

Kenneth Butler

Curriculum Vitae

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EDUCATION

PhD Mathematics Education, University of South Florida, 2016

Cognate in Educational Measurement

Dissertation: *Motivation for mathematics: The development and initial validation of an abbreviated instrument.*

MA Mathematics, East Carolina University, 2000

Concentration in Statistics, post-graduate work in Computer Science

Thesis: *The Evolution of neural networks and the creation of a statistical model.*

BA Philosophy, East Carolina University, 1994

Focus on epistemology and theory of mind

EXPERIENCE IN EDUCATION

August 2020 – Present

Assistant Professor,
University of Dayton, Dayton, OH

Facilitate AYA and MC Math Methods courses (EDT 432/553 EDT 427/533/542), and the AYA Mathematics Capstone course (EDT 436). Supervise student teachers, advise math education students. Manage CAEP NCTM SPA certification. Facilitate EDT 660 Research Methods, and EDT 667 Action Research in Practice.

January 2018 – May 2020

Adjunct Instructor,
University of South Florida, Tampa, FL

Instructed probability/statistics content and technology methods in mathematics education courses for undergraduate, MAT, and M.Ed. students. Supervised practicum for middle school and secondary school interns.

August 2016 – May 2017

Visiting Instructor,
University of South Florida, Tampa, FL

Collaborated with math education faculty to develop curricula for face-to-face, hybrid, and online courses. Instructed students in probability/statistics and algebra content courses, and current trends, technology methods in mathematics education, and high school methods courses for undergraduate, MAT, and M.Ed. students.

August 2019 – May 2020 Online Instructor,
Warner University, Lake Wales, FL

Facilitated online general education college level mathematics content courses.

August 2011 – May 2013 Assistant Professor,
Warner University, Lake Wales, FL

Collaborated with math faculty to develop curricula and instructed students in college algebra, Intermediate algebra, intermediate math, liberal arts math, linear algebra, introductory statistics, trigonometry, and geometry. Developed courses and instructed students in online courses on introductory statistics, college algebra, and liberal arts mathematics. Collaborated with math faculty to develop a liberal arts mathematics track for students in non-math intensive majors. Collaborated with math faculty to schedule all mathematics courses

January 2002 - May 2005 Lecturer Mathematics,
East Carolina University, Greenville, NC

Instructed students in math methods K-5, statistics, applied calculus, college algebra, intermediate algebra, pre-calculus, introductory statistics, and trigonometry. Scheduled courses for all lecturers in mathematics.

August 1994 - January 1998 Teaching Assistant,
East Carolina University, Greenville, NC

Instructed students in intermediate algebra, college algebra, introductory statistics, and applied calculus.

Clinical Supervision

August 2020 – Present Assistant Professor,
University of Dayton, Dayton, OH

Supervise student teachers as a university liaison in MC and AYA programs.

August 2016 – May 2017 Visiting Instructor,
University of South Florida, Tampa, FL

Supervised students and developed partnerships with local schools for clinical practicum experiences for 5-9 and 6-12 preservice teachers.

August 2013 – May 2015 Graduate Assistant,
University of South Florida, Tampa, FL

Observed middle school methods and content courses for Helios research grant. Supervised pre-service teachers in their internship.

Secondary School

August 2018 – June 2020 Mathematics Teacher,
Santa Fe Catholic, Lakeland, FL

Designed and implemented lesson plans aligned with standards for secondary school geometry for students with highly diverse abilities. Implemented IEPs for special needs students with IQs as low as 65. Improved gifted students achievement by focusing on abstract reasoning and proof.

August 2017 – May 2018 Mathematics Teacher,
Auburndale SH, Auburndale, FL

Designed and implemented lesson plans aligned with standards for secondary school geometry for high-level and struggling students. Collaborated with fellow geometry teacher on curricula. Continuously, received highly effective ratings.

August 2013 – June 2014 Secondary School Math Teacher,
Victory Christian Academy, Lakeland, FL

Designed and implemented lesson plans aligned with standards for secondary school geometry for high-level

and struggling students. Designed and implemented lesson plans for secondary school pre-calculus. Collaborated with math department on curricula. Developed online content and interacted with parents in support of student learning.

September 2015 – May
2018

Secondary School Math Teacher,
Upward Bound, Winter Haven, FL

Developed lessons to remediate mathematical misconceptions of bright high school students who are from families with no college graduates. Motivated students by incorporating related content. Counseled students on applying to college.

PUBLICATIONS

Refereed Journal Articles

Butler, K. (2022). Math in MineCraft. *Ohio Journal of School Mathematics*, 89, 29-39.

Butler, K., Dedrick, R.F. (2021). Content and internal structural validity of the motivation for mathematics abbreviated instrument. *SN Soc Sci* 1, 275.
<https://doi.org/10.1007/s43545-021-00276-6>

Sears, R., **Butler, K.,** Krajcevski, M. (2017). The integration of technology in model eliciting activities to support mathematical reasoning. *Dimensions in Mathematics*.

Butler, K., Sears, R. (2016). Using toys as manipulatives: Promoting mathematics while motivating children. *Dimensions in Mathematics*, 36(2), 6-14.

Sears, R., Karadeniz, I., **Butler, K.,** Pettey, D. (2015). Are standards for mathematical practice overlooked in Geometry textbooks? Chapter Tests? *Annual Perspectives in Mathematics Education 2015: Assessment to Enhance Learning and Teaching*, 75-85.

Refereed Conference Proceedings

Butler, K. (April 2024). *What is Math? How Three Misconceptions Lead to Oppression in Education*. AERA Annual Meeting, Philadelphia.

Butler, K. (April 2023). *Motivation for Mathematics Abbreviated Instrument: Internal Structural Validity in an Urban High School*. AERA Annual Meeting, Chicago.

Butler, K. & Sears, R. (March 2015). *Technology in Intermediate Algebra: Relationships with anxiety and opportunity to learn*. Proceedings from 42nd annual RCML conference.

In Progress Submissions

Butler, K. (In review for Spring 2024). Performance Orientations: Does Competition Drive Students Away from Math? *Ohio Journal of Teacher Education*.

Butler, K. (submitted September 2023). The Universe Does Not Count: Promoting a Humanistic Ontology for Math. *The Currere Exchange Journal*.

CONFERENCE ACTIVITY

Presentations at National Conferences

Butler, K. (November 2023). *STEM for Social Justice: Empowering Students Through Critical Pedagogy*. Lilly Conference, Miami University.

Butler, K. (April 2023). *Motivation for Mathematics Abbreviated Instrument: Internal Structural Validity in an Urban High School*. AERA Annual Meeting, Chicago.

Butler, K. (March 2023). *Performance Orientations: A Critical Inquiry*. RCML Conference, Las Vegas.

Welkener, M., Adams S., Butler, K. (November 2022). "Let's build a garden." *Using Ill Defined Problems and Emergent Curricula to Promote Creativity*. Lilly Conference, Miami University.

Butler, K. (October 2021). *Using MineCraft to Represent Math and Motivate Students*. OCTEO Conference, Online.

Butler, K. (October 2021). *Aligning Mathematics Education with Critical Theory*. NAC:UE Conference, Online.

Butler, K. (April 2017). *Motivation for mathematics: The development and initial validation of an abbreviated instrument*. AERA Annual Meeting in San Antonio, TX.

Butler, K. (March 2017). *Theoretical and Operational aspects of Content validity and the MMAI*. 44th annual RCML conference, Fort Worth, TX.

Sears, R., **Butler, K.**, Hopf, F. (January 2017). *Developing Intermediate Algebra Students Mathematical Communications via Workspace assignments in MyLabsPlus*. MAA Joint Mathematics Meetings, Atlanta, GA.

Butler, K. (April 2016). *Motivation for mathematics: The development and initial validation of an abbreviated instrument*. Presented in-progress research at the AREA Annual Meeting in Washington, DC. Winner of the Division D In-Progress Research Gala.

Butler, K. (March 2016). *Seeing through the eyes of the other: Switching roles to foster critical dialogue*. NAPDS National Conference, Washington, DC.

Butler, K. (February 2016). *From manipulatives to social justice: An ecological model for relatedness*. 43rd annual RCML conference, Orlando, FL.

Butler, K. (November 2015). *Incorporating social justice into the statistics curriculum*. AMATYC Conference, New Orleans, LA.

Butler, K., Sears, R. (February 2015). *Technology in Intermediate Algebra: Relationships with anxiety and opportunity to learn*. 42nd annual RCML conference, Las Vegas, NV.

SERVICE TO SCHOLARSHIP

Proceedings Reviewer

2024 AERA Annual Meeting

2024 RCML Conference Proceedings

2023 AERA Annual Meeting

2022 AERA Annual Meeting

2021 AERA Annual Meeting

2017 AERA Annual Meeting

2017 RCML Conference Proceedings.

2016 NCTM Research Conference.

2016 RCML Conference Proceedings.

Journal Reviewer

2023 BMC Public Health

2019 Investigations Journal of RCML

2019 Psychological Reports

SERVICE TO UNIVERSITY

University Committees

Fall 2021	CAPstone Working Group
Fall 2021	Teaching Fellows

SEHS Committees

Fall 2021-present	UAAC
Fall 2022-present	FAC (chair since august 2023)

Teacher Education Committees

Spring 2021	Sabbatical Committee
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SPA Report

August 2023	Authored CAEP/NCTM certification (received certification in August 2023)
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PROFESSIONAL MEMBERSHIPS

NCTM – National Council of Teachers of Mathematics

AERA – American Educational Research Association

RCML – Research Council for Learning Mathematics