CURRICULUM VITAE

Rebecca G. Gault

Associate Professor of Mathematics Education
Early Childhood through Secondary Education
College of Education, Education Annex Room 114
678-839-2354
University of West Georgia
Carrollton, Georgia 30118
Email: rgault@westga.edu

ACADEMIC BACKGROUND

Ph.D.	UNIVERSITY OF CENTRAL FLORIDA, Orlando, Florida
2016	Mathematics Education
	Dissertation Title: *A multiple case study examining how third-grade students who struggle in mathematics make sense of fraction concepts.*
	Chair: Dr. Enrique Ortiz
M.A.	UNIVERSITY OF CENTRAL FLORIDA, Orlando, Florida
2006	Mathematics Education
B.S.	LOUISIANA STATE UNIVERSITY, Baton Rouge, Louisiana
1992	Civil Engineering

PROFESSIONAL EXPERIENCE

2023-present	**Associate Professor of Mathematics Education (UWG)** – Taught courses focused on methods and linking research to practice in secondary mathematics education, science education, and STEM education as well as courses focused on pedagogy and content in elementary mathematics education.
2016-2023	**Assistant Professor of Mathematics Education (UWG)** – Taught courses focused on methods and linking research to practice in secondary mathematics education, science education, and STEM education as well as courses focused on pedagogy and content in elementary mathematics education.
2015-2016	**Graduate Research Associate (UCF)** – A study examining the effects of robotics on children's mathematical learning and physiological well-being for children with acute lymphocytic leukemia. School of Teaching, Learning, and Leadership, University of Central Florida, Orlando, FL.
2014-2015	**Graduate Research Associate (UCF)** – Replication of the original Cognitively Guided Instruction study in first and second grade classrooms with diverse student populations. School of Teaching, Learning, and Leadership, University of Central Florida, Orlando, FL. Research associate work included compiling relevant scholarly writings, writing literature reviews, conducting diagnostic interviews with first and second grade students, coding interview and testing data, and coding teacher performance in first and second grade mathematics classrooms using Instructional Quality Assessment Rubrics.

2013-2016 **Graduate Teaching Associate (UCF)** – Instructor of Record for MAE 4326, How Children Learn Mathematics. School of Teaching, Learning, and Leadership, University of Central Florida, Orlando, FL. This methods course includes face to face components and online components and is specifically intended to support preservice teachers in internship.

Graduate Teaching Associate (UCF) – Instructor of Record for MAE 2801, Elementary School Mathematics. School of Teaching, Learning, and Leadership, University of Central Florida, Orlando, FL. This content course is designed to support the development of deep conceptual understanding of mathematics for preservice teachers. The course employs an alternate base system to cover whole number concepts of counting, place value, number sense, and operations. Fractions are covered with a focus on pictorial representations and conceptual understanding. The course models use of high cognitive demand tasks, whole class discourse, and justification of reasoning strategies in all mathematical work.

1/15- 5/15 **Internship (unpaid)** – Developed and implemented a twice-weekly mathematics intervention program for struggling third and fourth graders in a low socio-economic elementary school. Intervention topics included number sense, relational reasoning, whole number operations, and fraction concepts and operations. The program focused on using high cognitive demand tasks with small group discourse and appropriate teacher scaffolding to support deep conceptual student learning.

2/14- 5/14 **Interviewer/Coder** – Conducted and coded diagnostic interviews with first and second grade students as part of the Replicating the CGI Experiment in Diverse Environments grant, a Cognitively Guided Instruction efficacy study, conducted by UCF in conjunction with the Florida Center for Research in Science, Technology, Engineering, and Mathematics.

2012-2013 **Mathematics Teacher** – Taught Algebra 2 and Algebra 1 to a diverse population of students including students in the Exceptional Education program and students in the Language Enriched Pupil program. Cypress Creek High School, Orange County Public Schools, Orlando, FL.

2006-2012 **Mathematics Teacher** – Taught Algebra 1 and Eighth Grade Mathematics. Served a crucial role in developing an Algebra 1 End of Course Exam Prep class which resulted in a 97% passing rate for Algebra 1 students at Legacy MS in 2012. As the Algebra 1 teacher for the AVID team, was responsible for developing lessons that increased rigor through the use of real world applications, writing assignments, and student to student discourse. Legacy Middle School, Orange County Public Schools, Orlando, FL.

2005-2006 **Mathematics Teacher** – Taught Eighth Grade Mathematics on the Language Enriched Pupil Team. Created lessons for students with diverse learning styles and levels of proficiency. Meadow Woods Middle School, Orange County Public Schools, Orlando FL.

2004-2005 **Project Engineer/Civil Design Engineer** – Inwood Consulting, Orlando, FL.

2000-2003 **Project Engineer/Civil Design Engineer** – URS Corporation, Orlando, FL.

1992-2000 **Project Engineer/Civil Design Engineer** – HNTB Corporation, Orlando, FL.

1990-1992 **Engineering Student Intern** – Sigma Consulting Group, Baton Rouge, LA.

1988-1990 **Engineering Co-operative Student**– Federal Highway Administration, Arlington, VA.

COURSES TAUGHT AT THE UNIVERSITY OF WEST GEORGIA

ECED 3250 Teaching Elementary Mathematics 1 - Mathematics education content, methods, and materials that are appropriate for the cognitive development of the young child from grades k-5 within the domains of numerical reasoning related to whole-number, patterning, and algebraic reasoning will be investigated by means of course discussions and assignments, field placements/assignments, and course readings. Students will apply knowledge of content, methods, and materials during field experience.

ECED 3260 Teaching Elementary Mathematics 2 - Mathematics education content, methods, and materials that are appropriate for the cognitive development of the young child from grades k-5 within the domains of numerical reasoning related to integers, measurement, data reasoning, geometry, and spatial reasoning will be investigated by

means of course discussions and assignments, field placements/assignments, and course readings. Students will apply knowledge of content, methods, and materials during field experience.

ECED 4251 Assessment and Correction in Mathematics Education - This course is offered for elementary education majors and overviews development of acquisition of mathematical concepts. The assessment/correction process is examined. Teaching strategies appropriate to children with learning difficulties are described. Individual assessment and analysis of a particular child's mathematical problems, including teaching to this analysis are developed in case study form. Current research on teaching mathematics to children with special needs is examined. Knowledge of teaching strategies and the assessment/correction process is applied during field experience.

ECED 4251L Assessment and Correction in Mathematics Education Lab - This course is offered for elementary education majors and requires demonstration of the content knowledge and pedagogical skills acquired in ECED 4251. This course requires the supervised and coordinated diagnosing and correcting of students in K-5 classrooms.

ECED 4263 Teaching Content/Process: Mathematics Education – This course is offered for elementary education majors. This course focuses on mathematics education content, methods, and materials which are appropriate for the cognitive development of the young child from pre-k to grade 5.

ECED 4285 Math Content for Teaching Grades 3-5 – This course is offered for elementary education majors. This course focuses on deepening the pedagogical mathematics content knowledge of preservice teachers and expanding their understanding of the methods and materials which support building mathematical content knowledge for grades 3 through 5.

ECED 7259 Investigating Methods and Materials in Mathematics - This course is offered for those pursuing a Master of Education with a major in Early Childhood Education and covers concepts and material which are appropriate for mathematics education of pre-k - grade 5 children. In addition, research on the use of process education in these areas will be considered.

ECSE 4763 Teaching Content/Process: Dual Certificate Mathematics Education – This course is offered for elementary education majors. This course focuses on mathematics education content, methods, and materials which are appropriate for the cognitive development of the young child from pre-k to grade 5 with emphasis on developmentally appropriate practices for teaching mathematics to all children, including those with mild disabilities.

ECSE 7275 STEM Math for Social Justice - This course focuses on concepts and materials which are appropriate for mathematics education integrated with science, technology, and engineering for pre-k to grade 12 children. In addition, STEM education is considered through the lens of social justice, equity, and community-based learning.

ECSE 8562 Using Data to Meet the Needs of Diverse Learners – This course is offered for K-12 Education Specialist candidates. This course is designed to advance teachers' understandings of the philosophies and practices of educational measurement as they apply to diverse student assessment data, specifically data collection and analysis.

EDMI 7271 Teaching Content/Process: Mathematics Education – This course is offered for K-5 Mathematics Endorsement candidates. This course prepares candidates to understand and use the major concepts of number and operations in mathematics for grades k-5.including expressing, transforming, and generalizing patterns and quantitative relationships through a variety of representations.

EDMI 7271L Elementary Mathematics I – This course is offered for K-5 Mathematics Endorsement candidates. This course involves a series of supervised and coordinated real applications of the knowledge and skills occurring in actual K-5 classroom settings that allow students to further develop and demonstrate the knowledge and skills acquired in coursework.

EDME 7272 Elementary Mathematics II - This course is offered for K-5 Mathematics Endorsement candidates. This course prepares candidates to understand and use the major concepts of probability and data analysis for grades K-5, solve problems using multiple strategies, manipulatives, and technological tools; interpret solutions; and determine reasonableness of answers and efficiency of methods.

EDME 7272L Elementary Mathematics II Lab - This course is offered for K-5 Mathematics Endorsement candidates. Supervised and coordinated series of real applications of the knowledge and skills occurring in actual K-5 classroom settings that allow students to further develop and demonstrate the knowledge and skills acquired in coursework. Residency experiences shall require demonstration of the content knowledge and pedagogical skills acquired in Elementary Mathematics II.

EDME 7273 Advanced Strategies for Teaching Elementary Mathematics - This course is the capstone course for K-5 Mathematics Endorsement candidates. Exploration of techniques and strategies for teaching mathematics in the elementary school, including diversity, data-driven instruction, grouping for instruction, and technology in the classroom.

EDME 7273L Advanced Strategies for Teaching Elementary Mathematics Lab - This course is offered for K-5 Mathematics Endorsement candidates. Supervised and coordinated series of real applications of the knowledge and skills occurring in actual K-5 classroom settings that allow students to further develop and demonstrate the knowledge and skills acquired in coursework. Residency experiences shall require demonstration of the content knowledge and pedagogical skills acquired in Advanced Strategies for Teaching Elementary Mathematics.

SEED 6200 Comprehensive Exam for Master of Education - This course is offered for graduates seeking secondary teaching certification in mathematics and consists of a comprehensive final written examination administered during the semester immediately preceding graduation to all candidates seeking a Master of Arts in Teaching degree.

SEED 6260 Instructional Strategies in Secondary Schools Laboratory - This course consists of the field experience designed to accompany the Instructional Strategies content pedagogy course. Students are expected to spend two full days in a public school placement for twelve weeks.

SEED 6264 Instructional Strategies in Secondary Mathematics Education – This course is offered for graduates seeking secondary teaching certification in mathematics. This course is designed for investigation and assessment of research in teaching of mathematics with implications for strategies and curricular needs at the secondary level.

SEED 6270 Technology in the Math and Science Classroom – The purpose of this course is to explore the use of technology in math and science classrooms. The course will promote best practices for integrating technology into the math and science classroom.

SEED 7264 Advanced Instructional Strategies for Secondary Mathematics Education –This course is designed for continued professional growth of mathematics teachers as they investigate and evaluate current issues, practices, and resources in mathematics education.

SEED 7289 Teaching Internship Seminar – This course is offered for graduates seeking secondary teaching certification in mathematics. This course is designed to engage interns in a critical reflection of issues, topics, materials, and skills appropriate to their professional development and teaching experience during their internship. The course also serves as a capstone experience satisfying exit requirements of the program.

SEED 8200 Culminating Project for the SEED EdS – This course provides teacher leaders with the opportunity to continue integrating and applying the knowledge and skills learned throughout the Secondary Education Specialist Degree program through a practice-based investigative project. Students select their project format, develop and carry out their plan, and complete their final submission.

SEED 8202 Culminating Project for the SEED EdS – This course provides teacher leaders with the opportunity to exchange scholarly thinking and research through successful dissemination of the practice-based, peer-reviewed investigative project and findings prepared in their culminating project course.

UTCH 3001 Knowing and Learning in Mathematics and Science – This course is offered for mathematics and science majors seeking secondary teaching certification. Students develop a powerful tool kit of approaches to knowing and learning in mathematics and science. The course focuses on what it means to know and learn mathematics and science.

UTCH 3002 Classroom Interactions – This course is offered for mathematics and science majors seeking secondary teaching certification. Students develop a powerful tool kit of approaches to knowing and learning in mathematics and science. Students investigate how theories explored in Knowing and Learning play out in instructional settings as they design and implement instructional activities informed by their understandings of what it means to know and learn mathematics and science. Students then evaluate the outcomes of those activities on the basis of student artifacts.

COURSES TAUGHT AT THE UNIVERSITY OF CENTRAL FLORIDA

MAE 2801 Elementary School Mathematics – Instructor of Record. This course is required for elementary education and exceptional education majors. Students explore whole number concepts and operations in base 8 and then move back to base 10 as they develop deep understanding of fraction concepts and operations. Emphasis is also placed on developing conceptual understanding of measurement and geometry.

MAE 4326 How Children Learn Mathematics – Instructor of Record. This course is required for elementary education majors. This course for pre-service elementary school teachers includes instructional strategies, learning activities, the use of manipulatives, lesson planning, evaluation of mathematical learning, and diagnostic techniques.

STATEMENT OF TEACHING AND RESEARCH INTERESTS

My teaching and research are grounded in a commitment to fostering robust mathematical understanding through the use of high cognitive demand tasks and classroom practices that actively engage learners at all levels. My instructional approach centers on integrating research-based strategies, especially discourse and scaffolding, to support conceptual achievement in mathematics and STEM education for both elementary and secondary students. Central to my practice is the belief that students who struggle benefit most from cognitively challenging learning experiences, carefully curated to promote reasoning, sense-making, and equitable participation. My scholarship investigates how all learners including those who struggle, construct meaning in complex topics such as fraction concepts and operations. These findings directly inform my classroom methods. I am passionate about designing and analyzing interventions, curriculum, and professional development that elevate engagement and achievement by leveraging collaborative, socially constructed knowledge, and data-driven insights. Ultimately, my teaching is consistently shaped and enriched by research, allowing me to model and mentor pedagogical practices that cultivate deep understanding, equity, and excitement in mathematics learning

RESEARCH FOCI AND ACTIVITIES

- The role of teacher implementation of high cognitive demand tasks, discourse, and scaffolding to support achievement and conceptual understanding of mathematics and STEM concepts for all students including struggling learners in elementary through secondary settings.
- Understanding the thinking and sense-making employed by students who struggle to learn mathematics.

- Students' development of conceptual and procedural understandings of fractions, including students identified as struggling in mathematics.

What are the Eco-Educational Resources for Water Initiative - Co-investigator on this professional development and curriculum planning study for k-12 teachers in a local community that was designed to expose teachers to investigations focusing on the local watershed and using these experiences to create cognitively complex curriculum for their students. This study was grant funded.

MAT Impact Fellows – Member and contributor to this large grant team under the direction of Dr. Dianne Hoff, P.I., Dr. Jennifer Edelman, Co-P.I, and Dr. Brent Gilles, Co-P.I. This grant will fund a Robert Noyce Scholarship Program that the team is designing to develop future and emerging teacher leaders in secondary science and mathematics.

How do Pre-Service Teachers Make Sense of Fraction Division with Remainder? – Co-investigator on this research study with the primary purpose of gaining an understanding of the thought processes pre-service teachers use to build conceptual knowledge of fraction division.

Replicating the Cognitively Guided Instruction Experiment in Diverse Environments – Conducted interviews with first and second grade students to contribute data for research on children's mathematical thinking in classrooms with teachers trained or not trained in Cognitively Guided Instruction, entered pretest and posttest data, participated on the writing team for the literature review, conducted Instructional Quality Assessments on class instruction via videotape.

DISSERTATION

A multiple case study examining how third-grade students who struggle in mathematics make sense of fraction concepts. - Although many researchers in mathematics education have studied the conceptual thinking and reasoning of elementary mathematics students and the need for conceptually-based instruction prior to instruction in procedures, few of these studies have specifically addressed the thinking or instructional needs of students who struggle in mathematics. This study is an attempt to qualitatively document how third-grade students who struggle make sense of fraction concepts in a conceptually-rich intervention emphasizing social construction of knowledge, discourse, and scaffolding techniques. Chair: Enrique Ortiz, Ed.D.

PUBLICATIONS

- Gault, R.G. & Britton, S. (2022). Online interdisciplinary STEM education: A case of co-teaching for social justice. *Journal of STEM Teacher Education, 57*(1). *https://ir.library.illinoisstate.edu/jste/vol57/iss1/3/*
- Gault, R.G. & Edelman, J. (2022). Reasoning with equations and functions in *The 5th Wave*. In P. Greathouse (Ed.), *Developing mathematics literacy through young adult literature* (pp. 99-115). Rowman & Littlefield Publishers.
- Sahin, N., Gault, R.G., Tapp, L., & Dixon, J.K. (2020). Pre-service teachers making sense of fraction division with remainders. *International Electronic Journal of Mathematics Education, 15*(1), em0552, https://doi.org/10.29333/iejme/5934.
- Gilles, B., Gault, R.G., Britton, S. (2019). Education outside the classroom: Engaging teachers in their own environment through professional development. *GATEways to Teacher Education, 30*(1), https://issuu.com/gaate/docs/gateways_fall_2019.
- Britton, S. & Gault, R.G. (2019). Negotiating a co-taught interdisciplinary STEM education class in an online environment. In Carliner, S. (Ed.). Proceedings of the World Conference on E-Learning. New Orleans, LA.

- Gault, R.G., Sahin, N., & Dixon, J.K. (2019). What do we do with what's left over? Making sense of remainders in fraction division. *Reflections, 11*(2), https://www.gctm.org/page-1709366.
- Glenn-White, V. & Gault, R.G. (2015). Alternative subtraction algorithms and place value. *Dimensions in Mathematics, 34*(2), 11-16.

PRESENTATIONS

- Gault, R.G. & Edelman, J. (February 2022). *Confronting experience and beliefs: Reading Grading for Equity by Joe Feldman in a graduate course for in-service k-12 teachers.* Critical Questions in Education Conference in Charleston, S.C.
- Britton, S. & Gault, R.G. (February 2022). *Challenging the STEM education perspective: Using he Immortal Life of Henrietta Lacks by Rebecca Skloot to confront social justice issues in STEM.* Critical Questions in Education Conference in Charleston, S.C.
- Gault, R.G. (May 2021). *Promoting participation in online course evaluations.* Innovations in Pedagogy in Carrollton, GA.
- Gault, R.G. & Britton, S. (October 2020). *Negotiating interdisciplinary online STEM education for social justice.* National Association for Multicultural Education Annual Conference in Montgomery, AL.
- Gilles, B. and Gault, R. (October 2020). *Supporting literacy in science and math.* Southeastern Association for Science Teacher Education, Virtual.
- Gault, R.G. (July 2020). *Using Kaltura to support flipped instruction.* UWG Faculty Senate Teaching Academy in Carrollton, GA.
- Edelman, J., Gault, R.G., Gilles, B., Strickland, T., & Scasney, K. (June 2020). *UTeach program sustainability: Adaptations for evolving college enrollments.* UTeach Annual Conference, Austin, TX. (Conference canceled).
- Britton, S. & Gault, R.G. (November 2019). *Negotiating a co-taught interdisciplinary STEM education class in an online environment.* World Conference on E-Learning in New Orleans, LA.
- Gault, R.G. (October 2019). *Cognitively complex tasks in the elementary classroom.* Georgia Mathematics Conference in Rock Eagle, GA.
- Gilles, B., Gault, R.G., and Britton, S. (October 2019). *Lessons learned: First year report on implementing a K-12 teacher environmental focused professional development.* Southeastern Association for Science Teacher Education in Carrollton, GA.
- Gault. R.G. & Britton, S. (March 2019). *An integrative approach to STEM education methods courses for k-12 teachers.* Interdisciplinary STEM Teaching and Learning Conference in Savannah, GA.
- Butler, J., Arrington, L., Gilles, B., Ponder, T., & Gault, R.G. (February 2019). *Finding your way through the 4Cs with technology.* Association of Teacher Educators Annual Conference in Atlanta, GA.
- Gault, R.G. & Britton, S. (November 2018). *Problematizing STEM with ecojustice philosophy.* National Association for Multicultural Education Annual Conference in Memphis, TN.
- Britton, S. & Gault, R.G. (October 2018). *STEM for all.* Southeastern Association of Science Teacher Education Annual Conference in Birmingham, AL.
- Britton, S., Gilles, B., and Gault, R. (October 2018). *Current partnership with local urban school district to learn about watersheds.* Southeastern Association for Science Teacher Education, Birmingham, AL.
- Britton, S. & R.G. Gault (March 2018). *The role of social justice in STEM education.* Interdisciplinary STEM Teaching and Learning Annual Conference in Savannah, GA.
- Gault, R.G. (February 2018). *Students who struggle to understand fractions: Where is the breakdown?* Research Council on Mathematics Learning Annual Conference in Baton Rouge, LA.
- Gault, R. (October 2017). *Pre-service teachers' emerging understandings of fraction division with remainders.* Georgia Educational Research Association, Augusta, GA.
- Gaquere-Parker, A., Gault, R.G., & Scasney, K. (May 2017). *Developing and sustaining relationships with K-12 school partners: What can UTeach do for you?* UTeach Annual Conference, Austin, TX.

- Childs, K., Dixon, J.K., Sutherland, M., Gault, R.G., & Sahin, N. (April, 2016). *Examining an instrument for assessing primary grades mathematics classrooms.* Research Conference of the National Council of Teachers of Mathematics, San Francisco, CA.
- Tapp, L., Gault, R.G., & Dixon, J.K. (April, 2016). *Making sense of fraction division with remainders.* National Council of Teachers of Mathematics, San Francisco, CA.
- Gault, R.G. (February, 2016). *How do struggling third graders make sense of fraction concepts?* Research Council on Mathematics Learning annual conference in Orlando, FL.
- Eisenreich, H. & Gault, R.G. (October, 2015). *Building early number sense: Understanding your students' struggle by making sense of counting and regrouping.* Florida Council of Teachers of Mathematics, Orlando, FL.
- Gault, R.G. (July, 2015). *A multiple case study: How do third grade students who struggle in mathematics make sense of fraction concepts involving representation, comparison, and equivalence?* A poster presentation given as a capstone activity in an education research class. University of Central Florida, Orlando, FL.
- Gault, R.G., & Tapp, L. (February, 2015). *Building Conceptual Understanding of Fraction Division with Remainders*. Research Council on Mathematics Learning annual conference in Las Vegas, NV.
- Sahin, N., Gault, R.G., & Tapp, L. (February, 2015). *How do pre-service teachers make sense of fraction division with remainder?* Presentation at the Association of Mathematics Teacher Educators annual conference in Orlando, FL.
- Gault, R.G. & Harshman, K. (November, 2014). *Guiding versus telling: Engaging students in doing mathematics.* Presentation at the School Science and Mathematics Association annual conference in Jacksonville, FL.
- Harshman, K. & Gault, R.G. (November, 2014). *Common core made easy!* Presentation at the School Science and Mathematics Association annual conference in Jacksonville, FL.
- Gault, R.G., Tapp, L., & Harshman, K. (October, 2014). *All about division: Interpreting the remainder*. Presentation at the Florida Council of Teachers of Mathematics annual conference in Tampa, Florida.
- Gault, R.G. & Tapp, L. (October, 2014). *Learning area with geoboards: An alternative to procedural learning.* Presentation at the Florida Council of Teachers of Mathematics annual conference in Tampa, Florida.
- Gault, R.G. and Harshman, K. (February, 2014).*Common core made easy: A walk through the standards for mathematical practice.* Presentation at Happy Hour Workshop sponsored by the College of Education and Human Performance at the University of Central Florida. Orlando, FL.
- Gault, R.G. (December, 2013). *Guiding versus telling.* An Ignite! presentation given as a capstone activity in a mathematics education doctoral student seminar. University of Central Florida, Orlando, FL.
- Gault, R.G. (November, 2013). *An exploratory study: Investigation into the use of manipulatives to teach addition and subtraction with derived fact strategies to under-performing second grade students.* A poster presentation given as a capstone activity in an education research class. University of Central Florida, Orlando, FL.
- Gault, R.G. and Furnari, K. (February, 2012). *Thinking maps in the middle school mathematics curriculum.* Presentation to Legacy Middle School mathematics teachers' professional learning community. Legacy Middle School, Orlando, FL.
- Gault, R.G. (December, 2011). *Middle school student preparation for the algebra 1 end of course exam.* Presentation to Legacy Middle School mathematics teachers' professional learning community which included demonstrating use of the FLDOE Algebra 1 EOC Test Item Specifications and the Florida Virtual School Practice EOC for student preparation. Legacy Middle School, Orlando, FL.
- Gault, R.G. (April, 2006). *Impact of local community planning decisions on school organization, safety, and performance.* Capstone presentation for Master of Art in Mathematics Education. University of Central Florida, Orlando, FL.

SERVICE

University

- Chair, Teaching, Learning, and Assessment Committee, 2020-2021.
- Executive Committee of the Faculty Senate Member, 2020-2021.
- Faculty Senate Representative for College of Education Department of Early Childhood through Secondary Education, 2019-2022.
- Committee Senator Member of the Teaching, Learning, and Assessment Committee, 2019-2022.
- Peer Reviewer for UWG Annual Peer Review of SACSCOC Template Summaries of Academic Assessment, Spring 2019.

College of Education

- Search Committee Member for Clinical Assistant Professor (Generalist), Spring 2024.
- Led college book study group meeting of Grading for Equity by Joe Feldmen, 2024.
- Member of the Personnel Committee, Fall 2016 - Spring 2019, Fall 2021 – Spring 2022.
- Search Committee Member for Assistant Professor of Social Studies Education, Fall 2021 – Spring 2022.
- Search Committee Member for Assistant Professor of Social Studies Education, Fall 2019 – Spring 2020.
- Search Committee Chair for Assistant Professor of Education (Generalist), Fall 2017 – Spring 2018.
- Search Committee Member for Assistant Professor of Mathematics Education and Assistant Professor of Education (Generalist), Fall 2018 – Spring 2019
- Search Committee Member for Assistant Professor of Science Education, Fall 2016 – Spring 2017.

Department and Program

- Tenure and Promotion Department Committee Member for two committees, Fall 2023.
- Coordinator/Scorer for the Master of Arts in Secondary Education Comprehensive Project, 2024.
- Curriculum, Assessment, and Instruction (CIA) Leader for all initial preparation programs within the Early Childhood Through Secondary Education Department including elementary education BSEd, elementary education dual certification BSEd, secondary education BS, secondary education MAT, and secondary education UTeach program.
- Coordinator/Scorer and Faculty of Record for the Master of Arts in Secondary Education Comprehensive Exams, 2017 – 2023.
- Instructor of Record for SEED 8200, Culminating Project for the Secondary Education Specialist degree, Spring 2020, Spring 2021, Spring 2022.
- Advisor for all Secondary Education Specialist candidates with a concentration in Mathematics Education. This role includes guiding candidates through the process of planning and conducting their culminating project, in addition to advising candidates on their program of study, Fall 2018 – current.
- Department Scholarship Awards Committee, Spring 2022.
- Co-led department book study group of *Cultivating Genius* by Gholdy Muhammad, 2021
- Assessor for STEM Endorsement Portfolios, 2019-2023.
- Scorer for the Master of Arts in Secondary Education Comprehensive Exams, Fall 2016 – Summer 2017.
- Conducted an interactive presentation with Dr. Natasha Ramsay-Jordan on mathematics in STEM education for the New Teacher Candidate Symposium, August 2018.
- Conducted an interactive presentation with Dr. Edelman on using the Fibonacci sequence to create engaging elementary mathematics activities for the Future Educators' Day, January 2017.
- Led a workshop engaging UTeach students and their mentors in STEM activities focused on hands-on geometry constructions and exponential functions using manipulatives for the UTeach Showcase, January 2017.

Community

- Georgia State Science Bowl, Scorer, 2023-2024.

- Collaboration with Elm Street Elementary, Coweta County, to oversee an after-school math tutoring clinic in which UWG elementary education students serve as tutors for Elm Street grade 2-5 students identified as needing support, Fall 2019 – Fall 2023.
- Georgia Sub-Regional Science Bowl, Scorer and Timer, 2018-2024.
- Conducted a multi-day professional development over several months in a local high school focused on embedding literacy skills in mathematics and science teaching and learning, 2020-2021.
- Developed mathematics components and implemented interdisciplinary training for k-12 teachers in Carrollton City Schools, as a member of a team of three university professors that facilitated professional development focused on incorporating place-based, outdoor, experiential learning into integrated STEM curriculum, Fall 2018 – Spring 2019.
- Science Café contributor: Women in Engineering presentation and discussion, November 2021 in Carrollton, GA.
- Regeneron International Science and Engineering Fair Grand Awards Judge, 2021
- Georgia Science and Engineering Fair Tier 1 Judge, 2021.
- Douglas County Elementary Science and Engineering Fair Judge, 2021.
- West Georgia Regional Science and Engineering Fair, Judge, 2017-2021.
- Carroll County Elementary STEM Day, Activity Presenter and Facilitator, September 2019, September 2021.
- Paulding County STEM Day, Activity Presenter and Facilitator at McGarity Elementary School, May 2019.
- Haralson County Middle Schools Science Fair, Judge, May 2019.
- Carrollton High School Women in Mathematics Meeting, Speaker, March 2019.
- DeKalb County STEM Endorsement Fair, Promoted UWG STEM Education Endorsement to in-service teachers, February 2019.
- Union Elementary STEM Night, Activity Presenter and Facilitator, January 2019.

Reviewer

- Article Reviewer, Online Journal of Science and Mathematics Education, 2020-2024.
- Chapter Reviewer, Aline Learning, 2021.
- Peer Reviewer, MERLOT Online Resources for Teachers, 2020-2021.
- Article Reviewer, Investigations in Mathematics Learning published by the Research Council on Mathematics Learning, 2019-2020.
- Article Reviewer, Online Journal of Science Education, 2019-2020.

SERVICE Prior to Joining the University of West Georgia

University of Central Florida (2013-2016)

- Actively participated in the development of a Professional Learning Community (PLC) designed to support and improve instruction by Graduate Teaching Associates teaching MAE 2801 Elementary School Mathematics.
- Revised the Course Pack and Course Notes for MAE 2801 Elementary School Mathematics.

National and State Professional Organizations

- Served as a reviewer for the RCML Annual Conference 2016.
- Served on the Local Arrangements Committee for the Association of Mathematics Teacher Educators (AMTE) 2015 annual conference.
- Volunteered at the Florida Educational Research Association (FERA) 2014 annual conference.

Local School District

- Developed and implemented a thrice-weekly mathematics intervention program for struggling third graders in a high socio-economic elementary school. Intervention topics included number sense, algebraic reasoning, and fraction concepts and operations. The program focused on using high cognitive demand tasks with small group discourse and appropriate teacher scaffolding to support deep conceptual student learning, 2016.
- Developed and implemented a twice-weekly mathematics intervention program for struggling third and fourth graders in a low socio-economic elementary school. Intervention topics included number sense, relational reasoning, whole number operations, and fraction concepts and operations. The program focused on using high cognitive demand tasks with small group discourse and appropriate teacher scaffolding to support deep conceptual student learning, 2015.
- Developed and implemented an intervention program to improve student performance on the Algebra 1 EOC. Helped to choose and train additional instructors from existing staff. Provided materials, support and instructional guidance for instructors teaching EOC preparation, 2011-2012.
- Developed and implemented a free morning mathematics tutoring program for students struggling in 6th grade mathematics through geometry at Legacy Middle School, Orlando, FL., 2007-2012.

Community

- Organized the 2013 Timber Creek High School Thespians Silent Auction fundraiser.
- Training and direction of volunteers working with the Florida Engineering Society's MathCounts competitions. 1992-1996.

REVIEWER

- Rebecca G. Gault (2015) Presentation Proposal Reviewer. *RCML Annual Conference 2016.*
- Rebecca G. Gault (2014-2015) Article Reviewer. *Teaching Children Mathematics*
- Rebecca G. Gault (2014-2015) Article Reviewer. *Mathematics Teaching in Middle School*

TRAINING

- Completed Quality Matters *Applying the QM Rubric*. October, 2021.
- Completed Quality Matters *Improving Your Online Course.* March, 2020.
- edTPA Deep Dive Training conducted during the Southeastern Regional edTPA Conference. April, 2018. Birmingham, AL.
- Instructional Quality Assessment (IQA) training conducted by Dr. Melissa Boston. June, 2015 & October, 2014. University of Central Florida, Orlando, FL.
- Student Interview training for Cognitively Guided Instruction research project. March-April, 2014. University of Central Florida, Orlando, FL.
- Graduate Teaching Associate training. July, 2013. University of Central Florida, Orlando, FL.

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

Research Council on Mathematics Learning (RCML) 2014-present
National Council of Teachers of Mathematics (NCTM) 2014-2020
Georgia Council of Teachers of Mathematics (GCTM) 2017-present
Association of Mathematics Teacher Educators (AMTE) 2014-2018

School Science and Mathematics Association (SSMA) 2014-2018
National Association of Multicultural Educators (NAME) 2018-2020
Association of Teacher Educators (ATE) 2018-2019

HONORS AND AWARDS

- Graduate Presentation Fellowship, 2014.
- Graduate Dean's Fellowship, 2013-2016.
- Education Dean's Fellowship, 2013-2016.
- Lockheed Martin Fellowship for the Teachers of Mathematics and Science Transition (TMAST) program, 2005-2006.