

Robert William Danielson, Ph. D.

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EDUCATION

- 2012-2017 **University of Southern California**
Ph.D. Urban Education Policy
Concentration: Educational Psychology / Learning Sciences
Cognate: Methods and Measurement
Dissertation Title: *Promoting Epistemic and Conceptual Change with Texts and Graphics*
Advisor: Gale M. Sinatra, Ph.D.
- 2009-2012 **California State University, Chico**
Master of Arts in Psychological Science
Thesis Title: *The Effect of Decorative Graphics on Expository Text Comprehension*
Advisor: Neil H. Schwartz, Ph.D.
- 2002-2007 **California State University, Chico**
Bachelor of Arts in Psychology

RESEARCH INTERESTS

My research focuses on students in K-12 through college, as well as members of the public. Areas of focus include how learning with texts and graphics may promote epistemic and conceptual change around STEM concepts; how individuals learn from, create, and express their understanding of these topics; and the educational, policy, and health-related implications of the public's understanding of science.

PROFESSIONAL EXPERIENCE

- 2017-Present **Assistant Professor, Washington State University.** Designing and teaching educational psychology related courses. Maintaining an active program of research. Providing service to the university, community, and profession.
- 2017-Present **Health Education Research Center Member, Washington State University.** HERC is a center of excellence for conducting innovative research on the determinants of health disparities across biological, behavioral, family, and community levels.
- 2014-2017 **Motivated Change Research Lab Team Leader, University of Southern California.** Directed by Gale Sinatra, Ph. D. Principal investigator for four

studies, as well as directing graduate and undergraduate students in research design.

2014-2017 **Research Assistant, Fund for the Improvement of Post-Secondary Education First in the World Program.** *Improving Access to College through Games, Technology, and Social Media* Total Award: \$3,200,000. Research Assistant responsible for developing multiple measures to assess interest and motivation, leading quantitative analysis and research design.

2013-2016 **Research Assistant, Mattel Children's Foundation, Mattel Speedometry Phase II District Wide RTC.** Total Award: \$784,000.00. Research Assistant helping develop, administer, and score measures of knowledge, interest, and emotions. Assisted in research design and data analysis.

2011-2012 **Associate Director, Learning Cognition and Instruction (LCI) Research Group. California State University, at Chico.** Directed by Neil Schwartz, Ph.D. Principal investigator for two studies, as well as directing graduate and undergraduate students in research design.

FUNDING (total funded: ~1.75M)

Projects Funded

External

2019-2022 **Co-PI.** *Collaborative Research: Meta-Analysis of the Effects of Refutation Materials for Promoting Conceptual Change in STEM.* (PI: Olusola Adesope, USC PIs: Sinatra / Patall). Division of Undergraduate Education (DUE), National Science Foundation (NSF), Award# 1920348. **Amount awarded: \$494,456 (WSU portion: \$257,068)**

2018-2024 **Co-PI.** *Health Education through Arts-based Learning (HEAL): A Partnership to Investigate Interdisciplinary Science Programs in Rural Communities.* (PI: Molly Kelton, Co-PIs: Butterfield / Owen / White / Diaz Martinez / Garcia. Science Education Partnership Award (SEPA) Award# 1R25GM129814, National Institutes of General Medical Sciences (NIGMS), National Institutes of Health (NIH). **Amount awarded: \$1.2 M**

2017-2023 **External Evaluator.** *Spokane Community Colleges (SCC) STEM Scholars Project.* (PI: Jaye Hopkins). Division of Undergraduate Education (DUE), National Science Foundation (NSF), Award# 1741960. **Amount Awarded: \$649,790, Sub-award amount: \$34,000**

Internal

2019-2021 **Co-PI.** *Advancing Education Research Using Large-Scale Assessment Data.* (PI: Shenghai Dai). WSU New Faculty Seed Grant Competition, WSU Office of

Research Advancement and Partnerships. Washington State University. **Amount awarded: \$18,191**

2018-2019 **Co-PI.** *Health Education through Arts Learning: A STEM Partnership in Diverse Rural Communities.* (PI: Molly Kelton, Co-PIs: Owen / White / Diaz Martinez). WSU New Faculty Seed Grant Competition, WSU Office of Research Advancement and Partnerships. Washington State University. **Amount awarded: \$22,043**

Under Review

2024-2029 **Co-PI.** *Riversport Outdoor adVenture Education Research (ROVER): Promoting Student Social, Emotional, Behavioral and Academic Competencies Through an Adventure Sports Program* (PI: Ben Heddy, Co-PIs: Brown, Feille, Borger). Institute of Educational Sciences (IES) Education Research Grants Program. Amount Requested: \$2.1 M. [submitted in September 2023].

2023-2028 **PI.** *Refuting Misconceptions through Short Animated Videos.* NSF Faculty Early Career Development Program (CAREER). Amount requested: \$500,000. [submitted in July 2023].

Projects Not Funded

2022-2026 **Co-PI.** *Identifying Malleable Factors and Practices Supporting Culturally and Linguistically Diverse Students' STEM Learning: What Can We Learn from NAEP and State Policies?* (PI: Shenghai Dai, Co-PIs: Ardsheva, Carbonneau, Higheagle Strong, Austin). Institute of Educational Sciences (IES) Education Research Grants Program. Amount Requested: \$1.1M. [Resubmission]

2021-2025 **Co-PI.** *Identifying Malleable Factors and Practices Supporting Culturally and Linguistically Diverse Students' STEM Learning: What Can We Learn from NAEP and State Policies?* (PI: Shenghai Dai Co-PIs: Ardsheva, Carbonneau, Higheagle Strong, Austin). Institute of Educational Sciences (IES) Education Research Grants Program. Amount Requested: \$786,965

2020-2022 **Co-PI.** *Using Machine Learning and Multilevel Modeling to Identify Predictors of At-Risk Students' Achievement and Self-Concept on 2018 PISA Reading Assessment.* (PI: Shenghai Dai, Co-PI: Ardsheva). American Educational Research Association. Amount requested: \$35,000.

2019-2024 **Co-PI.** *Bridging Research, Understanding, and Sustaining Health (BRUSH): Inoculating Misconceptions about Oral Health in the Age of Alternative Facts.* (PI: Benjamin Heddy). National Institutes of Health (NIH). Amount requested: \$1.2 M.

2018-2020 **PI. Equipping the Tool Belts of Biostatistics in the Era of Big Data.** National Institutes of Health (NIH) Summer Institute of Biostatistics. Amount Requested: \$736,810.

PUBLICATIONS (19 at WSU, Total 481 citations, h-index = 10, i-index = 11)

Referred Journal Articles

* denotes graduate student + denotes undergraduate student

Danielson, R. W., Sinatra, G. M., Dai, S., Seyranian, V., Heddy, B. C., Polikoff, M. S., & Marsh, J. A. (2024). Validating an Instrument to Assess 4th Grade Students' Interest in STEM Content. *Journal of Experimental Education*.
<https://doi.org/10.1080/00220973.2023.2276933>

*Ramazan, O., Dai, S., **Danielson, R. W.**, Ardasheva, Y., *Hao, T., & Austin, B. W. (2023). Students' 2018 PISA Reading Self-concept: Identifying Predictors and Examining Model Generalizability for Emergent Bilingual Students. *Journal of School Psychology*.
<https://doi.org/10.1016/j.jsp.2023.101254>

*Jin, G., *Ramazan, O., & **Danielson, R. W.** (2023). Effects of refutational texts and seductive pictures on conceptual change, situational interest, and cognitive loads. *Journal of Experimental Education*. <https://doi.org/10.1080/00220973.2023.2238644>

Heddy, B. C., **Danielson, R. W.**, *Ross, K., & Goldman, J. A. (2023). Everyday engineering: The effects of transformative experience in middle school engineering. *The Journal of Engineering Education*. <https://doi.org/10.1002/jee.20527>

* Ramazan, O., **Danielson, R. W.**, Rougée, A., Ardasheva, Y., & Austin, B. W. (2023). Effects of Classroom and School Climate on Linguistically Diverse Students' PISA Mathematics Self-Concept and Achievement Scores. *Large-scale Assessment*.
<https://doi.org/10.1186/s40536-023-00156-w>

Dai, S., *Hao, T., Ardasheva, Y., *Ramazan, O., **Danielson, R. W.**, & Austin, B. W. (2023). PISA Reading Achievement: Identifying Predictors and examining Model Generalizability for Multilingual Students. *Reading and Writing*.
<https://doi.org/10.1007/s11145-022-10357-4>

Danielson, R. W., Sinatra, G. M., Trevors, G., Muis, K. R., Pekrun, R., & Heddy, B. C. (2022). Can Multiple Texts Prompt Causal Thinking? The Role of Epistemic Emotions. *Journal of Experimental Education*. <https://doi.org/10.1080/00220973.2022.2107604>

Danielson, R. W., *Grace, E., White, A. J., Kelton, M. K., Owen, J. P., Saba Fisher, K., Diaz Martinez, A., & +Mozo, M. (2022). Facilitating Systems Thinking Through Arts-Based STEM Integration. *Frontiers in STEM Education*.
<https://doi.org/10.3389/feduc.2022.915333>

- Taasoobshirazi, G., Heddy, B. C., **Danielson, R. W.**, Abraham, E. R. I. & Joji, S. (2022). Development and psychometric analysis of the meta-representations survey for physics: Understanding students' free-body diagrams. *Journal of Learning Theory and Methodology*, 3(3), 93-101 <https://doi.org/10.17309/jltm.2022.3.01>
- *Turk, M., Heddy, B. C., & **Danielson, R. W.** (2022). Teaching and social presences supporting basic needs satisfaction in online learning environments: How can presences and basic needs happily meet online? *Computers & Education*, 180, 104432. <https://doi.org/10.1016/j.compedu.2022.104432>
- Heddy, B. C, Lombardi, D., & **Danielson, R. W.** (2021). The Moral Side of the Climate Crisis: The Effect of Moral Conviction on Learning about Climate Change. *The Educational and Developmental Psychologist Special Issue: Climate Crisis*. <https://doi.org/10.1080/20590776.2021.2011203>
- Lippmann, M., **Danielson, R. W.**, Schwartz, N. H., Körndle, H., & Narciss, S. (2020). Effects of Keyword Tasks and Biasing Titles on Metacognition and Recall. *Metacognition and Learning*. <https://link.springer.com/article/10.1007/s11409-020-09246-4>
- *Thacker, I., Sinatra, G. M., Muis, K. R., **Danielson, R. W.**, Pekrun, R., Winne, P. H., & Chevrier, M. (2019). Using Persuasive Refutation Texts to Prompt Attitudinal and Conceptual Change. *Journal of Educational Psychology*. <http://dx.doi.org/10.1037/edu0000434>
- Heddy, B. C., Taasoobshirazi, G., *Chancey, J. B., & **Danielson, R. W.** (2018). Developing and Validating a Conceptual Change Cognitive Engagement Instrument. *Frontiers in Education*. (Vol 3, p. 43). <https://doi.org/10.3389/feduc.2018.00043>
- Polikoff, M. S., Le, Q. T., **Danielson, R. W.**, Sinatra, G. M., & Marsh, J. (2018). The Impact of Speedometry on Student Knowledge, Interest, and Emotions. *Journal of Research on Educational Effectiveness*, 11(2) 217-239. <https://doi.org/10.1080/19345747.2017.1390025>
- Mason, L., Baldi, R., Di Ronco, S., Scrimin, S., **Danielson, R. W.**, & Sinatra, G. M. (2017). Textual and graphical refutations: Effects on conceptual change learning. *Contemporary Educational Psychology*, 49, 275-288. <https://doi.org/10.1016/j.cedpsych.2017.03.007>
- Danielson, R. W.** & Sinatra, G. M. (2017). A Relational Reasoning Approach to Text-Graphic Processing. *Educational Psychology Review*, 29(1), 55-72. <https://doi.org/10.1007/s10648-016-9374-2>
- Heddy, B. C., **Danielson, R. W.**, Sinatra, G. M., & Graham, J. (2017). Modifying Knowledge, Emotions, and Attitudes about Genetically Modified Organisms. *Journal of Experimental Education*, 85(3), 513-533. <https://doi.org/10.1080/00220973.2016.1260523>

Danielson, R. W. & Sinatra, G. M., Kendeou, P. (2016). Augmenting the Refutation Text Effect with Metaphors and Graphics. *Discourse Processes*, 53(5-6), 392-414.
<https://doi.org/10.1080/0163853X.2016.1166334>

Lombardi, D., **Danielson, R. W.**, and Young, N. (2016). A plausible connection: Critical evaluation, the refutation effect, and plausibility reappraisal. *Learning and Instruction*, 44 74-86. <http://dx.doi.org/10.1016/j.learninstruc.2016.03.003>

Danielson, R. W., Schwartz, N. H., & Lippmann, M. (2015). Metaphorical Graphics Aid Learning and Memory. *Learning and Instruction*, 39, 194-205.
<http://dx.doi.org/10.1016/j.learninstruc.2015.07.004>

Danielson, R. W. & Lombardi, D. (2015). More Money Less Acceptance: The Relationship between GDP, Science Literacy, and Acceptance of Human-Induced Climate Change. *The International Journal of Climate Change: Impact and Responses*, 7 (4), 13-23.

Practitioner Oriented Journal Articles (761 downloads)

* denotes graduate student + denotes undergraduate student

*Grace, E., Kelton, M., Owen, J., Martinez, A., White, A., **Danielson, R. W.**, Butterfield, P.
*Fallon, M., & *Schafer, G. (2021). Zooming in on Systems Thinking: Leveraging Arts-integration Strategies in a STEAM Summer Camp. *Afterschool Matters*

Danielson, R. W., *Grace, E., White, A. J., Kelton, M.K., Martinez, A., *Fallon, M., Owen, J. P., & Butterfield, P. (2020). Assessing Science Learning and Systems Thinking Through Arts. *Washington Educational Research Journal*. 13(1), 36-45.

Schultz, J. A., **Danielson, R. W.**, Catena, R., Connolly, C. P., Hildebrandt, K. (2020). Is Kinesiology a Bridge to STEM Engagement? Sport Science Labs in High School. *Northwest Journal of Teacher Education*. 15(4).
DOI: <https://doi.org/10.15760/nwjte.2020.15.3.4>

Invited online Op-Ed

Sinatra, G. M. & **Danielson, R. W.** (2014). Adapting to a Warmer Climate of Science Communication. *BioScience*, <https://doi.org/10.1093/biosci/biu023>

Book Chapters (1 at WSU)

Lombardi, D. & **Danielson, R. W.** (2021). On Learning and Teaching for Conceptual Change. Book chapter to be included in the *Handbook for Educational Psychology* (Oxford University Press). <https://doi.org/10.1093/oxfordhb/9780199841332.013.20>

Corwin, Z.B. & **Danielson, R. W.** (2016). Admission is the Mission: How First Generation Students Approach Learning About College Through Games. In: *Diversifying Barbie and Mortal Kombat*: Carnegie-Mellon Press

Sinatra, G. M., & **Danielson, R. W.** (2016). Adapting Evolution Education to a Warming Climate of Teaching and Learning. In *Evolutionary Perspectives on Child Development and Education* (pp. 271-290). Springer International Publishing.

Corwin, B. Z., **Danielson, R. W.**, Ragusa, G., & Tierney, W., G. (2016). Can Games Facilitate Access to College? In: O'Neil, H. F., Baker, E. L., & Perez, R. S. (Eds.) *Using Games and Simulations for Teaching and Assessment: Key Issues*. Routledge/Taylor Francis.

Manuscripts under Review (6)

* denotes graduate student + denotes undergraduate student

Danielson, R. W., Jacobson, N. G., Patall, E. A., Sinatra, G. M., Adesope, O. O., Kennedy, A., Bhat, B. H., *Ramazan, O., *Adaramola, B., Nketah, G., *Jin, G., & Sunday, O. J. (*Educational Psychology*). A Meta-Analysis of Refutation Text Effectiveness in Confronting Scientific Misconceptions.

Danielson, R. W., Heddy, B. C., *Ramazan, O., *Jin, G., *Gill, K. S., & *Berry, D. N. (*Journal of Research on Science Teaching*). Conceptual Contamination: Investigating the impact of misinformation on conceptual change and inoculation strategies.

*Jin, G., **Danielson, R. W.**, & *Ramazan, O. (*Discourse Processes*). Resurrecting a Classic Design: Examining the Refutational Text Effect Using a Solomon Four-Group Design.

Danielson, R. W. & Sinatra, G. M. (*Journal of Experimental Education*). A Tale of Two Interventions: Augmenting Refutation Texts with Graphicacy Instruction.

*Turk, M., *Muftuoglu, A. C., Heddy, B. C., & **Danielson, R. W.** (*The Journal of Experimental Education*). Conceptual change about coronavirus: The impact of goal orientations and cognitive engagement.

Technical Reports

Marsh, J., Polikoff, M., Sinatra, G., Dhanatya, C., McKibben, S., Allbright, T., **Danielson, R. W.**, Gasparian, H., Le, Q. T., Mukhopadhyay, A., & Young, T. (2015). Promoting STEM interest, enjoyment, and learning through standards aligned curriculum and play: Speedometry evaluation final technical report. Los Angeles, CA: University of Southern California Rossier School of Education.

RESEARCH PRESENTATIONS (35 at WSU)

* denotes graduate student + denotes undergraduate student

International/National

*Lee, D. K. L., *Ramazan, O., & **Danielson, R. W.** (2024, August). *Relationship between media trust and fact-checking behavior through mediation role of media usage*. Annual Conference of American Psychological Association (APA), Seattle, Washington, United States.

- *Lee, D. K. L., *Ramazan, O., *Jin, G., & **Danielson, R. W.** (2023, August). *Examining the role of conceptual change cognitive engagement for health information in social media*. Paper presented at the annual meeting of American Psychological Association (APA), Washington, D. C.
- *Lee, D. K. L., *Ramazan, O., *Jin, G., & **Danielson, R. W.** (2023, August). *Exploring conceptual change in the context of social media: A Solomon four-group design*. Paper presented at the annual meeting of American Psychological Association (APA), Washington, D. C.
- *Ramazan, O., Dai, S., **Danielson R. W.**, *Kirakosian, A. T., & Carbonneau, K. J. (2023, August). *Confidence in mathematics across sex in the past decade: A measurement invariance investigation*. Paper presented at the annual meeting of American Psychological Association (APA), Washington, D. C.
- Danielson, R. W.**, *Pautzke, K., *Saba Fisher, K., Owen, J., *Grace, E., +Stacey, E., +Young, B., Kelton, M. L., White, A. J., & Diaz Martinez, A. and Garcia, D. (2023, August). *Mapping Mosquitoes: Prioritizing Art Education in STEAM*. Paper presented at the annual meeting of American Psychological Association (APA), Washington, D. C.
- Danielson, R. W.**, Kelton, M. L., Owen, J., White, A. J., Diaz Martinez, A., Garcia, D., *Grace, E., *Saba Fisher, K., & *Pautzke, K., +Stacey, E., & +Young, B., (2023, June). *Blending Arts and Biomedical Science to Facilitate Systems Thinking*. Poster presented at the Annual Conference for NIH Science Education Projects (NIH SciEd), Washington D.C.
- *Adaramola, B. O., *Ramazan, O., **Danielson, R. W.**, Adesope, O. O., Sinatra, G. M., Patall, E. A., & Jacobson, N. G. (2023, April). *Effectiveness of Refutational Instruction on Misconceptions: A Meta-Analysis*. Paper presented at the annual meeting of American Educational Research Association (AERA), Chicago, Illinois.
- *Jin, G., **Danielson, R. W.**, & *Ramazan, O. (2023, April). *Resurrecting a classic design: Examining the refutational text effect using a Solomon Four-Group Design*. Paper presented at the annual meeting of American Educational Research Association (AERA), Chicago, Illinois.
- Danielson, R. W.**, *Grace, E., *Saba Fisher, K., Kelton, M., White, A. J., +Stacey, E., +Young, B., Owen, J., & Diaz Martinez, A. (2023, April) *Full STEAM Ahead: Blending Photography and Biomedical Science to Facilitate Systems Thinking*. Paper presented at the annual meeting of American Educational Research Association (AERA), Chicago, Illinois.
- *de Lira, C., Wong, R. M., **Danielson, R.W.**, & Adesope, O. O. (2023, April). *Fostering Interest and Motivation in Computing among Rural Middle School Students with Online Programming Environments*. Paper presented at the annual meeting of American Educational Research Association (AERA), Chicago, Illinois.

- +Stacey, E., +Young, B., *Grace, E., Kelton, M. L., *Saba Fisher, K., **Danielson, R. W.**, White, A. J., Diaz Martinez, A., Owen, J., *Pautzke, K., and Garcia, D. (2022). *Health Education through Arts-based Learning (HEAL): Examining Systems Thinking and the Impact of Out of School Contexts within an Afterschool Science Program*. Poster presented at the REU Summer Research Symposium, Washington State University, Pullman, WA.
- *Pautzke, K., *Saba Fisher, K., Kelton, M. L., Garfield, E., **Danielson, R. W.**, and Owen, J. P. (2022). *Buzzing for Blood: A Cartographic Exploration of Mosquito Ecology*. Poster presented at the Entomological Society of America Conference, Vancouver, Canada.
- Danielson, R. W.**, Heddy, B. C., *Ramazan, O., *Jin, G., & *Peltier, T. K. (2022, August). *Contaminated Conceptual Frameworks: Inoculating Knowledge in the Age of Alternative Facts*. Poster presented at the American Psychological Association (APA) Conference, Minneapolis, Minnesota.
- *Lee, D. K. L., *Ramazan, O., & **Danielson, R. W.** (2022, August). *Effect of text structure and visuals on conceptual change in influenza in context of social media*. Poster presented at the American Psychological Association (APA) Conference, Minneapolis, Minnesota.
- *Jin, G., *Ramazan, O., **Danielson, R. W.**, & Dai, S. (2022, August). *The Effects of ICT-related Factors and School Climate on Mathematics Achievement: A Multi-level Analysis*. Poster presented to the annual meeting of the American Psychological Association (Division 15)
- Danielson, R. W.**, *Grace, E., Kelton, M., +Mozo, M., & +Pena, V. (2022, April). *Facilitating Systems Thinking Through Arts-Based STEM Integration*. Paper presented at the annual meeting of American Educational Research Association (AERA), San Diego, California
- *Ramazan, O., *Jin, G., & **Danielson, R. W.** (2022, April). *Detecting Items with Differential Item Functioning in the Context of Conceptual Change Using Logistic Regression*. Paper presented at the annual meeting of American Educational Research Association (AERA), San Diego, California
- *Jin, G., *Ramazan, O., **Danielson, R. W.**, & Chi, C. (2022, April). *Effects of Text Structure and Seductive Details on Conceptual Change, Situational Interest, and Cognitive Loads*. Paper presented at the annual meeting of American Educational Research Association (AERA), San Diego, California
- *Ramazan, O., Dai, S., **Danielson, R. W.**, *Hao, T., & Ardasheva, Y. (2022, April). *Predicting Reading Self-Concept for English Learners on 2018 PISA Reading*. Paper presented at the annual meeting of American Educational Research Association (AERA), San Diego, California
- *Ramazan, O., *Jin, G., *Lee, D. K. L., & **Danielson, R. W.** (2021, January). *Effect of Economic, Cultural and Social Status on Digital Reading Mastery Goal Orientation as*

Mediator. Paper presented at the National Consortium for Instruction and Cognition, Virtual Conference.

- *Jacobson, N. G., Adesope, O. O., Patall, E. A., Sinatra, G. M., & **Danielson, R. W.** (2021). *The refutation text effect and science learning: The moderating role of text characteristics*. Paper presented at the annual meeting of American Educational Research Association (AERA), Virtual Conference.
- *Hao, T., Dai, S., Ardasheva, Y., *Ramazan, O., **Danielson, R. W.**, & Austin, B. W. (2021, April). *Student 2018 PISA Reading Achievement: Identifying Predictors and Examining Model Generalizability for English Learners*. Poster presented at the annual meeting of American Educational Research Association (AERA), Virtual Conference.
- *Jin, G., *Ramazan, O., *Lee, D. K. L., & **Danielson, R. W.** (2021, April). *Relationship between Metacognition and Reading Achievement: Moderation Role of Teachers' Stimulation of Reading Engagement*. Paper presented [Roundtable Session] at the annual meeting of American Educational Research Association (AERA), Virtual Conference.
- *Ramazan, O., Dai, S., **Danielson, R. W.**, Austin, B. W., *Hao, T., & Ardasheva, Y. (2021, April). *Students' 2018 PISA Reading Self-Concept: Identifying Predictors and Examining Model Generalizability for English Learners*. Paper presented [Roundtable Session] at the annual meeting of American Educational Research Association (AERA), Virtual Conference.
- Danielson, R. W.**, *Grace, E., Kelton, M., White, A., Martinez, A. Owen, J., & Butterfield, P., (2020). *Promoting Systems Thinking Through Arts-Based Science Activities*. Poster presented at the annual meeting of the International Conference of the Learning Sciences, Nashville, Tennessee.
- *Grace, E., Kelton, M., **Danielson, R. W.**, White, A., Martinez, A. Owen, J., & Butterfield, P., (2020). *STEAM as a Social Practice: Art of Insects and Zoom*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California.
- *Grace, E., Kelton, M., **Danielson, R. W.**, White, A., Martinez, A. Owen, J., & Butterfield, P., (2020). *Promoting Systems Thinking through STEAM Education*. Poster accepted for publication at the annual meeting of the American Educational Research Association, San Francisco, California.
- *Ramazan, O., Rougee, A., **Danielson, R. W.**, & Ardasheva, Y. (2020). *Effects of Classroom and School Climate on Linguistically Diverse Students' PISA Mathematics Self-Concept, and Achievement*. Paper accepted for presentation at the annual meeting of the American Educational Research Association, San Francisco, California. <http://tinyurl.com/t2zloqu>
- Danielson, R. W.**, Schultz, J., *Jin, G., *Ramazan, O., & Kirking, S. (2020). *Putting the Science in Sport Science: Using Kinesiology as a Bridge to Engagement in STEM*. Paper

presented at the annual meeting of the American Educational Research Association, San Francisco, California. <http://tinyurl.com/u87ufq2>

*Jin, G., *Ramazan, O., *Lee, D. K. L., **Danielson, R. W.** (2020). *The Relationship between Gender and Science Achievement: The Mediation Role of ICT Usage at School*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, California. <http://tinyurl.com/twhbyl7>

White, A., **Danielson, R. W.**, Kelton, M., & *Fallon, M. (2019). *Equity and engagement through art-based assessment*. Interactive workshop presented at the annual meeting of the Washington Educational Research Association (WERA), Seattle, Washington

Danielson, R. W., *Jin, G., & Lippmann, M. (2019). *Exploring the Limitations of Refutation Texts: A Closer Look at Individual Differences*. Poster presented at the annual meeting of the American Educational Research Association, Toronto, Canada.

*Ramazan, O., *Jin, G., & **Danielson, R. W.** (2019). *The impact of school climate on math achievement score of the USA's students in PISA 2012*. Poster presented at the annual meeting of the American Psychological Association (APA), Chicago, IL.

Kelton, M., *Grace, E., Owen, J., **Danielson, R. W.**, Butterfield, P., White, A., & Martinez, A. (2019). *Health Education through Arts-based Learning (HEAL): A Partnership to Investigate Interdisciplinary Science Programs in Rural Communities*. Poster presented at the Annual Conference for NIH Science Education Projects (NIH SciEd), Washington D.C.

*Grace, E., Kelton, M., White, A., **Danielson, R. W.**, Owen, J., Butterfield, P., Martinez, A., & Ord, G. (2019) *Health-science Education Through Arts-Based Learning: A Partnership to Increase Minority and Rural STEM Representation*. Interactive workshop conducted at the annual meeting of the Globalization, Diversity, and Education Conference, Airway Heights, Washington.

Danielson, R. W. & Sinatra, G. M. (2018). How emotions influence learning from multiple graphical climate change interventions. In Kendeou, P. (chair) *The Role of Emotions on the Revision of Socioscientific Misconceptions*. Symposium presented at the annual meeting of the American Educational Research Association, Washington D.C.

Danielson, R. W., Sinatra, G. M., Polikoff, M., Marsh, J. (2016) *Promoting Interest and Positive Emotions When Learning STEM Content*. Paper presented at the International Conference on Motivation, (EARLI, SIG 8 Motivation and Emotion), Thessaloniki, Greece.

Danielson, R. W., Sinatra, G. M., Trevors, G., Muis, K. R., & Pekrun, R. (2016) *Prompting Causal Thinking with Multiple Texts: The Role of Epistemic Beliefs and Emotions*. Paper presented at the annual meeting of the Society for Text and Discourse, Kassel, Germany.

- Danielson, R. W.**, Sinatra, G. M., & Mason, L. (2016). *Doubling Down on Refutations: The Combined Effect of Refutation Text and Graphics*. Poster presented at the bi-annual meeting of the European Association for Research on Learning and Instruction (SIG 2, Texts and Graphics), Geneva, Switzerland.
- Sinatra, G. M. & **Danielson, R. W.** (2016). Overcoming Stumbling Blocks to Public Understanding of Science through Refutation Texts and Graphics. In **R. W. Danielson** (chair) *Promoting Public Understanding Of Science: A Cornerstone of Diverse Democracies*. Symposium presented at the annual meeting of the American Educational Research Association, Washington D.C.
- Sinatra, G. M., **Danielson, R. W.**, Marsh, J., & Polikoff, M. (2016). Promoting STEM Interest and Positive Emotions in 4th Grade Girls and Boys. In K. J. Pugh (chair) *Engaging Male and Female STEM Students: Investigations of Learning environments and Teacher Influences*. Symposium presented at the annual meeting of the American Educational Research Association, Washington D. C.
- Jacobson, N., Schwartz, N. H., **Danielson, R. W.**, Lippmann, M., & Ludewig, L. (2016). Visual Demonstrative Evidence in a Mock Jury Setting. In N. H. Schwartz, S. Moser, & J. Zumbach (chairs) *Learning with Static and Dynamic Visualizations*. Symposium presented at the annual meeting of the American Educational Research Association, Washington D. C.
- Polikoff, M., Le, T. Q., **Danielson, R. W.**, Sinatra, G. M., & Marsh, J. (2016). *The Impact of a NGSS-Aligned Curriculum on Students' Science Knowledge*. Poster presented at the annual meeting of the American Educational Research Association, Washington D. C.
- Mason, L., Baldi, R., **Danielson, R. W.**, & Sinatra, G. M. (2016). *Refutation Text and Graphics: Effects on Conceptual Change Learning*. Paper accepted for presentation at the annual meeting of the American Educational Research Association, Washington D. C.
- Danielson, R. W.**, Sinatra, G. M., Polikoff, M., & Marsh, J. (2015). *Scaling up Assessment of Affect: Measuring Interest and Emotions at Scale within a STEM Intervention*. Poster presented at the bi-annual meeting of the Southwest Consortium for Innovative Psychology in Education (SCIPIE) at Albuquerque, New Mexico.
- Young T. K., **Danielson, R. W.**, Sinatra, G.M., Marsh, J. A., Polikoff, M.S. (2015). *More Than Just Drawings: Using Illustrations to Evaluate Conceptual Knowledge in Elementary School Science*. Poster presented at the Southwest Consortium for Innovative Psychology in Education (SCIPIE) at Albuquerque, New Mexico
- Danielson, R. W.**, Sinatra, G. M., Jaeger, A., & Wiley, J. (2015). *Augmenting the refutation-text effect with analogies and graphics*. Paper presented at the annual meeting of the Society for Text and Discourse, Minneapolis, Minnesota.

Danielson, R. W., Sinatra, G. M., Muis, K. R., & Pekrun, R. (2015). *The Influence of Epistemic Beliefs and Emotions in Learning from Multiple Texts*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.

Danielson, R. W., Sinatra, G. M., Seyranian, V., Mukhopadhyay, A., Heddy, B. C., Marsh, J. A., Polikoff, M. S., Zhou, N., & Hossepian, K. (2015). *Measuring Interest and Emotion in a 4th Grade STEM Unit*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois.

Lombardi, D., **Danielson, R. W.**, & Young, N. (2015). *Exploring relationships between plausibility, critical evaluation, the refutation text effect, and students' climate change knowledge*. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Mukhopadhyay, A., Marsh, J.A., Polikoff, M.S., Sinatra, G.M., & **Danielson, R.W.** (2015). *Speedometry curriculum as a model for inquiry-based science teaching and teacher learning*. Paper presented at the annual meeting of the National Consortium for Instruction and Cognition, Chicago, IL.

Danielson, R. W., Young, N., & Lombardi, D. (2015). *A plausible model? Refutation texts foster the connection between critical evaluation, plausibility, and knowledge*. Poster presented at the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.

Danielson, R. W. (2014, June) Overcoming Barriers to Understanding Climate Change. In D Lombardi (chair) *Climate Change Education: Warm Processes in Learning about a Hot Topic*. Plenary Session presented at the Sixth International Conference on Climate: Impacts and Responses, Reykjavik, Iceland.

Young, N., **Danielson, R. W.**, & Lombardi, D. (2014, June) The Consequences of Global Warming: Which Do People Care About? In D Lombardi (chair) *Climate Change Education: Warm Processes in Learning about a Hot Topic*. Plenary Session presented at the Sixth International Conference on Climate: Impacts and Responses, Reykjavik, Iceland.

Danielson, R. W. (2014) *The Evolution of a Controversy: how science teachers have led the charge in public education*. Poster presented at the annual meeting of the National Association of Research on Science Teaching, Pittsburg, PA.

Danielson, R. W. (2014) *The Evolution of a Controversy*. Poster presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

Heddy, B. C., Sinatra, G. M., & **Danielson, R. W.** (2014) *Modifying Attitudes, Emotions, and Conceptual Knowledge about Genetically Modified Foods*. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

Young, N., **Danielson, R. W.**, & Lombardi, D. (2013) *Exploring undergraduate Engagement with the Consequences of Climate Change*. Poster presented at the annual meeting of the American Geological Union, San Francisco, CA.

Seyranian, V., **Danielson, R. W.**, & Omoto, A. (2013) *Do American College Professors Indoctrinate Students in Political Liberalism?*. Poster presented at the bi-annual meeting of the European Association for Research on Learning and Instruction, Munich, Germany.

Lippmann, M., Narciss, S., Schwartz, N. H., & **Danielson, R. W.** (2013). *Effects of Text Titles and the Timing of Keywording Tasks on Metacognitive Monitoring*. Paper presented at the annual meeting of the Cognitive Science Society, Berlin, Germany.

Danielson, R. W., Schwartz, N. H., Vallado, W., Sarmiento, D., Lippmann, M., Fallahi, M., Magreehan, D., Evans, L. (2013). *The Preservation Effects of Decorative Graphics on the Comprehension of Expository Text*. Poster presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Heddy, B. C., Sinatra, G. M., **Danielson, R. W.**, & Graham, J. (2013). *Conceptual Change and Attitude Change: A Dynamic Interplay*. Paper presented at the annual meeting of the American Psychological Association. Honolulu, HI.

Seyranian, V., **Danielson, R. W.**, & Omoto, A. (2013) *Personality predicts political attitude change in college*. Poster presented at the annual meeting of the American Psychological Association, Honolulu, HI.

Schwartz, N. H. & **Danielson, R. W.** (2012) *What Kind of Graphic is This? A Framework for Delineating the Graphics in Text-Graphic Research*. Keynote address presented to the Special Interest Group "Learning with Text and Graphics" at the bi-annual meeting of the European Association for Research on Learning and Instruction, Grenoble, France.

Lippmann, M., Narciss, S., Schwartz, N. H., **Danielson, R. W.** & Sarmiento, D. (2012). *Interactive Effects of Text and Task Characteristics on Active Cognition, Metacognition, and Learning Outcomes*. Poster presented at the annual meeting of the American Educational Research Association, Vancouver, British Columbia, Canada.

Danielson, R. W., Schwartz, N. H., Kraus, S., Lippmann, M. & Sarmiento, D. (2011). *Depiction of Theme in Graphics: Its Influence in Expository Text*. Paper presented at the bi-annual meeting of the European Association for Research on Learning and Instruction, Exeter, England.

Danielson, R. W., Schwartz, N. H., Gonen, S., & Stanley, J. (2011). *Relative Judgment of Graphics in the Interpretation of Meaning*. Paper presented at the bi-annual meeting of the European Association for Research on Learning and Instruction, Exeter, England.

Danielson, R. W., Schwartz, N. H., Kraus, S., & Lippmann, M., Sarmiento, D. (2011). *The Effect of Metaphorical Graphics on the Comprehension of Expository Texts*. Paper presented at the annual meeting of the National Consortium for Instruction and Cognition, New Orleans, LA.

Schwartz, N. H., **Danielson, R. W.**, Falahi, M. (2011). *Metaphorical Visualizations: Their Influence on the Emotional Intensity of Text Themes*. Paper presented at the bi-annual meeting of the European Association for Research on Learning and Instruction, Exeter, England.

Lippmann, M., Narciss, S., Schwartz, N. H., **Danielson, R. W.** & Sarmiento, D. (2011). *Effects of Headings and Keywording on Learning in Self-regulated Text-based Learning*. Paper presented at the bi-annual meeting of the European Association for Research on Learning and Instruction, Exeter, England.

Lippmann, M., Narciss, S., Schwartz, N. H., **Danielson, R. W.** & Sarmiento, D. (2011). *Self-regulated Learning from Texts: How is it Affected by Headings and Immediate vs. Delayed Keywording?* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Danielson, R. W., Valladao, W., Gonen, S., Schwartz, N. H., & Sarmiento, D. (2011) *Geopolitical Conflict Awareness: The Effect of Metaphorical Graphics on Text Comprehension*. Poster presented at the annual meeting of the Association for Psychological Science, Washington D.C.

Regional

Kelton, M., **Danielson, R. W.**, Owen, J., White, A., Ord, G., Butterfield, P., Martinez, A., & Grace, E. (2019). *Health Education through Arts-based Learning (HEAL): A Pilot Program on the Art of Insects*. Poster presented at the Annual WSU Research Showcase, Washington State University, Pullman

Danielson, R. W. (2010) *A Brief History of Drug Laws*. Poster presented at the College of Behavioral and Social Science Student Research and Scholarly Work Symposium, California State University, Chico

Danielson, R. W., Yates, A. (2010) *Reward Cues in the Nucleus Accumbens (as viewed by Rube Goldberg)*. Video presented at the College of Behavioral and Social Science Student Research and Scholarly Work Symposium, California State University, Chico

TEACHING

Courses Taught at Washington State University

ED_PSYCH 508 Educational Statistics. 3 credits.
Fall 2023, Spring 2024

- ED_PSYCH 521 *Topics in Educational Psychology (Conceptual Change)*. 3 credits.
Fall 2021
- ED_PSYCH 574 *Seminar in Educational Psychology*. 1 credit.
Fall 2021, Spring 2022, Fall 2022
- ED_PSYCH 521 *Topics in Educational Psychology (College Teaching)*. 3 credits.
Spring 2021, Spring 2023
- ED_PSYCH 597 *Educational Psychology Internship*. 3 credits.
Fall 2020, Spring 2022, Spring 2023
- ED_PSYCH 563 *Principles of Research* 3 credits.
Spring 2018, Spring 2019, Spring 2020, Spring 2021, Spring 2022, Spring
2023, Spring 2024
- ED_PSYCH 502 *Learning and Instruction*. 3 credits.
Fall 2017, Fall 2018, Fall 2019, Fall 2020, Fall 2021, Fall 2022, Fall 2023

Courses Taught at Chapman University

- PSY 323 *Child Development*. 3 credits.
Fall 2016
- PSY 327 *Lifespan Development*. 3 credits.
Spring 2016

Courses Taught at University of Southern California

- Rossier PhDs Four-day Statistics Bootcamp for incoming PhD students
Winter 2017

Guest Lectures

- SUSI Program *Critical Thinking*. International Programs at WSU
Summer 2019, Summer 2021
- EDUC 642 *Learning and Instruction*. 3 credits. *University of Southern California*
Spring 2015 Spring 2016
- PSYC 433 *Experimental Psychology*. 3 credits. *CSU, Pomona*
Spring 2015, Spring 2016
- EDUC 582 *Assessment and Evaluation*. 3 credits. *University of Southern California*
Spring 2015, Fall 2015

PSYC 560 *Principles of Psychological Measurement. 3 credits. CSU, Chico*
Spring 2011

PSYC 410 *Senior Seminar: Visualization. 3 credits. CSU, Chico*
Spring 2011

PSYC 353 *Learning and the Young Child. 3 credits. CSU, Chico*
Fall 2010, Spring 2011

PSYC 605 *Advanced Human Learning. 3 credits. CSU, Chico*
Fall 2010

PROFESSIONAL AND ACADEMIC SERVICE

External / Professional Service

2023-present **Board Member (Treasurer)**, Scholarly Consortium for Innovative Psychology
in Education (SCIPIE)

2023-present **Editorial Board Member**, Learning and Individual Differences

2023-present **Editorial Board Member**, Learning and Instruction

2020-present **Editorial Board Member**, Contemporary Educational Psychology

2018-2021 **Committee Member**, The Committee for the Development of Early Career
Educational Psychologists, APA

2016-2023 **Board Member / Treasurer**, NCIC.
National Consortium for Instruction and Cognition.

2014-2016 **Newsletter Editor**, AERA Graduate Student Council

2014-2016 **Communication Director**, NCIC.
National Consortium for Instruction and Cognition.

2014-2015 **Activities Director**, AERA Division C Graduate Student Council.
Coordinate, in conjunction with the other Division C Graduate Student Council
members, the annual graduate student social and related activities.

2012-present **Ad-Hoc Reviewer**
American Educational Research Association (conference submissions)
American Educational Research Association (Division C student submissions)
Applied Cognitive Psychology
British Journal of Educational Psychology

Contemporary Educational Psychology
Climactic Change
Educational and Developmental Psychologist
Educational Psychology
International Journal of Climate Change: Impacts and Responses
International Society of the Learning Sciences (conference submissions)
International Journal of Science Education
Journal of Cognitive Psychology
Journal of Geoscience Education
Journal of Educational Psychology
Journal of Research in Science Teaching
Learning and Individual Differences
Learning and Instruction
Psychology Learning and Teaching
Review of Educational Research

WSU Service

WSU College of Education Service

2022-2023 **Committee Member**, College of Education's Faculty Search Committee
2021 **Committee Member**, College of Education's Faculty Search Committee
2020-present **Committee Member**, College of Education's Graduate Studies Committee
2019-present **Committee Member**, College of Education's Equity and Inclusion Committee

WSU Department Service

2017-present Ed Psych website design / maintenance

PROFESSIONAL AFFILIATIONS

American Educational Research Association (AERA), Division C
American Psychological Association (APA), Division 15
Association for Psychological Science (APS)
European Association for Research on Learning and Instruction (EARLI)
National Consortium for Instruction and Cognition (NCIC)
Society for Text and Discourse (ST&D)

Honors and Awards

2020 Excellence in Science, Technology, Engineering, Mathematics Award (HEAL youth programs): State Award, National Association of Extension 4-H Youth Development Professionals
2017 Received "Rossier Internal Research Award" (Total amount \$1,000)

2016 Nominated for “Best Poster” at the EARLI SIG 2 Text and Graphics Conference
2016 Nominated for Provost’s Mentored Teaching Fellowship Award
2015 Inaugural recipient of the Richard C. Anderson Graduate Student Research Award
2015 Nominated for Provost’s Mentored Teaching Fellowship Award
2014 Graduate Scholar Award, Climate Change: Impacts and Responses
2013 USC Graduate Student Travel Fund Recipient
2013 Poster Selected for Highlight at Division C Business Meeting at AERA
2012-2015 Rossier Dean’s Fellowship, University of Southern California.
Spring 2011 Excellence in Psychology Award, California State University

Relevant Software Skills

SPSS

STATA

R

Adobe Photoshop

Macromedia Dreamweaver

Learning Management Software (WebCT, Blackboard, CANVAS)

References available on request