

BRADLEY BOSTICK, Ed.D.

Academic Researcher | Learning & Cognition | STEM Education | English Language Learner Research | Curriculum & Instruction

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RESEARCH PROFILE

Scholar, educator, and educational leader with more than 25 years of experience spanning K–12 education, teacher preparation, higher education, instructional coaching, STEM/STEAM education, English language learner (ELL) instruction, curriculum development, and educational leadership.

Research interests center on the intersection of learning and cognition, academic language, content-area access, culturally and linguistically responsive instruction, STEM education, teacher learning, and instructional design. Particular interest in understanding how structured language supports can improve English language learners' access to rigorous content-area instruction.

Experienced in designing and evaluating educational interventions, translating learning sciences research into instructional practice, developing teacher professional learning, and leading large-scale externally funded initiatives. Research and professional experience includes project-based learning, STEM identity, teacher self-efficacy, professional learning communities, educational technology, and emerging applications of artificial intelligence in curriculum and instructional design.

RESEARCH INTERESTS

- Learning and Cognition
- English Language Learner (ELL) Education
- Academic Language Development
- Language Supports in Content-Area Instruction
- Culturally and Linguistically Responsive Teaching
- STEM and STEAM Education
- Science Education
- Project-Based English Language Learning (PBELL)
- Project-Based Learning

- Curriculum and Instructional Design
 - Teacher Learning and Professional Development
 - Teacher Self-Efficacy
 - Instructional Coaching
 - Teacher Preparation
 - STEM Identity Development
 - Educational Technology
 - Artificial Intelligence in Education
 - Virtual and Blended Learning
 - Career-Connected Learning
 - Educational Program Evaluation
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EDUCATION

Ph.D., Learning & Cognition

Universidad de los Andes | 2021–2024

Dissertation:

Exploring the Effects of Structured Language Supports on English Language Learners' Access to Content-Area Instruction

Research Focus:

Examined the role of structured language supports in improving English language learners' access to and engagement with rigorous content-area instruction.

Ed.D., Leadership and Innovation

Arizona State University, Tempe, Arizona | 2013

Dissertation:

Using Social Media as a Tool for Novice Teacher Collegiality and Improved Self-Efficacy

Research Focus:

Investigated the use of social media and professional learning communities as mechanisms for supporting novice teacher collaboration and self-efficacy.

M.A.Ed., Curriculum and Instruction – Science Education

University of Phoenix, Phoenix, Arizona | 2000

Thesis:

Restructuring High School Science Core Curriculum for Homebound and Home-Based Learners

B.S., Microbiology/Veterinary Sciences

University of Arizona, Tucson, Arizona | 1998

ACADEMIC APPOINTMENTS**Secondary Region Lead & Clinical Professor****Arizona State University, Mary Lou Fulton Teachers College**

August 2020–June 2024

- Provided academic and professional leadership for 17 clinical professors in the secondary teacher preparation program.
 - Designed and facilitated professional learning for K–12 mentor teachers focused on instructional practice, teacher evaluation, mentoring, and educational leadership.
 - Developed and taught undergraduate and graduate courses in STEM/STEAM education, English language learner instruction, educational technology, and curriculum design.
 - Served as a dissertation committee chair and contributed to graduate student research and curriculum redesign.
 - Mentored clinical faculty and teacher candidates in instructional planning, assessment, differentiated instruction, and evidence-based pedagogy.
 - Supported university–school partnerships designed to strengthen teacher preparation and clinical practice.
 - Contributed to research-informed improvements in teacher preparation curricula and professional learning.
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Lead Instructional Coach, PBL/STEM – iTeach ELLs**Arizona State University**

June 2016–August 2020

- Served in a leadership role on a \$3 million U.S. Department of Education grant focused on improving STEM instruction and learning opportunities for culturally and linguistically diverse students.

- Developed and implemented Project-Based English Language Learning (PBELL) curriculum integrating academic language development with rigorous content-area instruction.
 - Led professional learning for faculty and educators focused on language-based learning theories, project-based learning, STEM pedagogy, and instructional coaching.
 - Supported educators in translating research on language development and learning into classroom practice.
 - Conducted professional presentations on PBELL, instructional coaching, STEM education, and content accessibility.
 - Collaborated with university faculty, K–12 educators, and community partners on research-informed instructional initiatives.
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Clinical Associate Professor

Arizona State University

August 2008–2014

- Taught undergraduate and graduate courses in teacher preparation, science education, curriculum, and instructional practice.
 - Supervised and mentored 300+ teacher candidates completing clinical experiences in urban and high-poverty school districts.
 - Developed teacher preparation curricula and supported program improvement initiatives.
 - Achieved an average course evaluation rating of 3.98/4.00.
 - Twice nominated for the Graduate and Professional Student Association Teaching Excellence Award.
 - Developed university–community partnerships with the Audubon Society and Arizona Science Center to expand STEM learning opportunities.
 - Mentored teacher candidates in inquiry-based science instruction, assessment, classroom practice, and differentiated instruction.
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RESEARCH & SCHOLARLY PROJECTS

Structured Language Supports for English Language Learners

Doctoral Research | Universidad de los Andes | 2021–2024

Investigated how structured language supports can facilitate English language learners' access to rigorous content-area instruction. Research focused on the relationship between

language development and disciplinary learning, with particular attention to instructional strategies that make complex academic content more accessible while maintaining cognitive rigor.

Project-Based English Language Learning (PBELL)

Arizona State University | 2016–2020

Developed and implemented instructional approaches integrating academic language development with project-based STEM learning. The initiative emphasized providing English language learners with meaningful opportunities to engage with grade-level content while simultaneously developing academic language.

Teacher Self-Efficacy and Professional Learning Communities

Arizona State University | 2013

Doctoral research examining the use of social media as a tool for novice teacher collaboration, collegiality, and professional self-efficacy.

Engineering STEM Identity

Maricopa County Education Service Agency | 2014–2016

Participated in grant-funded research and professional development focused on engineering education, STEM identity, and the development of STEM learning opportunities across **10 local education agencies**.

CURRENT PROFESSIONAL RESEARCH & OUTREACH

Teacher-Industry Support Coordinator

Maricopa County School Superintendents Office

June 2024–Present

- Lead implementation of the Exploring Pathways to Bioscience & Healthcare (EPBH) initiative.
- Develop career-connected instructional resources linking secondary education with bioscience and healthcare careers.

- Recruit and coordinate industry professionals participating in classroom learning experiences.
 - Develop career spotlight videos and classroom activities that connect disciplinary content with authentic professional contexts.
 - Support educators in integrating career awareness, STEM learning, and industry engagement into classroom instruction.
 - Develop professional learning resources for educators supporting career-connected STEM education.
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ADDITIONAL PROFESSIONAL EXPERIENCE

Pedagogical Content Knowledge Expert – Engineering STEM Identity

Maricopa County Education Service Agency

May 2014–June 2016

- Oversaw grant implementation and professional development across 10 LEAs.
- Coordinated STEM professionals for virtual classroom engagement.
- Provided pedagogical content knowledge support for engineering and STEM instruction.
- Supported development of instructional strategies designed to strengthen student STEM identity.
- Coordinated partnerships among educators, STEM professionals, and community organizations.

High School Science Instructor

Paradise Valley Unified School District

2000–2008

- Taught AP Biology and secondary science courses.
 - Developed Pre-AP science curriculum.
 - Created online science courses for district virtual programs.
 - Chaired the North Central Accreditation process.
 - Served as district Technology Liaison.
 - Implemented inquiry-based, technology-enhanced, and differentiated science instruction.
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SELECTED PUBLICATIONS

Bostick, B. (2013). *Using Social Media and Professional Learning Communities*.

Bostick, B. (2018). *To Tweet or Not to Tweet: The Art of Persuasion*. ADE ESSA Conference.

Bostick, B., & Farr, W. J. (2017). *PBELL: Ensuring 100% Content Accessibility*. Carnegie Foundation.

Bostick, B., & Hengesbach, J. (2015). *Classroom Connections – Rural and Urban Video Integration*. Arizona Science Teachers Association.

Lund, S., Bostick, B., & Saltmarsh, S. (2018). Demolishing traditional approaches to science instruction. *Science Scope*, 42(4), 53–59.

SELECTED PRESENTATIONS

Bostick, B. *To Tweet or Not to Tweet: The Art of Persuasion*. ADE ESSA Conference, 2018.

Bostick, B., & Farr, W. J. *PBELL: Ensuring 100% Content Accessibility*. Carnegie Foundation, 2017.

Bostick, B., & Hengesbach, J. *Classroom Connections – Rural and Urban Video Integration*. Arizona Science Teachers Association, 2015.

Bostick, B. Presentations on Project-Based English Language Learning, instructional coaching, STEM education, academic language, and content accessibility for English language learners at regional and national professional conferences.

SELECTED GRANTS & EXTERNALLY FUNDED PROJECTS

U.S. Department of Education — \$3 Million

iTeach ELLs / Project-Based English Language Learning

Arizona State University | 2016–2020

Lead instructional coach with responsibility for implementation, professional development, curriculum development, instructional coaching, and fiscal oversight.

Investing in Innovation (i3) Award

Arizona State University | 2014

Participated in implementation of an innovation-focused educational initiative supporting instructional improvement and student learning.

National Science Foundation Grant

Civil Infrastructure Modeling / Rural K–8 Collaboration

Arizona State University | 2016

Collaborated with Dr. Pingbo Tang on a project involving civil infrastructure modeling and rural K–8 educational partnerships.

ASU–Audubon Society Partnership Grant

Title I Science Enrichment | 2007

Supported science enrichment and expanded STEM learning opportunities for students.

Engineering STEM Identity Initiative

Maricopa County Education Service Agency | 2014–2016

Grant-funded initiative supporting engineering STEM identity, professional development, and STEM partnerships across 10 LEAs.

AWARDS & HONORS

ASU President's Award for Innovation | 2019

Citizen Diplomat Award, Global Ties Arizona | 2019

National Association of Counties Achievement Award | 2016

Investing in Innovation (i3) Award | 2014

Graduate and Professional Student Association Teaching Excellence Award 2017

Arizona State University

Graduate and Professional Student Association Teaching Excellence Award 2018

Arizona State University

TEACHING & PEDAGOGICAL EXPERTISE

Graduate & Undergraduate Teaching

- Science Education
- STEM/STEAM Education
- Curriculum & Instruction
- English Language Learner Instruction
- Educational Technology
- Teacher Preparation
- Instructional Design
- Professional Learning

Research-Informed Pedagogy

- Project-Based Learning
 - Project-Based English Language Learning
 - Academic Language Development
 - Culturally and Linguistically Responsive Teaching
 - Differentiated Instruction
 - Inquiry-Based Science Instruction
 - Technology-Enhanced Learning
 - Virtual and Blended Instruction
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ACADEMIC SERVICE & LEADERSHIP

- Dissertation committee chair
 - Clinical faculty mentor and supervisor
 - Teacher candidate supervisor
 - Teacher preparation program development
 - Curriculum redesign
 - Professional development design and delivery
 - University–school partnership development
 - STEM community partnership development
 - Grant implementation and program leadership
 - Faculty mentoring
 - K–12 educator professional learning
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RESEARCH METHODS & PROGRAM EVALUATION

Areas of methodological experience and interest include:

- Educational research
 - Learning sciences research
 - Mixed-methods research
 - Instructional intervention research
 - Practitioner research
 - Program evaluation
 - Curriculum evaluation
 - Teacher professional learning evaluation
 - Qualitative inquiry
 - Quantitative educational research
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PROFESSIONAL AFFILIATIONS & COLLABORATIONS

Arizona State University, Mary Lou Fulton Teachers College

Arizona Science Teachers Association

Audubon Society

Arizona Science Center

Global Ties Arizona

Maricopa County Education Service Agency

COMMUNITY & INDUSTRY ENGAGEMENT

- Bioscience and healthcare career education
 - STEM professional–school partnerships
 - University–community partnerships
 - K–12 STEM outreach
 - Career-connected learning
 - Teacher professional development
 - Industry-supported classroom learning
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REFERENCES

Anne Smith, Ed.D.

Clinical Professor

ASU Mary Lou Fulton Teachers College

Anne.Smith@asu.edu | 602-390-2020

Brian Hoffner

STEM Professional Development Coordinator

Maricopa County Education Service Agency

Brian.Hoffner@mcesa.maricopa.gov | 602-799-2995

Jeff Hengesbach, Ph.D.

Physical Sciences Instructor

Estrella Mountain Community College

Jeffrey.Hengesbach@estrellamountain.edu | 757-793-1171