

B. Troy Frensley

University of North Carolina Wilmington
Department of Environmental Science
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EDUCATION

Doctor of Philosophy

Virginia Tech, Blacksburg, Virginia

June 2018

Dept: Forest Resources and Environmental Conservation

Dissertation: Investigating the links between lesson characteristics, student engagement, and outcomes at a residential environmental education center.

Master of Science, Environmental Education

Nova Southeastern University, Ft. Lauderdale, Florida

June 2011

Thesis: Increasing environmental literacy among elementary students

Bachelor of Science, Marine Science

Minor-Environmental Science

Coastal Carolina University, Conway, South Carolina

December 2003

Senior Thesis: Phase shifts on a Caribbean coral reef.

RESEARCH INTERESTS

Environmental education, environmental interpretation, citizen and community-based science, program evaluation, nonformal education, free-choice learning, informal STEM learning, human dimensions of natural resource management, adaptive management, communities of practice, motivation and engagement.

PROFESSIONAL EXPERIENCE

Associate Professor, University of North Carolina Wilmington (NC)	<i>August 2023-present</i>
Applied Learning Coordinator, University of North Carolina Wilmington (NC)	<i>January 2023-present</i>
Assistant Professor, University of North Carolina Wilmington (NC)	<i>August 2018-July 2023</i>
Research Assistant, Virginia Tech (VA)	<i>August 2014-June 2018</i>
Instructor of Record, Virginia Tech (VA)	<i>January 2017-May 2017</i>
Teaching Assistant, Virginia Tech (VA)	<i>August 2014-May 2015</i>
Instructor of Record, St. George's University (Grenada)	<i>August 2011-July 2014</i>
Education and Discovery Center Manager, Conservancy of SW Florida (FL)	<i>May 2008-August 2011</i>
Research Assistant, Nova Southeastern University (FL)	<i>May 2010-May 2011</i>
Discovery Center Supervisor, Conservancy of SW Florida (FL)	<i>September 2006-May 2008</i>
Naturalist/Aquarist, Conservancy of SW Florida (FL)	<i>August 2004-August 2006</i>
Interpretive Park Ranger, Huntington Beach State Park (SC)	<i>May 2003-August 2004</i>
Natural Resource Manager/Educator, Bird Island Reserve (NC)	<i>May 2003-August 2003</i>
Field Researcher, Discovery Bay Marine Lab (Jamaica)	<i>May 2003</i>

COURSES TAUGHT

University of North Carolina Wilmington

- EVS 205-Global Environmental Issues (undergraduate, revised course, in-person and online)
- EVS 360-Human Dimensions of Natural Resource Management (undergraduate, revised course)
- EVS 424-Environmental Nonprofit Organizations (undergraduate, new course)
- EVS 428-Environmental Interpretation in Protected Areas (undergraduate, new course)
- EVS 463-Environmental Education (undergraduate, revised course)
- EVS 490-Environmental Community Engagement
- EVS 497-Undergraduate EVS Practicum
- EVS 501-Introduction to Environmental Problems (graduate-level, revised course)
- EVS 524-Environmental Nonprofit Organizations (graduate, new course)
- EVS 525-Foundations of Environmental Education (graduate-level, revised course)
- EVS 528-Environmental Interpretation in Protected Areas (graduate, new course)
- EVS 597-Graduate EVS Practicum

Virginia Tech

- FREC 3524-Environmental Interpretation

St. George's University

- BIOL 211-Conservation and the Environment
- BIOL 215-Biology and Diversity of Life
- MBIO 207-Caribbean Living Oceans
- BIOL 217-Grenada Wildlife and Habitats
- BIOL 200-Botany (new course)
- BIOL 201-Natural History of Grenada

PEER-REVIEWED PUBLICATIONS & PROCEEDINGS

(student collaborators underlined)

1. Meier, E., Powell, R. B., Stern, M. J., **Frensley, B. T.**, and Sene-Harper, A. (in review). *Appropriateness and use of civic engagement, advocacy, and behavior change techniques in environmental education across the U.S.* (submitted to Environmental Education Research).
2. Merritt, E., Stern, M. J., Powell, R. B., and **Frensley, B. T.** (2023). Benefits of participation in a community of practice focused on evaluation and programmatic improvement for environmental educators. *Evaluation and Program Planning*. DOI: 10.1016/j.evalprogplan.2023.102317
3. Powell, R. B., Stern, M. J., and **Frensley, B. T.** (2022). Which approaches lead to better outcomes? Evidence from a national study of EE field trip programs for adolescent youth in the United States. *Environmental Education Research*. DOI: 10.1080/13504622.2022.2145270
4. **Frensley, B. T.**, Stern, M. J., Powell, R. B., and Sorice, M. G. (2022). Investigating the links between student's basic psychological needs, engagement, and environmental literacy at a residential environmental education center. *The Journal of Environmental Education*. DOI: 10.1080/00958964.2022.2081654
5. Bannister, L., Powell, R. B., Stern, M. J., **Frensley, B. T.**, and Wright, B. A. (2022). Reorienting training in the time of Covid-19 and social justice movements. *Applied Environmental Education and Communication*. DOI: 10.1080/1533015X.2022.2078439
6. **Frensley, B. T.**, Stern, M. J., Powell, R. B., Blackwell, M. J. (2022). Exploring the links between teaching approaches and student outcomes at a residential setting. *Environmental Education Research*. DOI: 10.1080/13504622.2022.2044454
7. Merritt, E., Stern, M. J., Powell, R. B., **Frensley, B. T.** (2022). A systematic literature review to identify evidence-based principles for online environmental education programs. *Environmental*

Education Research. DOI:10.1080/13504622.2022.2032610

8. Stern, M. J., Powell, R. B., **Frensley, B. T.** (2022). Interpretation and environmental education on public lands: Lessons from research and new directions. *Journal of Park and Recreation Administration*. DOI: 10.18666/JRPA-2021-1103
9. Stern, M. J., Powell, R. B., and **Frensley, B. T.** (2021). How do environmental education field trips for adolescent youth in the United States influence audiences of different grade level, race, and socioeconomic class? *Environmental Education Research*. DOI: 10.1080/13504622.2021.1990865
10. **Frensley, B. T.**, Stern, M. J., and Powell, R. B. (2020). Does student enthusiasm equal learning? The mismatch between observed and self-reported student engagement and environmental literacy outcomes in a residential setting. *The Journal of Environmental Education*. DOI: 10.1080/00958964.2020.1727404
11. Powell, R.B., Stern, M. J., **Frensley, B.T.**, and Moore, D. (2019) Identifying and developing crosscutting environmental education outcomes for adolescents in the 21st Century (EE21). *Environmental Education Research*, 25(9), 1281-1299. DOI: 10.1080/13504622.2019.1607259
12. Huang, J., Hmelo-Silver, C., Jordan, R., **Frensley, T.**, Gray, S., Newman, G., and Stern, M. (2018). Scientific discourse of citizen scientists: Models as a boundary object for collaborative problem solving. *Computers in Human Behavior*. DOI: 10.1016/j.chb.2018.04.004
13. **Frensley, T.**, Crall, A., Stern, M. J., Jordan, R., Gray, S., Prysby, M., Newman, G., Hmelo-Silver, C., Mellor, D., and Huang, J. (2017). Bridging the benefits of online and community supported citizen science: A case study on motivation and retention with conservation-minded volunteers. *Citizen Science: Theory and Practice*, 2(1), 4. DOI: <http://doi.org/10.5334/cstp.84>
14. Huang, J., Hmelo-Silver, C., Jordan, R., **Frensley, T.**, Gray, S., and Newman, G. (June 2017). *Scientific discourse of citizen scientists: A collaborative modeling as a boundary object*. The 12th International Conference on Computer Supported Collaborative Learning - Proceedings, Philadelphia, Pennsylvania.
15. Stern, M. J., **Frensley, B. T.**, Powell, R. B., and Ardoin, N. M. (2017). What difference do role models make? Investigating outcomes at a residential environmental education center. *Environmental Education Research*, DOI: <https://doi.org/10.1080/13504622.2017.1313391>
16. Gray, S., Jordan, R., Crall, A., Newman, G., Hmelo-Silver, C., Huang, J., Novak, W., Mellor, D., **Frensley, T.**, Prysby, M., and Singer, A. (2017). Combining participatory modeling and citizen science to support volunteer conservation action. *Biological Conservation*, 208, 76-86. DOI: <https://doi.org/10.1016/j.biocon.2016.07.037>

BOOK CHAPTERS

1. Powell, R. B., Stern, M. J., and **Frensley, B. T.** (2020). Crosscutting outcomes for environmental education programming in national parks. In J. Thompson & A. Houseal (Eds.), *America's largest classrooms: What we learn from our National Parks*. University of California Press, Berkeley, CA.

MANUSCRIPTS IN PROGRESS

(student collaborators underlined)

1. **Frensley, B. T.**, Busch, A., and Rotenberg, J. (in progress). *Longer-term outcomes from participation in a contributory citizen science project: The painted bunting observation team*. Manuscript in preparation.
2. Anderson, K. A., Stern, M. J., Powell, R. B., and **Frensley, B. T.** (in progress). *Lessons learned from an evidence-based learning network*. Manuscript in preparation.
3. Goldsberry, S., Coakley, A., **Frensley, B. T.**, and Mulstein, H. (in progress). *Outcomes from student participation in a distance learning "at-home" lab program for high school students*. Manuscript in preparation.
4. McBride, D. M., **Frensley, B. T.**, Bresnahan, P., Brewin, B., Riveria-Cavallo, S. (in progress). *Using evaluation and adaptive management to improve the development of a large-scale participatory*

science network. Manuscript in preparation

5. **Frensley, B. T.**, Monteiro, M., Hao, H., and Holland, H. (in progress). *Does interpretive signage enhance positive recycling behaviors: A case study at a university food court.* Manuscript in preparation.
6. Peadon, B., **Frensley, B. T.**, Long, A., and Taylor, A. (in progress). *Investigating university student's environmental literacy levels as a result of participation in introductory environmental science courses.* Manuscript in preparation.
7. **Frensley, B. T.**, Peadon, B., Long, A., and Taylor, A. (in progress). *Investigating the role of the theory of planned behavior and environmental literacy in university students.* Manuscript in preparation.
8. Bell, H., and **Frensley, B. T.** (in progress). *Measuring ocean literacy and more: A case study from a youth marine field trip evaluation in Cape Town, South Africa.* Manuscript in preparation.
9. **Frensley, B. T.**, Bell, H. (in progress). *A novel approach to fostering social-emotional learning skills in a marine field education program for underserved South African youth.* Manuscript in preparation.
10. Holmes, A., Stallard, I., **Frensley, B. T.**, and Lee, M. (in progress). *Does attending a fire education have any impact on participants? Findings from an evaluation of the Fire in the Pines festival.* Manuscript in preparation.
11. Goldsberry, S., Buggy, K., **Frensley, B. T.**, and Mulstein, H. (in progress). *Outcomes from a residential marine and STEM summer camp program for rising seniors: A case study on the Oceans 17 program.* Manuscript in preparation.
12. McBride, D. M., Bresnahan, P., **Frensley, B. T.**, Moran, E. (in progress). *Outcomes from an immersive marine engineering summer experience for diverse high school students.* Manuscript in preparation

TECHNICAL REPORTS, PUBLIC & WHITE PAPERS

(student collaborators underlined)

1. Stallard, I., and **Frensley, B. T.** (2024). Fire in the Pines 2023 evaluation report. The Nature Conservancy of North Carolina.
2. Bell, H., and **Frensley, B. T.** (2023). Ocean Guardians Workshop Final Evaluation Report. I AM WATER: Ocean Conservation, South Africa.
3. Holmes, A., and **Frensley, B. T.** (2023). Fire in the Pines 2022 evaluation report. The Nature Conservancy of North Carolina.
4. Bell, H., and **Frensley, B. T.** (2022). Ocean Guardians Workshop Interim Evaluation Report. I AM WATER: Ocean Conservation, South Africa.
5. Coakley, A., and **Frensley, B. T.** (2022). Isaac Bear Early College Hybrid Program Evaluation: Final Report. UNCW MarineQuest.
6. Anderson, K., Stern, M. J., Powell, R. B., and **Frensley, B. T.** (2021). National Park Foundation open outdoors for kids hybrid learning grant: Interim report. The National Park Foundation.
7. Einig, K. L., Patterson, R. G., Toskas, A. O., and **Frensley, B. T.** (2021). Fire in the Pines 2020 evaluation report. The Nature Conservancy of North Carolina.
8. Merritt, E., Stern, M. J., Powell, R. B., and **Frensley, B. T.** (2020). *Promising principles to enhance distance learning in environmental education.* Directions, Journal of the Association of Nature Center Administrators.
9. Munden, M. P., and **Frensley, B. T.** (2020). Fire in the Pines 2019 pilot evaluation report. The Nature Conservancy of North Carolina.
10. Hermann, S. R., Alward, C. L., and **Frensley, B. T.** (2019). Pilot UNCW MarineQuest field trip evaluation report.
11. Munden, M. P., and **Frensley, B. T.** (2019). Fire in the Pines 2018 evaluation report. The Nature Conservancy of North Carolina.
12. Marstall, A., and **Frensley, B. T.** (2019). Final pilot evaluation report for the UNCW Surfriider

Foundation Club.

13. **Frensley, B. T.** and Stern, M. J. (2018). NorthBay Education Foundation environmental education research report.
14. **Frensley, B. T.** and Stern, M. J. (2018). NorthBay Education Foundation 2016-17 evaluation report.
15. **Frensley, B. T.**, Stern, M. J, and Powell, R. B. (2018). U.S. Forest Service partnership freshwater snorkeling pilot program evaluation report.
16. **Frensley, B. T.** and Stern, M. J. (2017). NorthBay Education Foundation 2015-16 evaluation report.
17. Stern, M. J., and **Frensley, B. T.** (2015). NorthBay Education Foundation 2014-15 evaluation report.

DOCTORAL DISSERTATION

1. **Frensley, B. T.** (2018). *Investigating the links between lesson characteristics, student engagement, and outcomes at a residential environmental education program*. PhD Dissertation. Virginia Tech.

RESEARCH SYMPOSIUM & CONFERENCE PRESENTATIONS

1. Bell, H., **Frensley, B. T.*** (2024). *Measuring ocean literacy and more: Outcomes from a two-day marine education program for South African youth*. Ocean Sciences Meeting (virtual), February 2024. (*non-presenting co-author).
2. Bresnahan, P. J., **Frensley, B. T.**, McBride, D., Thompson, L., O’Neil, S., Hill, S., and Moran, E. (2023). *Investigating diverse outcomes for high school students after participation in a four-week, intensive, research-based summer course titled Applied Coastal Science and Engineering*. American Geophysical Union (AGU) Conference, December 2023, San Francisco, CA.
3. Stern, M. J., Powell, R.B., **Frensley, B. T.**, Anderson, K. (2023). *What leads to better outcomes? Evidence from a national study*. North American Association for Environmental Education (NAAEE) Virtual Conference, October 2023.
4. Anderson, K., Stern, M. J., Powell, R.B., and **Frensley, B. T.** (2023). *Lessons learned from a community of practice focused on evidence-based learning*. North American Association for Environmental Education (NAAEE) Virtual Conference, October 2023.
5. Powell, R. B., Stern, M. J., and **Frensley, B. T.** (2023). *Lessons from a national study of EE field trip programs*. North American Association for Environmental Education (NAAEE) Research Symposium, October 2023.
6. McBride, D., **Frensley, B. T.**, Bresnahan, P., and Brewin, B. (2023). *Helping make sense of satellite ocean imagery: Introduction to the SeaHawk/HawkEye citizen science project*. Virtual presentation, National Marine Educators Association Conference, July 2023
7. Bresnahan, P.J., **Frensley, B.T.**, Brewin, R.J.W., Brewin, T., McBride, D., Rivero-Calle, S., Briggs, E., Rodriguez, A., Edwards, L., Leonard, L., LaClair, C., Faircloth, D., Wells, D. (2023) *Bridging observational voids with cutting-edge, affordable, in-situ sensors and public participation*. Global Marine Science Summit, Wilmington, NC, April 2023.
8. Bell, H., and **Frensley, B. T.** (2022). *Outcomes of a novel two-day program on South African youth*. Environmental Educators of North Carolina, September 2022
9. Ahmed, N., Fischer, H., Phillips, T., **Frensley, B. T.**, Del Bianco, V. (2022). *Ideas to action session: Culturally responsive and equitable evaluation*. Citizen Science Association Virtual Conference, May 2022
10. Stern, M. J., Powell, R. B., **Frensley, B. T.**, Merritt, E., Kern, M., and Kilby, A. (2021). *A community improving practice: Lessons from an evidence-based learning network*. North American Association for Environmental Education (NAAEE) Conference, Virtual due to COVID-19, October 2021
11. Merritt, E., Stern, M. J., Powell, R. B., **Frensley, B. T.**, Pownall, M., Thorpe, E., and Garcia, J. (2021). *Zooming in on successful online programs*. North American Association for Environmental Education (NAAEE) Conference, Virtual due to COVID-19, October 2021

12. **Frensley, B. T.**, Powell, R. B., and Stern, M. J. (2021). *What leads to better EE field trip outcomes for youth? Evidence from a nationwide study*. Environmental Educators of North Carolina (EENC)/Southeastern Environmental Education Alliance (SEEA) Conference, September 2021. (accepted but withdrew from conference due to COVID-19)
13. **Frensley, B. T.**, Powell, R. B., Stern, M. J., Merritt, E. (2021). *What leads to better online EE programs for youth? Learning from and with each other*. Environmental Educators of North Carolina (EENC)/Southeastern Environmental Education Alliance (SEEA) Conference, September 2021. (accepted but withdrew from conference due to COVID-19)
14. Fisher, H., Phillips, T., Sandford-Dolly, C., and **Frensley, B. T.** (2021). *Program evaluation 101: Evaluation basics and logic models Part II*. CitSciVirtual Conference, May 2021.
15. Fisher, H., Phillips, T., Sandford-Dolly, C., and **Frensley, B. T.** (2021). *Program evaluation 101: Evaluation basics and logic models Part I*. CitSciVirtual Conference, May 2021.
16. Fisher, H., Phillips, T., Sandford-Dolly, C., and **Frensley, B. T.** (2021). “Ask me anything” *Research and Evaluation Working Group: Surveys, focus groups, and interviews*. CitSciVirtual Conference, May 2021.
17. Powell, R. B., Stern, M. J., and **Frensley, B.T.** (2020). *What leads to better outcomes?* North American Association for Environmental Education (NAAEE) Conference (online due to COVID-19).
18. Powell, R. B., Stern, M. J., and **Frensley, B. T.** (2019). *EE21: Opportunities for evidence-based, networked learning in EE*. North American Association for Environmental Education (NAAEE) Conference, Lexington, Kentucky.
19. Stern, M. J., Powell, R. B., and **Frensley, B. T.** (2019). *Questioning our assumptions with real data: What makes EE better?* North American Association for Environmental Education (NAAEE) Conference, Lexington, Kentucky.
20. Dumas, C. and **Frensley, B. T.** (2019). *Citizen science vs. survey design—a comparison of MyCountFish and M.R.I.P.* Joint American Fisheries Society and The Wildlife Society Conference, Reno, Nevada
21. **Frensley, B. T.**, Stern, M. J., and Powell, R. B. (2018). *Investigating the links between program characteristics, student engagement, and outcomes*. North American Association for Environmental Education (NAAEE) Conference, Spokane, Washington.
22. Powell, R. B., Stern, M. J., **Frensley, B. T.**, and Kelinbort, T. (2018). *EE21: Crosscutting outcomes for evaluating EE in the 21st century*. North American Association for Environmental Education (NAAEE) Conference, Spokane, Washington.
23. Stern, M. J., Powell, R. B., **Frensley, B. T.**, Kelinbort, T, Pratson, D., and Lee, H. (2018). *What leads to better outcomes in environmental education?* North American Association for Environmental Education (NAAEE) Conference, Spokane, Washington.
24. Powell, R. B., Stern, M. J., and **Frensley, B. T.** (2018). *Developing cross-cutting outcomes for environmental education*. International Symposium for Society and Resource Management, Park City, Utah. June 19, 2018.
25. **Frensley, B. T.**, Stern, M. J., and Powell, R. B. (2017). *Investigating the links between teaching approaches, student engagement, and outcomes*. North American Association for Environmental Education (NAAEE) Conference, San Juan, Puerto Rico. (accepted but conference cancelled due to Hurricane Maria)
26. **Frensley, B. T.**, Stern, M. J., and Powell, R. B. (2017). *Novel methods to investigate teaching approaches, student engagement, and outcomes*. North American Association for Environmental Education (NAAEE) Research Symposium, San Juan, Puerto Rico. (accepted but conference cancelled due to Hurricane Maria)
27. Gray, S., Jordan, R., **Frensley, B. T.**, Huang, J., and Gallo, J. A. (May 2017). *Symposium: Designing collaborative science projects and tools for conservation*. CitSci2017 (Citizen Science Association Conference), St. Paul, Minnesota.
28. Huang, J., Hmelo-Silver, C., Jordan, R., Gray, S., **Frensley, T.**, Stern, M., and Newman, G. (May 2017). *Exploring citizen science engagement in collaborative scientific practices*. American Educational

Research Association (AERA) Annual Meeting.

- Jordan, R., Crall, A., Gray, S., and **Frensley, B. T.** (May 2016). *Collaborativescience.org*. Video showcase at the National Science Foundation STEM for All Video Showcase: Research and Design for Impact.

INVITED WORKSHOPS, WEBINARS, & PRESENTATIONS

- McBride, D., Frensley, B. T.,** Bresnahan, P., and Brewin, B. (2023). *Helping make sense of satellite ocean imagery: Introduction to the SeaHawk/HawkEye citizen science project*. Cape Fear Arch Conservancy Meeting, October 2023
- Frensley, B. T., Holmes, A.,** Ly, M., Burmester, N., Tholen, B. (2023). *Fire in the Pines and fire education festival evaluation projects*. Virtual meeting of the Southeastern United States Fire Festivals Learning Group. May 23, 2022
- Bell, H., and Frensley, B. T.** (2022). *Outcomes of a novel two-day program on South African youth*. Invited talk at the North Carolina Environmental Education Online Meeting, December, 2022.
- Frensley, B. T.,** Posey, M., Long, J., Lewis, R., and Bresnahan, P. (2022). “*Citizen science: Engaging community participation in data collection*”. Love Data Week Panel, UNCW. February 2022 (panel moderator).
- Frensley, B. T.,** Fischer, H., Phillips, T., Ahmed, N., Del Bianco, V. (2021). “*Ask me anything*” *Research and Evaluation Working Group: Survey design*. Workshop for Citizen Science Association, September 2021.
- Wiggins, M., Tolley, L., **Frensley, B. T.,** Davis, L, Navarro, J. (2021). *Workshop for approval of EnRoads Criteria 1 training from Climate Interactive for NC EE Certification credit*. NC EE Certification Subcommittee, September 2021.
- Environmental Educators of North Carolina. (2021). *Connection to nature assessment and vision workshop*. Virtual workshop participant for EENC. February 2021.
- Merritt, E., Stern, M. J., Powell, R. B., and **Frensley, B. T.** (2020). *Design principles for online EE programs*. Virtual webinar for the Association of Nature Center Administrators summit (online due to COVID-19). September 2020.
- Merritt, E., Stern, M. J., Powell, R. B., and **Frensley, B. T.** (2020). *What works in online EE programming?* Virtual webinar for the North American Association for Environmental Education (online due to COVID-19). September 2020.
- Braun, S., Powell, R. B., **Frensley, B. T.,** Stern, M. J., Brooks, S., Askew, K., Clark, C., McCann, E., DeMattia, L., Roth, W. (2020). *EE21 student outcomes and the development of common measures for evidence-based learning evaluation workshop*. Oregon Outdoor School for All! Workshop, Lebanon, Oregon, January 2020.

GUEST LECTURES & COMMUNITY OUTREACH

- Frensley, B. T.** (2024). Applied Learning Introduction: EVS Department. EVS 295, University of North Carolina Wilmington
- McBride, D., Frensley, B. T.,** and Bresnahan, P. J. (2023). Citizen science. Honors College, University of North Carolina Wilmington
- Frensley, B. T.,** and Holland, K. (2021). Social science research from the field. Research Field Methods (EVS 515), University of North Carolina Wilmington.
- Frensley, B. T.,** and Brink, C. T. (2020). Are Cape Fearians engaging more with nature? WHQR CoastLine radio show (May 20th).
- Frensley, B. T.** (2020). Citizen science and climate change (EVS 485), University of North Carolina Wilmington.
- Frensley, B. T.** (2020). Identifying best practices in EE observation research methods training, Part II (FREC 5974: Environmental Education Research), Clemson University and Virginia Tech.

7. **Frensley, B. T.** (2020). Identifying best practices in EE observation research methods training, Part I (FREC 5974: Environmental Education Research), Clemson University and Virginia Tech.
8. **Frensley, B. T.** (2020). Communicating about climate change (EVS 485), University of North Carolina Wilmington.
9. **Frensley, B. T.** (2019). Education and social science to address complex environmental problems. Human Dimensions of Natural Resource Management (EVS 360), University of North Carolina Wilmington.
10. **Frensley, B. T.** (2019). Introduction to Qualitative Research Part I. Fundamentals of Applied Environmental Research (EVS 519), University of North Carolina Wilmington.
11. **Frensley, B. T.** (2019). Introduction to Qualitative Research Part II. Fundamentals of Applied Environmental Research (EVS 519), University of North Carolina Wilmington.
12. **Frensley, B. T.** (2018). Education and social science to address complex environmental problems. Human Dimensions of Natural Resource Management (EVS 360), University of North Carolina Wilmington.

CONFERENCE POSTERS

(student collaborators underlined)

1. Rother, M., **Frensley, B. T***, Wilson, J. C., and Tippet, J. E. (2024). *Remnant old-growth longleaf pine (Pinus palustris) in the Cape Fear Region, North Carolina, USA*. American Association of Geographers Conference, Honolulu, Hawaii, April (*non-presenting co-author).
2. McBride, D., **Frensley, B. T.**, Bresnahan, P., and Brewin, B., Wynne, J. (2023). *Using evaluation and adaptive management to build capacity for a collaborative citizen science project to enhance understanding of coastal satellite imagery*. American Geophysical Union Conference, San Francisco, CA.
3. Bresnahan, P., Brewin, B., **Frensley, B. T.**, Brewin, T., McBride, D., Wynne, J., Torkelson, M., Rivero-Calle, S., Scott, A., Hong, L., Feldman, G., Holmes, A., Morrison, J. (2023). *Water quality monitoring and remote sensing validation with novel, technology-enabled citizen science devices*. ASLO Aquatic Sciences Meeting, Palma de Mallorca, Spain.
4. McBride, D., **Frensley, B. T.**, Bresnahan, P., and Brewin, B. (2023). *Developing a public engagement network for the SeaHawk/HawkEye nanosatellite project*. Poster session at the Global Marine Science Summit, Center for Marine Science @ UNCW.
5. McBride, D., **Frensley, B. T.**, Bresnahan, P., and Brewin, B. (2023). *Developing a public engagement network for the SeaHawk/HawkEye nanosatellite project*. Poster session at the virtual C*Sci Conference.
6. Busch, A., **Frensley, B. T.**, and Rotenberg, J. (2023). *Longer-term outcomes of participation in a contributory citizen science project*. Poster session at the virtual C*Sci Conference.
7. Bell, H., and **Frensley, B. T.** (2022). *Outcomes of a novel two-day program on South African youth*. Poster session presented at the North American Association for Environmental Education Conference, Tucson, Arizona.
8. Munden, M. P., Alward, C. L., Pelkey, S. N., and **Frensley, B. T.** (2019). *Deaf community inclusivity in environmental education: A pilot study*, Poster session presented at the Environmental Educators of North Carolina Conference, Gastonia, North Carolina.
9. **Frensley, B. T.**, Stern, M.J., Powell, R.B., and Ardoin, N.M. (2018). *Do role models matter? Exploring their influence on student outcomes*, Poster session presented at the North American Association for Environmental Education (NAAEE) Conference, Spokane, Washington.
10. **Frensley, B. T.**, Stern, M.J., Powell, R.B., and Ardoin, N.M. (2017). *Do role models matter? Exploring their influence on student outcomes*, Poster session presented at the North American Association for Environmental Education (NAAEE) Conference, San Juan, Puerto Rico.
11. **Frensley, B. T.** (2015). *Investigating teaching approaches and student outcomes at the NorthBay Adventure Center*, Poster session presented at the Annual Connections Conference (The Center for Efficacy in Higher Education), Blacksburg, Virginia.

GRADUATE STUDENT RESEARCH, COMMITTEES, & DIS PROJECTS

1. Goldsberry, S. (2024). Manuscript development for two UNCW MarineQuest evaluation projects. *EVS 595: Graduate Capstone (advisor)*. University of North Carolina Wilmington.
2. Wynne, J. (2023- 2024). Low-cost multiparameter water instrument development for citizen science-based evaluation of satellite imagery. *Master's thesis committee (member)*. University of North Carolina Wilmington (M.S. Marine Science).
3. Stallard, I. (2023 – 2024). Evaluating the Fire in the Pines festival and youth Field Day educational programs. *Research Assistant*. University of North Carolina Wilmington.
4. Holmes, A. (2023). Manuscript writing on the evaluation of the Fire in the Pines festival. *Directed Independent Study (faculty advisor)*. University of North Carolina Wilmington
5. Goldsberry, S. (2023). Evaluating the outcomes from a novel distance learning science-lab focused program with high school students. *Directed Independent Study (faculty advisor)*. University of North Carolina Wilmington
6. McBride, D. (2022-2024). Development of a citizen science project to collect nationwide in-situ water color and clarity data for validation with SeaHawk/HawkEye and other remote sensing satellites. *Research Assistant*. University of North Carolina Wilmington.
7. Holmes, A. (2022-2023). Evaluating the Fire in the Pines festival. *Research assistant*. University of North Carolina Wilmington
8. Bell, H. (2021-2023). Partnership program evaluation project for the I AM WATER Ocean Guardians flagship youth environmental and marine education program. *Research assistant*. University of North Carolina Wilmington
9. Busch, A. (2021-2023). Investigating the longer-term outcomes for adults after participation in a citizen science project. *Research assistant*. University of North Carolina Wilmington
10. Buggy, K. (2021-2023). Evaluating the UNCW MarineQuest OCEANS 17 summer high school camp program. *Research assistant*. University of North Carolina Wilmington.
11. Turner, S. C. (2021). Education Without Walls (EWOW) program evaluation. *Directed Independent Study (faculty co-advisor with Dr. Hunter Holland)*. University of North Carolina Wilmington.
12. Meirer, E. (2020-2021). Changing youth behaviors through environmental education: Perspectives across the field. (*master's degree committee member*). Clemson University
13. Bannister, L. (2020-2021). Professional development needs assessment for environmental educators. (*master's degree committee member*). Clemson University
14. Einig, K. L., Patterson, R. G., Toskas, A. O. (2020-2021). Fire in the Pines online program evaluation. *Research assistants*. University of North Carolina Wilmington.
15. Munden, M. (2020). Fire in the Pines pilot evaluation. *Research assistant*. University of North Carolina Wilmington.
16. Alward, C. L. (2019). Environmental nonprofit management and leadership reflection paper. *Directed Independent Study. (faculty advisor)* University of North Carolina Wilmington
17. Munden, M., Alward, C. L., and Pelkey, S. N. (2019). Inclusivity in nonformal environmental education for the deaf community: A pilot study. *EVS 591 original research project (faculty advisor)*.
18. Hermann, S.R., and Alward, C. L. (2019). UNCW MarineQuest field trip pilot program evaluation. *Research assistants*. University of North Carolina Wilmington
19. Munden, M. (2019). Impacts of citation usage on undergraduate student retention. *Directed Independent Study. (faculty co-advisor with Dr. Anthony Snider)* University of North Carolina Wilmington.

UNDERGRADUATE STUDENT RESEARCH, HONORS, & DIS PROJECTS

1. Cooles, G. (2023-2024). Evaluating the impacts of the youth Ability Gardens program. *Honors Thesis*. University of North Carolina Wilmington. (*thesis committee chair*)
2. Murray, T. (2023-2024). Investigating student learning outcomes from different forms of scientific

- communication. *Honors Thesis*. University of North Carolina Wilmington. (*thesis committee member*)
3. Pressley, N. (2023). Fieldwork with Brunswick County Habitat for Humanity. *Directed Independent Study (faculty advisor)*. University of North Carolina Wilmington
 4. Cole, G. (2023). Fieldwork with the North Carolina Division of Marine Fisheries. *Directed Independent Study (faculty advisor)*. University of North Carolina Wilmington
 5. Stokes, J. (2023). Developing environmental interpretation resources at Carolina Beach State Park. *Directed Independent Study (faculty advisor)*. University of North Carolina Wilmington.
 6. Irlbeck, R. (2023). Investigating human dimensions of natural resources management. *Directed Independent Study (faculty advisor)*. University of North Carolina Wilmington
 7. Peadon, B. (2022-2023). Evaluating environmental literacy rates of introductory UNCW environmental science classes. *Honors Thesis*. University of North Carolina Wilmington. (*thesis committee chair*).
 8. Montero, M. (2022-2023). Understanding the influence of interpretive signage on university student's recycling and waste disposal behaviors. *Honors Thesis*. University of North Carolina Wilmington. (*thesis committee chair*).
 9. Golden, R., and Janovetz, C. (2022). Developing environmental education and environmental interpretive outdoor learning resources for the Friends School of Wilmington. *Directed Independent Study (faculty advisor)*. University of North Carolina Wilmington.
 10. Coakley, A. (2022). Evaluating a novel MarineQuest distance learning STEM program for high school students. *Directed Independent Study (faculty advisor)*. University of North Carolina Wilmington.
 11. Norman, K. (2021-2022). Understanding community members values related to park planning (title in development). *Honors Thesis*. University of North Carolina Wilmington. (*thesis committee member*).
 12. Walsh, R. (2021-2022). The utility of probiotics to enhance growth rates in coral recruits (title in development). *Honors Thesis*. University of North Carolina Wilmington. (*thesis committee member*).
 13. Mondoro, J. (2021). North Carolina Museum of Natural History Whiteville outdoor signage project. *Directed Independent Study (faculty advisor)*. University of North Carolina Wilmington.
 14. Verry, J. (2020). Ev-Henwood interpretive trail map and signage. *Directed Independent Study (faculty advisor)*. University of North Carolina Wilmington
 15. Carvalho-robinson, J. (2020). Development of MarineQuest volunteer motivations, barriers, and outcomes survey. *Directed Independent Study (faculty advisor)*. University of North Carolina Wilmington
 16. Greene, E. E. (2020). UNCW students' environmental literacy and perceptions about a potential environmental literacy-related course. *Honors Thesis*. University of North Carolina Wilmington. (*thesis committee member*)
 17. Price, B. E. (2019). Education about ocean pollution through a video game. *Honors Thesis*. University of North Carolina Wilmington. (*thesis committee member*)
 18. Marstall, A. K. (2019). UNCW Surfrider Foundation Chapter motivations, barriers, and outcomes evaluation research. *Undergraduate Senior Research Project*. University of North Carolina Wilmington. (*research advisor*)

RESEARCH & EDUCATION GRANTS & FUNDING

1. **Frensley, B.T.** (2023–2024). “Expansion of the program evaluation for the I AM WATER flagship Ocean Guardians youth program in Cape Town, South Africa.” \$5,000, *funded (Lead PI)*
2. **Frensley, B. T.** (2022-2023). “Fire in the Pines and field trip program evaluations.” The Orton Foundation. \$3,500, *funded*.
3. Bresnahan, P., Rivero-Calle, S., Brewin, B., and **Frensley, B. T.** (2022-2025). “SOCON (Sustained Ocean Color Observations from Nanosatellites) Science Proposal.” The Gordon and Betty Moore Foundation. \$2,220,332, *funded (senior research personnel collaborating on citizen science, education, and evaluation project components totaling \$348,657)*.
4. **Frensley, B. T.** (2022). “Post-COVID project grant: research focus. \$1,250, *funded*

5. Rother, M., and **Frensley, B. T.** (2021-2022). “An assessment of old-growth longleaf pine in the Cape Fear Region of North Carolina.” North Carolina Policy Collaborative. *\$23,500, funded (Co-PI)*
6. **Frensley, B.T.** (2021–2023). “Development of a program evaluation for the I AM WATER flagship Ocean Guardians youth program.” *\$5,000, funded (Lead PI)*
7. Bresnahan, P., **Frensley, B.T.**, Kastner, R., Reinicke, D. (2021-2022). “A network of coastal communities for ocean research & learning: Building capacity to investigate ocean health and climate change,” National Science Foundation Convergence Accelerator Track E: Blue Economy. *\$749,533.45, not funded (Co-PI)*
8. Stern, M. J., Powell, R. B., **Frensley, B. T.** (2021-2022). “An evidence-based learning network for education in the national parks in the COVID era,” The National Park Foundation. *\$160,000, funded (Co-PI)*
9. **Frensley, B.T.** (2020-2021). “Fire in the Pines online program evaluation,” The Orton Foundation. *\$2,500, funded (Lead PI)*
10. Powell, R.B., Stern, M.J., and **Frensley, B.T.** (2020-2021). “Transitioning field trips to the online environment: An empirical study of what works best.” Spencer Foundation, *\$50,000, funded (Co-PI)*
11. **Frensley, B.T.** (2020). “Faculty development and course preparation for Fall 2020 in response to COVID-19.” UNCW-Academic Affairs. *\$1,000, funded*
12. **Frensley, B.T.** (2020). “Faculty development and course preparation for Fall 2020 in response to COVID-19.” UNCW-Academic Affairs. *\$1,000, funded*
13. **Frensley, B.T.** (2020). “Faculty development and course preparation for Fall 2020 in response to COVID-19.” UNCW-Academic Affairs. *\$1,000, funded*
14. Powell, R.B., Stern, M.J., and **Frensley, B.T.** (2019-2022). “Enhancing informal science learning and environmental education through collective evaluation. Institute of Museum and Library Services, National Leadership Grant. *\$858,578, not funded (Co-PI)*
15. Powell, R.B., Stern, M.J., and **Frensley, B.T.** (2019-2023). “What leads to better outcomes in informal STEM-based environmental education programs for youth?” National Science Foundation, Advancing Informal Science Learning (AISL) research in Service to Practice Grant. *\$1,944,840, funded (Co-PI)*
16. **Frensley, B.T.** (2019-2020). “Pilot evaluation of the Fire in the Pines festival.” The Orton Foundation. *\$3,000, funded (Lead PI)*
17. **Frensley, B.T.** (2018) “Project WET Training for EVS 463 class.” UNCW-Applied Learning Teaching Grant. *\$540, funded*
18. Stern, M.J., Powell, R.B., and **Frensley, B. T.** (2017-2018). “National Freshwater Snorkeling Program Evaluation.” U.S. Forest Service, NorthBay Education Foundation and NatureWatch. *\$10,000, funded (Co-PI)*
19. **Frensley B. T.**, Conservancy of Southwest Florida. (2011). “Environmental education outreach programs to area schools. Walmart Foundation. *\$75,000, funded*
20. **Frensley B. T.**, Conservancy of Southwest Florida. (2011). “Conservancy summer day camp scholarships.” Kara Foundation. *\$5,000, funded*
21. **Frensley B. T.**, Conservancy of Southwest Florida. (2011). “Conservancy nature center field tripscholarships and schoolteacher resource development.” Wells Fargo Foundation. *\$10,000, funded*
22. **Frensley B. T.**, Conservancy of Southwest Florida. (2011). “Environmental education outreach programs to area schools.” Bank of America Foundation. *\$10,000, funded*
23. **Frensley B. T.**, Conservancy of Southwest Florida. (2010). “Environmental education outreach programs to area schools.” Walmart Foundation. *\$30,000, funded*
24. **Frensley B. T.**, Conservancy of Southwest Florida. (2009). “Development of a Boys and Girls Club of Collier County partnership program.” van Otterloo Family Foundation. *\$100,000, funded*

AWARDS

Merritt Million Dollar Club University of North Carolina Wilmington	2023
Rising Researcher Award University of North Carolina Wilmington	2023
Outstanding Faculty Award Student Government Association, St. George's University, Grenada, West Indies	2013
Best Faculty of the Biology, Ecology & Conservation Department Student Government Association, St. George's University, Grenada, West Indies	2013
Top 40 Under 40 Award Gulfshore Life Business Magazine, Naples, Florida	2009

SERVICE TO THE PROFESSION

Advisory Committee State of North Carolina Environmental Education Certification Program	2018-present
Research and Evaluation Working Group Citizen Science Association	2020- 2023
Proposal Reviewer for National Science Foundation Advancing Informal STEM Learning (AISL) program	2018
Peer Reviewer for Academic Journal Journal of Interpretation Research (1) Conservation Biology (1) Citizen Science: Theory & Practice (1) Journal of Park and Recreation Administration Wildlife Society Bulletin (1) Environmental Education Research (3)	2017-present
Volunteer Virginia Statewide Environmental Education Certification Program	2017

SERVICE TO THE UNIVERSITY

UNCW EVS EE & Outreach Faculty Search Committee (Chair)	2023-present
UNCW EVS Applied Learning Coordinator	2023-present
UNCW Faculty Senate (EVS Representative)	2022-present
UNCW EVS Environmental Social Scientist Faculty Search Committee	2022-2023
UNCW EVS Majors and Minors Fair (Volunteer)	Fall 2022
UNCW EVS Wetlands Ecology and Management Faculty Search Committee	2021-2022
UNCW EVS Assessment Committee	2021-present
UNCW Faculty Annual Review Committee	2021
UNCW EVS Environmental Education Committee	2021
UNCW Campus Recreation Advisory Committee Chair	2020-2022
UNCW EVS Graduate Application Review Committee	2020-present

UNCW Majors and Minors Fair (Volunteer)	<i>Spring 2020</i>
UNCW EVS Taggart Scholarship Committee	<i>2020</i>
UNCW Water Festival (Volunteer)	<i>Spring 2020</i>
UNCW NAMEPA Club (Faculty Advisor)	<i>2019-present</i>
UNCW Majors and Minors Fair (Volunteer)	<i>Fall 2019</i>
UNCW Open House/Seahawk Saturday (Volunteer)	<i>Fall 2019</i>
UNCW Majors and Minors Fair (Volunteer)	<i>Fall 2018</i>
Freshman Orientation Committee (Arts and Sciences Coordinator) St. George's University, Grenada, West Indies	<i>2012-13</i>
Public Open Lecture Series Committee St. George's University, Grenada, West Indies	<i>2012-13</i>
Hiring and Steering Committee Florida Gulf Coast University & Conservancy of Southwest Florida	<i>2009-11</i>

SERVICE TO THE COMMUNITY

Friends School of Wilmington & Cape Fear Center for Inquiry EE Project UNCW graduate students development and delivery of EE programs for students in grades K – 8	<i>2024</i>
I AM WATER: Ocean Guardians Workshop Evaluation Project Expanded evaluation project for nonprofit in Cape Town, South Africa	<i>2023-2024</i>
The Nature Conservancy of North Carolina Fire in the Pines Festival Evaluation UNCW graduate student evaluation research project	<i>2023-2024</i>
Mad Mole Interpretive Signage Project UNCW graduate students developing signage for sustainability efforts at this business.	<i>2023</i>
Halyburton Park Interpretive Signage Project UNCW undergraduate students developing signage for installation at park.	<i>2023</i>
Friends School of Wilmington EE Project UNCW graduate students development and delivery of EE programs for students in grades K – 8	<i>2023</i>
The Nature Conservancy of North Carolina Fire in the Pines Festival Evaluation UNCW graduate student evaluation research project	<i>2022-2023</i>
I AM WATER: Ocean Guardians Workshop Evaluation Project UNCW graduate student evaluation project for nonprofit in Cape Town, South Africa	<i>2022-2023</i>
UNCW MarineQuest Evaluation Project UNCW graduate student evaluation of the Oceans 17 marine science high school residential summer camp	<i>2022-2023</i>
Cape Fear Center for Inquiry Interpretive Signage Project UNCW undergraduate students development and delivery of EE programs for students in grades K – 8	<i>2022-2023</i>

Friends School of Wilmington Interpretive Signage Project UNCW undergraduate students directed independent study project	2022
Friends School of Wilmington EE Project UNCW graduate students development and delivery of EE programs for students in grades K – 8	2022
UNCW MarineQuest Evaluation Project UNCW undergraduate student evaluation for directed independent study	2022
North Carolina Azalea Festival “Parnell Natural Garden” Interpretive Project UNCW undergraduate students on-site education for visitors	2020-2022
North Carolina Museum of Natural Sciences Whiteville, Interpretive Signage UNCW undergraduate student directed independent study project	2021
The Nature Conservancy of North Carolina Fire in the Pines Festival Evaluation UNCW graduate student evaluation research project	2020-2021
North Carolina Museum of Natural Sciences Whiteville Interpretive Project UNCW undergraduate student environmental interpretive signage development for outdoor trail	2020
Education Without Walls (EWOW) Evaluation Project UNCW graduate student evaluation research project with local nonprofit organization	2019-2021
UNCW MarineQuest Evaluation Project UNCW graduate student evaluation research project for middle and high school field trip programs	2019-2020
The Nature Conservancy of North Carolina Fire in the Pines Festival Evaluation UNCW graduate student evaluation research project	2019-2020
Advisory Volunteer S.E.E.D.S. & Price House Nature Center, Blacksburg, Virginia	2017
Board of Directors Ocean Spirits Inc.-Sea Turtle Research & Conservation, Grenada, West Indies	2014
Founding Executive Committee Member, Advisor Boy Scouts of America Explorers Post 1450, Naples, Florida	2004-06
Vice Chairman, Volunteer Surfrider Foundation Grand Strand Chapter, Myrtle Beach, SC	2001-04

PROFESSIONAL MEMBERSHIPS

North American Association for Environmental Education

Environmental Educators of North Carolina

Citizen Science Association

Association for the Sciences of Limnology and Oceanography

TRAININGS & CERTIFICATES

DocuSign, UNCW	<i>2023</i>
Creating Successful Student Video Projects, UNCW ADAPT 2020 Training	<i>2020</i>
Building an Inclusive Online/Hybrid Course & Online Teaching, UNCW ADAPT Training	<i>2020</i>
Using VoiceThread for Student Presentations and Discussions, UNCW ADAPT Training	<i>2020</i>
How to Deepen Dialogue in Online Discussion Boards, UNCW ADAPT Training	<i>2020</i>
Introduction to Microsoft Teams, UNCW ADAPT Training	<i>2020</i>
Creating Group Work in Canvas, UNCW ADAPT Training	<i>2020</i>
Conservation Training Certification, Open Standards for Practice of Conservation	<i>2013</i>
Miradi Certification, Adaptive Management Software for Conservation Projects	<i>2013</i>
NAAEE National Guidelines for Excellence Training	<i>2009</i>
National Certified Interpretive Guide, National Association for Interpretation (NAI)	<i>2006</i>
Certified Instructor, Florida Master Naturalist Program, UF Extension	<i>2005</i>
Projects WET, WILD, Learning Tree, and Flying Wild Trainings	<i>2004-2008</i>