

## Curriculum Vitae

### Malcolm B. Butler

#### *Professional Contact Information*

School of Teaching, Learning and Leadership  
College of Education & Human Performance  
University of Central Florida  
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867 63<sup>rd</sup> Avenue South  
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## EDUCATION

- 1995 Ph.D., Curriculum and Instruction, Science Education  
University of Florida  
Dissertation Title: *Factors associated with students' intentions to engage in science learning activities: An application of the theory of reasoned action*  
Major Professors: Drs. Linda Cronin-Jones and Simon O. Johnson
- 1991 M.Ed., Curriculum and Instruction, Secondary Science Education  
University of Florida
- 1989 B.S., Physics  
Southern University, Baton Rouge, Louisiana

## PROFESSIONAL WORK EXPERIENCE

- 2015-Present Professor of Science Education  
Program Coordinator  
Ph.D., Science Education  
Master's Degrees, Secondary Science Education, Physics, Middle School  
Bachelor's Degrees, Secondary Science Education, Physics  
Graduate Faculty Member, College of Graduate Studies  
Lockheed Martin/UCF Academy Faculty Member  
Mentor for Science Education Faculty, Drs. Su Gao and Tonjua Freeman
- 2012-2015 Associate Professor of Science Education (with tenure)  
2012-2013, Acting Program Coordinator, Ph.D. in Science Education  
Program Coordinator, Masters Degrees in Secondary Science Education  
Graduate Faculty Member, College of Graduate Studies  
Lockheed Martin/UCF Academy Faculty Member
- 2008-2012 Associate Professor of Science Education (with tenure)  
University of South Florida St. Petersburg  
2010-2012, Mathematics/Science Program Coordinator

- 08/06-5/11 Adjunct Assistant Professor and Graduate Faculty Member  
University of Georgia
- 08/06-7/08 Assistant Professor of Science Education  
University of South Florida St. Petersburg
- 08/01-08/06 Assistant Professor of Science Education  
University of Georgia  
Appointed to Graduate Faculty, November 14, 2001
- 1999-2001 Program Specialist  
Southeast Eisenhower Consortium for Mathematics and Science Education  
@ SERVE, Atlanta, Georgia
- 1995-1999 Assistant Professor of Science Education  
Program Developer and Coordinator, Masters and Certification Program in  
Science Education  
Texas A&M University-Corpus Christi
- 1994-1995 Science Instructor  
Project Reclaim, Williamsburg-James City County Public Schools and School of  
Education, College of William and Mary, Williamsburg, VA
- 1993-1994 Science and Mathematics Instructor  
P.K.Yonge Developmental Research School, Gainesville, FL
- 1991-1992 Science and Mathematics Instructor  
Newberry Junior/Senior High School, Newberry, FL

## PROFESSIONAL CERTIFICATIONS AND LICENSES

Florida Teacher Certification, Physics, Grades 6-12, 1989-1994  
Virginia Teacher License, Physics and Physical Science, Grades 6-12, 1994-1999  
Texas Educator Certification, Secondary Physics, Grades 6-12, 1996 (Lifetime Certification)

## SCHOLARLY ACTIVITIES

### **Books**

Atwater, M. M., Russell, M., & **Butler, M. B.**, Eds. (2014). *Multicultural science education: Preparing teachers for equity and social justice*. The Netherlands: Springer.

Nutta, J., Bautista, N., & **Butler, M. B.** (2011). *Teaching science to English Language Learners*. New York: Routledge.

Tippins, D., Thomson, N., **Butler, M.**, Fowler, L., & Lawrence, M. (Eds.). (2006). *Environmental dilemmas in Georgia: Considering alternative solutions*. Athens, GA: Partnership for Reform in Science and Mathematics (PRISM) and National Science Foundation.

### **Science Curriculum Materials**

National Geographic Learning. (2015). *Exploring Science*. Independence, KY. Program Authors: R. Bell, **M. B. Butler**, K. C. Trundle, & J. Lederman.

National Geographic Society. (2010). *National Geographic Science and Literacy*. Carmel, CA: Program Authors: R. Bell, **M. B. Butler**, N. K. Duke, J. Lederman, D. W. Moore, & K. C. Trundle.

### **Book Chapters**

Black, D. R., Carnes, G. N., **Butler, M. B.**, & Scantlebury, K. (2015). Jane Butler Kahle: Her journey of transformations and career curves. In Jon Pedersen, Kevin D. Finson, & Barbara Spector, (Eds.), *Going back for our future II: Carrying forward the spirit of pioneers of science education*. Charlotte, NC: Information Age Publishing.

**Butler, M. B.** (2014). A bubble exploration of Response to Intervention (RtI), Tier I. In Popejoy, K. & Morrell, P. (Eds.), *A few of our favorite things: Teaching ideas for k-12 science methods instructors*. The Netherlands: Sense Publishers.

**Butler, M. B.** (2014). Second class citizens, first class scientists: Using sociocultural perspectives to highlight the successes and challenges of African American scientists during Jim Crow. In Atwater, M.M, Russell, M., & Butler, M.B., *Multicultural science education: Preparing teachers for equity and social justice*. The Netherlands: Springer.

**Butler, M. B.**, Atwater, M. M., & Russell, M. (2014). Introduction: Culture, equity, and social justice for science teacher educators. In Atwater, M.M, Russell, M., & Butler, M.B. *Multicultural science education: Preparing teachers for equity and social justice*. The Netherlands: Springer.

Russell, M., **Butler, M. B.**, & Atwater, M. M. (2014). Conclusion and next steps for science teacher educators. In Atwater, M.M, Russell, M., & Butler, M.B., *Multicultural science education: Preparing teachers for equity and social justice*. The Netherlands: Springer.

**Butler, M. B.** (2012). Teaching to the Bottom. In J. Settlage & S. Sutherland, *Teaching science to every child: Using culture as a starting point, (2<sup>nd</sup> edition)*. New York: Routledge.

Riley, J. P., **Butler, M. B.**, Aun, T. K., & Chin, Y. K. (2008). Science misconceptions in the service of conceptual change: Intervention studies with preservice primary teachers. In Lee, Y-J., & Tan, A. L. (Eds.) (pp. 45-64). *Science education at the nexus of theory and practice*. Rotterdam, the Netherlands: Sense Publishers.

**Butler, M. B.** (2007). Just how universal are science process skills? In J. Settlage & S. Sutherland, *Teaching science to every child: Using culture as a starting point*. New York: Routledge.

Atwater, M. M., & **Butler, M. B.** (2006). The professional development of teachers of science in urban schools. In J. Kincheloe, K. Hayes, K. Rose, & P. Anderson, (Eds.), *The Praeger handbook of urban education*, (pp.153-161). Westport, CT: Praeger Publishers.

**Butler, M. B.**, Riley, J. P., Toh, K. A., Yap, K. C., Lee, Y. J. (2006). Action research on primary teachers' physical science misconceptions, In H. S. Dhindsa, I. J. Kyeleve, O. Chukwu, S. B. Lim, Z. B. Taha, et al. (Eds.), *Shaping the future of science, mathematics, and technical education* (pp. 62-66). Brunei Darussalam: Universiti Brunei Darussalam.

**Butler, M. B.** & Koballa, T. R. (2003). If only I had known about the plasma. In T. R. Koballa & D. J. Tippins (Eds.), *Cases in middle and secondary science education* (2<sup>nd</sup> ed.). (pp. 88-96). New Jersey: Prentice Hall.

### **Refereed Journal Articles**

\* indicates a Graduate Student

\*Reece A. J., **Butler M. B.** (2017). How do virtual laboratories impact STEM students' content knowledge, course performance, and motivation to learn in an introductory biology course? *Journal of College Science Teaching*, 46(3), 83-89.

Parsons, E. C., \*Bulls, D. L., Freeman, T. B., **Butler, M. B.**, & Atwater, M. M. (2016). General experiences + race + racism= Work lives of Black faculty in postsecondary science education. *Cultural Studies of Science Education*. doi:10.1007/s11422-016-9774-0.

Settlage, J., **Butler, M.**, Wenner, J., Smetana, L., & McCoach, B. (2015). Examining elementary school science achievement using organizational and leadership perspectives: A fresh tactic for attacking achievement gap disparities. *School Science and Mathematics*, 115(8), 381-391.

Atwater, M. M., **Butler, M. B.**, \*Freeman, T., & Parsons, E. (2013). An examination of Black science teacher educators' experiences with multicultural education, equity and social justice. *Journal of Science Teacher Education*, 24(8), 1293-1313.

Johnston, A., **Butler, M.**, Mensah, F.M., & Williams, B. (2011). Playing with science: Models for engaging communities. *Children, Youth and Environments*, 21(2), 312-324.

Atwater, M. M., \*Freeman, T. B., **Butler, M. B.**, & \*Draper-Morris, J. (2010). A case study of science teacher candidates' understandings and actions related to the culturally responsive teaching of 'Other' students. *The International Journal of Environmental and Science Education*, 5(3), 287-318.

Lawrence, M. N., & **Butler, M. B.** (2010). Becoming aware of the challenges of helping students learn: An examination of the nature of learning during a service-learning experience. *Teacher Education Quarterly*, 37(1), 155-175.

\*Seung, E., Bryan, L., & **Butler, M. B.** (2009). Improving preservice middle grades science teachers' understanding of the nature of science using three instructional approaches. *Journal of Science Teacher Education*, 20(2), 157-177.

**Butler, M. B.**, & Nesbit, C. (2008). Using science notebooks to improve writing skills and conceptual understanding. *Science Activities*, 44(4), 137-146.

Lee, S., **Butler, M. B.**, & Tippins, D. J. (2007). A case study of an early childhood teacher's perspective on working with English Language Learners. *Journal of Multicultural Education*, 15(1), 43-49.

\*Parlo, A. T., & **Butler, M. B.** (2007). Impediments to environmental education instruction in the classroom: A post-workshop inquiry. *International Journal of Environmental and Science Education*, 2(1). 32-37.

**Butler, M. B.**, \*Lee, S., & Tippins, D. J. (2006). Case-based pedagogy as an instructional strategy for understanding diversity: Preservice teachers' perceptions. *Multicultural Education*, 13(3), 20-26.

Hutchison, C., **Butler, M. B.**, & Fuller, S.M. (2005). Pedagogical communication issues arising during international migrations to teach science in America. *Electronic Journal of Science Education*, 9(3). ISSN 1087-3430

**Butler, M. B.** (2000). Science education library resources for preservice elementary teachers in Texas. *The Texas Science Teacher*, 29(2), 47-49.

**Butler, M. B.** (1999). Factors associated with students' intentions to engage in science learning activities. *Journal of Research in Science Teaching*, 36, 455-473.

### **Funded Grants**

#### **External Grants**

*Improving Augmented Reality Technologies for Training and Education.*

Principal Investigators: Joseph LaViola, Greg Welch, & Malcolm Butler (\$83,333). Sponsoring Agency: Florida High Tech Corridor Council.

*Improving Augmented Reality Technologies for Training and Education.*

Principal Investigators: Joseph LaViola, Greg Welch, & Malcolm Butler (\$250,000). Sponsoring Agency: Lockheed Martin Cooperation.

*The African Diaspora: Developing Black Scholars in Science Education for the 21<sup>st</sup> Century in the United States (A Symposium), Part II.* Supplemental Funding (\$57,515). National Science Foundation. Extended to July 2015. Co-Principal Investigator. <http://african-diaspora.coe.uga.edu/>

*PhysTEC (Physics Teacher Education Coalition) Comprehensive Site.* (\$303,539). American Physical Society and American Association of Physics Teachers. 2013-2016. Co-Principal Investigator. <http://physics.cos.ucf.edu/physotec/>

*Collaborative Research Project: School Organization and Science Achievement.* (\$2.9 million). National Science Foundation. July 2011-June 2016. Partner Principal Investigator. <http://education.ucf.edu/sosa/>

*The African Diaspora: Developing Black Scholars in Science Education for the 21<sup>st</sup> Century in the United States (A Symposium), Part II.* (\$100,000). National Science Foundation. September 2012-June 2014. Co-Principal Investigator. <http://african-diaspora.coe.uga.edu/>

*Teaching Excellence and Achievement Program (TEA).* (\$195,800). IREX (U.S. Department of State). Fall 2013. Co-Principal Investigator and Specialist in Science Education.

*Equitable Educational Opportunities for the Marginalized: A Reciprocal Study Abroad Program to Botswana for Undergraduate Teacher Education Majors.* (\$595,818). U.S. Department of State; Bureau of Educational and Cultural Affairs (2012-2015). Co-Principal Investigator and Specialist in Science Education.

*The African Diaspora: Developing Black Scholars in Science Education for the 21<sup>st</sup> Century in the United States (A Symposium).* (\$100,000). National Science Foundation. September 2008-June 2010. Co-Principal Investigator.

*UPTAQ (Understanding the Profile of Tampa Bay's Aquatic Quality).* (\$113,920). Part of USF St. Petersburg's C-SPACE funding from Environmental Protection Agency. Co-Principal Investigator.

*MS PHD's classroom and community engagement and mentoring program: A track 1 project.* (\$77,000). National Science Foundation. June 2007. Co-Principal Investigator.

*C.O.A.S.T.L.I.N.E.S. 2007.* (\$60,000). Georgia Improving Teaching Quality Program funded by the US Department of Education, Summer 2007. Principal Investigator.

*Rivers to Reefs 2006* (\$56,321). Georgia Improving Teaching Quality Program funded by the US Department of Education, Summer 2006. Principal Investigator.

*Enhancing elementary preservice teachers' understanding of physical science through science notebooks* (\$4,000). Northeast Georgia PRISM Professional Network Small Grants Program. 2005-2006. Principal Investigator.

*COASTLINES 2005* (\$52,000). Georgia Improving Teaching Quality Program funded by the US Department of Education, Summer 2005. Principal Investigator.

*Koalaty science notebooks @ Whitehead Elementary School, Clarke County, Georgia.* (\$4,750). Funded by the Southeast Eisenhower Regional Consortium for Mathematics and Science Education @ SERVE. 2005-2006. Principal Investigator.

*Rivers to Reefs 2004* (\$48,800). Georgia Eisenhower Professional Development Higher Education Program funded by the US Department of Education, Summer 2004. Principal Investigator.

*COASTLINES 2003* (\$45,000). Georgia Eisenhower Professional Development Higher Education Program funded by the US Department of Education, Summer 2003. Principal Investigator.

*SAPELO: Scientists and Professional Educators Learning g Outdoors* (\$41,472). Georgia Eisenhower Professional Development Higher Education Program funded by the US Department of Education, 2003-2004. Principal investigator.

*Teaching Environmental Science Summer Course for Elementary Teachers* (\$2,000). Texas General Land Office, Summer 1998. Principal Investigator.

*Teaching Environmental Science Summer Program for Elementary Teachers* (\$25,000). Port Industries of Corpus Christi, Summers 1996, 1997, 1998, 1999. Principal Investigator.

### **Internal Grants**

Large Proposal Development Award. Funding provided by UCF's Office of Research and Commercialization via a university-wide competition to provide release time (one course for Spring 2017, one course for Summer 2017) to write a proposal for a minimum of 1 million dollars per year and 3 million dollars total.

*Come One, Come All: Community Science Night at Gulf Beaches Elementary* (\$1,000). USF St. Petersburg Center for Civic Engagement Course Development Grant. Spring 2007. Principal Investigator.

University of Georgia, College of Education, International Travel Grant (\$1,100). April 2005.

*Preparing Elementary Teachers for Diversity: A Study of Student Teaching as Case-based Professional Development* (\$3,100). GSTEP Research and Travel Mini-Grant College of Education, University of Georgia, Spring 2003. Co-Principal Investigator.

Faculty Research Enhancement Grant (\$3,500). College of Education, Texas A&M- Corpus Christi, Summer 1999. Principal Investigator.

### **Grant Proposals Submitted and Under Review**

"Utatio: A Higher-Order Thinking and Learning Game for Biology II"

Principal Investigators: Joseph Fanfarelli, Kenneth Fedorka, Emily Johnson, and Malcolm Butler. Sponsoring Agency: US Department of Education. Amount Requested: \$,1013,172.84.

### **Conference Proceedings (Refereed Papers)**

**Butler, M.B.** (2008). Paradoxes, paradigms, and purpose. In J. Settlage & A. Johnston (Eds.), *Proceedings of the Science Education at the Crossroads Conference*. (pp. 20-21). Alta, UT: National Science Foundation [Available online at [www.sciedxroads.org/proceedings2008.html](http://www.sciedxroads.org/proceedings2008.html)]

**Butler, M.B.** (2007). The invisible science educator. In J. Settlage & A. Johnston (Eds.), *Proceedings of the Science Education at the Crossroads Conference*. (pp. 18-19). Amherst, MA: National Science Foundation. [Available online at: [www.sciedxroads.org/proceedings2007.html](http://www.sciedxroads.org/proceedings2007.html)]

### **Non-refereed Journal Articles**

**Butler, M. B.** (Winter 2017). NGS<sup>4</sup> matrix for Florida science educators. *Florida Science Teacher* (the official journal of the Florida Association of Science Teachers), 3-6.

Inyega, J.O., Thomson, N., **Butler, M. B.**, & Inyega, H. N. (2010, July). In-service teachers' classroom practices and experiences. *The Fountain: Journal of Education Research*, University of Nairobi, Kenya, 4(1), 1-21.

**Butler, M. B.** (2001). In the Southeast: Students do! Students write! Students learn! *ENC Focus*, 8(1), 46.

**Butler, M. B.** (2000). You teach teachers how to teach science? *Radiations*, 6(1), 9-10.

### **Commissioned Report**

**Butler, M. B.** (2003). *Can science notebooks impact teaching and learning in north Alabama Schools? A study of the HASP science notebook project*. A commissioned report submitted to the Southeast Eisenhower Regional Consortium for Mathematics and Science Education @ SERVE, Tallahassee, FL.

### **Book Reviews**

**Butler, M.B.** & Freeman, T.B. (2015). *Deep knowledge*, by Douglas B. Larkin. *Teachers College Record*. Available at <http://www.tcrecord.org/Content.asp?ContentId=17823>.

**Butler, M.B.** (2007). *Preparing mathematics and science teachers for diverse classrooms: Promising strategies for transformative pedagogy*, by Alberto J. Rodriguez & Richard S. Kitchen (Eds.). *The Journal of Negro Education*, 76(1), 89-90.

### **Contributing Authorships**

Southeast Eisenhower Regional Consortium for Mathematics and Science Education @ SERVE. (2002). *The common denominator*, 6(2).

Southeast Eisenhower Regional Consortium for Mathematics and Science Education @ SERVE. (2002). *The common denominator*, 6(1).

Southeast Eisenhower Regional Consortium for Mathematics and Science Education @ SERVE. (2003). *A survey of mathematics and science reform in the southeast: A landscape paper*. Tallahassee, FL: SERC @ SERVE.

Krueger, A., & Sutton, J. (Eds.). (2002). *EDThoughts: What we know about mathematics teaching and learning*. Aurora, CO: Mid-continent Research for Education and Learning.

Krueger, A., & Sutton, J. (Eds.). (2001). *EDThoughts: What we know about science teaching and learning*. Aurora, CO: Mid-continent Research for Education and Learning.

### ***ERIC (Education Resources Information Center) Document***

**Butler, M. B.** (2001). Children's literature with a science emphasis: Ten teacher-developed k-8 activity packets. ERIC Document Reproduction Service No. ED455090

### ***Author Monograph***

**Butler, M. B.** (2009). Motivating young students to be successful in science: Keeping it real, relevant and rigorous. National Geographic & Hampton-Brown Publishing. Available at: [http://www.ngsp.com/Portals/0/downloads/SCL22-0419A\\_AM\\_Butler.pdf](http://www.ngsp.com/Portals/0/downloads/SCL22-0419A_AM_Butler.pdf)

### ***Research Projects***

*Understanding high school students' science content knowledge and attitudes toward doing and learning science.* Project in collaboration with Dr. Cynthia Deaton at Clemson University. 2013-Present.

*Learning to learn about science teaching: Building analysis of practice into pre-service teacher education.* This study was coordinated by LessonLab, Santa Monica, CA. Project was conducted in collaboration with over 30 universities in the US. 2007-2009.

### ***Conference Papers***

#### **Presented at Professional Meetings**

\* indicates a Graduate Student

#### *International Conferences*

Butler, M.B., Settlage, J. & Smetana. (2013). *Schools, families, communities and equitable science achievement.* Paper presented at the biannual conference of the European Science Education Research Association. Nicosia, Cyprus. September 2-7.

Settlage, J., Butler, M. B. & Smetana (2013). *School cultural norms and the relationship to equitable science performance.* Paper presented at the biannual conference of the European Science Education Research Association. Nicosia, Cyprus. September 2-7.

Smetana, L., Settlage, J. & Butler, M. B. (2013). *Exploring school trust in support of equitable science achievement.* Paper presented at the biannual conference of the European Science Education Research Association. Nicosia, Cyprus. September 2-7.

Butler, M. B., Atwater, M., Parsons, E., & \*Freeman, T. (2013). *Black male science education scholars in the academy: An analysis of their perspectives and experiences.* Paper presented at the annual conference of the Southern African Association for Research in Mathematics, Science and Technology Education, Cape Town, South Africa. January 14 – 17.

Butler, M. B. & Settlage, J. (2013). *Teacher perceptions about school, family and community relationships in relation to primary school science achievement.* Paper presented at the annual

conference of the Southern African Association for Research in Mathematics, Science and Technology Education, Cape Town, January 14 - 17.

Riley, J. P., Yap, K. C., Toh, K. A., Boo, H. K., Ho, B. T. & Butler, M. (2006, November). *Physical science misconceptions: Moving from identification to intervention*. Paper presented at the International Science Education Conference, Singapore.

Butler, M., Riley, J. P., Toh, K.A., Yap, K.C. & Lee, Y. J. (2006, May). *Action research on primary teacher's physical science misconceptions*. Paper presented at the Eleventh international Conference on Science and Technical Education, University of Brunei, Darussalam.

Riley, J. P., Boo, H. K. Ho, B. T., Toh, K. A., & Yap, K. C., Butler, M. (2006, May). *The effect of peer discussion on primary teachers' willingness to abandon physical science misconceptions*. Paper presented at the Educational Research Association Meetings, Singapore.

Riley, J. P., Boo, H. K. Ho, B.T., Toh, K. A., & Yap, K. C., Butler, M., Hsiung, T. H., Hsiung, C. T. (2005, May). *Pre-service primary teachers' constructed knowledge of physical science concepts in Singapore, Taiwan and the U.S*. Paper presented at the International Conference on Education organized by Centre for Research in Pedagogy & Practice, National Institute of Education, Singapore.

Riley, J., Kwen, B.H., Tiong, H.B., Aun, T.K., Chin, Y.K., Butler, M., Tung-Hsing, H., & Chao-Ti, H. (2005, June). *Pre-service primary teachers' constructed knowledge of physical science concepts in Singapore, Taiwan and the US*. Paper presented at the conference on Redesigning Pedagogy, Singapore.

Butler, M.B. (2004, April). *A study of the utility of science notebooks in the elementary school classroom*. Paper presented at the international conference of the National Association for Research in Science Teaching, Vancouver, British Columbia, Canada.

Butler, M.B., Padilla, M.J., & Patterson, P.E. (2004, March). *Involving US teachers in an international comparative study using Japanese science lesson videos*. Paper presented at the International Consortium for Research in Science and Mathematics, Concepcion, Chile.

Butler, M.B., & Padilla, M. (2003, November). *Japanese science lesson video study: An evaluation of four Japanese grade 8 science lessons by science teachers in the United States*. Paper presented at the Japanese Science Lesson Video Study Meeting, Tokyo, Japan.

#### *National Conferences*

Gao, S., \*Hall, J., & Butler, M.B. (2017, April). *Learning to teach English Language Learners: Examinations of preservice science teachers' lesson plans and practices*. Paper presentation at the annual conference of the American Educational Research Association, San Antonio, TX.

Butler, M.B., & Butler, S.K. (2017, February). *Know your role! Being a self-advocating mentee: Strategies for effectively mentoring male students of color (Parts I and II)*. National Male Student

Success Conference, Orlando, FL.

\*Rediske, A. M., \*McAfee, M. A., Eisenreich, H. A., Sivo, S. A., Butler, M. B. (2016, July). *Alignment of lecture and lab in introductory microbiology and biology courses: Analysis of current practices (Poster)*. American Society for Microbiology Conference for Undergraduate Educators, Bethesda, MD.

\*Rediske, A. M., \*McAfee, M. A., Eisenreich, H. A., Sivo, S. A., Butler, M. B. (2016, July). *Attitudes of instructors towards the importance and necessity of alignment of topics in lecture and lab in introductory microbiology and biology courses (Poster)*. Society for the Advancement of Biology Education Research National Meeting, Minneapolis, MN.

\*Rediske, A. M., Butler, M. B. (2016, January). *Alignment of lecture and laboratory curricula in introductory science courses*. Association for Science Teacher Education International Meeting, Reno, NV.

Settlage, J., Butler, M. B., McCoach, D., Madura, J., Wenner, J., & Andrada, G. (2014). *Organizational and leadership factors associated with elementary school science test performance*. Paper presented at the annual meeting of AERA, Philadelphia, PA, April 3-7.

\*Reece, A., Butler, M. B., & Fedorka, K. (2014). *An exploration of student learning and attitudes across three laboratory platforms in a university biology course*. Paper presented at the annual meeting of NARST, Pittsburg, PA. March 30-April 2.

Parsons, E. R. C., \*Bulls, D., Atwater, M. M., Butler, M. B., & Freeman, T. B. (2014). *Awaken a dialogue: Race and the experiences of Black faculty in the science education community*. Paper presented at the annual meeting of NARST. Pittsburg, PA. March 30-April 2.

Butler, M.B. (2013). *Teachers' knowledge and perceptions about community, families & the workplace*. Paper presented at the annual international conference of NARST, Rio Grande, Puerto Rico, April 6-9.

Settlage, J., & Butler, M. B. (2012, April). *School level factors contributing to reductions in science achievement gaps*. Paper presented at the annual meeting of the American Education Research Association, Vancouver, British Columbia, Canada.

Johnson, N. H., Atwater, M. M., Butler, M. B., Parsons, E. C., & \*Freeman, T. B. (2012, March). *African American female faculty members: Factors influencing their recruitment, retention and promotion at traditionally white institutions*. Paper presented at the annual conference of NARST, Indianapolis, IN.

Smetana, L., Settlage, J., & Butler, M. B. (2012, January). *Explaining and resolving science achievement gaps: Could leadership structures, school climate and social capital offer solutions?* Paper presented at the annual conference of the Association for Science Teacher Educators, Clearwater, FL.

Butler, M.B., Hollon, R., Kein, K., Lane, P., Popejoy, K., Aram, R., Lawrence, M., Meyer, J., & Smith, D. (2009, April). *Developing a common research-based, words-to-images language: The ViSTA teacher educator community*. Paper presented at the national conference of the National Association for Research in Science Teaching, Garden Grove, CA.

\*Lawrence, M.N., & Butler, M.B. (2009, January). Wrestling with the complexity of facilitating student learning while planning a family science night: Reconsidering preconceptions and meanings made in more traditional contexts. Paper presented at the annual conference of the Association for Science Teacher Educators, Hartford, CT.

Thomson, N., Butler, M., \*Hodges, G., \*Governor, D., \*Hewitt, B., \*Atkinson, J., & \*Garbach, J. (2009, January). *Professional development workshops and science teacher retention: Tales from the field- what do teachers expect and need?* Paper presented at the annual conference of the Association for Science Teacher Educators, Hartford, CT.

Butler, M.B. (2008, October). *Paradoxes, paradigms, and purpose*. Paper presented at the annual meeting of Science Education at the Crossroads, Alta, UT.

Butler, M.B. (2007, September). *The invisible science educator*. Paper presented at the annual meeting of Science Education at the Crossroads, Amherst, MA.

Riley, J. P., Butler, M., Toh, K. A., Yap, K. C., Ho, B. T., & Boo, H. K. (2007, April). *The influence of peer discussion on preservice elementary teachers' physical science conceptions*. Paper presented at the annual conference of the National Association for Research in Science Teaching, New Orleans, LA.

Atwater, M. M., Freeman, T. B., Draper-Morris, J., & Butler, M. B. (2007, March). *Science teachers' ideas and actions related to the accommodation of students' culture, race, and ethnicity synopsis*. Presentation at the national conference of the National Science Teachers Association, St. Louis, MO.

Butler, M. B., Lawrence, M., Tippins, D., & Thomson, N. (2007, January). *University students as curriculum developers: An alternative worth pursuing*. Paper presented at the annual conference of the Association for Science Teacher Educators, Clearwater, FL.

Lawrence, M., Butler, M. B., Andrews, G., & Oliver, J. S. (2006, November). "Whoa! How Do I Get a Student to Understand?" Preservice teachers' learning during a one-on-one, content-focused early field experience. Paper presented at the annual conference of National Middle School Association, Nashville, TN.

Atwater, M. M., Butler, M. B., Freeman, T. B., Suriel, R., Watkins, W., & Holt, K. (2006, October). *Science teacher education and professional development: Critical multicultural education research*. Paper presented at the annual convention of the School Science and Mathematics Association, Missoula, MT.

Inyega, J., Butler, M. B., & Thomson, N. (2006, January). *A multi-site analysis of teachers'*

*practices on the "mole concept" following professional development program.* Paper presented at the annual conference of the Association for Science Teacher Educators, Portland, OR.

Morrison, J., Alonzo, A., Villanueva-Hay, M., Butler, M. B., & Nesbit, C. (2006, January). *Science notebooks: Investigating strategies for classroom use.* Paper presented at the annual conference of the Association for Science Teacher Educators, Portland, OR.

Parlo, A., & Butler, M. B. (2006, January). *Environmental education professional development: Limitations to the impact of teacher instruction.* Paper presented at the annual conference of the Association for Science Teacher Educators, Portland, OR.

Tippins, D. J., Thomson, N., & Butler, M. B. (2006, January). *Exploring the challenge of culturally relevant science education through metaphor and discourse.* Paper presented at the annual conference of the Association for Science Teacher Educators, Portland, OR.

Ogura, Y., Butler, M. B., Padilla, M., & Cresswell, J. (2005, April). *How do non-Japanese science teachers evaluate Japanese science lessons?* Paper presented at the annual conference of the National Association for Research in Science Teaching, Dallas, TX.

Riley, J., Butler, M. B., Toh, K. A., & Yap, K. C. (2005, April). *Preservice elementary teachers' physical science alternative conceptions: Across border and over time.* Paper presented at the annual conference of the National Association for Research in Science Teaching, Dallas, TX.

Morrison, J., Akerson, V. L., Black, K. M., Butler, M. B., Hand, B., & Yore, L. (2004, January). *Students' writing in science: Issues at the elementary and middle school levels.* Paper presented at the annual conference of the Association for the Education of Teachers of Science, Nashville, TN.

Butler, M. B., Padilla, M., Patterson, P., & Ogura, Y. (2004, January). *Involving U.S. teachers in an international comparative study using Japanese science lesson videos.* Paper presented at the conference of the Association for the Education of Teachers of Science, Nashville, TN.

Butler, M. B., & Riley, J.P. (2003, February). *The inclusion of science content in an elementary science methods class: A three-year study of a nettlesome issue.* Paper presented at the annual conference of the Association for the Education of Teachers of Science, St. Louis, MO.

Koballa, T. R., Atwater, M. M., Butler, M. B., Crawely, F. E., & Miles, R. (2002, April). *Professors, protégés, perspectives, and practices: A symposium on mentoring new faculty.* Paper Presented at the national conference of the National Association for Research in Science Teaching, New Orleans, LA.

### *Regional Conferences*

Atwater, M. M., \*Freeman, T., Butler, M. B., & Parsons, E. R. C. (2011, October). *Science teacher educators for multicultural education, equity, and social justice.* Paper presented at the annual meeting of the Southeastern Association for Science Teacher Education, Athens, GA.

Handa, V. C., Tippins, D. J., & Butler, M. B. (2006, February). *An ethnographic case study of community immersion experiences in science teacher education preparation.* Paper presented

at the annual conference of the Southeastern Association of Educational Studies, Knoxville, TN.

Deaton, B., Minchew, C., Recesso, A., & Butler, M. B. (2005, October). *The use of direct evidence as a basis for reflection on practice*. Paper presented at the annual conference of the Southeastern Association for Science Teacher Education, Athens, GA.

Freeman, T. B., Atwater, M. M., & Butler, M. B. (2005, October). *Dreams of social justice? Preservice teachers' ideas about race, culture, ethnicity, and science teaching*. Paper presented at the annual conference of the Southeast Association for Science Teacher Education, Athens, GA.

Inyega, J., Butler, M. B., & Thomson, N. (2005, October). *Teaching high school electrochemistry: A multi-site analysis of teachers' practices following in-service programs*. Paper presented at the annual conference of the Southeast Association for Science Teacher Education, Athens, GA.

Minchew, C., Deaton, B., Butler, M. B., & Recesso, A. (2005, October). *Lessons learned: Reflections from a novice grant writer and professional development facilitator*. Paper presented at the annual conference of the Southeast Association for Science Teacher Education, Athens, GA.

Parlo, A. T., & Butler, M. B. (October, 2005). *Identifying limitations of the impact of a teacher workshop on classroom instruction*. Paper presented at the annual conference of the Southeast Association for Science Teacher Education, Athens, GA.

Seung, E., Bryan, L. A., & Butler, M. B. (2005, October). Preservice teachers' perceptions about the different instructional approaches of NOS used in a middle grades science methods course. Paper presented at the annual conference of the Southeast Association for Science Teacher Education, Athens, GA.

Staples, L., Pierce, G., Minchew, C., Deaton, B., Butler, M. B., & Recesso, A. (2005, October). *The teacher: Reflections from elementary science teachers on their participation in a professional development course*. Paper presented at the annual conference of the Southeast Association for Science Teacher Education, Athens, GA.

Parlo, A. T., & Butler, M. B. (2004, October). *Infusing science content in an elementary methods course: Feasible or futile?* Paper presented at the annual conference of the Southeastern Association for Education of Teachers in Science, Gainesville, FL.

Butler, M. B., Tippins, D., & Lee, S. (2003, May). *Preparing elementary teachers for diversity: A study of student teaching as cased-based professional development*. Paper presented at the GSTEP Project Meeting. College of Education, The University of Georgia, Athens, GA.

Butler, M. B., Riley, J.P., & Garrett, M. (2001, October). *Science content in elementary methods courses: Issues and challenges*. Paper present at the annual conference of the Southeastern Association for the Education of Teachers in Science Annual Conference, Tampa, FL.

Butler, M. B. (1997, April). *A science education application of the theory of reasoned action*. National Science Teachers Association Annual Conference, New Orleans, LA.

Butler, M. B. (1996, October). Children's attitudes toward science: A socio-psychological *perspective*. Texas A&M University-Corpus Christi, College of Education Seminar, Corpus Christi, TX.

Butler, M. B. (1996, January). *Multicultural science education and performance assessment: What do they mean to each other?* Conference on Nontraditional Pedagogies, Corpus Christi, TX.

### **Invited Papers**

Butler, M. B. (2004, February). *Science notebooks in the elementary classroom: A tool for improving learning and teaching*. Paper presented at an international conference at West Visayas State University, Iloilo City, Philippines.

Butler, M. B. (2004, February). *Have data, will code: Developing coding categories for your data set*. Paper presented at an international conference at West Visayas State University, Iloilo City, Philippines.

### **Invited Keynotes and Presentations**

March 2017. Featured Speaker at the Virginia State Reading Association Annual Conference. Roanoke, VA.

November 2016. Invited Presenter for National Geographic Learning Workshops (2). St. Louis and University City, MO.

April 15, 2016. Invited Panelist for a Presidential Session on "Where Should Science Education Be with Respect to the Conversations and Cultural Unrest in Our Academies?". Annual international conference of NARST. Baltimore, MD.

January 29 and 30, 2016. Invited Presenter National Geographic Learning for School District Presentations on Literacy and Science. Green Bay and Milwaukee, WI.

October, 7, 2015. Featured Presenter at the National Geographic Workshop on Science and Literacy, De Moines, IA.

December 19, 2014. Panelist for Webinar for Community for Advancing Discovery Research in Education (CADRE) Fellows.

September 28, 2013. Featured Speaker at the PK-2<sup>nd</sup> Super Science Saturday for Teachers and Leaders, Houston, TX. Houston Independent School District.

June 11, 2011. *Shine brightly*. Rigor, Relevance and Relationships Conference, sponsored by Cypress-Fairbanks Independent School District, Cypress, TX.

(Note: This is the third largest school district in Texas. Over 1,200 educators attended this conference.)

## Other Presentations

\*Rediske, A. M., Butler, M. B. (2016, February). *The alignment of lecture and laboratory curricula in undergraduate biology courses: Analysis of current practices and attitudes*. College of Education and Human Performance Graduate Research Showcase, Orlando, FL.

Butler, M. B. (2016, January). "Women in STEM", Panel Discussion. Share Fair Nation, UCF. Orlando, FL.

Butler, M., & Schleith, S. (2014). "Sunsational" Solar Electricity: The Physics of Photovoltaics. Workshop to be presented at the area conference of the National Science Teachers Association, Orlando, FL, November 6-8.

\*Wilder, O., \*Acharya, P., Butler, M. B. (2014). *The Preservice Elementary Teacher Affect Scale for Science: Pilot study*. Division H Vice-Presidential Invited Session: Fresh and Innovative Graduate Student Work in School-Based Research, Evaluation, and Assessment. Division H - Research, Evaluation and Assessment in Schools; Invited Session at the AERA annual conference, Philadelphia, PA, April 3-7.

Symposium- *Impact: Mini-symposium as a powerful synergy for young Black scholars in science education*. Presider. Discussants: Mary Atwater, The University of Georgia, \*Salina T. Gray, Stanford University, Geraldine L. Cochran, Florida International University, Ashraf A. Shady, Queens College, CUNY, Vanashri J. Nargund-Joshi, New Jersey City University, \*Tamecia R. Jones, Purdue University, Line A. Saint-Hilaire, Queens College, CUNY, Gillian U. Bayne, Lehman College CUNY, Natasha Johnson, University of Georgia. Symposium Presented at NARST annual conference, Pittsburgh, PA, March 30-April 2.

Butler, M.B. (2012). Elementary teachers' perspectives on school organization and science achievement- One district's view. Paper presented at the annual conference of the Florida Association of Science Teachers, St. Pete Beach, FL, October 25-27.

Butler, M.B. (2012). Using science notebooks to increase student achievement. Presented at the annual conference of the Florida Association of Science Teachers, St. Pete Beach, FL, October 25-27.

Butler, M. B. (2011, June). *Defining success- Who's right?* Rigor, Relevance and Relationships Conference, sponsored by Cypress-Fairbanks Independent School District, Cypress, TX.

Butler, M. B. (2011, June). *Learning to write and learning to read about science*. Eighth Georgia Conference on Teaching Writing and Reading, Perry, GA.

Butler, M. B. (2011, June). *Writing to learn and reading to learn about science*. Eighth Georgia Conference on Teaching Writing and Reading, Perry, GA.

Butler, M. B., & Brice, A. E. (2009, October). *Who wants to be a professor?* 47<sup>th</sup> biennial convocation of Kappa Delta Pi International Honor Society, Orlando, FL.

Williams, B., & Butler, M.B. (2007, February). *Hurricanes, earthquakes, and tomatoes?* Annual conference of the Georgia Science Teachers Association, Athens, GA.

Seung, E., Bryan, L., & Butler, M. (2006, April). *Improving middle school science preservice teachers' understanding of the nature of science*. Interactive Poster Session presented at the national conference of the National Association for Research in Science Teaching, San Francisco, CA.

Black, K. M., Akerson, V. L., Aram, R. J., Butler, M. B., Cannon, J. R., Crowther, D. T., Hand, B., & Bard, B. (2006, January). *Helping educators apply appropriate writing in and writing to learn science strategies*. Embedded workshop presented at the annual conference of the Association for Science Teacher Educators, Portland, OR.

Williams, B. Butler, M., & Frick, L. (2005, February). *In-depth marine science & technology for teachers*. Annual conference of the Georgia Science Teachers Association, Columbus, GA.

Morrison, J., Akerson, V. L., Black, K. M., Butler, M. B., Hand, B., & Yore, L. (2005, January). *Developing science literacy: Writing in science and writing to learn in science*. Embedded workshop presented at the annual conference of the Association for Science Teacher Educators, Colorado Springs, CO.

Butler, M. B., Tippins, D., Lee, S., & Calkin, J. (2003, April). *Science inquiry through children's literature*. Annual Conference on Children's Literature, The University of Georgia, Athens, GA.

Tippins, D., Butler, M. B., & Lee, S. (2003, February). *Contextual teaching and learning: Cases in the education of science teachers*. Annual conference of the Georgia Science Teachers Association, Jekyll Island, GA.

Butler, M. B., & Narayan, R. (2003, February). *Teaching about inquiry and the nature of science*. Annual I conference of the Georgia Science Teachers Association, Jekyll Island, GA.

Butler, M. B. (2002, February). *Science in all occasions*. Annual conference of the Georgia Science Teachers, Jekyll Island, GA.

Butler, M., & Bryan, L. (2002, February). *Who wants to be a professor? Getting into the academy*. College of Education and Department of Science of Education Colloquium. The University of Georgia, Athens, GA.

Butler, M. B. (2000, April). *What's in the library? Resources for Texas teachers*. National Science Teachers Association, Orlando, FL.

### ***Recognitions and Outstanding Achievements***

University of Central Florida's Academic Leadership Academy, Fall 2015-Spring 2016.  
A cadre of 26 university-wide faculty selected to participate in a yearlong leadership development initiative.

Association for Science Teacher Education (international organization)

Elected in 2014; served as President-Elect in 2015, President in 2016 and Past

President in 2017.

Teaching Academy Fellow, 2014-2015, College of Education and Human Performance (CEDHP).

Major Grants Development Stimulus Initiative Program Awardee, CEDHP, Spring 2014

Teaching Academy Fellow, CEDHP, 2013-2014 (Note: Program was suspended after fellowship was announced.)

USF St. Petersburg Chancellor's Award for Teaching Excellence, College of Education, 2009

Florida Fish and Wildlife Conservation Commission, Certificate of Recognition for facilitating at least two Project WILD workshops in the calendar years, 2006, 2007, 2008, 2009

Alpha Phi Alpha Fraternity, Incorporated  
Theta Eta Lambda Chapter, St. Petersburg, Florida  
President, 2013-2014  
Vice President, 2010-2013  
Recording Secretary, 2008-2010  
President of Education Foundation, 2010-2013  
"Man of the Year", 2011

University of Georgia, College of Education, D. Keith Osborn Award for Teaching Excellence, 2006 (1 of only 2 awarded)

Phi Delta Kappa International, 2002

Outstanding Young Men of America, 1998

Kappa Delta Pi International Honor Society in Education, 1998  
Chapter Founding Co-Counselor, 2009-2012, USF St. Petersburg  
Chapter Adviser, 1998-1999, Texas A&M University-Corpus Christi

"Top 40 under 40" Leaders under the age of 40 for the city of Corpus Christi, as selected by the Corpus Christi Caller-Times, for exemplary work with the local schools and the local university, February 1998

Phi Kappa Phi, International Honor Society, 1995

Delores E. Auzenne Graduate Fellowship, University of Florida, 1992

Graduate Minority Fellowship, University of Florida, 1989

Sigma Pi Sigma, Physics Honor Society, 1988

***Areas of Research***

Multicultural science education  
Equity and diversity in science  
Writing to learn in science  
Science and underserved students  
Case-based pedagogy in teacher education  
Physics teacher education

## INSTRUCTION

### Courses Taught at the University of Central Florida

- +EDG 6223- Curriculum Theory, Organization, and Policy
- +IDS 6939- Seminar in Mathematics and Science Education
- \*SCE 4360- Science Instructional Analysis
- \*SCE 3310- Teaching Science in the Elementary School
- +SCE 5325- Teaching Middle School Science
- +SCE 5337- Issues and Methods in Secondary School Science
- +SCE 6315- Methods in Elementary School Science
- #SCE 7935- Seminar on Professional Writing and Grants in Science Education
- #SCE 7242- Assessment in Science Teaching, Learning and Research
- #SCE 7145- Design of Postsecondary Science Curricula
- #SCE 7864- Science, Technology and Society in Science and American Culture

- # doctoral course
- + graduate course
- \* undergraduate course

### Courses Taught at the University of South Florida St. Petersburg

- \*-EDG 4909- Science for All Students
- +EDG 6935- Seminar in Classroom Research
- \*SCE 4313- Science for All Students
- \*SCE 4310- Teaching Elementary School Science
- +SCE 5937- Selected Topics in Life Science Education
- +SCE 5937- Selected Topics in Physical/Earth Science Education
- +SCE 6616- Trends in Science Education

- + graduate course
- \* undergraduate course
- course developed by instructor

### Courses Taught at the University of Georgia

- +ESCI 9700- Internship in Science Education Teaching (for Doctoral Students)
- +ESCI 9600- Educational Research in Science Education Internship
- +ESCI 8990- Doctoral Research Seminar in Science Education (Program Evaluation)
- +ESCI 7480/5480- Philosophy and Leadership in Science Classroom Practice
- +ESCI 7040- Teaching Strategies for Middle and Secondary School Science Teachers
- +ESCI 6420- Science for Early Childhood Education
- +ESCI 6230- Environmental Science Education
- +ESCI 6220- Marine Environmental Education
- \*ESCI 4440- Science Teaching Methods in the Middle Grades
- \*ESCI 4420- Science for Early Childhood Education
- \*EDEC 4030L- Field Experience for Early Childhood Education

- + graduate course
- \* undergraduate course

#### Courses Taught at Texas A&M University- Corpus Christi

- \*The American School
- +Applied Research and Professional Writing
- \*Classroom Management and Instructional Evaluation– Elementary
- \*Classroom Management and Instructional Evaluation– Secondary
- \*Curriculum Organization and Teaching– Elementary
- \*Curriculum Organization and Teaching– Secondary
- +The Integrated Curriculum (Field-Based Course)
- \*Planning, Teaching, Assessing and Technology– Elementary (Field-Based Course)
- \*-Principles and Strategies for Teaching Science in the Elementary School
- +Science through Children’s Literature
- +Science through Games and Activities
- +Teaching Environmental Science for Elementary Teachers

- + graduate course
- \* undergraduate course
- course developed by instructor

#### Supervision of Student Research

#### *Doctoral Committees (17)*

##### Major Professor

Andrea Rediske, Ph.D., Science Education, UCF, Doctoral Candidate  
Amber Reece, Ph.D., Science Education, UCF, Summer 2015  
Amy Parlo, Ph.D., Science Education, UGA, Spring 2007

##### Committee Member

Marsha Francis, Ph.D., Educational Theory & Practice, University of Georgia, In Progress  
Neffisatu Dambo, Counselor Education, UCF, Summer 2016  
Jarrad Pond, Ph.D., Physics, UCF, Summer 2016  
Jennifer Gallup, Ph.D., Exceptional Education, UCF, Spring 2015  
Jennifer Dames, Ph.D., Science Education, UCF, Spring 2014  
Gwyndolyn Crittenden, Ph.D., Science Education, UCF, Spring 2014  
Tonjua Freeman, Ph.D., Science Education, University of Georgia, Spring 2014  
Kiyra Holt, Ph.D., Science Education, University of Georgia, Spring 2013  
Vicente Handa, Ph.D., Science Education, Spring 2008  
Cynthia Minchew Deaton, Ph.D., Science Education, Sumer 2007  
Jodi Wheeler-Toppen, Ph.D., Science Education, Summer 2006  
Philip Patterson, Ph.D., Science Education, Spring 2006  
Justus Inyega, Ph.D., Science Education, Spring 2005  
Seungyoun Lee, Ph.D., Elementary Education, Fall 2003  
Wilson Gonzalez-Espada, Ph.D., Science Education, Fall 2001

*Education Specialist (Ed.S.) Committees*

Committee Member

April Gann, Science Education, May 2005

Thomas Haugh, Science Education, August 2002

*Master of Art Committee*

Major Professor

Kerrie Anne Lloyd, Science Education, Spring 2004

Master of Education Committee

Otis Wilder, Applied Learning and Instruction, UCF, Spring 2016

Undergraduate Honor's Thesis

Thesis Director

Sara Mae Butcher, Fall 2008

Committee Member

Christine Parsons, Spring 2017

***Professional Associations and Activities***

Council of Scientific Society Presidents, 2015-Present

Board of Directors, 2016-Present

Association for Science Teacher Education

President, 2016

Membership and Participation Committee, 2005- 2008

Elections Committee (elected position), 2007-2010 (3-year term)

Chair, 2009-2010

2012 ASTE annual international conference, Conference Co-Chair

American Education Research Association

2012 AERA annual international conference, Division C, Section 4 (Science), Co-Chair

National Science Teachers Association

Founding Chapter Advisor, NSTA@UCF, a student chapter of NSTA, 2015-Present

National Association for Research in Science Teaching

Search Committee for *Journal of Research in Science Teaching* Editors for 2016-2020,  
2013-2014

Florida Association of Science Teachers

Pinellas County Elementary Science Teachers Association (2007-2012)

### **Consultantships**

Resident Teacher Professional Preparation Program (RTP3), Science Consultant. Conducted a series of three workshops, 07.13, 09.13, & 01.14.

Central Florida Aerospace Academy Curriculum Project, Coalition for Science Literacy, University of South Florida, 05/10

Partnership to Rejuvenate & Optimize Mathematics and Science Education (PROMiSE), Professional Design Team Facilitator, 02-07/08

ESOL Miami University (Ohio) ESOL Project institute. Trainer, 05/08

Competency Development and Competency Validation Meetings Participant. Florida Teacher Certification Examination, Middle Grades General Science 5-9, 02/-4/08

### **SERVICE**

Service to the Profession

Editorial Board Membership

*International Journal of Environmental and Science Education*, 2006-2016

*Journal of Science Teacher Education*, 2008-2016

*Journal of Research in Science Teaching*, 2008-2011

Manuscript Reviewer for Professional Journals

*School Science and Mathematics*, 2014

*Science Education*, 2006- Present

*Tapestry Journal*, 2009-2012

*Journal of Research in Science Teaching*, 2001-2008, 2015-Present

*Journal of Science Teacher Education*, 2008, 2016-Present

*The Negro Educational Review*, July 2005

*Task Force Member*

National Science Teachers Association's New Visions Task Force for Preservice Teacher Preparation, October 2010-2012.

*Journal Virtual Issue*

Committee Member, *Journal of Research in Science Teaching* Virtual Issue on Diversity, 2010-2013.

Membership and Participate Committee Member, NARST, 2015-2018.

Reviewer of Textbook Prospectuses

*Urban science and mathematics teaching learning and leading: Stories of success and challenges.* Arlington, VA: NSTA Press.

*Science now: Real science for real children.* Columbus, OH: Pearson Merrill Prentice Hall.

*Integrating science, thinking, and children's literature for content literacy.* Norwood, MA: Christopher-Gordon Publishers.

*Helping students who struggle with math and science.* Norwood, MA: Christopher-Gordon Publishers.

*Reviewer of Grant Proposals*

National Science Foundation, Discovery Research K-12, December 2014.

National Research Foundation of South Africa, 2013 and 2015; each year, I was invited to review one application for a government-funded research grant.

Louisiana Board of Regents Research Commercialization and Educational Enhancement Program, 2007.

National Science Foundation, Discovery Research K-12 Program Preliminary Grants, 2006.

US Department of Education, "No Child Left Behind", Title III Part A, Improving Teacher Quality Higher Education, 2003, 2004, 2005.

National Science Foundation, Math and Science Partnership Program, 2002 & 2003.

US Department of Education, Eisenhower Program for Improving Mathematics and Science Instruction, 2001 & 2002.

*Reviewer of Conference Proposals*

National Association for Research in Science Teaching (NARST) annual international conference, 2002-2006, 2008

Expert Reviewer of draft of new Sunshine Standards for Science. Florida Department of Education. December 2007

*Reviewer of Curriculum Materials*

Smiley Face Math for Rising 3<sup>rd</sup> Graders, October 2009. Can be found online at: [www.cdnportfolio.net/smileyfacemath](http://www.cdnportfolio.net/smileyfacemath)

*External Reviewer of Faculty Promotion Materials*

University of Arizona, 2016  
Merrimack College, 2015  
Queens College, New York, 2014  
University of Vermont, 2014  
Indiana State University, 2011  
University of Georgia, 2008

*Invited Referee*

National Institute of Education, Nanyang Technological University, Singapore. Review of a Science Education Grant Proposal, 2008

*Invited Participation*

Invited panelist for the Presidential Awards for Excellence in Mathematics and Science Teaching (Elementary Science), Arlington, VA, 07/10

Invited facilitator and panelist for the National Association for Research in Science Teaching pre-conference workshop for scholars of color, Garden Grove, CA, 04/09

Invited panelist for the National Association for Research in Science Teaching Graduate Student Forum, Baltimore, MD, 04/08

Invited discussion group member on increasing diversity in the areas of environmental research and education. National Science Foundation's Advisory Committee for Environmental Research and Education (AC-ERE). Washington, DC, 11/06

Invited member of the Diverse Committee and participate in a meeting for the Center for Ocean Sciences Education Excellence- Southeast. Charleston, SC, 03/06

Second Annual Research Symposium, "Optimizing Science Achievement for all Students". Hosted by the Maryland Institute for Minority Achievement and Urban Education, University of Maryland, 09/05

*Service to Schools*

Presenter at Bay Point Elementary School, St. Petersburg, 5000 Role Models and 5000 Pearls, "Math and its connections to our lives", 03/02/10

Host and Presenter at Family Science Night at Just Elementary School, Tampa, FL, 01/12/10

Presenter at Academy Prep, St. Petersburg. Implementing the New Science Sunshine State Standards, 08/14/08

Presenter at the USF St. Petersburg College of Education Teacher Leadership Institute, 05/07

Consultant to Tarpon Springs Fundamental Elementary School, Pinellas County. Topic: Action Research through migrations, 09/06-06/07

Invited Presenter of a Pre-conference workshop on Culturally Responsive Pedagogy. National Youth At-Risk Conference, Savannah, Georgia, 03/07

Guest Presenter at North Shore Elementary School, Pinellas County Schools, 3<sup>rd</sup> Grade, Mrs. Campbell. Topic: Density, 09/06

Consultant to Screven County Schools and Georgia Southern University, Statesboro, Georgia  
Topic: Strategies to Close the Achievement Gap, 09/06

Consultant to Georgia Southern University, FIPSE Grant Office Workshop: Culturally Responsive Teaching, 02/06

Consultant to Jefferson High School, Jefferson City Schools (Georgia). Physical Science, Biology, Chemistry, and Physics Workshop: Unpacking the GPS Standards, 07/05

Consultant to Project TEAMS: Teaching Environmental and Multicultural Science, an Improving Teaching Quality Program-funded teacher professional development experience for Hall County, Georgia, 06/05-07/06

Consultant to Clarke County Schools (Georgia). Mathematics and Science Summit, 06/05

Science Fair Judge, Johnson High School, Gainesville, Georgia, 05/05  
Certified as a facilitator for Project WILD, 04/05

Consultant to Environmental Literacy Initiative, an Improving Teaching Quality Program-funded teacher professional development experience at the Rock Eagle 4-H Center, Eatonton, Georgia, 06-07/05

Consulted to SERVE on studying the utility of science notebooks in elementary schools in the Huntsville, Alabama area, 10/01-05/03

Assisted Madison City Schools (Alabama) with the implementation of science notebooks into their elementary and middle school kit-based science program, 11/01

Consultant to the Alabama Mathematics, Science and Technology Initiative (AMSTI) Committee, 2000

Service to University of Central Florida  
University  
Scroll and Quill Society 2016, Review Committee Co-chair

University Faculty Senate, 2014-2016  
Graduate Program Review and Awards Committee

EnergyWhiz Olympics, annual statewide event sponsored by the Florida Solar Energy Center, a research institute of UCF, Judge for Energy Innovations category, May 3, 2014

Central Florida STEM Alliance, CEDHP Representative, 2012-2013

#### College

Doctoral Council, Fall 2016-Present

Masters Council, Fall 2016-Present

Graduate Curriculum and Standards Committee, Fall 2013-Spring 2016

College Research Committee, Alternate, Fall 2013-Spring 2016

HAPPY Hour Workshop: We Love Professional Organizations, Presenter, Spring 2013

HEPS Salon, *The Politics of Higher Education*, Panelist, Spring 2013

School of Teaching, Learning and Leadership  
K-12 STEM Education Faculty Search Committee, 2016-2017

Science Education Faculty Search Committee, 2014-2015

Lockheed Martin Academy K-8 Enhancement Program, Selection Committee Chair,  
Spring 2013

Secondary Education Program Committee Member Fall 2012-Present

#### Service to USF St. Petersburg

USF System  
Newly-created System Faculty Advisory Council, Fall 2010-August 2011

#### University

CSPACE Executive Committee, 10/11-2012

Gave Welcome at Parent University, USFSP, 09/10/11

Presented at Fall Faculty Meeting on Innovative Pedagogies, 08/19/11

College of Education Representative on the University Faculty Senate (Elected Position for a two-year term; one additional year added to term via revision of constitution), 09/09-2012

"The Science of Our Lives: Bridging the Parallel Universes. Science Café Library Talk, Poynter Library, 03/04/10

Invited Talk, "Culturally Relevant Pedagogy", The Psychological Student Organization, 01/24/08

Regional Vice Chancellor for Academic Affairs Search Committee, 05/07-02/08

Invited Speaker on Community Science Night as part of Senator Bob Graham's visit with USF St. Petersburg's Florida Studies and Center for Civic Engagement programs, 10/07

Center for Civic Engagement Fall 2007 Course Development Grant applications review, 05/07

Science and Technology Building Planning Committee, 05/07-06/08

*Insight into a civically engaged classroom.* A roundtable discussion with the Spring 2007 Center for Civic Engagement Course Development grant recipients, 04/13/07

Panelist for a discussion of the movie, "Flock of Dodos", as part of a campus-wide Darwin Day event, "Communicating Science in the 21<sup>st</sup> Century", 02/07

College of Education

Reading Education Faculty Search Committee, Fall 2010 - Spring 2011

Founding Co-Counselor, Kappa Delta Pi International Society in Education, Alpha Zeta Beta Chapter, Spring 2010 - Spring 2012

Advisor, Masters Program in Mathematics and Science, Spring 2010 - Summer 2012

Co-Advisor, Masters Program in Mathematics and Science, Fall 2009

Assessment Committee, 2008-2012

College Council, 09/09-08/09

Chair, 08-09

Vice Chair, 07-08

Parliamentarian, 07-08

College of Education Institutional Representative to the American Association of Colleges of Teacher Education (AACTE), 2007-2011

Curriculum and Program Committee, 06/06-08/07

Program

Mathematics Education Faculty Search Committee, 09/08-02/09

Science Education Faculty Search Committee, 09/06-03/07

Service to the University of Georgia  
University

- 2005-2006 Organizing Committee Member, "The Intersection of Diversity and Learning: A National Conference". NSF-funded conference hosted by the University of Georgia, to be held May 18-21, 2006
- 2004-2006 Reviewer, Georgia Systemic Teacher Education BRIDGE Program

College of Education

- 2002-2004 Early Childhood Education Advisory Committee
- 2001-2002 Department of Elementary Education Search Committee

Department of Science Education

- 2003-2004 Elementary Program Committee
- 2003-2004 Middle Grades Program Committee, Chair
- 2003-2004 Colloquium Committee
- 2003-2004 Multicultural Committee

Department of Mathematics and Science Education

- 2004-2006 Bylaws Committee

Department of Mathematics and Science Education, Science Education Program

- 2004-2005 Elementary Education Committee
- 2004-2005 Colloquium Committee, Chair

Service to Texas A&M University-Corpus Christi

State

- 09/96-05/98 Educator Preparation Improvement Initiative Peer Assistant
- Spring 1998 Environmental Protection Agency, Region Six Grant Proposal Reviewer

University

- 01-07/99 Faculty Athletics Representative
- 04/98-07/99 Intercollegiate Athletics Council, Chair
- Fall 1997 Sponsored Programs Coordinator Search Committee, Chair

1997-1999 Undergraduate Admissions Committee  
05/97-06/99 Faculty Senate  
Ad Hoc Committee on Web Page Design, 05-08/98  
Ad Hoc Committee on Faculty Compensation, 01-06/98  
Bylaws and Elections Committee, 07/97-06/98

09/96-06/98 Core Curriculum Advising Subcommittee

09/96-06/99 Title III Advisory Committee

06/96-05/98 Freshman Advisor

#### College of Education

05/98-07/99 Kappa Delta Pi Honor Society, Chapter Counselor

6/97 Faculty Research Enhancement Proposal Review Committee

01/97-06/99 College Liaison with the Carroll High School Educational Assistant Cooperative

1997-1999 Computing Committee

1996-1998 Curriculum Coordinating Committee

1995-1999 Citgo Science Tower Development Committee

1995-1996 Early Childhood Development Center Advisory Council

#### Department of Curriculum & Instruction

10/98 Mathematics Education Faculty Search Committee, Chair  
01-08/98 Field-Based Faculty Search Committee

1997-1998 Reading Faculty Search Committee Fall

01/97-07/99 Webmaster for departmental web page

01/96-07/99 Assisted with development of the Field-Based Teacher Education Program

#### Service to St. Petersburg, Florida Community

05/03/11 Judge, Science Fair, Pasadena Fundamental Elementary School

2008-2010 Volunteer, *St. Petersburg Times* Festival of Reading  
08, 09 & 10/09 Science Sunday at New Philadelphia Community Church

02/07 & 02/08 Reader for Pinellas Urban League Black History Month Essay Contest

10/06-09/09 Board Member, Science Center of Pinellas County

10/06 Guest Presenter, "Density", North Shore Elementary School 3<sup>rd</sup> Grade  
(Mrs. Campbell), Pinellas County Schools

08/06 Guest Co-presenter, "Framing the Research Question", Tarpon Springs  
Fundamental School, Pinellas County Schools

Service to Corpus Christi, Texas Community

02/99 Science Fair Judge Moore Elementary School

12/98-06/99 St. Paul United Methodist Church Administrative Council, Chair

09/97-06/99 St. Paul United Methodist Church Study/Futures Committee  
Chair, 09/97-05/98  
Vice Chair, 06/98-06/99

12/96-06/99 St. Paul United Methodist Church United Methodist Men  
Vice President, 01/97-01/99

Invited Speeches

05/16 NOBCChE Florida Science Bowl Guest Speaker, UCF, Orlando, FL

02/14 Guest Speaker. Men of Vision Program. Bethel African Methodist Church, St.  
Petersburg, FL

02/99 Guest Speaker. Black History Month, Coles Elementary School

05/98 Keynote Speaker. Black Methodists for Church Renewal

10/96 Guest Speaker. St. Paul United Methodist Men Monthly Meeting

01/96 Guest Speaker. King High School National Beta Club Induction Ceremony

Service to Gainesville, Florida Community

01/94 P.K. Yonge Middle School Science Fair, Co-Coordinator

02/93 Alachua County Science Fair, Judge

02/93 Guest Speaker. African-American Scientists. P.K. Yonge Elementary School

03/92 Florida State Science Fair, University of Florida, Judge Facilitator  
11/91 Science Fair, Fort Clarke Middle School, Judge  
10/91 Science Fair, P.K. Yonge, Judge Facilitator