

## Curriculum Vitae

### **Katherine P. Dabney**

Virginia Commonwealth University  
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### **LICENSURE**

Commonwealth of Virginia, License Number: PGP-0607713                      2004-2019  
Postgraduate Professional License, Elementary Education, PREK-6  
Re-issued March 4, 2014

### **EDUCATION**

<b>Ph.D.</b>	Science Education	University of Virginia	2012
	Dissertation: <i>Differences Within: A Comparative Analysis of Women in the Physical Sciences-- Motivation and Background Factors</i>		
<b>M.T.</b>	Elementary Education	University of Virginia	2005
<b>B.S.</b>	Psychology with Honors	Colorado State University	2001

### **ACADEMIC APPOINTMENTS AND WORK EXPERIENCE**

<b>Associate Professor</b>	<b>School of Education</b> Virginia Commonwealth University	2018-Present
<b>Assistant Professor</b>	<b>School of Education</b> Virginia Commonwealth University	2012-2018
<b>Graduate Research Assistant</b>	<b>Curry School of Education</b> University of Virginia	2009-2012
<b>Teaching Fellow</b>	<b>Curry School of Education</b>	2009-2012

	University of Virginia	
<b>Elementary Teacher</b>	<b>Albemarle County Public Schools</b> Charlottesville, Virginia	2004-2009
<b>GED Instructor</b>	<b>Adult Learning Center</b> Charlottesville City Schools	2004-2008
<b>ESL Teacher</b>	<b>Blue Ridge School</b> Charlottesville, Virginia	2004
<b>Research Assistant</b>	<b>Curry School of Education</b> University of Virginia	2003-2004
<b>Instructor</b>	<b>Occupational Therapy Department</b> Colorado State University	2001-2002

## **SCHOLARSHIP**

### **Research Lab:**

Dr. Dabney conducts quantitative and qualitative research to advance STEM educational instruction and inform public policy. Her research team, The Early Science Education Research Lab, is dedicated to understanding formal and informal educational experiences that influence scientific literacy, interest, science achievement, and persistence in science-related career fields. This research is focused especially on underrepresented groups in STEM. The Early Science Education Research Lab involves faculty and students within and beyond the VCU School of Education. Our dissemination efforts reach national and international scholarly audiences via grants, publications, presentations, and professional development.

*\*Below indicates a student author from the VCU Early Science Education Research Lab.*

## **BIBLIOGRAPHY**

### **Refereed Articles Published:**

Dou, R., Hazari, Z., **Dabney, K. P.**, Sonnert, G., & Sadler, P. M. (2019). Early informal science and STEM identity: The importance of talking science. *Science Education, 103*(3), 1-15. doi: 10.1002/sce.21499

\*Johnson, T. N. & **Dabney, K. P.** (2018). Voices from the field: Constraints encountered by early career elementary science teachers. *School Science and Mathematics, 118*(6), 244-256. doi: 10.1111/ssm.12290

**Dabney, K. P.**, Chakraverty, D., \*Hutton, A. C., Warner, K. A., & Tai, R. H. (2017). The bachelor's to Ph.D. transition: Factors influencing Ph.D. completion among women in chemistry and physics. *Bulletin of Science, Technology & Society*. doi: 10.1177/0270467617710852

**Dabney, K. P.**, \*Johnson, T., Sonnert, G., & Sadler, P. M. (2017). STEM career Interest in women and informal science experiences. *Journal of Women and Minorities in Science and Engineering, 23*(3), 249- 270. doi: 10.1615/JWomenMinorScienEng.2017018018

Tai, R. H., Kong, X., Mitchell, C. E., **Dabney, K. P.**, Read, D. M., Jeffe, D. B., Andriole, D. A., & Wathington, H. D. (2017). Examining summer laboratory research apprenticeships for high School students as a factor on entry in MD/PhD programs at matriculation. *CBE-Life Sciences Education, 16*(2). doi: 10.1187/cbe.15-07-0161

**Dabney, K. P.**, Tai, R. H., & \*Scott, M. R. (2016). Informal science: Family education, experiences, and initial interest in science. *International Journal of Science Education, Part B: Communication and Public Engagement, 6*(3), 263-282. doi: 10.1080/21548455.2015.1058990

**Dabney, K. P.**, & Tai, R. H. (2014). Factors associated with female chemist doctoral career choice within the physical sciences. *Journal of Chemical Education, 91*(11), 1777-1786. doi: 10.1021/ed4008815

**Dabney, K. P.**, & Tai, R. H. (2014). Comparative analysis of female physicists in the physical sciences: Motivation and background factors. *Physics Review Special Topics, Physics Education Research, 10*(1), 010104. doi: 10.1103/PhysRevSTPER.10.010104

Kong, X., **Dabney, K. P.**, & Tai, R. H. (2014). The association between science summer camps and career interest in science and engineering. *International Journal of Science Education, Part B: Communication and Public Engagement, 4*(1), 54-65. doi: 10.1080/21548455.2012.760856

**Dabney, K. P.**, & Tai, R. H. (2013). Female physicist doctoral experiences. *Physics Review Special Topics, Physics Education Research, 9*(1), 010115. doi: 10.1103/PhysRevSTPER.9.010115

**Dabney, K. P.**, Chakraverty, D., & Tai, R. H. (2013). The association of family influence and early interest in science. *Science Education, 97*(3), 395-409. doi: 10.1002/sce.21060

**Dabney, K. P.**, Tai, R. H., Almarode, J. T., Miller-Friedmann, J. L., Sonnert, G., Sadler, P. M., & Hazari, Z. (2012). Out-of-school time science activities and their association with career interest in STEM. *International Journal of Science Education, Part B: Communication and Public Engagement*, 2(1), 63-79. doi: 10.1080/21548455.2011.629455

### **Peer Conference Proceedings:**

\*Spotts, K.B., **Dabney, K.**, Sonnert, G. & Sadler, P. (2019). Elementary Informal Engineering Experiences and Participation in Later STEM Experiences. In K. Graziano (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 2335-2339). Las Vegas, NV, United States: Association for the Advancement of Computing in Education (AACE). Retrieve from: <https://www.learntechlib.org/primary/p/207975/>.

\*Spotts, K.B., **Dabney, K.**, Sonnert, G. & Sadler, P. (2019). Elementary Informal STEM and Participation in Later STEM Experiences. In K. Graziano (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 2340-2344). Las Vegas, NV, United States: Association for the Advancement of Computing in Education (AACE). Retrieve from: <https://www.learntechlib.org/p/207976>.

### **Refereed Book Chapters:**

Almarode, J. T., Subotnik, R. F., **Dabney, K. P.**, Crowe, E., Tai, R. H., & Kolar, C. (2017). Parent or guardian characteristics and talented students' persistence in STEM. In K. S. Taber, M. Sumida, & C. L. McClure (Eds.), *Teaching gifted learners in STEM subjects: Developing talent in science, technology, engineering and mathematics*. London, United Kingdom: Routledge.

### **Non-Refereed Papers:**

**Dabney, K. P.**, & Tai, R. H. (July, 2012). *An Examination of Factors Associated with Entry and Retention in the Scientific Workforce: A Perspective from the Physical Sciences* (White Paper). Scientific Workforce and Modeling Group, John Glenn School of Public Policy, Columbus, OH.

### **REFEREED PROFESSIONAL PRESENTATIONS:**

\*Spotts, K.B. & **Dabney, K. P.** (March, 2019). Elementary Informal STEM and Participation in Later STEM Experiences. Presentation at the 2019

annual Society for Information Technology and Teacher Education. Las Vegas, NV.

\*Spotts, K.B. & **Dabney, K. P.** (March, 2019). Elementary Informal Engineering Experiences and Participation in Later STEM Experiences. Presentation at the 2019 annual Society for Information Technology and Teacher Education. Las Vegas, NV.

Dou, R., Hazari, Z., **Dabney, K. P.**, Sonnert, G., & Sadler, P. M. (September, 2018). *Examining early informal STEM experiences and STEM identity: The importance of 'talking science'*. Presentation at the 2018 annual Association of Zoos and Aquariums conference. Seattle, WA.

**Dabney, K. P.**, Sonnert, G., Bae, C. L., & Sadler, P. M. (April, 2018). *STEM Experiences and Computer Science Career Interest*. Presentation at the 2018 annual American Educational Research Association. New York, NY.

Bae, C., Hayes, K. N., & **Dabney, K. P.** (April, 2018). *The Roles of Student Characteristics and Classroom Learning Opportunities in Science Achievement: A Multilevel Approach*. Presentation at the 2018 annual American Educational Research Association. New York, NY.

Chakraverty, D., **Dabney, K. P.**, Jeffe, D.B., & Tai, R.H. (April, 2018). *Pursuing a PhD in Biomedical Science: Reasons and Challenges*. Presentation at the 2018 annual American Educational Research Association. New York, NY.

Dou, R., Hazari, Z., **Dabney, K. P.**, Sonnert, G., & Sadler, P. M. (April, 2018). *Talking Science: Experiences that Predict STEM Identity and Career Goals*. Presentation at the 2018 annual National Association for Research in Science Teaching. New York, NY.

**Dabney, K. P.**, \*Johnson, T. N., Hazari, Z., \*Dou, R., Sonnert, G., & Sadler, P. M. (April, 2017). *Elementary, Middle, and High School Out-of-School Time Science Experiences and STEM Career Interest*. Presentation at the 2017 annual American Educational Research Association. San Antonio, TX.

\*Johnson, T. N., **Dabney, K. P.**, Hazari, Z., Sonnert, G., & Sadler, P. M. (April, 2017). *The Association Between K-12 Out-of-School Time Science and STEM Identity at the Beginning of College*. Presentation at the 2017 annual American Educational Research Association. San Antonio, TX.

**Dabney, K. P.**, \*Hutton, A. C., Chakraverty, D., & Tai, R. H. (April, 2017). *Physics Doctoral Retention and Graduation: Gender and Pre-Doctoral Factors*. Presentation at the 2017 annual American Educational Research Association. San Antonio, TX.

\*Johnson, T. N. & **Dabney, K. P.** (April, 2017). *Voices from the Field: Constraints Encountered by Early Career Elementary Science Teachers*. Presentation at the 2017 annual National Association for Research in Science Teaching. San Antonio, TX.

**Dabney, K. P.**, \*Scott, M. R., \*Hutton, A. C., & \*Perry, S. J. (April, 2016). *Preservice Elementary Teachers and Science Instruction: Barriers and Supports*. Presentation at the 2016 annual National Association for Research in Science Teaching. Baltimore, Maryland.

**Dabney, K. P.**, Sadler, P. M., & Sonnert, G. (April, 2016). *Out-of-School Time Science Activities and Their Association with Female Career Interest in STEM*. Presentation at the 2016 annual American Educational Research Association. Washington, D.C.

\*Scott, M. R., & **Dabney, K. P.** (April, 2016). *Identity Development of Pre-Service Elementary Teachers as Teachers of Culturally Diverse Students*. Presentation at the 2016 annual American Educational Research Association. Washington, D.C.

**Dabney, K. P.**, \*Hutton, A. C., & Tai, R. H. (April, 2016). *Chemist Doctoral Retention and Graduation: Gender and Pre-Doctoral Factors*. Presentation at the 2016 annual American Educational Research Association. Washington, D.C.

Tai, R. H., **Dabney, K. P.**, Maltese, A. V., & Almarode, J. T. (April, 2016). *Learning Activities and Early Career Interest*. Presentation at the 2016 annual American Educational Research Association. Washington, D.C.

**Dabney, K. P.**, Tai, R. H., Maltese, A. V., & Almarode, J. T. (April, 2015). *Gender and Early Career Choice in STEM*. Presentation at the 2015 annual American Educational Research Association. Chicago, Illinois.

**Dabney, K. P.**, & Tai, R. H. (April, 2015). *Time to Ph.D. of Women in Physics- Early Motivation and Background Factors*. Presentation at the 2015 annual American Educational Research Association. Chicago, Illinois.

**Dabney, K. P.**, & Tai, R. H. (April, 2014). *A Comparative Analysis of Female Chemists in the Physical Sciences- Motivation and Background Factors*. Presentation at the 2014 annual American Educational Research Association. Philadelphia, Pennsylvania.

**Dabney, K. P.**, & Tai, R. H. (April, 2014). *The Association of Parental Education and Family Interest in Science*. Presentation at the 2014 annual American Educational Research Association. Philadelphia, Pennsylvania.

**Dabney, K. P.**, & Tai, R. H. (March, 2014). *Differences Within: A Comparative Analysis of Women in the Physical Sciences*. Presentation at the 2014 annual National Association for Research in Science Teaching. Pittsburgh, Pennsylvania.

**Dabney, K. P.** (May, 2013). *Engaging Science Programs and Practices in Out-of-School Contexts*. Presentation at the 2013 annual American Educational Research Association. San Francisco, California.

**Dabney, K. P.**, & Tai, R. H. (May, 2013). *A Comparative Analysis of Female Physicists in the Physical Sciences- Motivation and Background Factors*. Presentation at the 2013 annual American Educational Research Association. San Francisco, California.

**Dabney, K. P.**, & Tai, R. H. (April, 2012). *Career Satisfaction and Success of Physical Scientists in Project Crossover*. Presentation at the 2012 annual American Educational Research Association. Vancouver, British Columbia, Canada.

**Dabney, K. P.**, Chakraverty, D., Almarode, J. T., & Tai, R. H. (April, 2012). *The Association of Parental Influence on Early Interest in Science*. Presentation at the 2012 annual American Educational Research Association. Vancouver, British, Canada.

**Dabney, K. P.**, Wyss, V. L., & Tai, R. H. (March, 2012). *Female Physicist Doctoral Experiences and Career Choice Factors*. Presentation at the 2012 annual National Association for Research in Science Teaching. Indianapolis, Indiana.

Miller-Friedmann, J. L., Sonnert, G., Sadler, P. M., & **Dabney, K. P.** (March, 2012). *The Effect Out-of-School-Time Programs on Career Interest in STEM*. Presentation at the 2012 annual National Association for Research in Science Teaching. Indianapolis, Indiana.

Almarode, J. T., **Dabney, K. P.**, & Tai, R. H. (April, 2011). *The Impact of Taking Algebra I in the Eighth Grade on Success in College Calculus*. Presentation at the annual American Educational Research Association. New Orleans, Louisiana.

Almarode, J. T., **Dabney, K. P.**, & Tai, R. H. (April, 2011). *Out-of-School Time Science Activities and Their Association with Career Interest in STEM*. Presentation at the annual National Association for Research in Science Teaching. Orlando, Florida.

Kogan, L.R., Bowers, K., **Dabney, K. P.**, Fjeseth, J., Slickard, B., & Rickard, M. (April, 2000). *Women's fashion magazines: What is their message?* Presentation

at the annual meeting of the Rocky Mountain Psychological Association. Tuscon, Arizona.

### **INVITED NON-REFEREED PROFESSIONAL PRESENTATIONS:**

**Dabney, K. P.** (May, 2017). *Explorations of Informal Science and STEM Career Interest*. Presentation at the Advisory Panel Meeting for Project OPSCI: Outreach Programs and Science Career Intentions. Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

Tai, R. H., **Dabney, K. P.**, Ryoo, J. H., Almarode, J. T., Bennett, J., & Airey, J. (March, 2016). *PROJECT EXPLORE: Exploring Longitudinal Research on Out-of-school Time Experiences in STEM*. Presentation at the 2016 National Science Foundation AISL PI Meeting. North Bethesda, Maryland.

**Dabney, K. P.** (March, 2014). *Diversity in the Elementary Science Classroom*. Presentation at Metropolitan State University School of Education. Denver, Colorado.

**Dabney, K. P.**, & Tai, R. H. (May, 2012). *An Examination of Factors Associated with Entry and Retention in the Scientific Workforce: A Perspective from the Physical Sciences*. Presentation at the Scientific Workforce and Modeling Group. John Glenn School of Public Policy, Columbus, OH.

**Dabney, K. P.**, Almarode, J. T., & Tai, R. H. (June, 2011). *Structural Equation Modeling of Variables*. Presentation at the annual Advisory Panel Meeting for Project FICSMath: Factors Influencing College Success in Mathematics. Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

Hall, M. T., **Dabney, K. P.**, Chakraverty, D., Mitchell, C., Wathington, H., & Tai, R. H. (August, 2011). *Transitions in the Education of Minorities Underrepresented in Research: Project TREMUR*. Presentation at the annual National Institutes of Health Interventions 2011 Progress Report Meeting, San Francisco, CA.

Almarode, J. T., **Dabney, K. P.**, & Tai, R. H. (June, 2010). *FICSMath Preliminary Interests and Analyses*. Presentation at the annual Advisory Panel Meeting for Project FICSMath: Factors Influencing College Success in Mathematics. Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

### **FUNDED GRANTS**

#### **External Grants and Contracts:**

PI Research Collaboration 2018-2023

*Science Learning+: Impacts of STEM Experiences on Informal STEM Learning*

The research will undertake a longitudinal mixed-methods approach of Out of School Time/informal STEM experiences over a five-year time span of data collection for youth ages 9-19 in urban, suburban, town, and rural communities. The evidence base will include data on youth experiences of informal STEM, factors that exert an influence on participation in informal STEM, the impact of participation on choices about educational pathways and careers, and preferences for particular types of learning activities. The quantitative data will include youth surveys, program details (e.g. duration of program, length of each program session, youth/facilitator ratio, etc.), and demographics. The qualitative data will include on-site informal interviews with youth and facilitators, and program documentation.

(NSF DRL 1811265, DRL) Project in Collaboration with University of Virginia at Charlottesville, VA. July 2018- July 2023. PI: Robert H. Tai; VCU PI: **Katherine P. Dabney**. (Total Funding: \$687,771.00).

Advisor 2012-2017

*Outreach Programs and Science Career Intentions (OPSCI)*

Serve on the advisory board for grant development and implementation that examines the extent to which informal STEP activities that target pre-college students influence career aspirations.

(NSF DUE 1161052, STEP). Project through the Harvard-Smithsonian Center for Astrophysics at Cambridge, MA. September 2012- August 2017. PI: Phillip Sadler; co-PI: Gerhard Sonnert. National Science Foundation (Total Funding: \$1,135,426).

PI Research Collaboration 2014-2016

*Exploring Longitudinal Research on Out-of-school Time Experiences in STEM (EXPLORE)*

Grant to design and implement a large scale, multi-programmatic, longitudinal study of United States and United Kingdom informal science learning programs.

(NSF DRL 1451275, AISL, SL+). Project in Collaboration with University of Virginia at Charlottesville, VA. November 2014- October 2016. PI: Robert H. Tai; **VCU subcontract PI: Katherine P. Dabney**. National Science Foundation's Science Learning+ is an international grant partnership awarded with the UK Wellcome Trust and Economic and Social Research Council (Total Funding: \$114,099).

Graduate Research Assistant 2010-2012

*Spark to Flame: An Accelerated Longitudinal Study of Students' Interest and Engagement in Science Grades 3-12.*

Participated in instrument design, data collection and analysis.

(S. D. Bechtel). Project in Collaboration with Indiana University at Bloomington, IN. June 2011 – June 2015. PI: Robert H. Tai; IU sub-contract co-PI: Adam V. Maltese, Ph.D. S. D. Bechtel, Jr. Foundation (Total Funding: \$600,000).

Graduate Research Assistant 2010-2012  
*Transitions in the Education of Minorities Underrepresented in Research.*  
Performed research on biomedical research, research training, and workforce development including data collection and analysis.  
(NIH – NIGMS 1 R01 GM094535-01). Project in Collaboration with Washington University of Saint Louis School of Medicine, Saint Louis, MO. September 2010 – August 2014. PI: Robert H. Tai; Joint PI: Heather Wathington. WUSTL subcontract co-PIs: Dorothy Andriole, MD and Donna Jeffe, PhD. National Institutes of Health (Total Funding: \$1,489,676).

Graduate Research Assistant 2010-2012  
*Collaborative Research on Out-of-school Time Science Programs.*  
Participated in the grant writing and editing process and instrument development. (NSF DRL 1010935, ISE). Project in collaboration with the Ethnography and Evaluation Research Center of the University of Colorado, Boulder, CO. October 2010 – September 2012. PI: Robert H. Tai; CU Joint PI: Sandra Laursen, PhD. National Science Foundation (Total Funding: \$440,000).

Graduate Research Assistant 2010-2012  
*Exploring the Outcomes and Methods of Youth Out-of-School-Time Science Programs.*  
Participated in the grant writing and editing process. (Noyce). Project in collaboration with the Ethnography and Evaluation Research Center of the University of Colorado, Boulder. January 2010 – December 2010. PI: Robert H. Tai. CU Joint PI: Heather Thiry. Noyce Foundation. (Total Funding: \$224,815).

Graduate Research Assistant 2009-2012  
*Youth-based Program Impact on Education and Career Choices: An Exploration of Issues in Planning and Implementing Longitudinal Research.*  
Performed research on STEM education and workforce development including data collection and analysis. (NSF DRL 0748041). PI: Robert H. Tai; Co-PI: Xitao Fan; National Science Foundation (Total Grant Funding: \$200,000).

Graduate Research Assistant 2009-2012  
*Study of the Impact of Specialized Public H.S. of Science, Mathematics, and Technology.*  
Participated in survey development and editing. (NSF DRL 0815421). Subcontract in partnership with the American Psychological Association. September 15, 2008 – August 31, 2011. Subcontract PI: Robert H. Tai; Co-PI: Xitao Fan; PI: Rena Subotnik. National Science Foundation (Total Funding: \$1,050,000).

## Internal Grants and Contracts:

Graduate Research Assistant 2003-2004  
*Technology Integration and Programming Initiative*  
Conducted case studies at Venable Elementary School on the classroom effect of technology instruction. (TNE). An exploratory study examining the effect of elementary preservice students' teaching technology with elementary pupils. PI: Eleanor Wilson. Teachers for a New Era.

## UNFUNDED GRANTS

### Unfunded External Grants and Contracts:

PI Research Collaboration 2016  
*Science Learning+: Exploring Pathways through Longitudinal Research (EXPLORE): A study of youth experiences with informal STEM learning and long-range outcomes*  
Grant to implement a large scale, multi-programmatic, multi-method longitudinal study of United States and United Kingdom informal science learning programs. (NSF DRL, SL+). Project in Collaboration with University of Virginia, James Madison University, and the University of York. April 2017- April 2023. PI: Robert H. Tai; subcontract **PI: Katherine P. Dabney, VCU**; John T. Almarode, JMU; Judith Bennett & Jeremy Airey, UK. National Science Foundation's Science Learning+ is an international grant partnership awarded with the UK Wellcome Trust and Economic and Social Research Council (Unfunded: Total Funding: \$2,400,000).

Co-PI Research Collaboration 2014  
*Project SMART: Science and Mathematics Adaptive Responsive Tutoring for Young Children at Risk for Developmental Delays*  
Grant writing directed toward developing an informal science and mathematics tutoring program for at-risk preschool and head start participants. (NSF AISL). Project through the Science Museum of Virginia at Richmond, VA. September 2013-August 2018. PI: Yaoying Xu; **co-PIs: Katherine Dabney, Rosalyn Hargraves, Mary Huennekens, and Lynn Pelco.** National Science Foundation (Unfunded: Total Requested Funding: \$1,454,319).

Co-PI Research Collaboration 2013  
*Adapted Peer Tutoring Science Museum Based Program for At-Risk Youth*  
Grant writing directed toward developing a science museum based program for at-risk preschool and head start participants. (NSF AISL). Project through the Science Museum of Virginia at Richmond, VA. September 2013-August 2018. PI: Yaoying Xu; **co-PIs: Katherine Dabney,**

Rosalyn Hargraves, and Lynn Pelco. National Science Foundation (Unfunded: Total Requested Funding: \$1,499,609).

### **Unfunded Internal Grants and Contracts:**

PI Research Collaboration 2013-2014

*A Quest for an Online Community of Learners: An Elementary Pre-Service Teacher Project*

Grant writing directed toward developing a community of learners online for the Department of Teaching and Learning Elementary pre-service teachers. (VCU Quest). Project in Collaboration with School of Education Elementary Program Group. **PI: Katherine Dabney**; co-PIs: Joan Rhodes, Valerie Robnolt, Volkan Sevim, and Loraine Stewart. VCU Quest Innovation Fund Grant (Unfunded: Total Requested Funding: \$50,000).

## **TEACHING AND ADVISING**

### **COURSES TAUGHT**

Independent Study (TEDU 641) 2019-Present

A graduate student individual study of a specialized issue or problem in education.

Dissertation Research (EDUC 899) 2017-Present

Enrollment restricted to students who have successfully completed comprehensive examinations. Dissertation work under direction of dissertation chair and committee.

Classroom Management in Elementary Schools (TEDU 410) 2019

Designed to help students develop their understanding of effective classroom management techniques. Students will examine management models and research and evaluate antecedent factors of a management scheme such as their philosophy of education, management style, learning styles and school and classroom climate.

Internship Sem: Investigation and Trends in Educ (TEDU 681) 2018

This seminar course is a companion piece to the student internship in elementary education. Its major purposes are to cultivate the knowledge, dispositions and skills of a critically reflective practitioner into actual teaching practice. To do so, this class provides opportunities for interns to describe, analyze, and evaluate the curricular, instructional, and management decisions they make during their internship.

Elementary School Practicum B (TEDU 313) 2017

Virginia Commonwealth University, Richmond, Virginia

An early and elementary teacher education field placement that precedes student teaching/internship. Includes planned observations, tutorials and small-group and whole class involvement.

Science Education in the Elementary School (TEDU 517) 2012-Present  
Virginia Commonwealth University, Richmond, Virginia

This course, required for elementary teacher certification, is designed to renew and/or expand teachers' knowledge and skills in the teaching of science in the classroom and the community. New materials and methodologies are examined in the light of current trends, research findings and professional recommendations.

Science in Elementary Schools (EDIS 5330) 2009-2012  
University of Virginia, Charlottesville, Virginia

This course, required for elementary teacher certification, emphasizes the ability to translate understandings about earth, life, and the physical sciences into an active elementary science program. Understandings of the nature of science and scientific inquiry are developed through applications of experimental design and science process skills that are appropriate for PreK-6 students. Students organize content and design instruction that addresses state and national science standards, while incorporating technology and integrating other subjects with science.

5<sup>th</sup> Grade Science, Math, Language Arts, and Technology 2004-2009  
Albemarle County Public Schools, Charlottesville, Virginia

Prepared students for the Virginia Standards of Learning (VSOL) and graduation to middle school. Responsible for classroom planning, assessments, parent-teacher communication, and behavior management. Position that included work with a variety of special education inclusion students using differentiation and in collaboration with school psychologists, Region Ten, parents, and special educators. Additional roles included being the school vertical Science Coordinator, 5<sup>th</sup> Grade Team Leader, and Equity and Diversity Coordinator.

GED Science, Language Arts, and Mathematics Instructor 2004-2008  
Adult Learning Center, Charlottesville City Schools

Center located in the city housing project with teaching aimed towards special needs and underserved population. Instruction included science, reading, writing, language arts, and a strong emphasis on math (middle school to high school). Responsible for classroom planning, assessment, and Adult Learning Center planning and collaboration.

ESL Teacher 2004  
Blue Ridge School, Charlottesville, Virginia

Educated refugee and immigrant elementary school students in English as a second language with a focus on science and mathematics content. Responsible

for instruction, planning, assessment, and behavior management of students ages 6-13 that communicated in over 10 different dialects.

Medical Terminology and Anatomy and Physiology (OT 215) 2001-2002  
Occupational Therapy Department, Colorado State University  
Course that emphasized definition and use of medical terms. Designed to provide students with a basic understanding of the medical vocabulary necessary for subsequent coursework in health-related fields. Covered the use of word parts, medical terms, word-building skills, spelling, abbreviations, and medical records and their connection to related topics of anatomy and physiology.

## SERVICE

### MAJOR COMMITTEES

#### **Professional-Community:**

Journal Reviewer 2017-Present  
Reviewer for the *Journal of Women and Minorities in Science and Engineering*.

Associate Editor 2016-Present  
Associate Editor for the journal *Science Educator* published via the National Science Education Leadership Association.

Conference Proposal Evaluation 2016-Present  
Evaluate proposals for the annual American Educational Research Association Conference.

Journal Reviewer 2015-Present  
Reviewer for *Physics Review*.

National Science Foundation Reviewer 2015-Present  
Ad hoc reviewer of the NSF EHR Core Research Program grants.

Minds in Motion 2015-2016  
Collaborate with the Richmond Ballet, local school districts, teachers, pre-service teachers, and students regarding the intersection of movement and elementary science education. Create professional development for educators and program development for students regarding the education, preparation, and performance of a science and movement-based show at the Richmond Ballet.

Journal Reviewer 2013-Present  
Reviewer for *Science Education*.

Session Chair 2013

America Educational Research Association National Meeting.

Advisory Board Member 2012-2017  
Outreach Programs and Science Career Intentions (OPSCI) NSF STEP Project  
through the Harvard-Smithsonian Center for Astrophysics at Cambridge, MA.

Conference Proposal Evaluation 2011-2015  
Evaluate proposals for the annual National Association for Research in Science  
Teaching Conference.

Journal Reviewer 2011-Present  
Reviewer for the *International Journal for Environmental and Science Education*.

### **University-School:**

Council for Community Engagement 2018-Present  
Member of commit of representatives from all academic and major support units  
help facilitate VCU becoming a national model for community engagement and  
regional impact.

VCU SOE Strategic Planning Committee 2018-Present  
Member of the SOE committee which is developing a comprehensive strategic  
planning school-wide process. This new strategic plan will move our vision for the  
school forward while connecting our path to the new VCU strategic plan  
(launching summer 18).

VCU Education Psychology Search Committee 2018-2019  
Collaborate with Department of Foundations to hire a professor of educational  
psychology.

SOE Faculty Organization 2017-Present  
Member of organization for faculty governance that works in collaboration with  
administration to strengthen SOE.

Climate, Culture, and Voice Committee 2017-2018  
Member of committee to strengthen SOE workplace climate, culture, and voice.

VCU SOE Grade Appeal Committee 2017  
Member of school committee to review grade appeals.

VCU Spring 2017 Grant Academy Mentor 2017  
Mentor providing training and support for a select cohort of investigators working  
with senior faculty, research development experts, and research administrators  
with the goal of submitting a successful funding proposal.

VCU NSTA Faculty Advisor 2016-Present  
Sole faculty advisor to the VCU NSTA student organization for over 100 Early and Elementary Program, Secondary, and Science Students.

VCU SOE Faculty Mentor 2016-2017  
Mentor a new faculty member regarding teaching, service, and research at VCU.

Marshall 2015-Present  
VCU School of Education graduation Marshall.

VCU Education Psychology Search Committee 2015-2016  
Collaborate with Department of Foundations to hire a professor of educational psychology.

VCU Quantitative Methods Search Committee 2014-2015  
Collaborate with School of Education to hire a professor of quantitative methods.

6 and Under Group 2012-2015  
Collaborate with pre-tenure faculty regarding promotion and tenure and professional development.

**Department:**

Master of Teaching in Elementary Education Coordinator 2019-Present  
Lead meetings and collaboration to develop and implement the master of teaching with a concentration in elementary education and university curriculum.

STEM Research Group Chair 2017-Present  
Group that collaborates to develop research, grants, and community service.

Curriculum, Culture & Change PhD Track Committee Advisor 2017-Present  
Advise doctoral students and collaborate to develop and implement Curriculum, Culture & Change program and university curriculum.

VCU Elementary Social Studies Search Committee 2016-2017  
Collaborate with Department of Teaching and Learning to hire a professor of social studies.

VCU Race and Ethnicity Teach-In Workshop Committee 2016  
Elementary coordinator to a series of race and ethnicity and science teaching hands-on workshops with Dr. McDonough and guest faculty speaker Dr. Jones for over 100 elementary preservice teachers and the VCU and local community.

VCU NSTA Elementary Faculty Advisor 2015-2016

Represent the VCU NSTA student organization as an Early and Elementary Program science faculty member.

Co-Chair of VCU Early and Elementary Program Group 2014-2015  
Lead meetings and collaboration to develop and implement the early/elementary program and university curriculum.

VCU Vista Search Committee 2012  
Collaborate with VISTA to hire a VCU curriculum specialist as a full time employee.

STEM Research Group 2012-Present  
Collaborate to develop research, grants, and community service.

VCU Early and Elementary Program Group 2012-Present  
Collaborate to develop and implement the early/elementary program and university curriculum.

Early and Elementary Program Advisor 2012-Present  
Meeting individually with my advisees to guide them through their course progression in order to prepare for internship, graduation, and licensure.

### **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

American Association of University Professors (AAUP)

American Association for the Advancement of Science (AAAS)

American Association of University Women (AAUW)

American Educational Research Association (AERA)

National Association for Research in Science Teaching (NARST)

National Science Education Leadership Association (NSELA)

School Science and Mathematics Association (SSMA)

Virginia Association of Science Teachers (VAST)

### **AWARDS AND HONORS**

5 Years- Annual Service Award Virginia Commonwealth University 2017

Distinguished Junior Faculty Award	Virginia Commonwealth University	2017
ORFD Instruction Module Award	Virginia Commonwealth University	2016
SOE Presentations to Publications Award	Virginia Commonwealth University	2015
McLeod Faculty Development Award	Virginia Commonwealth University	2015
SOE Presentations to Publications Award	Virginia Commonwealth University	2014
Five Year Service Award	Albemarle County	2010