coached 4th and 5th grade girls-only robotics league team; girls won 1st place for best innovation project at regional competition.
- Girl Scout Troop Leader; 2013-2015; Volunteer 2015 - present



Relationships with Community Partners

- 1000+ hours of community outreach as Director of STEM Education Center
- Founding and Active Member, Central Valley STEM Alliance
- Developed and implemented a plan for effective and sustainable regional STEM Network in Central Valley of CA



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FUNDED GRANT PROJECTS

Total career funds awarded: \$3,771,372

18 submitted projects total: 8 total funded projects; 4 national grants funded (Co-PI or institutional lead); 2 intramural grants funded (as PI); 2 state-level grants funded (both as PI); 1 pending NSF IUSE grant (as Co-PI).

PI. "Investigating Instructional Strategies to Reduce Science Denial: An International Collaboration among Health Sciences Faculty" Research and Creative Activities Award, Fresno State College of Science and Mathematics. \$5,000 awarded for the period 6/1/22 to 8/31/22.

PI (with M. Banuelos, L. Guzman, C. Jones, A. Ressler, & X. Xu). "Teaching Camp for NERDS: Networking for Engagement and Re-Design in STEM teaching." NSF HSI supplementary grant of \$68,489; recommended for funding as of 3/9/22.

Co-PI (with PI Ira Clark, UCLA). California Learning Lab. "Introducing Research Deconstruction Pedagogy into Gateway Courses to Improve Student Engagement with STEM" project (CLL Grant). Cal Learning Lab Innovation Grant. \$1,100,000 awarded for period 1/1/20 to 12/31/23.

Co-PI (with M. Pirouz Nia, D. Donnelly, & R. Mehta). "Advancing Computational Thinking for Teacher Education in Central California." NSF NOYCE #1950031. Awarded \$1,199,999 for period 1/15/20 to 12/31/24.

PI (with M. Banuelos, L. Guzman, C. Jones, A. Ressler, R. Romanoff, & X. Xu). Summer Family Camp: Building Community, Belonging, and Excellence in STEM Teaching. NSF HSI Ideas supplementary grant; \$53,000.

Institutional Leader for Component 1. STEM Teacher Education and School Strengthening Activity (STESSA). USAid Contract 72026318C00003. \$24.1M (Fresno State sub-contract \$1,156,983). Awarded for period 1/1/19 to 12/31/2024.

Primary Investigator (with J. Goto, C. Jones, and C. Meyer; Co-PIs). Graduation Initiative 2025 Student Success Grant. "Values Affirmations in CSM Courses." \$10,400 awarded for period 10/1/20 to 5/31/21.

Internal Education Researcher (with C. Meyer, A. Hasson, & C. Jones). "A Network Approach to Enhancing Faculty Diversity in the College of Science and Mathematics at CSU Fresno State: Boot Camp to Prepare Future Faculty." \$272,500 awarded for the period 1/1/18 to 12/31/18.

PI. "Bulldogs for Excellence in STEM Teaching (BEST): A College Wide Transformation for Student Success." Research and Creative Activities Award, Fresno State College of Science and Mathematics. \$5,000 awarded for the period 7/1/17 to 6/30/18.



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TEACHING EXPERIENCE - SCIENCE CONTENT

- 2016 - present** General Education Biology
14 semesters *Instructor of Record; Graduate Teaching Assistant*
Provost's Award for Extraordinary Teaching, 2020
Fresno State, University of Missouri, Westminster College,
BlackHawk Community College
- 2015 - present** Environmental, Earth, and Life Science
10 semesters *Instructor of Record*
Fresno State
Content course for future elementary teachers; aligned with NGSS
- Spring 2022** Evolution (Capstone for Majors)
1 semester *Instructor of Record*
Fresno State
- 2010 - 2012** Introductory Biology for Majors
3 semesters *Instructor of Record*
Westminster College
- Fall 2010** Ecology Lab (Writing-Intensive)
1 semester *Graduate Teaching Assistant*
University of Missouri
- Spring 2007** Anatomy and Physiology
1 semester *Instructor of Record*
BlackHawk Community College



TEACHING EXPERIENCE - INTERDISCIPLINARY

- 2023 - present** First-Year Experience CURE for STEM Majors
2 semesters *Instructor of Record*
Fresno State
Students design a study, gather data, & present findings on
how people think about 1 of 17 UN Sustainable Dev Goals
- 2019 - present** History & Philosophy of Science (Grad Course)
2 semesters *Instructor of Record*
Fresno State



TEACHING EXPERIENCE - PEDAGOGY

- 2015 - present** College Science Teaching (Grad Course)
7 semesters *Instructor of Record*
Fresno State
- Fall 2017** Evolution Education (Grad Course)
1 semester *Instructor of Record*
Fresno State



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PEER REVIEWED PUBLICATIONS, 2016-2024

Walter, E. M., Bailey, M. L., Gill, A., & Fernandez, P. (2022). Suddenly Online: Exploring Postsecondary Teaching, Attitudes, Technology, and Faculty Mental Well-Being. *CBE-Life Sciences Education*.

Walsh, L., Withers, M., **Walter, E. M.,** Lo, S., Weintraub, B., & Callis-Duehl, K. (2022). We can't fail again: Arguments for professional development in the wake of COVID-19. *Journal of Microbiology and Biology Education*.

Walter, E. M., Beach, A. L., Henderson, C., Williams, C. T., & Ceballos Madrigal, I. (2021). Navigating the complex environment of postsecondary instructors: Development and validation of the Survey of Climate for Instructional Improvement (SCII). *International Journal of Technology in Education*.

Pilgrim, M. E., McDonald, K. K., Offerdahl, E. G., Ryker, K., Shadle, S. E., Stone-Johnstone, A., & **Walter, E. M.** (2021). An Exploratory Study of What Different Theories Can Tell Us About Change. In C. Henderson & M. Stains (Eds.), *Transforming Institutions: Accelerating Systemic Change in Higher Education*. Pressbooks.

Walter, E. M., Senn, L., & Munoz, E. E. (2020). Navigating the Barriers to Adoption and Sustained Use of Active Learning. In *Active Learning in College Science* (pp. 59-70). Cham: Springer.

Mintzes, J. J., & **Walter, E. M.** (2020). *Active Learning in College Science: The Case for Evidence Based Practice*. New York, NY: Springer. [60-chapter edited book]

Dunk, R. D., Barnes, M. E., Reiss, M. J., Alters, B., Asghar, A.,...**Walter, E. M.,** Brownell, S. E., & Wiles, J. R. (2019). Evolution education is a complex landscape. *Nature Ecology & Evolution*, 1.

Romine, W. L., Todd, A. N., & **Walter, E. M.** (2018). A closer look at the items within three measures of evolution acceptance: analysis of the MATE, I-SEA, and GAENE as a single corpus of items. *Evolution: Education and Outreach*, 11, 17.


Kenyon, L.O., **Walter, E. M.,** & Romine, W. L. (2018). Transforming a college biology course to engage students in science and engineering practices: Exploring shifts in knowledge and mechanistic reasoning. In U. Harms and M. J. Reiss (Eds.), *Evolution Education Re-Considered: Understanding What Works*. Springer.


Romine, W. L., **Walter, E. M.,** Bosse, E., & Todd, A. N. (2017). Understanding patterns of evolution acceptance—A new implementation of the Measure of Acceptance of the Theory of Evolution (MATE) with Midwestern university students. *Journal of Research in Science Teaching*, 54, 642-671. doi: 10.1002/tea.21380

Walter, E. M., Henderson, C., Beach, A., & Williams, C. T. (2016). Introducing the Postsecondary Instructional Practices Survey (PIPS): A concise, interdisciplinary, and easy-to-score survey. *CBE-Life Sciences Education*, 15. doi: 10.1187/cbe.15-09-0193



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PEER REVIEWED PUBLICATIONS, 2013-2016

Walter, E. M., Beach, A. L., Henderson, C., & Williams, C. T. (2016). Measuring postsecondary teaching practices and departmental climate: The development of two new surveys. In G. C. Weaver, W. D. Burgess, A. L. Childress, & L. Slakey (Eds.), *Transforming institutions: Undergraduate STEM in the 21st Century*. Purdue, IN: Purdue University Press.

Williams, C. T., **Walter, E. M.**, Henderson, C., & Beach, A. (2015). Describing undergraduate STEM teaching practices: A comparison of instructor self-report instruments. *International Journal of STEM Education*, 2, 18. doi: 10.1186/s40594-015-0031-y

Romine, W. L., & **Walter, E. M.** (2014). Assessing the efficacy of the Measure of Understanding of Macroevolution as a valid tool for undergraduate non-science majors. *International Journal of Science Education*, 36, 2872-2891. doi: 10.1080/09500693.2014.938376

Walter, E. M., Halverson, K. L., Boyce, C-J. (2013). Investigating the relationship between college students' acceptance of evolution and tree thinking understanding. *Evolution: Education and Outreach*, 6, 26.



PEER-REVIEWED PRESENTATIONS, 2021-2024

Chontong, T., **Walter, E. M.**, & Gill, H. (2024, March). Secret sauce: Southeast Asian culture as a lens for culturally responsive teaching in undergraduate biology. Paper presented at the National Association for Research in Science Teaching, Denver, CO.

Walter, E. M., Johnson, M. J., Lopez, O.N., & Martin, G. (2022, March). Going beyond the Content: Impact of a Values Affirmation Writing Exercise on Student Outcomes in an Undergraduate Majors' Biology Course. Paper presented at the National Association for Research in Science Teaching, Vancouver, BC, Canada.

Smith, D.L., **Walter, E. M.** (2021, December). Trans-disciplinary education to meet Earth system challenges: Development of the Egyptian STEM school and teacher education curricula. Talk presented at the American Geophysical Union, New Orleans, LA.

Walter, E.M., Nelson, K., Macalalag, A., Nelson, F.P., & DiDio, R. (2021, October). Pedagogical insights emerging from Egyptian STEM teacher education professional development: An international collaborative self study. Talk presented at the International Conference on Science and Technology Education. Porto, Portugal.

Offerdahl, E., Pilgrim, M., **Walter, E. M.**, & Ryker, K. (2021, June). University systems in the time of punctuated equilibrium: Understanding adaptations to rapid and unpredictable change. Talk presented at the ACSN Transforming Institutions Conference.



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PEER-REVIEWED PRESENTATIONS, 2018-2020

Walter, E. M., Bailey, M. L., Fernandez, P., & Gill, A. (2021, April). Suddenly Online: Exploring Postsecondary Teaching, Attitudes, Technology, and Faculty Mental Well-Being in Spring 2020. Paper presented at the National Association for Research in Science Teaching Conference.

Munoz, E. E., & **Walter, E. M.** (2020, April). A Multi-Institutional Exploration of Teaching Practices, Attitudes, and Organizational Climate. Talk presented at the Central California Research Symposium. Fresno, CA.

Lopez, O., & **Walter, E. M.** (2020, April). Unpacking relationships in student attitudes and learning outcomes in Undergraduate Biology. Poster presented at the Central California Research Symposium. Fresno, CA.

Kiran, M., Mian, M., & **Walter, E. M.** (2020, April). Using active learning in the face of personal and institutional barriers: A mixed methods study. Keynote oral presentation at the Central California Research Symposium. Fresno, CA.

Senn, L. G., Munoz, E. E., Lemus, M., Ceballos-Madrigal, I., Mendez, A., Martin, G., & **Walter, E. M.** (2019, April). Investigating faculty adoption of new active learning strategies through the Theory of Planned Behavior: A case study. Paper presented at the National Association for Research in Science Teaching. Baltimore, MD.

Martin, G., Gomez, A., Ceballos-Madrigal, I., & **Walter, E. M.** (2019, April). Building Biology Experts: A Longitudinal Analysis of Students' Attitudes and Knowledge in Majors' Biology Courses. Paper presented at the National Association for Research in Science Teaching. Baltimore, MD.

Gomez, A., & **Walter, E. M.** (2019, May). A social network approach to exploring the First Year Experience: A study of self-efficacy and advice exchange among STEM students. Poster presented at the College of Science and Mathematics Celebration of Research. Fresno, CA.

Martin, G., & **Walter, E. M.** (2019, May). Exploring The Relationship Among Student Attitudes About Science And Conceptual Understanding In Undergraduate Biology. Talk presented at the Central California Research Symposium. Fresno, CA.

Bailey, M. L., Gill, A., Mendez, A., Martin, G., Senn, L., & **Walter, E. M.** (2019, May). Exploring Faculty Teaching Practices Through The Theory Of Planned Behavior. Talk presented at the Central California Research Symposium. Fresno, CA.

Munoz, E. F., & **Walter, E. M.** (2019, May). The Impact Of A First-Year-Experience (FYE) On The STEM Identity Of Undergraduate Students. Talk presented at the Central California Research Symposium. Fresno, CA.

Senn, L. G., & **Walter, E. M.** (2018, November). Embracing Change: A Case Study of Attitudes, Norms and Perceived Barriers. Poster presented at the AAC&U Transforming Institutions Conference. Atlanta, GA.

Ceballos-Madrigal, I. & **Walter, E. M.** (2018, November). Building Theory: Exploring Attitudes, Norms, and Teaching Behavior of Faculty. Poster presented at AAC&U Transforming Institutions Conference. Atlanta, GA.



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PEER REVIEWED PRESENTATIONS, 2017-2018

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Walter, E. M., & Ceballos-Madrigal, I. (2018, April). Exploring Patterns in Teaching Practices and Organizational Barriers to Teaching Improvement. Paper presented at the American Educational Research Association conference. New York, NY.

Martin, G., **Walter, E. M.,** & Ceballos-Madrigal, I. (2018, April). Building Biology Experts: A Longitudinal Analysis of Students' Attitudes and Knowledge in Majors' Biology Courses. Poster presented at the Central California Research Symposium, Fresno, CA.

Mendez, A., **Walter, E. M.,** Munoz, E. E., Lemus, M., Ceballos-Madrigal, I., & Senn, L. (2018, April). Exploring Faculty Teaching Practices Through the Lens of Ajzen's Theory of Planned Behavior. Poster presented at the Central California Research Symposium, Fresno, CA.

Munoz, E., Lemus, M., & **Walter, E. M.** (2018, March). Exploring Intent and Behavior through the Observed and Self-Reported Teaching Practices of Postsecondary STEM Instructors. Paper presented at the National Association for Research in Science Teaching conference. Atlanta, GA.

Bosse, E., & **Walter, E. M.** (2018, March). An Exploration of Post-Instruction Shifts in Evolution Acceptance 'Profiles' as Documented by the Measure of Acceptance of the Theory of Evolution (MATE). Paper presented at the National Association for Research in Science Teaching conference. Atlanta, GA.

Walter, E. M., & Ceballos-Madrigal, I. (2017, November). Individual Patterns in Teaching Practices and their Relationship with Organizational Barriers to Teaching Improvement. Paper presented at the National Association of Biology Teachers Conference. St. Louis, MO.

Walter, E. M., & Ceballos-Madrigal, I. (2017, November). Exploring Institutional Patterns in Teaching Practices and Organizational Climate. Paper presented at the American Association of Colleges and Universities' Transforming STEM Higher Education Conference. San Francisco, CA.

Kenyon, L.O., **Walter, E. M.,** & Romine, W. L. (2017, September). Evolution learning and conceptual change: Exploring shifts in evolution knowledge and mechanistic reasoning after a practice-based college biology course. Paper presented at the Implementing and Researching Evolution Education Symposium. Kiel, Germany.

Walter, E. M., Beach, A. L., Henderson, C., Williams, C. T., & Ceballos Madrigal, I. (2017, April). Exploring Organizational Climate for Teaching in Postsecondary Settings: The Development and Validation of the Survey of Climate for Instructional Improvement (SCII). Paper presented at the annual conference for the American Educational Research Association (AERA), San Antonio, TX.

Walter, E. M., Bosse, E., & Romine, W. L. (2017, April). A mixed method exploration of evolution acceptance profiles as delineated by the Measure of Acceptance of the Theory of Evolution (MATE). Paper presented at the annual conference for the National Association for Research in Science Teaching (NARST), San Antonio, TX.



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PEER REVIEWED PRESENTATIONS, 2015-2017

Krishnamurthy, S., & **Walter, E. M.** (2017, April). The impact of different instructional strategies on students' understanding about the cell cycle in a general education biology course. Presentation at the Central California Research Symposium, Fresno, CA.

Lemus, M., Munoz, E., & **Walter, E. M.** (2017, April). Is what they say what they do?: Comparing observed and self-reported teaching practices of faculty in STEM. Presentation at the Central California Research Symposium, Fresno, CA.

Ceballos Madrigal, I., & **Walter, E. M.** (2017, April). Looking beyond a 'lack of resources': Exploring the influence of institutional environments and structures on individual teaching practices in STEM. Presentation at the Central California Research Symposium, Fresno, CA.

Muller, U. K., Merana, G., Bosse, E., Lent, D. D., & **Walter, E. M.** (2017, January). Exploring student understanding and attitudes in introductory biology courses: lessons learned. Poster presented at the Society for Integrative and Comparative Biology, New Orleans, LA.

Bosse, E., & **Walter, E. M.** (2016, November). An Exploration of Evolution Acceptance Profiles as Measured by the Measure of Acceptance of the Theory of Evolution (MATE). Poster at the National Association of Biology Teachers Conference, Denver, CO.

Valadez, J., Nelson, F., & **Walter, E. M.** (2016, November). Engage with integrated STEM activities and learn how teacher preparation courses based on these successful STEM-rich practices foster equity and access for underserved students. Workshop presented at the regional conference for the National Science Teachers' Association, Portland, OR.

Beach, A. L., **Walter, E. M.**, & Henderson, C. (2016, April). Self-report of instructional climate and practices: Two new instruments. Paper presented at the AAAS-NSF Envisioning the Future of Undergraduate STEM Education (EnFUSE): Research and Practice Symposium, Washington, DC.

Walter, E. M., Williams, C. T., Henderson, C., Beach, A. L., & Grunert, M. (2016, April). Comparing self-report and observational data: An investigation of faculty instructional practices. Paper presented at the annual conference for the National Association for Research in Science Teaching, Baltimore, MD.

Romine, W. L., & **Walter, E. M.** (2016, April). Assessing the efficacy of the MATE as a valid measure for understanding of macroevolution for undergraduate non-science majors. Paper presented at the annual conference for the National Association for Research in Science Teaching, Baltimore, MD.

Walter, E. M., Muller, U., & Merana, G. (2015, November). Developing shared vision: Community change and course redesign in an interdisciplinary faculty learning community. Poster presented at the annual conference for the National Association of Biology Teachers, Providence, RI.



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PEER REVIEWED PRESENTATIONS, 2012-2015

Walter, E. M., Beach, A. L., Henderson, C., & Williams, C. T. (2015, April). Development and preliminary validation of the survey of Departmental Climate for Teaching Improvement (DCTI). Paper presented at the annual conference for the American Educational Research Association (AERA), Chicago, IL.

Walter, E. M., Henderson, C., Beach, A. L., & Williams, C. T. (2015, April). Development and preliminary validation of the Postsecondary Instructional Practices Survey (PIPS). Paper presented at the annual conference for the American Educational Research Association (AERA), Chicago, IL.

Williams, C. T., **Walter, E. M.,** Henderson, C., Beach, A. L., & Williams, C. T. (2015, April). Describing undergraduate STEM teaching practices: A comparison of instructor self-report instruments. Paper presented at the annual conference for the National Association for Research in Science Teaching, Chicago, IL.

Walter, E. M., Beach, A. L., Henderson, C., & Williams, C. T. (2014, October). Measuring postsecondary teaching practices and departmental climate: The development of two new surveys. Paper presented at the Transforming Institutions: 21st Century Undergraduate STEM Education Conference, Indianapolis, IN.

Romine, W. L., & **Walter, E. M.** (2014, April). Applying Rasch modeling to assessment development and validation. Paper presented at the Annual Conference of the National Association for Research in Science Teaching, Pittsburgh, PA.

Walter, E. M. (2013, November). Research-based topics and strategies to influence evolution acceptance. Paper presented at the Annual Conference of the National Association of Biology Teachers, Atlanta, GA.

Walter, E. M., & Friedrichsen, P. (2013, April). The influence of pedagogical content knowledge for teaching macroevolution on student knowledge of macroevolution and evolution acceptance in a non-majors' biology course. Paper presented at the National Association for Research in Science Teaching, San Juan, Puerto Rico.


Walter, E. M. (2012, November). The influence of instruction on evolution knowledge and acceptance in a non-majors' biology course. Poster presented at the Annual Conference of the National Association of Biology Teachers, Dallas, TX.

Walter, E. M. (2012, March). Influence of PCK for teaching macroevolution on student outcomes in a non-majors' college course. Poster presented at the annual conference of the National Association for Research in Science Teaching, Indianapolis, IN.

Halverson, K. M., **Walter, E. M.,** & Boyce, C-J. (2012, March). Investigating the relationship between college students' acceptance of evolution and tree thinking understanding. Paper presented at the Annual Conference of the National Association for Research in Science Teaching, Indianapolis, IN.



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PEER REVIEWED PRESENTATIONS, 2008-2011

Walter, E. M. (2011, October). Not “just a theory”: Research-based strategies for teaching evolution. Paper presented at Annual Conference of the National Association of Biology Teachers, Anaheim, CA.

Walter, E. M., & Friedrichsen, P. J. (2011, April). Non-science majors' perceptions of evolution: A phenomenological study. Poster presented at the annual conference of the National Association for Research in Science Teaching, Orlando, FL.

Walter, E. M. (2010, November). Blubber, blowholes and baleen: Teaching introductory biology principles with whales. Workshop presented at the National Association of Biology Teachers, Minneapolis, MN.

Walter, E. M., & West, A. B. (2010, March). Anticipating student questions: A self-study approach to develop PCK for teaching theory and law. Paper presented at the Annual Conference of the National Association for Research in Science Teaching, Philadelphia, PA.

Walter, E. M., Thomas, J. A., & Stalf, C. (2008, March). Visual discrimination of three-dimensional stimuli by an Asian elephant (*Elephas maximus*) using match-to-sample. Presentation at the International Conference on Comparative Cognition, Melbourne, FL.

Thomas, J. A., **Walter, E. M.**, Stalf, C., & Crowell, S. (2008, March). Training an Asian elephant for a visual match-to-sample test. Presentation at the International Conference on Comparative Cognition, Melbourne, FL.



INVITED TALKS

Walter, E. M. (2022, April). Recognizing and Combating Science Denial in the Age of Misinformation. University of Missouri Division of Biological Sciences; Diamond Jubilee Seminar Series.

Walter, E. M. (2020, February). Knowing yourself and becoming an agent for inclusive teaching practice. Provost's Awards Lecture Series. California State University - Fresno.

Walter, E. M. (2019, April). Knowing yourself and becoming an agent of inclusive teaching practice. Invited keynote plenary at the 2019 Project Kaleidoscope (PKAL) Regional Network Meeting. Rochester, NY.

Walter, E. M. (2016, March). Exploring patterns in Institutional Climate and Instructional Practices in Postsecondary Settings. Middle Tennessee State University Research Seminar Series, Murfreesboro, TN.

Walter, E. M. (2015, March). Looking beyond a lack of time and money: Examining how features of a department and institution can influence the teaching practices of STEM faculty. Wright State University Biology Education Research Seminar Series, Dayton, OH.

Walter, E. M. (2014, October). Measuring teaching practices and departmental climate in post-secondary settings. Michigan State University Physics Ed Research Lab Seminar Series, East Lansing, MI.



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COMMITMENT TO DIVERSITY & INCLUSION

I have extensive **experience teaching and mentoring as well as building and supporting student success initiatives at a minority-serving institution** (HSI and AANAPISI) with 72% Pell Eligible students. Much of my research focuses on reducing achievement gaps in STEM and Higher Education at large. As such, my curriculum lifts up the contributions of historically marginalized people, interrogates whiteness in STEM, and includes methods for future teachers, scientists, and professionals to foster diversity, equity, and inclusion. I also design curriculum to **dismantle white supremacy culture** through considering how features of white supremacy culture manifest in daily instruction (e.g. worship of the written word) and overall course structure (e.g. only one "right way"). Outside of my time as a faculty member, I was a tutor during grad school, and provided one-on-one instruction for advanced students, students with learning disabilities, and English language learners.



SERVICE TO THE PROFESSION

- 2020 - present** Panelist
National Science Foundation
I serve on NSF panels (IUSE and S-STEM) each focused on reviewing 8-12 proposals tied to student success in STEM.
- 2019 - present** Founding and Active Member
Central Valley STEM Network
Develop and implement a plan for an effective and sustainable regional STEM Network in the Central Valley of California. Further the mission to educate the public about current and future needs of children, particularly low-income children.
- 2019 - 2020** Doctoral Committee Member; Lyn Eisenhower
Oregon State University
Provide feedback on comprehensive exams, meetings to guide student one-on-one, and dissertation defense.
- 2015 - present** Reviewer
CBE - Life Sciences Education
International Journal of Technology in Education
Review 3-7 manuscripts per year and provide constructive feedback to authors.
- 2015 - present** Proposal Reviewer; Graduate Student Mentor
National Association for Research in Science Teaching (NARST)
Review 5 five-page proposals per year; provide mentoring at Graduate Student Symposium
- 2013 - 2014** Graduate Teaching Assistant Institute
Western Michigan University
Co-facilitated year-long professional development program for graduate students.



Dr. Emily M. Walter

She/Her/Hers



SERVICE TO THE UNIVERSITY

CONTACT



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- 2024 - present** Co-Chair, Increasing HIPS Participation Task Force
University-Level Service
Analyze student data and the broader literature to determine strategies to increase student participation in high impact practices, especially for historically marginalized students
- 2018 - present** Director, STEM Education Center
College of Science and Mathematics
The Center has 3 areas of emphasis: Undergraduate student success, K-12 outreach, and Faculty Collaboration. I work to incubate new projects and support faculty professional development, as well as knit together STEM student success projects at Fresno State.
- 2019 - 2022** Academic Senator, Biology
University-Level Service
Effective voice on the Academic Senate, representing both my department and the broader interests of the university.
- 2018 - 2020** Chair, Vice Provost's High Impact Practices Task Force
Office of the Vice Provost
Worked with three colleges to develop department action teams. Met with teams bi-weekly to develop active learning pedagogies in target courses.
- 2018 - 2022** Faculty Mentor
Fresno State Anime Club
Give advice for club to grow membership and advance interests of the club. Attend meetings while dressed in cosplay.
- 2017 - 2018** Chair, Science Education Search Committee
College of Science and Mathematics
Facilitate a search for new faculty member, from the Job Vacancy Announcement to final recommendation to the Dean. Estimated time: 100 hours.
- Fall 2018** College Curriculum Committee
College of Science and Mathematics
Reviewed course proposals and program changes on the College Curriculum Committee
- 2018 - 2020** Chair, Department Assessment Committee
Department of Biology
Gathered and analyzed course data and produced ~50 page annual report on the status of Biology learning per our Student Outcomes Assessment Plan (SOAP).



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HONORS

- 2022 College of Science and Math Outstanding Teaching Award
California State University - Fresno
- 2020 Provost's Award for Extraordinary Teaching in Extraordinary Times
California State University - Fresno
- 2019 Provost's Promising New Faculty Award
California State University - Fresno
- 2018 Provost's Promising New Faculty Nominee
California State University - Fresno
- 2017 Professional Development Award
California State University - Fresno
- 2015 Fresno State Talks Nominee
California State University - Fresno
- 2011 Sandra K. Abell Institute Scholar
National Association for Research in Science Teaching
- 2011 Walter Scott Monroe Research Fellowship
University of Missouri - College of Education
- 2010 Walter Scott Monroe Research Fellowship
University of Missouri - College of Education
- 2010 Phi Delta Kappa Graduate Scholarship
University of Missouri - College of Education
- 2009 Walter Scott Monroe Research Fellowship
University of Missouri - College of Education
- 2004 Phi Beta Kappa
Iowa State University



PROFESSIONAL MEMBERSHIPS

- National Association for Research in Science Teaching (NARST)
- National Association of Biology Teachers (NABT)
- Society for the Advancement of Biology Education Research (SABER)
- American Educational Research Association (AERA)
- California Association of Science Educators (CASE)