

Daniel R. Pimentel

drpimentel@ua.edu | www.danielpimentel.com

Research and Teaching Interests

Teacher education, science teaching and learning, curriculum development, scientific literacy, science media literacy, online reasoning, epistemic cognition, nature of science, science studies, socioscientific issues, qualitative and mixed methods

Education

- Ph.D. Stanford University**, Stanford, CA 2023
Curriculum Studies and Teacher Education: Science Education,
Learning Sciences and Technology Design, Education Data Science
Dissertation Title: *Learning to Evaluate Sources of Science (Mis)Information: A Mixed Methods Study of High School Students' Scientific Online Reasoning*
Committee: Janet Carlson, Bryan Brown, Jonathan Osborne, & Victor Lee
- M.Ed. Boston College**, Chestnut Hill, MA 2014
Secondary Education: Biology
- B.S. Boston College**, Chestnut Hill, MA 2013
Biology (Minor: Music)

Academic Appointments

The University of Alabama, Tuscaloosa, AL 2023 - present
Assistant Professor of Science Education
Department of Curriculum and Instruction

Affiliations

- International Panel on the Information Environment**, Zürich, Switzerland 2024 - present
Research Affiliate
- The University of Alabama**, Tuscaloosa, AL 2023 - present
Faculty Affiliate, Alabama Science Communication Initiative
College of Communication & Information Sciences
- Simon Fraser University**, Burnaby, British Columbia 2023 - present
Research Affiliate, Public Knowledge Project

Certificates

Stanford University, Stanford, CA 2021
Graduate Certificate in Science, Technology, and Society
Concentration: Data and Society

Publications | * indicates all authors contributed equally; † indicates student author

Refereed Journal Articles

- Pimentel, D.R.**, & Osborne, J. (under review). Intellectual humility as an important content transcendent goal for science education.
- Pimentel, D.R.**, Moriarty, T.W., & Carlson, J.C. (2025). Developing science teachers' vision of developmental coherence using vertical professional learning communities. *School Science and Mathematics*. <https://doi.org/10.1111/ssm.18382>
- Pimentel, D.R.** (2025). Learning to evaluate science (mis)information on the internet: Assessing students' scientific online reasoning. *Journal of Research in Science Teaching*, 62(3), 684-720. <https://doi.org/10.1002/tea.21974>
- Willinsky, J. & **Pimentel, D.R.** (2024). The publication facts label: A public and professional guide for research articles. *Learned Publishing*, 37(2), 139-146. <https://doi.org/10.1002/leap.1599>
- Stovall, J.L., **Pimentel, D.R.**, Levine, S., & Carlson, J.C. (2024). High school mathematics teachers' noticing of inequitable talk. *Journal of Mathematics Teacher Education*, 27, 551-578. <https://doi.org/10.1007/s10857-023-09572-9>
- Osborne, J., & **Pimentel, D.R.** (2023). Science education in an age of misinformation. *Science Education*, 107(3), 553-571. <https://doi.org/10.1002/sce.21790>
- Lee, V. R., **Pimentel, D. R.**, Bhargava, R., & D'Ignazio, C. (2022). Taking data feminism to school: A synthesis and review of pre-collegiate data science education projects. *British Journal of Educational Technology*, 53(5), 1096- 1113. <https://doi.org/10.1111/bjet.13251>
- Osborne, J., & **Pimentel, D.R.** (2022). Science, misinformation, and the role of education. *Science*, 378(6617), 246-248. <https://doi.org/10.1126/science.abq8093>
- Reynante, B. M.*, Selbach-Allen, M. E.*, & **Pimentel, D. R.*** (2020). Exploring the promises and perils of integrated STEM through disciplinary practices and epistemologies. *Science & Education*, 29, 785-803. <https://doi.org/10.1007/s11191-020-00121-x>
- Pace, N. J., **Pimentel, D. R.** & Weerapana, E. (2012). An inhibitor of Glutathione S-Transferase Omega 1 that selectively targets apoptotic cells. *Angewandte Chemie International Edition*, 51(33), 8365-8368. <https://doi.org/10.1002/anie.201203730>

Research Reports

- Henze, I., Stammes, H., de Vries, M., Chan, K., van Driel, J., Abdalla, A., Alonzo, A., Barendsen, E., Bayram, D., Berry, A., Carlson, J., Daehler, K., Forsler, A., Houkes, W., Kind, V., Kinskey, M., Nilsson, P., Osborne, J., Park, S., **Pimentel, D.R.**, Sermeus, J., Veal, W., Zhang, X., & Zwart, S. (2025). *21st Century Science Education: What Does it Mean for Teachers?* Lorentz Center Workshop Report. Leiden, the Netherlands.
- Pimentel, D. R.**, Horton, N. & Wilkerson, M. H. (2022). *Tools to support data analysis and data science in K-12 education*. Commissioned Paper for the National Academies of Sciences,

Engineering, and Medicine, Board on Science Education, Workshop on Foundations of Data Science for Students in Grades K-12. Washington, D.C.

Osborne, J., **Pimentel, D.R.**, Alberts, B., Allchin, D., Barzilai, S., Bergstrom, C., Coffey, J., Donovan, B., Kivinen, K., Kozyreva, A., Wineburg, S. (2022). *Science education in an age of misinformation*. Stanford University, Stanford, CA.

Peer-Reviewed Book Chapters

Pimentel, D.R. (under review). Science education in the age of social media. Kremer, K. & Büssing, A., (in preparation). (Eds.). *Climate Change and Social Media: A Perspective for Science Education in a Digital Society*. Springer.

Davidson, S. & **Pimentel, D.R.** (in press). Understanding the impact of a contentious sociopolitical landscape on science teachers' practice and well-being. Frisch, J.K & Alston, D.M. (in preparation). (Eds.). *Wicked Problems in PreK-12 Science Education*. Routledge.

Pimentel, D.R. & Osborne, J. (2025). Misinformation in science: The response of science education. Cakmakci, G. & Tasar, M.F. (2025). (Eds.). *Connecting Science Education with Cultural Heritage: Selected Papers from the ESERA 2023 Conference*. Springer Cham.

Pea, R., Biernacki, P., Bigman, M., Boles, K., Coelho, R., Docherty, V., Garcia, J., Lin, V., Nguyen, J., **Pimentel, D.**, Pozos, R., Reynante, B., Roy, E., Southerton, E., Suzara, M., Vishwanath, A. (2022). Four surveillance technologies and challenges for education. In Niemi, H., Pea, R., & Lu, Y. (2022). (Eds.). *AI in Learning: Designing the Future*. Springer Nature.

White Papers

Zucker, A., **Pimentel, D.R.**, & Osborne, J. (2024). Helping students learn to find trustworthy scientific information and resist misinformation: A toolkit for K-12 science curriculum developers. Available online:
<https://www.dropbox.com/scl/fi/8ggzs7k2wmsj1fiii0f8q/Toolkit-for-curriculum-developers-May-2024.pdf?rlkey=l4zudeckd97gkjcqy5wjgee0e&e=1&dl=0>

Osborne, J., Zucker, A., **Pimentel, D. R.** (2024). What next for science education standards? Available online:
<https://www.dropbox.com/scl/fi/xoz17g79vpq43gk8hntil/Where-Next-for-Science-Education-Standards.pdf?rlkey=aj27ixlxi3rwehx4kiyul4y0s&e=1&dl=0>

Osborne, J., **Pimentel, D.R.**, & Zucker, A. (2023). Reinventing scientific literacy: NGSS 2.0? Available online:
<https://sciedandmisinfo.stanford.edu/sites/g/files/sbiybj25316/files/media/file/reinventing-science-literacy-paper-2.pdf>

Osborne, J., Zucker, A., **Pimentel, D. R.** (2023). Tackling scientific misinformation in science education. Available online:
<https://sciedandmisinfo.stanford.edu/sites/g/files/sbiybj25316/files/media/file/tackling-misinformation-in-science-education-osborne-zucker-pimentel.pdf>

Peer-Reviewed Practitioner Articles & Chapters

Pimentel, D.R. (in press). "Am I sure?" The virtues of intellectual humility. *The Science Teacher*.

- Pimentel, D.R.** & Campbell, V.⁺ (2025). Flipping the script on claim, evidence, & reasoning: The credibility CER (C-CER). *The Science Teacher*, 92(4), 37-41. .
<https://doi.org/10.1080/00368555.2025.2500938>
- Pimentel, D.R.** (2025). Looks can be deceiving: Investigating online sources of scientific information. *The Science Teacher*, 92(1), 18-22.
<https://doi.org/10.1080/00368555.2025.2432824>
- Pimentel, D.R.** (2025). The science of sinkholes: Uncovering connections between chemistry, earth science, human activity, & social justice. In Steele, D. & Mercier, A.K. (in press). *Justice-Oriented Science Teaching and Learning: Anchoring Phenomena in Secondary Classrooms*. Springer Nature. https://doi.org/10.1007/978-3-031-76297-0_13
- Pimentel, D.R.**, & Osborne, J. (2023). Science education in an age of misinformation. *California Classroom Science*, 35(3).
<https://classroomscience.org/articles/fyi/science-education-age-misinformation>

Popular Press

- Bergstrom C.T., **Pimentel, D.R.**, & Osborne, J. (2022, October 26). To fight misinformation, we need to teach that science is dynamic. *Scientific American*.
<https://www.scientificamerican.com/article/to-fight-misinformation-we-need-to-teach-that-science-is-dynamic/>

In Preparation

- Pimentel, D.R.**, Reigh, E., Brown, B.A. & Lee, V.R. ‘If I see it in school, I probably take it as the truth’: Students’ and teachers’ conceptions of evaluating socioscientific data representations.
- Pimentel, D.R.** & Zummo, L. Apt epistemic vigilance.
- Kirk, E., & **Pimentel, D.R.** Beyond the competent outsider: Conceptualizing a trustee-constituent model of scientific literacy. (co-first authors, listed alphabetically)
- Pimentel, D.R.**, Jang, D., Selbach-Allen, M., & Reynante, B. Teachers' personal epistemologies of the STEM disciplines and integrated STEM.
- Southerton, E., **Pimentel, D.R.**, & Gallagher, S. Shifting the burden: Youth designers reimagine an information literacy tool for public audiences.
- Wilsey, M., Brown, B., & **Pimentel, D.R.** Assessment for learning: An exploration into how formative assessments can be designed for elementary student science learning and sensemaking.

Grants, Fellowships, and Awards

- | | |
|--|-----------|
| Bridging Differences in Higher Education Learning Fellow, UC Berkeley’s Greater Good Science Center | 2025-2026 |
| Outstanding Doctoral Research Award, National Association for Research in Science Teaching | 2025 |
| “This honor recognizes that Dr. Pimentel’s dissertation was judged by his NARST colleagues on the ODRA Selection Subcommittee to have the greatest | |

merit and significance in the field of Science Education from among all dissertations nominated for the award this year.”

Civic Online Reasoning for Science (CORS): Curriculum to Support Obtaining and Evaluating Information for Meaningful Decision-making (Co-PI with BSCS Science Learning and the Digital Inquiry Group), National Science Foundation, Proposal #25-0097 (\$376,037.00)	Under Review
SEC Travel Grant (\$1,628)	2024-2025
Doctoral Student Award: Research and Academic Excellence, Stanford Graduate School of Education	2023
Reinventing Scientific Literacy for an Age of Misinformation (<i>co-author, awarded to Jonathan Osborne</i>), Anonymous Donor (\$100,000)	2022
OpenSciEd Research Agenda Seed Funding (<i>co-author, awarded to Janet Carlson</i>), Digital Promise and the Carnegie Corporation of New York (\$9,000)	2022
Dissertation Support Grant, Stanford University (\$5,000)	2022
Markowski-Leach Scholarship, Horizons Foundation (\$2,500)	2022
Shriram Family Fellowship in Science Education, Stanford University (\$14,500)	2018 – 2020
Outstanding Mentor of an American Indian, Alaska Native, Native Hawaiian and Pacific Islander Student, Stanford Native American Cultural Center	2019
Enhancing Diversity in Graduate Education (EDGE) Fellowship, Stanford University (\$8,000)	2018
Science Educators for Urban Schools Scholarship, Robert Noyce Foundation, Boston College (\$59,000)	2013
Charles F. Donovan Urban Teaching Scholarship, Boston College (\$29,000)	2013
Sharp Urban Teaching Scholarship, Boston College (\$10,000)	2013

Research Experience

Catalyzing Capacity: A Network for Developing Curriculum Researchers Focused on Equity <i>Graduate Research Assistant</i> Center to Support Excellence in Teaching (CSET), Stanford University, Stanford, CA Primary Investigator: Janet Carlson, Ph.D.	2022 – 2023
The 5-Point Journal Integrity Initiative <i>Graduate Research Assistant</i> Stanford University, Stanford, CA Primary Investigator: John Willinsky, PhD	2022
Critical Data Literacy <i>Graduate Research Assistant</i>	2021 – 2022

Stanford University, Stanford, CA
Primary Investigators: Bryan Brown, PhD & Victor Lee, PhD

Teaching Science in a “Post-Truth” Society 2021 – 2022

Graduate Research Assistant
Stanford University, Stanford, CA
Primary Investigator: Jonathan Osborne, Ph.D.
Funded by the Gordon and Betty Moore Foundation

Generative Formative Assessment 2018 – 2022

Graduate Research Assistant
Science in the City Lab, Stanford University, Stanford, CA
Primary Investigator: Bryan Brown, Ph.D.

Computational Thinking, Investigation Strategies, and Online Games 2018 – 2021

Graduate Research Volunteer
AAALab, Stanford University, Stanford, CA
Primary Investigator: Daniel Schwartz, Ph.D.
Funded by the Stanford Institute for Human-Centered Artificial Intelligence

The Efficacy of the Wipro Science Education Fellowship as a Model of Science Teacher Leadership Professional Development 2018 – 2020

Graduate Research Assistant
Center to Support Excellence in Teaching (CSET), Stanford University, Stanford, CA
Primary Investigator: Janet Carlson, Ph.D.

Constructing and Critiquing Arguments in Middle School Science Classrooms: Supporting Teachers with Multimedia Educative Curriculum Materials 2012 – 2014

Research Assistant
Boston College, Chestnut Hill, MA
Primary Investigator: Katherine McNeill, Ph.D.
Funded by the National Science Foundation

Conference Presentations

Pimentel, D.R. & Zummo, L. (2025, June). Apt epistemic vigilance. [Paper presentation]. Paper presented at the annual International Conference of the Learning Sciences (ICLS).

Davidson, S. & **Pimentel, D.R.** (2025, April). Understanding the impact of a contentious sociopolitical landscape on science teachers: Considerations for the field. [Paper presentation]. Paper presented at the annual meeting of the American Education Research Association.

Pimentel, D. R. (2025, March) Listening as a social and powered practice in science and engineering learning contexts. Session organizer and discussant at the annual meeting of NARST.

Shemwell, J., Capps, D., & **Pimentel, D.R.** (2025, March). Model-based inference as a source of agency in scientific explanation. [Paper presentation]. Paper presented at the annual meeting of NARST.

Pimentel, D. R. (2025, March). Why learn about science when it's already on your phone?. In Gotwals, A. (Chair), *A Celebration of Outstanding Doctoral Research Award Recipients, Early Career Award Recipients and new NARST Fellows: A Discussion of the Future of Science Education* [Symposium]. Awardee presentation at the annual meeting of NARST.

Kremer, K., Büssing, A. G., Nehring, A., Kresin, S., Bakker, M., **Pimentel, D. R.**, Baram-Tsabari, A., Dabran-Zivan, S., Selent, L., Pfeiffer, C. , Lenzer, S., Osborne, J., Allchin, D. (2025, March). Misinformation in science media: Enhancing the evaluation of credibility in digital contexts. [Symposium session]. Symposium presented at the annual meeting of NARST.

Osborne, J. & **Pimentel, D.R.** (2025, March). Intellectual humility and other content transcendent goals for science education. [Paper presentation]. Paper presented at the annual meeting of NARST.

Pimentel, D.R. (2025, March). "Science is... communication across the board": A biology teacher's conceptions of science media literacy. [Paper presentation]. Paper presented at the annual meeting of NARST.

Pimentel, D.R. (2024, March). "We're putting all our trust into what he's saying": Students' evaluations of science (dis)Information. [Paper presentation]. Paper presented at the annual meeting of NARST.

Pimentel, D.R. (2024, March). Acknowledging epistemic dependence. [Symposium presentation]. Presented at the annual meeting of NARST.

Pimentel, D.R. (2024, March). Pedagogical content knowledge of scientific online reasoning: An exploratory case study. [Poster presentation]. Poster presented at the annual meeting of NARST.

Pimentel, D.R. & Osborne, J. (2023, August). Misinformation in science: The response of science education. [Paper presentation]. Paper presented at the annual meeting of the European Science Education Research Association.

Pimentel, D.R. (2023, August). Learning to evaluate scientific evidence in the age of digital information. [Poster presentation]. Poster presented at the annual meeting of the European Science Education Research Association.

Pimentel, D.R. (2023, April). Students' evaluations of science (dis)Information. [Paper presentation]. Paper presented at the annual meeting of NARST.

Osborne, J.O., Allchin, D., Feinstein, N., Baram-Tsabari, A., & **Pimentel, D.R.** (2023, April). Reinventing scientific literacy for an age of misinformation: NGSS 2.0. [Symposium session]. Symposium presented at the annual meeting of NARST.

Pimentel, D.R. & Osborne, J. (2023, April). Learning to evaluate science (mis)Information on the internet. [Paper presentation]. Paper presented at the annual meeting of the American Education Research Association.

- Pimentel, D.R.,** Wilkerson, M.H., & Horton, N. (2023, April). Tools for learning and doing data science at the K–12 level. [Symposium session]. Symposium presented at the annual meeting of the American Educational Research Association.
- Pimentel, D.R.,** & Osborne, J. (2022, July). *Science education in an age of misinformation* [Paper presentation]. Paper presented at the biennial meeting of the International History, Philosophy, and Science Teaching Group (IHSPT).
- Pimentel, D. R.,** Reigh, E., Lee, V.R., & Brown, B. A. (2022, June). High school students' conceptions of climate change and COVID-19 data presented in infographics. In J. L. Polman, I. Tabak, & T. C. Tran (Chairs), *Cultivating critical, justice-oriented data literacies in a post-truth world* [Symposium]. Poster presented at the annual International Conference of the Learning Sciences (ICLS).
- Pimentel, D.R.,** Reigh, E., Lee, V.R, Brown, B.A. (2022, April). *Data and distrust: Epistemic vigilance and students' evaluations of infographic trustworthiness* [Roundtable presentation]. Roundtable presented at the annual meeting of the American Education Research Association (AERA).
- Selbach-Allen, M., **Pimentel D.R.,** & Reynante, B. (2022, April). *Exploring K–12 teachers' views of integrated STEM practices* [Roundtable presentation]. Roundtable presented at the annual meeting of the American Education Research Association (AERA).
- Wilsey, M., Brown, B.A., & **Pimentel, D.R.** (2022, April). Explaining as learning: Sense-making through generative formative assessment in science [Paper presentation]. Paper presented at the annual meeting of the American Education Research Association (AERA).
- Reynante, B., Selbach-Allen, M., & **Pimentel D.R.** (2022, April). *K–12 math and science teachers' conceptions of integrating STEM* [Poster presentation]. Poster presented at the annual meeting of the American Education Research Association (AERA).
- Reigh, E., **Pimentel, D.R.,** Lee, V.R, Brown, B.A. (2022, March). *Putting on a 'skeptical hat': Teachers' and students' conceptions of critiquing socioscientific data infographics* [Paper presentation]. Paper presented at the annual meeting of NARST.
- Pimentel, D.R.** (2022, March). *Teachers' conceptions of phenomena in the secondary science classroom* [Poster presentation]. Poster presented at the annual meeting of NARST.
- Pimentel, D.R.,** Moriarty, T.W., & Carlson, J. (2021, April). *Supporting science instruction with vertical teams: Teachers' perceptions of mixed grade-band professional learning communities* [Paper presentation]. Paper presented at the annual meeting of NARST. Virtual Conference.
- Pimentel, D.R.,** & Stovall, J.L (2021, April). *Supporting math and science teachers' noticing of inequitable participation with video-based instructional coaching groups* [Paper presentation]. Paper presented at the annual meeting of the American Education Research Association (AERA). Virtual Conference.
- Selbach-Allen, M., Reynante, B., & **Pimentel, D.R.** (2021, April). *Exploring teachers' beliefs about disciplinary hierarchies in STEM education: Implications for integrated STEM* [Paper presentation]. Paper presented at the annual meeting of the American Education Research Association (AERA). Virtual Conference.

- Pimentel, D.R.** (2020, June). *Learning to teach with phenomenon-based lessons in the high school science classroom* [Poster presentation]. Poster to be presented at the International Conference of the Learning Sciences. Nashville, TN. (Conference Cancelled)
- Pimentel, D.R.,** & Zhang, S. (2020, April). *Identifying investigation strategies through an online simulation game* [Poster presentation]. Poster to be presented at the annual meeting of the American Education Research Association (AERA). San Francisco, CA. (Conference Cancelled)
- Pimentel, D.R.,** Reynante, B., & Selbach-Allen, M. (2020, April). *Integrated STEM practices: Exploring overlap in K-12 STEM education* [Paper presentation]. Paper to be presented at the annual meeting of the American Education Research Association (AERA). San Francisco, CA. (Conference Cancelled)
- Pimentel, D.R.** (2020, March). *Exploring high school science teachers' conceptions of phenomenon-driven instruction* [Poster presentation]. Poster to be presented at the annual meeting of NARST. Portland, OR. (Conference Cancelled)
- Pimentel, D.R.,** Selbach-Allen, M., & Reynante, B. (2020, March). *Toward integrated STEM practices: Exploring the intersections of science, engineering, and mathematical practice* [Paper presentation]. Paper to be presented at the annual meeting of NARST. Portland, OR. (Conference Cancelled)
- Pimentel, D.R.** (2019, November). *Teaching with social justice-oriented science phenomena* [Paper presentation]. Paper presented at the 9th International Conference on Education and Social Justice. Honolulu, HI.
- Pimentel, D.R.** (2019, October). *Exploring high school science teachers' pedagogical content knowledge for phenomenon-based teaching* [Paper presentation]. Paper presented at the annual meeting of the Monash Education Research Community Conference. Clayton VIC, Australia.
- Pimentel, D.R.** (2019, September). *Curriculum as a tool for teacher learning: Supporting science instruction with educative curriculum materials* [Paper presentation]. Paper presented at the annual meeting of the Learning Sciences Graduate Student Conference. Evanston, IL.
- Pimentel, D.R.** (2019, May). *Supporting reform-based science instruction with educative curriculum materials* [Paper presentation]. Paper presented at the annual meeting of the Stanford Graduate School of Education SWAYWO Conference. Stanford, CA.
- Pimentel, D.R.,** Reynante, B., & Selbach-Allen, M. (2019, May). *Mapping disciplinary practices: exploring overlap in K-12 STEM standards* [Paper presentation]. Paper presented at the annual meeting of the Stanford Graduate School of Education SWAYWO Conference. Stanford, CA.

Workshops

- Osborne J., **Pimentel, D.R.,** Allchin, D., & Zucker, A. (2025, March). *What Next for ScienceStandards. NGSS 2.0?* Workshop presented at the National Science Teaching Association (NSTA), Philadelphia, PA.

- Pimentel, D.R.**, Davidson, S., Suh, J., & Shemwell, J. (2025, February). Science education research at the University of Alabama. Workshop presented at the Alabama Science Teachers Association (ASTA), Vestavia Hills, AL.
- Pimentel, D.R.**, & Osborne J. (2022, October). *Science education in an age of misinformation*. Workshop presented at the annual meeting of the California Association of Science Educators, Palm Springs, CA.
- Darling-Hammond, E., **Pimentel, D.R.**, & Bunderson, M. (2022, July). *Using online tools and UDL to elicit learner voice*. Workshop presented at the annual CAST UDL Symposium.
- Pimentel, D.R.** & Osborne, J. (2022, July). *Science education in an age of misinformation*. Workshop presented at the annual meeting of the National Science Teaching Association (NSTA), Chicago, IL.
- Pimentel, D.R.** (2022, May). *Tackling online misinformation in the science classroom*. Workshop presented at the Center to Support Excellence in Teaching, Stanford, CA.
- Osborne, J.O. & **Pimentel, D.R.** (2022, March). *Teaching and learning science in a ‘post-truth’ society: New roles for socioscientific issues*. Workshop presented at the annual meeting of NARST, Vancouver, British Columbia, Canada.
- Stovall, J.L. & **Pimentel, D.R.** (2020, February). *How to use film to have conversations about race in education*. Workshop presented to the Equity in Education Conference sponsored by the Center to Support Excellence in Teaching, Stanford, CA.
- Pimentel, D.R.**, Moriarty, T.W., Parker, S., Ulman, T., Rankins, B., Goren, R. (2019, August). *Elementary Science and the NGSS*. Workshop presented to the Mountain View-Wisman Unified School District, Mountain View, CA.
- Pimentel, D.R.**, Moriarty, T.W., Parker, S., Kanopka, K. (2019, August). *Implementing the 5E instructional model with NGSS curriculum*. Workshop presented to the San Jose Unified School District, San Jose, CA.
- Stovall, J.L. & **Pimentel, D.R.** (2019, July). *How to use film to have conversations about race in education*. Workshop presented to the Hollyhock Teaching Fellowship Program, Stanford, CA.
- Pimentel, D.R.**, Siedel, S., McBain, L., Tham, P. (2019, May). *Designing for student safety*. Workshop presented at the Hasso Plattner Institute of Design (d.school) at Stanford University. Stanford, CA.
- Pimentel, D.R.**, Knight, A. M. & McNeill, K. L. (2014, April). *Reasoning in argumentation: Helping students apply science concepts*. Workshop presented at the annual meeting of the National Science Teachers Association. Boston, MA.
- Katsh-Singer, R., **Pimentel, D.R.**, Gonzalez-Howard, M. & McNeill, K. L. (2014, April). *Supporting all students in writing scientific arguments*. Workshop presented at the annual meeting of the National Science Teachers Association. Boston, MA.

Invited Talks

Pimentel, D. R. (2025, March). Supporting science media literacy: Learning to evaluate online sources of scientific information in the K-12 science classroom. Invited talk presented at the University of Tennessee, Knoxville. Knoxville, TN.

Pimentel, D. R. (2025, March). Supporting science media literacy: Learning to evaluate online sources of scientific information in the K-12 science classroom. Invited talk presented at the New York University Institute of Education Sciences-funded Predoctoral Interdisciplinary Research Training (IES-PIRT) program. New York, NY.

Pimentel, D. R., & Osborne, J. (2024, April). *Evolving technological, legal, and social solutions to counter online disinformation*, National Academies of Science, Engineering, and Mathematics, Washington D.C.

Pimentel, D.R., Alberts, B., Osborne, J., Coffey, J. (2023, Nov). Rebuilding trust: Leveraging education to restore faith in science. Panel on Science Education in an Age of Misinformation. Scientists Speak Up at Stanford, Virtual, Palo Alto, CA, United States.

University Teaching Experience

The University of Alabama, *Primary Instructor*

CSE 493: Diversity Seminar	Sp2025
CSE 390: Instructional & Accommodation in Secondary Schools	F2024, Sp2025, F2025
CSE 530: Modern Secondary Schools	F2024
CSE 693: Advanced Workshop	Sp2024
CSE 467 / 567: Improving Science Teaching	F2023, F2025

Stanford University

EDUC 208B: Curriculum Construction, <i>TA with Denise Pope</i>	W2023
EDUC 200B: Introduction to Qualitative Research Methods, <i>TA with Denise Pope</i>	F2022
EDUC 267C: Curriculum and Instruction in Science, <i>Primary Instructor</i>	W2022
EDUC 267A & B: Curriculum and Instruction in Science, <i>TA with Bryan Brown</i>	Su & F2021
EDUC 261E: Curriculum and Instruction Elective in Data Science, <i>TA with Victor Lee</i>	Sp2021
EDUC 267: Development of Scientific Reasoning and Knowledge, <i>TA with Polly Diffenbaugh</i>	W2021
EDUC 285: Supporting Students with Special Needs, <i>TA with Linda Darling-Hammond & Elizabeth Kozleski (Winter 2021); Troya Ellis (Winter 2020); Shayna Sullivan (Spring 2019)</i>	W2020, W2021 Sp2019
EDUC 299: Equity and Schooling, <i>TA with Antero Garcia (Fall 2020); Jonathan Rosa & Anthony Villa (Fall 2019)</i>	F2019, F2020

Professional Experience

Center to Support Excellence in Teaching (CSET), Stanford, CA

Wipro Science Education Fellowship Program 2018 – 2023
Instructional Science Coach and Professional Development Facilitator

Hollyhock Fellowship Program 2019 – 2021
Instructional Science Coach and Professional Development Facilitator

OpenSciEd Elementary Design Specifications Writing Team 2020
Design Specifications Co-author

QiTian School Curriculum Development Team 2020
Science Curriculum Framework Co-developer

Residential Education, Stanford, CA 2021 – 2023
Graduate Resident Associate, Duan Family Hall

Graduate Life Office, Stanford, CA 2019 – 2021
Community Associate, Escondido Village

Hasso Plattner Institute of Design (d.school), Stanford, CA 2018 – 2019
Design Research Intern, K12 Lab

Math, Engineering, and Science Academy (MESA), Brooklyn, NY 2017 – 2018
Chemistry Teacher & Special Education Teacher

Brooklyn Ascend High School, Brooklyn, NY 2016 – 2017
Founding High School Chemistry Teacher

Leadership Prep Canarsie Middle Academy, Brooklyn, NY 2014 – 2016
Founding Middle School Science Teacher

Professional Service

Service to the Discipline

Journal of Research in Science Teaching, Editorial Board Member 2025-present

Science Education, Manuscript Reviewer 2024-present

Journal of Statistics and Data Science Education, Manuscript Reviewer 2023-2025

Journal of Research in Science Teaching, Manuscript Reviewer 2023-2025

Science & Education, Manuscript Reviewer 2019-2025

NARST Annual International Conference, Proposal Reviewer 2019-2025

National Science Foundation Developmental Sciences Program, Ad Hoc Reviewer 2024

National Science Foundation Division of Research on Learning in Formal and Informal Settings, NSF Review Panel Member for STEM Teacher Corps Program 2024

International Society of the Learning Science Annual Meeting, Proposal Reviewer	2021-2024
<i>British Journal of Education Technology</i> , Manuscript Reviewer	2022
Learning Sciences Graduate Student Conference, Proposal Committee	2019, 2022
<i>Journal of Pre-College Engineering Education Research (J-PEER)</i> , Manuscript Reviewer	2021 – 2022
NARST Graduate Student Committee, Scholarship Committee Volunteer	2020 – 2022

Service to the University

Artificial Intelligence Working Group, Alabama Cyber Institute	2024-2025
Faculty Search Committee, Department of Curriculum & Instruction	2024-2025
Stanford Title IX Office, Title IX Panelist	2020 – 2021
Resilient 1 st Gen (R1G) Collaborative Learning Group, Co-Director	2019 – 2021
Stanford Graduate School of Education SWAYWO Conference, Planning Committee	2019 – 2021
Stanford Graduate School of Education SWAYWO Conference, Proposal Reviewer	2019
Stanford Graduate School of Education Student Guild, First-Year Cohort Representative	2018 – 2019

Mentorship

Mentoring Graduate Student Research	2024-2025
Stanford Graduate School of Education Mentoring Program, Graduate Student Mentor	2021 – 2023
Enhancing Diversity in Graduate Education Fellowship, Graduate Student Mentor	2020 – 2023
Learning, Design, and Technology Master's Program, Project Mentor	2020 – 2022

Professional Affiliations

International History, Philosophy, and Science Teaching Group (IHPST)
European Science Education Research Association (ESERA)
International Society of the Learning Sciences (ISLS)
American Educational Research Association (AERA)
California Association of Science Educators (CASE)
National Association for Research in Science Teaching (NARST)
National Science Teachers Association (NSTA)

Relevant Skills

Stanford CITI (Collaborative Institute Training Initiative) certified
Proficient with Excel, SPSS, STATA, and R statistical analysis software
Proficient with NVIVO and Dedoose qualitative analysis software
Basic proficiency in Spanish