

SCOTT P. SOWELL, Ph.D.

Darnell-Cookman Middle/High School, School of the Medical Arts
1701 North Davis Street, Jacksonville, FL 32209
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Education

2004 Ph.D., Science Education, Florida State University
2002 M.S., Science Education, Florida State University
1995 B.S., Biology, University of North Florida
1995 B.A., Spanish, University of North Florida

Licensure

Professional Certificate, Florida – Biology (6-12) & General Science (5-9)

Professional Employment

2018 - Present Consultant for AP Environmental Science
College Board

2008 - Present Teacher, Science Department Chair, Professional Development Facilitator
Darnell-Cookman Middle/High School of the Medical Arts (Jacksonville, FL)

2016/2017 Summer Teacher Fellow
Jacksonville Public Education Fund (Jacksonville, FL)

2015-2017 Adjunct Professor
The Art Institute of Jacksonville (Jacksonville, FL)
Courses Taught:
SCIA 125 Environmental Science

2005-2008 Assistant Professor
Cleveland State University (Cleveland, OH)
Department of Teacher Education, College of Education and Human Services
Courses Taught:
ECE 417/517 - Science Instruction in Preschool and the Primary Grades
EDM 317 - Teaching and Assessing Science in the Middle School
EDS 317/517 - Secondary Science Instruction and Assessment
EST 492 – Student Teaching in Secondary Education, Science
EST 596- Independent Study in Education

2004-2005 Postdoctoral Researcher
Florida State University
Department of Middle and Secondary Education, College of Education
Project Title:
*Working to measure the impact of professional development activities:
Developing an instrument quantifying science teachers' pedagogical
discontentment*

2000-2004 Graduate Teaching/Research Assistant
Florida State University
Department of Middle and Secondary Education, College of Education

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Project Titles:

Scientific Thinking and Internet Learning Technologies (STILT)
Really Exploring and Learning Meteorology (REALM)

Courses Taught:

EDM 3001 – Introduction to Middle Schools
SCE 5625 - Conceptual Learning in Middle School Science
MET 1010L – Introductory Meteorology Lab
SCE 4948 – Student Teaching (Science Education)

1999-2000 Teacher
Douglas Anderson School of the Arts (Jacksonville, FL)

Courses Taught:
Biology
Spanish I

1997-1999 Teacher
Damascus Community School (Damascus, Syria)

Courses Taught:
7th Grade Science
8th Grade Science
7th Grade Mathematics

1995-1997 Teacher
Kirby-Smith Middle School (Jacksonville, FL)

Courses Taught:
7th Grade Science
7th Grade Mathematics

Professional Affiliations

- National Science Teacher Association (NSTA)
- National Association of Biology Teachers (NABT)

Service/Recognitions

- Duval Soil and Water Conservation District, Conservation Teacher of the Year, 2018
- St. Johns Riverkeeper's Educator of the Year, 2017
- Leadership in Education, Leadership Florida, Inaugural Class, 2016
- Teacher Roundtable Steering Committee, Jacksonville Public Education Fund, 2015-Present
- Howard Hughes Medical Institute (HHMI) Biointeractive Ambassador, 2015-Present
- Mentor Teacher, University of North Florida's Educator Preparation Institute, 2014-Present
- Duval County Teacher of the Year, 2012
- Ex-officio board member, Jacksonville Public Education Fund, 2012-2013
- Steering committee member, WJCT TEACH Conference, 2012-Present
- Science Department Chair, Darnell-Cookman MS/HS, 2011-Present
- Professional Development Facilitator, Darnell-Cookman MS/HS, 2010 – Present

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- Mentor Teacher, Mentoring and Induction for Novice Teachers, Darnell-Cookman MS/HS, 2010-Present
- Member, School Leadership Team, Darnell-Cookman MS/HS, 2011-Present
- Sponsor, Envirothon Club, Darnell-Cookman MS/HS, 2013-Present
- Sponsor, Gay-Straight Alliance (GSA) Club, Darnell-Cookman MS/HS, 2012-Present

Funded Projects/Grants/Research

Sowell, S. (2016). *DC-SOMA Gay/Straight Alliance's Pride Project*. JASMYN (Jacksonville Area Sexual Minority Youth Network). (\$250.00).

Sowell, S. (2015). *DC-SOMA Recycles*. Earth Day Mini-Grant, Earth Day Jacksonville, Inc. (\$483.22).

Sowell, S. (2013). *Vermicomposting project*. PowerUp Jax, Jacksonville Public Education Fund. (\$650).

Sowell, S. (2011). *Living wall project*. Earth Day Mini-Grant, Earth Day Jacksonville, Inc. (\$475.98).

Sowell, S. & Price, A. (2008). *Incorporating 'video critique' assignments into teacher education coursework*. Center for Teaching Excellence, Cleveland State University. (\$2, 723).

Sowell, S., & Ball, D. (2007-2008). *Making the nature of science and scientific inquiry explicit components of the K-3 classroom*. Improving Teacher Quality State Grants Program, Ohio Board of Regents. (\$68,608)

Southerland, S.A., Granger, E., & Sowell, S. (August, 2004 – July, 2005). *Working to measure the impact of professional development activities: Developing an instrument quantifying science teachers' pedagogical (dis)contentment*. Multi-University Reading, Mathematics and Science Initiative, Learning Systems Institute, Florida State University. (\$47,435)

Refereed Presentations

Sowell, S. & Guilfoyle, T. (2018). *Using Data to Explore Ecological Pyramids and Energy Flow with HHMI BioInteractive Resources*. Presented at the National Association of Biology Teachers, Annual Conference, San Diego, CA.

Sowell, S. (2018). *Online Resources for Teaching Biomes and Ecosystem Structures*. Presented at the College Board's Advanced Placement Annual Conference, Houston, TX.

Sowell, S., & Fassler, A. (2018). *How Do Species Coexist? Niche Partitioning with HHMI BioInteractive*. Presented at the National Science Teachers Association Annual Conference, Atlanta, GA.

Sowell, S., & Ward, K. (2017). *Using DNA Metabarcoding to Understand Niche Partitioning in*

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- the African Savanna*. Presented at the National Association of Biology Teachers, Annual Conference, St. Louis, MO.
- Sowell, S., & Fassler, A. (2017). *Resources for Inquiry and Argumentation in AP Environmental Science*. Presented at the College Board's Advanced Placement Annual Conference, Washington, D.C.
- Sowell, S. (2017). *Plunging into Data about Climate Change and Coral Bleaching*. Presented at the National Science Teachers Association STEM Conference, Orlando, FL.
- Sowell, S., Shackelford, A., & Csar, T. (2017). *Teacher Roundtables: Engaging Teacher Leaders in Policy Reform Conversations*. Presented at the International Teacher Leadership Conference, Miami, FL.
- Sowell, S. (2016). *Climate Change and Coral Bleaching: A Student Inquiry Experience*. Presented at the annual meeting of the Florida Association of Science Teachers, Orlando, FL.
- Sowell, S., & Klein, C. (2016). *Engaging Students with Authentic Science Literature*. Presented at the annual meeting of the National Association of Biology Teachers, Denver, CO.
- Sowell, S., & Klein, C. (2016). *Coral Bleaching and the Nature of Science in the Classroom*. Presented at the annual meeting of the National Marine Educators Association, Orlando, FL.
- Sowell, S. & Csar, T. (2015). *Teacher Roundtables: Empowering Teacher Leaders to Enact Change*. Presented at the annual TEACH Conference, Jacksonville, FL.
- Sowell, S. (2014). *Refusing to Unlearn: One Science Teacher's Response to the Accountability Movement*. Presented at the annual TEACH Conference, Jacksonville, FL.
- Sowell, S. (2013). *Scientific inquiry and the common core ELA standards*. Presented at the annual TEACH Conference, Jacksonville, FL.
- Sowell, S. (2012). *Empowering young scientists: Students learning science by really doing science*. Presented at the annual TEACH Conference, Jacksonville, FL.
- Vonderwell, S., Wachira, P., Ferguson, R., Sowell, S., Kim, H.K., Jackson, D., & Price, A. (2008). *A professional learning community for developing inquiry-based lessons using handheld computers*. Paper presented at the annual meeting of the Society for Information Technology and Teacher Education, Las Vegas, NV.
- Southerland, S.A., Sowell, S., Granger, D.E., Kahveci, M., & Saka, Y. (2007). *Working to measure the impact of professional development activities: Offering an instrument to quantify science teachers' pedagogical discontentment*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, New Orleans, LA.
- Jackson, D., Sowell, S., & Gielow, J. (2007). *Science teachers' perceptions of personal*

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- change: Describing influences of an MSP (Mathematics and Science Partnership) program.* Paper presented at the annual meeting of the Association for Science Teacher Education, Clearwater Beach, FL.
- Sowell, S., Southerland, S.A., & Blanchard, M. (2006). *Who are the "They" in "They say..."?* *Finding fruitfulness of nature of science within an urban context.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, San Francisco, CA.
- Sowell, S., Southerland, S., & Granger, E. (2006). *Exploring the construct of teacher pedagogical discontentment: A tool to understand teachers' openness to reform.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.
- Southerland, S.A., Sowell, S. Granger, D. E., Gaede, O., & Kahveci, M. (2006). *Working to measure the impact of professional development activities: developing an instrument to quantify pedagogical discontentment.* Paper presented at the annual meeting of the National Association for Research in Science, San Francisco, CA.
- Sowell, S., Ferguson, R., & Jackson, D. (2006). *Developing preservice teachers' nature of science knowledge via hand-held technology.* Poster presented at the Catalyst Ohio Technology Conference, Columbus, OH.
- Sowell, S. (2006). Presentation in symposium: *Integrating inquiry into the classroom: Challenges and possibilities.* Presented at the annual meeting of the National Association for Research in Science, San Francisco, CA.
- Sowell, S. (2005). *Equity and identity: Teaching as a political act.* Paper presented at the Crossroads of Science Education Conference, Hartford, CT.
- Sowell, S. (2005). *Integrating middle school discourse into a poststructural analysis of gender and science teaching.* Paper presented at the annual meeting of American Educational Research Association, Montreal, Canada.
- Southerland, S.A., Johnston, A., & Sowell, S. (2005). *Reinvoking conceptual ecologies: Inservice teachers' conceptual change in nature of science.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Dallas, TX.
- Southerland, S.A., Sowell, S., Johnston, A., & Settlage, J. (2005). *Perhaps triangulation isn't enough: A call for crystallization as a methodological referent in NOS research.* Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.
- Sowell, S. (2005). *Negotiating gendered science identities: A feminist poststructuralist expedition through middle school science teaching.* Paper presented as part of the paper set, *Poststructuralist possibilities: Using feminist poststructuralist theories for making sense in science education research*, (with W. Letts, C. Brandt, & F. Moore) at the annual meeting of National Association for Research in Science Teaching, Dallas, TX.

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Sowell, S. (2004). *Negotiating a science teacher identity: A feminist poststructural analysis of agency within discursive authorship*. Paper presented at the annual meeting of the Southeastern Association of Educators of Teachers in Science, Gainesville, FL.

Sowell, S. (2002). *Using a gender and development (GAD) lens to explore preservice science teachers' reflections on gender equity*. Paper presented at the annual meeting of the Southeastern Association of Educators of Teachers in Science, Kennesaw, GA.

Lawrence, C., Yager, R., Sowell, S., Hancock, E., Yalaki, Y., & Joblon, P. (2001). *The philosophy, theory and practice of science-technology-society orientations*. Paper presented at the annual meeting of the Association for the Education of Teachers of Science, Costa Mesa, CA.

Hancock, E., Moore, F., & Sowell, S. (2000). *Teacher learning via portfolio development*. Paper presented at the annual meeting of the Southeastern Association for the Education of Teachers of Science, Tampa, FL.

Butler, J. A., & Sowell, S. (1995). *Survivorship and predation of hatchling and yearling gopher tortoises*. Paper presented at the annual meeting of the Society for the Study of Amphibians and Reptiles, Boone, NC.

Lenart, L.A. & Sowell, S. P. (1994). *Anoline diversity in three different differentially altered habitats in the Sierra de Baoruco, República Dominicana, Hispaniola*. Paper presented at the joint annual meeting of the Herpetologists' League and The Society for the Study of Amphibians and Reptiles, Athens, GA.

Butler, J. A., Hull, T.W., Sowell, S., & Bowman, R. (1994). *Movements and home ranges of gopher tortoises during their first two years*. Paper presented at the Symposium on the Status and Conservation of Florida Turtles, St. Petersburg, FL.

Sowell, S.P., Powell, R., Parmerlee, J.S., Lathrop, A., & Smith, D. D. (1993). *Niche partitioning by a lizard community in the Sierra de Baoruco, Hispaniola*. Paper presented at the annual meeting of the Missouri Herpetological Association, Steelville, MO.

Publications

Southerland, S.A., Sowell, S., & Enderle, P. (2011). Science teachers' pedagogical discontentment: Its sources and potential for change. *Journal of Science Teacher Education*, 22(5), 437-457.

Southerland, S.A., Sowell, S., Blanchard, M., & Granger, E.M. (2010). Exploring the construct of pedagogical discontentment: A tool to understand science teachers' openness to reform. *Research in Science Education*, 41(3), 299-317.

Southerland, S.A., Smith, L. K., Sowell, S., & Kittleson, J. (2007). Resisting unlearning: Understanding science education's response to the United State's national accountability movement. *Review of Research in Education*, 31, 45-77.

Sowell, S. (2007). Possibilities of degrees of tentativeness of science in the classroom. In

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J. Settlage & S. A. Southerland (Eds.), *Teaching science to every child: Using culture as a starting point*. New York: Routledge.

Sowell, S., Johnston, A., & Southerland, S. (2007). Calling for a focus on where learning happens: A response to Abd-El-Khalick and Akerson. *Science Education*, 91(1), 195-199.

Southerland, S.A., Johnston, A., & Sowell, S. (2006). Describing teachers' conceptual ecologies for the nature of science. *Science Education*, 90(5), 874-896.

Johnston, A., Southerland, S., & Sowell, S. (2006). Dissatisfied with the fruitfulness of "learning ecologies." *Science Education*, 90(5), 907-911.

Butler, J. A., & Sowell, S. P. (1996). Survivorship and predation of hatchling and yearling gopher tortoises, Gopherus polyphemus. *Journal of Herpetology*, 30, 455-458.

Sowell, S.P., Parmerlee J.S., & Powell, R. (1995). Anolis bahorucoensis. *Catalogue of American Amphibians and Reptiles*, 608, 1-3.

Butler, J., Bowman, R.D., Hull, T. W., & Sowell, S. P. (1995). Movements and home range of hatchling and yearling gopher tortoises, Gopherus polyphemus. *Chelonian Conservation Biology*, 1, 173-180.

Bowersox, S.R., Calderón, S., Cisper, G., Garcia, R.S., Huntington, C., Lathrop, A., Lenart, L., Parmerlee, J.S., Powell, R., Queral, A., Smith, D. D., Sowell, S. P., & Zippel, K.C. (1994). Miscellaneous natural history notes on amphibians and reptiles from the Dominican Republic. *Bulletin of the Chicago Herpetological Society*, 29, 54-44.

Invited Presentations & Professional Development Sessions

Sowell, S. (2018). *Evidence and Explanation: Implementing Science Practices Using HHMI BioInteractive Resources*. Invited professional development for University of Central Arkansas.

Sowell, S. (2018). *Constructing Explanations with HHMI Biointeractive*. Invited professional development for Miami-Dade Public School, Florida.

Sowell, S. (2014). *Reflections on Pedagogy and Learning*. Invited presentation for City Year, Jacksonville, Florida.

Sowell, S. (2012). *Reflections on Organizing Gay-Straight Alliances*. Invited presentation for Teaching Respect For All: Creating Safe Schools for LGBT Students, Jacksonville, Florida.

Sowell, S. (2007). *Doing science at the public library*. Invited professional development presentations for librarian in-services at Cuyahoga County Public Library, Cleveland, OH.

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Sowell, S. (2006). *The role of “conceptual ecologies” in students’ science learning: Implications of the “warming trend” in conceptual change research*. Invited presentation at Integrating Science and Mathematics Education Research into Teaching, National Summer Conference, University of Maine.

Sowell, S. (2006). *Using the Conceptual Change Model (CCM) of learning in the science classroom: Implications for engendering robust nature of science (NOS) understandings*. Invited workshop at the Integrating Science and Mathematics Education Research into Teaching, National Summer Conference, University of Maine.

Sowell, S. (2006). *Evolution and intelligent design in the (science) classroom*. Invited presentation for Teacher Education Department faculty, Cleveland State University.

Sowell, S. (2004). *Toward defining the construct of pedagogical (dis)contentment*. Invited presentation at graduate science education departmental colloquium; Florida State University.

Website / Curriculum Development:

Settlage, J., Southerland, S.A., Johnston, A., & Sowell, S. (2004). *Scientific Thinking and Internet Learning Technologies (STILT): The Molecular Basis of Circadian Rhythms*. Available http://stilt.genetics.utah.edu/lessons/unit_three/