TEXAS STATE VITA

I. Academic/Professional Background

A. Name: Michelle E. Forsythe

Title: Associate Professor of STEM Education
Department of Curriculum & Instruction
College of Education
Texas State University

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
Ph.D.	2016	Vanderbilt University	Learning, Teaching, & Diversity (Specialization: Math & Science Education)	Investigations of the wild: The development of students' scientific practice & knowledge during ecological fieldwork
M.A.	2010	Western Governors University	Mathematics Education	Teaching statistics in the science classroom
M.S.	2009	Wright State University	Biological Sciences	The development of elementary preservice teachers' PCK for scientific modeling
M.Ed.	2005	Indiana Wesleyan University	Education	Dare to dream: Living the legacy of our great scientists
B.A.	2000	Houghton College	Biology & Secondary Education	

C. University Experience

Associate Professor of STEM Education	Texas State University	2022-present
Associate Chair, Depart. Of C&I	Texas State University	2023-present
Interim Associate Chair, Depart. of C&I	Texas State University	2022-2023
Assistant Chair, Depart. of C&I	Texas State University	2022-2022
Assistant Professor of STEM Education	Texas State University	2016-2022
Instructor, Field Supervisor, GTA, & Capstone Mentor	Vanderbilt University	2011-2016
Graduate Research Assistant	Vanderbilt University	2010-2016
Instructor	Mount Vernon Nazarene University	2008-2010
Instructor & GTA	Wright State University	2008-2009
Graduate Research Assistant	Wright State University	2007-2009

D. Relevant Professional Experience

SAVY Elementary Ecology Instructor	Vanderbilt University	2015-2016
EdTPA Secondary Science Scorer	Pearson Education	2014-2015
EdTPA Post-Benchmarking Scoring	SCALE, Stanford University	2013-2014
Secondary Science & Math Instructor	Dayton Christian School System	2009-2010, 2000-2007
Mongolia Field Research Participant	Earth Expeditions	2007
Montana Afoot & Afloat Participant	Wild Rockies Field Institute	1999

E. Other Professional Credentials (licensure, certification, etc.)

Certification Secondary Biological Science	Ohio Department of Education	2000

II. TEACHING

A. Teaching Honors and Awards:

2018 Presidential Distinction Award in Teaching, Rank of Assistant Professor, College of Education, Texas State University (Also college nominee for university-level award)

2017 Education Scholar, Ecological Society of America

B. Courses Taught:

Texas State University
- CI 2355 STEM in Early Childhood and Elementary Education (3 sections)
- CI 4355 Science in Elementary Education (30 sections)
- CI 4325 Classroom Management & Teacher-Student Relationships (2 sections)
- CI 4350 Mathematics in the Integrated Elementary Curriculum (2 sections)
- CI 5322 Middle School Instructional Strategies and Practices (1 section)
- CI 5329 The Elementary School Science Curriculum (1 section)
- CI 5304 STEM for Elementary Teachers (1 section)

Vanderbilt University
- Elementary Mathematics Methods
- Secondary Assessment Practicum
- Teaching and Learning Statistics and Probability
- Secondary Science Methods (Graduate Teaching Assistant)
- Scientific Literacies (Graduate Teaching Assistant)
- Graduate Residency Program (Field Supervisor)
- Secondary Science Student Teaching (Field Supervisor)
- Secondary Science Practicum (Field Supervisor)

Mount Vernon Nazarene University
- Middle Level Science Curriculum, Instruction, & Assessment (Virtual)

Middle Level Math Curriculum, Instruction, & Assessment (Virtual)
Meteorology

Wright State University
Concepts in Biology (Substitute Instructor)

C. Directed Student Learning (i.e. theses, dissertations, exit committees, etc.):

Bellarmine University – School of Education
Dissertation Committee Member, Ph.D. Education and Social Change
2022-2023 Nygard, C. Completed May 2023. *Cultivating Connectedness to Nature in the College Classroom: A Consideration of Nature-Based Pedagogy in Undergraduate Education.*

Middle Tennessee State University – Department of Curriculum & Instruction
Dissertation Committee Member, Ph.D. Math & Science Ed.
2021-2024 Scott, F. Completed August 2024. *An Examination of Variability: Using Construct Measurement to Develop an Interdisciplinary Assessment.*
2020-2023 Salisbury, S. Completed May 2023. *Exploring Opportunities for Reconceptualizing Place-based Science Education as a Three-Way Dance of Agency.*

Texas State University – Department of Biology
Dissertation Committee Member, Ph.D. Aquatic Sciences
2019-present Spencer, R. In progress for 2025 completion.
2018-2021 Idema, J. Completed August 2021. *Exploring the Communication of Climate Change Socioscientific Issues in Aquarium Exhibits*.
Master's Thesis Committee Member, M.S. Biology / Wildlife Biology
2024-present Carlton, D. In progress for 2025 completion.
2022-2024 Jess, C. Completed August 2024. *Exploring Outcomes from Participating in Outdoor Science Activities.*
2019-2023 Wait, M. Completed August 2023. *Connecting Interest in and Awareness of the Environment with an Informal Experience.*
2020-2022 Seets, R. Completed August 2022. *Influence of Visual Scaffolding on Science Practices in an Elementary Outdoor Science Investigation.*
2016-2018 Salisbury, S. Completed August 2018. *An Investigation of Preservice Teachers' Engagement and Perceptions of Science Learning in Outdoor Learning Environments*
Master's Project Committee Member, M.S. Biology / Wildlife Biology
2022-2023 Pringle, B. Completed December 2023. *Texas Nature Invaders*

Texas State University – Interdisciplinary Program in Sustainability Studies
Master's Professional Project Committee Chair, M.S. Sustainability Studies
2022-2024 Reisburg, Bess. Completed May 2024. *Development of an Integrated Service-Learning Experience and Community Partnership for Elementary Teacher Candidates at Texas State University*
Master's Thesis Committee Member, M.S. Sustainability Studies

2019-2020 Ozturk, S. Completed May 2020. *An Investigation of Preservice Teachers' Attitude Toward Permaculture to Teach Science in EC-6 Classrooms*

Texas State University – Department of Curriculum & Instruction

Master's Action Research Oral Presentations, Elementary Education - Teacher Fellows

2024 Faculty Reviewer (1 semester)
2023 Faculty Reviewer (1 semester)
2022 Faculty Reviewer (1 semester)
2021 Faculty Reviewer (1 semester)
2019 Faculty Reviewer (1 semester)
2018 Faculty Reviewer (1 semester)

Master's Written Comprehensive Exam, Middle Level Education

2022 Faculty Reviewer (1 semester)
2020 Faculty Reviewer (2 semesters)

Master's Written Comprehensive Exam, Elementary Education

2022 Faculty Reviewer (1 semester)
2021 Faculty Reviewer (1 semester)
2020 Faculty Reviewer (2 semesters)
2019 Faculty Reviewer (3 semesters)
2018 Ethics Committee Member (3 semesters)
2017 Faculty Reviewer (2 semesters)

Master's Oral Comprehensive Exam, Elementary Education - Talent Development

2017 Faculty Reviewer (Anna Bode)

Vanderbilt University – Department of Teaching, Learning, & Diversity

Master's Capstone, M.Ed. Learning, Diversity & Urban Studies

2012-14 Capstone Mentor – Informal Learning & STEM Education (4 semesters)

D. Courses Prepared and Curriculum Development:

2023 Doctor of Education (EdD) Major in Curriculum and Instruction – Proposal for a New Doctoral Program. Submitted to the Texas Higher Education Coordinating Board and the Texas State University System

2022 Minor in Innovation and Entrepreneurship – Proposal for a New Minor. Submitted to the Texas State University System. Approved 2023.

Texas State University – Courses Prepared

CI 2355 STEM in Early Childhood and Elementary Education
CI 3337 Survey of Social Studies Concepts for Elementary Educators (course proposed)
CI 3355 Survey of Science Concepts for Elementary Educators (course proposed)
CI 4355 Science in Elementary Education
CI 4355 Science in Elementary Education (revised after MCRTI training)
CI 4355 Science in Elementary Education (revised to be hybrid for pandemic)
CI 4355 Science in Elementary Education (revised to support secondary candidates)

CI 4325 Classroom Management & Teacher-Student Relationships
CI 4350 Mathematics in the Integrated Elementary Curriculum
CI 5304 STEM for Elementary Teachers
CI 5322 Middle School Instructional Strategies and Practices
CI 5329 The Elementary School Science Curriculum

Vanderbilt University – Courses Prepared
Elementary Mathematics Methods
Secondary Assessment Practicum
Teaching and Learning Statistics and Probability

Mount Vernon Nazarene University – Courses Prepared
Middle Level Science Curriculum, Instruction, & Assessment (online)
Middle Level Math Curriculum, Instruction, & Assessment (online)

E. Teaching Grants and Contracts

1. Funded External Teaching Grants and Contracts:

Forsythe, M**.** (2017). *Life Discovery Conference Travel Award and LDC-QUBES Faculty Mentoring Network.* NSF/ESA Travel and Teaching Mentorship Grant, $1,000 over one semester.

3. Funded Internal Teaching Grants and Contracts:

Silva, J. (PI), Forsythe, M. (Co-PI), & Maldonado, L. (Co-PI). (2019). *Equity and STEM Integration: Using Wearable Technology to Enhance STEM Education.* Teaching and Learning Technology Innovation Grant, $4,357 over one year.

Forsythe, M. (PI), & Jackson, J. (Co-PI). (2017). *Digital science notebooks: Elementary pedagogy for the 21st century.* Teaching and Learning Technology Innovation Grant, $6,000 over one year.

F. Other:

Guest Speaker. (Sept 26, 2023). CI 3338 Social Studies in Elementary and Middle Level Education. Department of Curriculum & Instruction, TXST, San Marcos, TX. Talk: *Addressing sustainability challenges: An interdisciplinary approach.*

Guest Speaker. (Feb 21, 2023). CI 3338 Social Studies in Elementary and Middle Level Education. Department of Curriculum & Instruction, TXST, San Marcos, TX. Talk: *Addressing sustainability challenges: An interdisciplinary approach.*

Guest Speaker. (Sept 27, 2022). CI 3338 Social Studies in Elementary and Middle Level Education. Department of Curriculum & Instruction, TXST, San Marcos, TX. Talk: *Addressing sustainability challenges: An interdisciplinary approach.*

Guest Speaker. (Sept 13, 2022). CI 3332 Foundations of Bilingual & ESL Education. Department of Curriculum & Instruction, TXST, San Marcos, TX. Talk: *Using ATLAS for clinical observations.*

Guest Speaker. (Jan 27, 2022). CI 3332 Foundations of Bilingual & ESL Education. Department of Curriculum & Instruction, TXST, San Marcos, TX. Talk: *Using ATLAS for clinical observations.*

Guest Speaker. (March 13, 2018). ECI 709 Special Topics: Examining Researchers and Teacher Educators as Learners, Department of Teacher Education & Learning Sciences, NC State, Raleigh, NC. Panel: Feedback on graduate student projects.

Guest Speaker. (Jan 19, 2013). EDUC 3730 Epistemic Foundations of Mathematics and Science, Department of Teaching and Learning, Vanderbilt University, Nashville, TN. Talk: *Ecology education from an epistemic perspective.*

Guest Speaker. (Oct 10, 2012). EDUC 3070 Inquiry into Education, Department of Teaching and Learning, Vanderbilt University, Nashville, TN. Talk: *What's going on in there? Students' mental models of ecosystems.*

G. Teaching Professional Development Activities Attended:

Conference Attendance

Conference for the Advancement of Science Teaching, Science Teachers' Association of Texas. (November 2024).

NSTA Annual Conference, National Science Teaching Association. (November 2024).

CSOTTE Annual Conference, Consortium of State Organizations for Texas Teacher Education (October 2024).

NSTA Annual Conference, National Science Teaching Association. (March 2024).

ASTE Annual Conference, Association for Science Teacher Education. (January 2024).

Conference for the Advancement of Science Teaching, Science Teachers' Association of Texas. (November 2023).

NSTA Annual Conference, National Science Teaching Association. (March 2023).

ASTE Annual Conference, Association for Science Teacher Education. (January 2023).

Conference for the Advancement of Science Teaching, Science Teachers' Association of Texas. (November 2022).

NAAEE Annual Conference, North American Association for Environmental Education. (October 2022)

2022 NOYCE Summit, National Science Foundation. (July 2022).

NSTA Annual Conference, National Science Teaching Association. (March 2022).

ASTE Annual Conference, Association for Science Teacher Education. (January 2022).

AERA Annual Conference (virtual), American Educational Research Association. (April 2021).

NARST Annual Conference (virtual), National Association for Research in Science Teaching. (April 2021).

ASTE Annual Conference (virtual), Association for Science Teacher Education. (January 2021).

NARST Annual Conference (virtual), National Association for Research in Science Teaching. (April 2020).

EdTech Conference (virtual), Department of Curriculum and Instruction, TXST. (April 2020).

ISEA Annual Conference, Texas Informal Science Education Association. (February 2020).

ASTE Annual Conference, Association for Science Teacher Education. (January 2020).

EdTech Conference, Department of Curriculum and Instruction, TXST. (April 27, 2019).

NARST Annual Conference, National Association for Research in Science Teaching. (April 2019).

ASTE Annual Conference, Association for Science Teacher Education. (January 2019).

EdTech Conference, Department of Curriculum and Instruction, TXST. (April 21, 2018).

NARST Annual Conference, National Association for Research in Science Teaching. (March 2018).

NSTA Annual Conference, National Science Teachers Association. (March 2018).

ASTE Annual Conference, Association for Science Teacher Education. (January 2018).

Conference for the Advancement of Science Teaching, Science Teachers' Association of Texas. (November 2017).

4th Life Discovery: Doing Science Biology Education Conference. (October 2017)

EdTech Conference, Department of Curriculum and Instruction, TXST. (April 22, 2017).

AERA Annual Conference, American Educational Research Association. (April 2017).

NARST Annual Conference, National Association for Research in Science Teaching. (April 2017).

NSTA Annual Conference, National Science Teachers Association. (March 2017).

Conference for the Advancement of Science Teaching, Science Teachers' Association of Texas. (November 2016).

Continuing Education Program

US Prep Curriculum Design Training. (October 2021 – October 2022).

Raise Your Hand Texas / Teaching Works High Leverage Teaching Practices. (January 2021 – June 2022).

Multicultural Curriculum Transformation and Research Institute, Texas State University. (May 20-25, 2019).

Faculty Maker PD, Texas State University. (September 2017 - May 2018).

LDC-QUBES Faculty Mentoring Network: Data Nuggets. (September 2017 – December 2017).

Program for Excellence in Teaching and Learning, Texas State University. (August 2016 – April 2017).

Faculty Book Study

Never Not Working, College of Education, TXST. (October 2024-present).

Unraveling Faculty Burnout, College of Education, TXST. (September 2023-April 2024).

Becoming Hispanic Serving Institutions, Department of Curriculum and Instruction, TXST. (September 2019 – November 2019).

We've Been Doing It Your Way Long Enough, Department of Curriculum and Instruction, TXST. (September 2018 - November 2018).

Race in Education, Department of Curriculum and Instruction, TXST. (February 2017 - May 2018).

Seminars and Workshops

Open Access Week: Finding and Using Images and Media, TXST (October 22, 2024)

Intentional Course Design in an Age of AI, TXST. (October 3, 2024)

Food for Thought: Teacher Residencies, College of Education, TXST. (September 30, 2022).

Food for Thought: Retention in Teacher Education, College of Education, TXST. (September 26, 2022).

US Prep Houston Learning Tour, US Prep. (April 11-13, 2022).

Building a Fire: Collaborative Mentoring Practices for Nontenure Line Faculty, TXST. (March 23, 2022).

Successfully Supervising Graduate Students' Theses and Dissertations, TXST. (March 1, 2022).

Raise Your Hand Texas Convening, Raise Your Hand Texas / WestEd / Teaching Works. (June 3-4, 2021).

Raise Your Hand Texas Convening, Raise Your Hand Texas / WestEd / Teaching Works. (October 29, 2020).

Centering Equity in EE's COVID-19 Response Webinar, North American Association for Environmental Education. (May 28, 2020).

Sharing Virtual Instructional Strategies that Work: A COE Community Conversation, Faculty Advisory Council, College of Education, TXST. (May 27, 2020).

In Limbo: Dilemmas Faced by Undocumented Students Training, College of Education, TXST. (Feb 14, 2020).

Dispositions Training, Department of Curriculum and Instruction, TXST. (Jan 14, 2020).

Some Reflections on Participation in the Mathematics Classroom with Marta Civil, Department of Mathematics Colloquium, TXST. (October 4, 2019).

Latinx Languages and Identities Beyond Borders with Jonathan Rosa, Department of Curriculum and Instruction & College of Education, TXST. (March 7, 2019).

We've Been Doing It Your Way Long Enough, Texas State University. (November 13, 2018).

Danielson Framework for Teaching Training, Department of Curriculum and Instruction, TXST. (September 28, 2018).

Race in Education with Rich Milner, Department of Curriculum and Instruction, TXST. (April 5, 2018).

Supporting Graduate Students for External Fellowships, Awards, and the Academic Job Market, Texas State University. (October 10, 2017).

Faculty Advisory Council Roundtable, College of Education, Texas State University. (April 7, 2017)

Faculty Toolkit: Reading List Builder, Texas State University. (December 2, 2016).

Integrating Research and Teaching, Texas State University. (November, 2016).

Simply Map, Texas State University. (November 17, 2016).

Danielson Framework for Teaching Seminar, Department of Curriculum and Instruction, TXST. (October 7, 2016).

III. SCHOLARLY/CREATIVE *(Last name changed from Cotterman to Forsythe in 2016)*

A. Works in Print (including works accepted, forthcoming, in press):

1. Books:

b. Textbooks:

Burgess, T., Domjan, H. & Forsythe, S. (2025). Texas Experience Science Grade 1. Savvas Learning Company LLC. [alphabetical equal authorship]

Burgess, T., Domjan, H. & Forsythe, S. (2025). Texas Experience Science Grade 2. Savvas Learning Company LLC. [alphabetical equal authorship]

Burgess, T., Domjan, H. & Forsythe, S. (2025). Texas Experience Science Grade 3. Savvas Learning Company LLC. [alphabetical equal authorship]

Burgess, T., Domjan, H. & Forsythe, S. (2025). Texas Experience Science Grade 4. Savvas Learning Company LLC. [alphabetical equal authorship]

Burgess, T., Domjan, H. & Forsythe, S. (2025). Texas Experience Science Grade 5. Savvas Learning Company LLC. [alphabetical equal authorship]

Burgess, T., Domjan, H. & Forsythe, S. (2025). Texas Experience Science Grade K. Savvas Learning Company LLC. [alphabetical equal authorship]

Burgess, T., Domjan, H., Forsythe, S., Wilcox, J. (in press). Experience Science Grade 1. Savvas Learning Company LLC. [alphabetical equal authorship]

Burgess, T., Domjan, H., Forsythe, S., Wilcox, J. (in press). Experience Science Grade 2. Savvas Learning Company LLC. [alphabetical equal authorship]

Burgess, T., Domjan, H., Forsythe, S., Wilcox, J. (in press). Experience Science Grade 3. Savvas Learning Company LLC. [alphabetical equal authorship]

Burgess, T., Domjan, H., Forsythe, S., Wilcox, J. (in press). Experience Science Grade 4. Savvas Learning Company LLC. [alphabetical equal authorship]

Burgess, T., Domjan, H., Forsythe, S., Wilcox, J. (in press). Experience Science Grade 5. Savvas Learning Company LLC. [alphabetical equal authorship]

Burgess, T., Domjan, H., Forsythe, S., Wilcox, J. (in press). Experience Science Grade K. Savvas Learning Company LLC. [alphabetical equal authorship]

2. Articles:

a. Refereed Journal Articles: ** indicates graduate student co-author*

Forsythe, M. E., & Chan, Y.-W. (2024). Building from scientific argumentation to democratic deliberation: An interdisciplinary approach to decision-making about socioscientific issues. *Journal of College Science Teaching.* https://doi.org/10.1080/0047231X.2024.2417180

Chan, Y.-W., & Forsythe, M. (2024). Integrating scientific argumentation and democratic deliberation in addressing environmental issues. *Social Education, 88*(5), 301-308.

*Ozturk, S., & Forsythe, M. E. (2024). Introducing preservice elementary teachers to permaculture education. *Journal of Agricultural Education 65*(2), 362-381.

Assaf, L. C., Forsythe, M., & Atal, D. (2024). Engaging in video clubs: Teacher candidates' visioning of ;inguistically responsive literacy instruction. *Action in Teacher Education*, 1–21. https://doi.org/10.1080/01626620.2024.2318225

*Marty, B., Daniel, K., & Forsythe, M. (2023). Bee Time. *Science & Children, 60*(6) 30-35.

Forsythe, M. E., Criswell, B. A., Arias, A. M., Ellis, J. A., Escalada, L., Johnson, H. J., Palmeri, A. B., Riccio, J., Parker, M. E. (2022). The Framework for Analyzing Video in Science Teacher Education (FAVSTE). *Journal of Science Teacher Education, 33*(6), 621-640. https://doi.org/10.1080/1046560X.2021.1970698

Forsythe, M. E., & Chan, Y.-W. (2021). Justice-centered education amid the COVID-19 pandemic. *Journal of Environmental Education, 52*(6), 347-357. https://doi.org/10.1080/00958964.2021.1981208

Jackson, J., Forsythe, M., *Medeiros, D., Parthemore, J., & Rix, A. (2021). Innovation and design: Using books to introduce engineering-based thinking. *Science & Children, 58*(3), 26-31.

Jackson, J., Forsythe, M., & Contreras, L. (2020). Science in your stacks: Using trade books and literacy strategies to enhance 5E science lessons. *Science Scope, 44*(2), 30-35.

Jackson, J., & Forsythe, M. (2020). Using trade books and biographies to bring the practices of engineering to life. *Science Scope, 44*(2), 36-45.

Arias, A., Criswell, B., Ellis, J., Escalada, L., Forsythe, M., Johnson, H., Mahar, D., Palmeri, A., Parker, M., & Riccio, J. (2020). The Framework for Analyzing Video in Science Teacher Education. *Innovations in Science Teacher Education, 5*(5). (Alphabetical equal authorship credit).

Chan, Y.-W., & Forsythe, M. (2020). Mapping Stakeholders: Tools to scaffold students in deliberation about environmental controversies. *Science Scope*, *44*(1), 50-57.

Forsythe, M., Jackson, J., & King, J. (2019). Turning tests into tasks: How to build performance assessments from standardized tests. *Science Scope, 42*(7), 67-74.

Forsythe, M., Jackson, J., & *Medeiros, D. (2019). Stories of design: Using books to unpack the engineering design process. *The Elementary STEM Journal, 23*(3), 18-22.

Jackson, J., Forsythe, M., *Medeiros, D., Parthemore, J., & Rix, A. (2018). Unpacking the engineering process: Resourcing trade books and biographies. *Children & Libraries, 16*(4), 4-8, 33.

Forsythe, M., Jackson, J., & Contreras, L. (2018). Hiding in plain sight: How to identify and use trade books to support the 5E instructional model. *Science & Children*, *56*(2), 80-87.

Forsythe, M. (2018). Seeds of practice: How to modify 5E inquiry lessons to amplify science and engineering practices. *Science & Children, 56*(1), 74-79.

Forsythe, M. E. (2018). Sampling in the wild: How attention to variation supports middle school students' sampling practice. *Statistics Education Research Journal, 17*(1), 8-34. https://iase-web.org/documents/SERJ/SERJ17(1)_Forsythe.pdf

Jackson, J., Warner, K., & Forsythe, M. (2017). There's a zoo in our room. *Science & Children, 55*(2), 34-40.

Forsythe, M., & Johnson, H. (2017). What to see, what to say: Tips for participating in teacher video clubs. *Tools for Learning Schools. 20*(2), 1-7.

Note: This article was originally submitted to the journal *The Learning Professional*, peer-reviewed, and accepted for publication. The journal editors, who also ran the newsletter *Tools for Learning Schools* at the time, asked to publish the article as the sole piece in the winter 2017 newsletter.

Johnson, H. J., & Cotterman, M. E. (2015). Developing preservice teachers' knowledge of science teaching through video clubs. *Journal of Science Teacher Education*, *26*(4), 393-417. https://doi.org/10.1007/s10972-015-9429-0 (Equal authorship credit).

b. Non-refereed Articles:

Forsythe, M., & Jackson, J. (2021, June 30). 5 children's books that teach valuable engineering lessons. *The Conversation.* https://theconversation.com/5-childrens-books-that-teach-valuable-engineering-lessons-162583

Article Metrics from *The Conversation* (June 30 – Sept 30. 2022)
56.453 known online readers (42% US; 17% UK; 15% India; 26% Other)
34 known online re-publishers, including the *World Economic Forum*
1 known print re-publisher *Syracuse Post-Standard* (circ. 83,000+)
Over 500 known social media shares

Johnson, H., & Cotterman, M. (2013). Collaborative efforts to put the 'E' back in STEM. *NSTA Reports, 25*(4), 3.

10. Other Works in Print:

Sikes, E., Barrett, A. L., Zipperer, J. E., Forsythe, M. E., & Daniel, K. L. (2024). Animal Invaders. In *Research Rangers*. Retrieved from https://researchrangers.wp.txstate.edu/home/animal-invaders/https://researchrangers.wp.txstate.edu/home/animal-invaders/

Bocanegra, J. K., Becker, K., Zipperer, J. E., Forsythe, M. E., & Daniel, K. L. (2024). Feeding Fungi. In *Research Rangers*. Retrieved from https://researchrangers.wp.txstate.edu/home/feeding-fungi/

Daniel, K. L., Forsythe, M. E., & Zipperer, J. E. (2024). Firefly Watch. In *Research Rangers*. Retrieved from https://researchrangers.wp.txstate.edu/home/firefly-watch/

Martinez, A., Acosta-Silva, N., Zipperer, J. E., Jess, C. A., Forsythe, M. E., &Daniel, K. L. (2024). Fossil hunt. In *Research Rangers*. Retrieved from https://researchrangers.wp.txstate.edu/home/fossil-hunt/

Tucker, K., Carrell, S., Piland, T., Zipperer, J. E., Forsythe, M. E., & Daniel, K.L. (2024). Living Waters. In *Research Rangers*. Retrieved from https://researchrangers.wp.txstate.edu/home/living-waters/

Cerda, S., Gatalica, D., Zipperer, J. E., Forsythe, M. E., & Daniel, K. L. (2024).Mammal Signs. In *Research Rangers*. Retrieved from https://researchrangers.wp.txstate.edu/mammal-signs/

Seets, R. L., Daniel, K. L., & Forsythe, M. E. (2024). Pollinating Partners. In *Research Rangers*. Retrieved from https://bpb-us-e1.wpmucdn.com/wp.txstate.edu/dist/a/4338/files/2024/08/Research-Rangers-Pollination-Partners.pdf

Arias, A., Criswell, B., Ellis, J., Escalada, L., Forsythe, S., Johnson, H., Mahar, D., Palmeri, A., Parker, M., Riccio, J. (May 28, 2020). Finding the best approximations of practice in the era of COVID-19: Video analysis and FAVSTE. *American Association of College for Teacher Education EdPrepMatters Blog.* https://edprepmatters.net/2020/05/finding-the-best-approximations-of-practice-in-the-era-of-covid-19-video-analysis-and-favste/ (Alphabetical equal authorship)

Forsythe, M. E. (2016). *Investigations of the wild: The development of students' scientific practice and knowledge during ecological fieldwork* (Doctoral dissertation). Retrieved from https://etd.library.vanderbilt.edu (etd-07252016-220357).

Cotterman, M. E. (2009). *The development of preservice elementary teachers' pedagogical content knowledge for scientific modeling* (Master's thesis). Retrieved from https://etd.ohiolink.edu (wright125377387).

B. Works Not in Print:

1. Papers Presented at Professional Meetings:

International or National

Forsythe, M. (2024, November). *Let's connect with phenomenon: Using phenomenon to link science, social studies, and literacy instruction.* National Science Teaching Association Annual Conference, New Orleans, LA.

Forsythe, M. (2024, November). *Let's talk about phenomenon: Building academic rigor through spiraled engagement with phenomenon.* National Science Teaching Association Annual Conference, New Orleans, LA.

Forsythe, M. (2024, November). *Let's tinker with toys: Using reverse engineering to stimulate student sensemaking.* [Poster]. National Science Teaching Association Annual Conference, New Orleans, LA.

Chan, Y.-W. & Forsythe, M. (2024, April). *Making sense of social sustainability: Analysis of preservice teachers' discussions about sustainability challenges in Texas*. [Poster Presentation]. American Educational Research Association Annual Meeting, Philadelphia, PA.

Forsythe, M. (2024, March). *Data discussions and sensemaking summaries: Two powerful talk routines for enhancing science lessons*. National Science Teaching Association Annual Conference, Denver, CO.

Forsythe, M. (2024, March). *"AI"deas: Strategies for using AI tools for professional development and classroom practice*. National Science Teaching Association Annual Conference, Denver, CO.

Forsythe, M. (2024, March). *Let's tinker with toys: The power of reverse-engineering*. National Science Teaching Association Annual Conference, Denver, CO.

Criswell, B., Arias, A., Ellis, J., Escalada, L., Forsythe, M., Johnson, H., Riccio, J. (2024, January). *The theory and tools of FAVSTE: A look at their evolution.* [Related Paper Set: Making equity explicit: Integrating equitable science practices in video analysis across a research collaborative of seven teacher preparation programs]. Association for Science Teacher Education Annual Conference, New Orleans, LA.

Ellis, J., Forsythe, M., Arias, A., Criswell, B., Escalada, L., Johnson, H., Riccio, J. (2024, January). *Pilot data from teacher candidate focus group interviews* [Related Paper Set: Making equity explicit: Integrating equitable science practices in video analysis across a research collaborative of seven teacher preparation programs]. Association for Science Teacher Education Annual Conference, New Orleans, LA.

Riccio, J., Escalada, L., Arias, A., Criswell, B., Ellis, J., Forsythe, M. Johnson, H. (2024, January). *Redesigning a methods course and tools to support noticing equitable science teaching.* [Related Paper Set: Making equity explicit: Integrating equitable science

practices in video analysis across a research collaborative of seven teacher preparation programs]. Association for Science Teacher Education Annual Conference, New Orleans, LA.

Riccio, J., Arias, A., Criswell, B., Ellis, J., Escalada, L., Forsythe, M. Johnson, H. (2024, January). *Building capacity for cross-site research on promoting noticing for equity and equitable science teaching practice through video analysis.* [Poster Presentation: Diversity, Equity, and Inclusion]. Association for Science Teacher Education Annual Conference, New Orleans, LA.

Forsythe, M., & Chan, Y.W. (2023, March). *Scaffolding decision making about socio-scientific issues by integrating scientific argumentation and democratic deliberation*. National Science Teaching Association Annual Conference, Atlanta, GA.

Forsythe, M. (2023, March). *The three most important science talks for elementary lessons*. National Science Teaching Association Annual Conference, Atlanta, GA.

Johnson, H., Arias, A., Criswell, B., Ellis, J., Escalada, L., Forsythe, M., Riccio, J. (2023, January). *Seeing the Equity in Science Classroom Teaching & Learning through Video Analyses* [Exploratory Session]. Association for Science Teacher Education Annual Conference, Salt Lake City, UT.

Chan, Y.-W., & Forsythe, M. (2022, October). *Scaffolding environmental decision making by integrating scientific argumentation and democratic deliberation* [Conference session]. North American Association for Environmental Education Annual Conference. Tucson, AZ.

Forsythe, M. & Chan, Y.-W. (2022, January). *How environmental education can inform science in the COVID-19 era* [Paper presentation]. Association for Science Teacher Education Annual Conference, Greenville, SC.

Assaf, L., & Forsythe, M. (2021, December). *Engaging in video clubs of exemplar elementary teachers: Teacher candidates' visioning of linguistically responsive literacy instruction* [Paper presentation]. Literacy Research Association Annual Conference, Atlanta, GA.

Chan, Y.-W & Forsythe, M. (2021, October). *Local lenses on global issues: Students deliberation of sustainability challenges* [Conference session]. North American Association for Environmental Education Annual Conference. Virtual.

Arias, A., Criswell, B., Ellis, J., Escalada, L., Forsythe, M., Johnson, H., Mahar, D., Palmeri, A., Parker, M., Riccio, J. (2021, April). *Designing, facilitating, and studying video analysis in teacher education using the FAVSTE* [Paper presentation]. American Educational Research Association Annual Conference, Virtual.

Forsythe, M., & Chan, Y.-W. (2021, March). *Preservice elementary teachers' perspectives of informal science space* [Paper presentation]. National Association for Research in Science Teaching Annual Conference, Virtual.

Forsythe, M., Arias, A., Criswell, B., Ellis, J., Escalada, L., Johnson, H., Mahar, D., Palmeri, A., Parker, M., Riccio, J. (2021, January). *Updates and applications of the FAVSTE* [Poster presentation]. Association for Science Teacher Education Annual Conference, Virtual.

Chan, Y.-W., & Forsythe, M**.** (2020, December). *Mapping stakeholders: Tools to scaffold students in environmental controversies deliberation* [Conference session]. National Council for the Social Studies 100th Annual Conference, Washington, D.C. (Conference cancelled)

Forsythe, M. & Criswell, B. (2020, March). *FAVSTE: The Framework for Analyzing Video in Science Teacher Education* [Conference roundtable session]. National Association for Research in Science Teaching Annual Conference, Portland, OR. (Conference cancelled; Virtual presentation)

Forsythe, M., Arias, A., Criswell, B., Ellis, J., Escalada, L., Johnson, H., Mahar, D., Palmeri, A., Parker, M., Riccio, J. (2020, January). *Models of video analysis use across teacher education programs* [Conference exploratory session]. Association for Science Teacher Education Annual Conference, San Antonio, TX.

Forsythe, M. (2020, January). *A duty of care: Weaving equity throughout an elementary science methods course* [Conference syllabus session]. Association for Science Teacher Education Annual Conference, San Antonio, TX.

Forsythe, M. (2019, April). *Preservice elementary teacher perspectives of a college maker space* [Paper presentation]. National Association for Research in Science Teaching Annual Conference, Baltimore, MD.

Forsythe, M. (2019, January). *Favored or forgotten: The implementation of science and engineering practices within K-5 Life Science* [Paper presentation]. Association for Science Teacher Education Annual Conference, Savannah, GA.

Forsythe, M. & Jackson, J. (2019, January). *Using children's literature to advance preservice teachers' implementation of scientific inquiry and engineering design.* [Conference syllabus session]. Association for Science Teacher Education annual conference. Savannah, GA.

Forsythe, M. (2018, March). *Disciplining the wild: The co-development of students' scientific knowledge and practice during ecological fieldwork* [Paper presentation]. National Association for Research in Science Teaching Annual Conference, Atlanta, GA.

Forsythe, M. (2018, March). *Professional noticing unmasked: Factors influencing the selective noticing of science teachers* [Paper presentation]. National Association for Research in Science Teaching Annual Conference, Atlanta, GA.

Forsythe, M. (2018, March). *Unpacking sources of variation in ecological data* [Conference session]. National Science Teachers Association annual conference. Atlanta, GA.

Criswell, B., Ellis, J., Forsythe, M., Liang, L., Maker, J., & Thamotharan, V. (2018, January). *Development and application of video analysis frameworks in science teacher*

preparation [Conference exploratory session]. Association for Science Teacher Education Annual Conference, Baltimore, MD.

Forsythe, M. (2017, April). *Modeling the wild: Using microcosms to support students' ecological fieldwork* [Poster presentation]. American Educational Research Association Annual Conference, San Antonio, TX.

Forsythe, M. (2017, March). *Transforming local STEM questions into global STEM journeys* [Conference session]. National Science Teachers Association Annual Conference, San Antonio, TX.

Forsythe, M. (2017, March). *Integrating engineering into life science lessons* [Conference session]. National Science Teachers Association Annual Conference, San Antonio, TX.

Cotterman, M., Lehrer, R., & Schauble, L. (2015, April). *Sampling in the wild: How attention to variation supports middle school students' sampling practice* [Paper presentation]. National Association for Research in Science Teaching Annual Conference, Chicago, IL.

Johnson, H., & Cotterman, M. (2015, April). *Video club as a context for shifting discourse about scientific practice* [Paper presentation]. National Association for Research in Science Teaching Annual Conference, Chicago, IL.

Cotterman, M., Lehrer, R., & Schauble, L. (2014, July). *Sampling in the wild: How attention to variation supports middle school students' sampling practice* [Paper presentation]. International Conference on Teaching Statistics, Flagstaff, AZ.

Johnson, H, & Cotterman, M. (2014, March). *"Is That a Model, Right?": Preservice and inservice teachers' interpretations of scientific practices during a combined video club* [Poster presentation]. National Association for Research in Science Teaching Annual Conference, Pittsburg, PA.

Cotterman, M., & Johnson, H. (2013, April). *Take ME (Mechanical Engineering) to school: Building successful partnerships between local schools and universities* [Conference session]. National Science Teachers Association Annual Conference, San Antonio, TX.

Cotterman, M., & Johnson, H. (2013, April). *Video clubs as productive sites for preservice science teachers to interrogate instructional representations* [Paper presentation]. National Association for Research in Science Teaching Annual Conference, Rio Grande, Puerto Rico.

Johnson, H., & Cotterman, M. (2013, April). *Developing preservice teachers' knowledge of teaching through video clubs* [Paper presentation]. National Association for Research in Science Teaching Annual Conference, Rio Grande, Puerto Rico.

Cotterman, M., Lehrer, R., & Schauble, L. (2013, April). *Seeing difference across time and space: Implications of ecological spatiotemporal variation for students' field practice* [Poster presentation]. National Association for Research in Science Teaching Annual Conference, Rio Grande, Puerto Rico.

Cotterman, M., Lehrer, R., & Schauble, L. (2012, April). *Seeing and modeling ecosystem functionality across aquatic ecologies* [Paper presentation]. American Educational Research Association Annual Conference, Vancouver, BC.

Cotterman, M., Lehrer, R., & Schauble, L. (2012, March). *The interplay between student and material agency in ecological investigations* [Poster presentation]. National Association for Research in Science Teaching Annual Conference, Indianapolis, IN.

Cotterman, M. (co-author), Manz, E. (co-author), Lehrer, R., Schauble, L., Lucas, D., & Shinohara, M. (2012, March). *Engaging students in modeling to develop understanding of ecosystems* [Poster presentation]. National Association for Research in Science Teaching Annual Conference, Indianapolis, IN.

Cotterman, M., & Kenyon, L. (2009, April). *Investigating how preservice elementary teachers' understanding of scientific modeling aligns with their modeling lesson designs* [Poster presentation]. National Association for Research in Science Teaching Annual Conference, Garden Grove, CA.

Hug, B., Kenyon, L., Teo, T.W., Nelson, M., Cotterman, M., & Davis, E. (2008, March). *Promoting preservice teachers' understanding and use of scientific modeling in teaching and learning* [Paper presentation]. National Association for Research in Science Teaching Annual Conference, Baltimore, MD.

Regional

Forsythe, M. (2024, November). *Let's talk about science: How to support data analysis in 3D lessons using "data discussion" talks* [Conference session]. Science Teachers Association of Texas Annual Conference. San Antonio, TX.

Forsythe, M. (2024, November). *Let's talk about science: How to launch three-dimensional lessons using "I notice, I wonder" talks* [Conference session]. Science Teachers Association of Texas Annual Conference. San Antonio, TX.

Assaf, L. C., & Forsythe, S. (2024, October). *Engaging in video clubs of exemplar elementary teachers: Teacher candidates' visioning of linguistically responsive literacy instruction* [Conference session]. Consortium of State Organizations for Texas Teacher Education Annual Conference. San Marcos, TX.

Chan, Y-W., & Forsythe, M. (2024, October). *An interdisciplinary approach to teaching about socioscientific issues in science and social studies* [Conference session]. Consortium of State Organizations for Texas Teacher Education Annual Conference. San Marcos, TX.

Forsythe, M. (2023, November). *Data discussions and sensemaking summaries: Two powerful talk routines for enhancing science lessons* [Conference session]. Science Teachers Association of Texas Annual Conference. Houston, TX.

Forsythe, M. & Chan, Y.-W. (2023, November). *Integrating scientific argumentation and democratic deliberation to scaffold student investigations of environmental challenges*

[Conference session]. Science Teachers Association of Texas Annual Conference. Houston, TX.

Forsythe, M. (2022, November). *The three most important talks for elementary science lessons* [Conference session]. Science Teachers Association of Texas Annual Conference. Dallas-Fort Worth, TX.

Forsythe, M**.** & Chan, Y.-W. (2021, February). *How environmental education perspectives and praxis can inform and improve science teaching and learning in the COVID-19 era* [Conference session]. Texas Informal Science Education Association Conference, Virtual. (Conference cancelled)

Forsythe, M**.** & Chan, Y.-W. (2020, February). *Preservice elementary teacher perspectives of informal science spaces* [Poster presentation]. Texas Informal Science Education Association Conference, Waco, TX.

Forsythe, M**.** (2017, November). *Supporting K-8 students' understanding of Life Science TEKS through integrated engineering design challenges* [Conference session]. Science Teachers Association of Texas Annual Conference. Houston, TX.

Jackson, J., Forsythe, M., & Contreras, L. (2017, November). *Hiding in plain sight: How to identify and use trade books to support the 5E instructional model* [Conference session]. Science Teachers Association of Texas Annual Conference. Houston, TX.

2. Invited Talks, Lectures, and Presentations:

International or National

Forsythe, M. (2024, November). *STEMimagination: Igniting curiosity through integrated STEM projects.* [Invited session]. National Science Teaching Association Annual Conference, New Orleans, LA. Invited by Savvas Learning Company.

Forsythe, M. (2024, March). *Destination integration: Using science to launch cross-curricular learning journeys*. [Invited session]. National Science Teaching Association Annual Conference, Denver, CO. Invited by Savvas Learning Company.

Arias, A., Criswell, B., Ellis, J., Escalada, L., Forsythe, M., Johnson, H., Riccio, J. (2023, June). Cultivating diversity, equity, and inclusion: Building capacity for cross-site research on promoting noticing for equity and equitable science teaching practice through video analysis. [Poster presentation] 2023 NOYCE Summit. Washington, DC.

Forsythe, M. (2023, March). Embedding mini-moments of literacy instruction within science lessons [Invited session]. National Science Teaching Association Annual Conference, Atlanta, GA. Invited by Savvas Learning Company.

Forsythe, M. (2022, October 14). Keeping science real part 2: Time for phenomena [Podcast]. Savvas Learning Company.

Forsythe, M. (2022, October 12). Simple strategies for connecting students to local phenomena [Webinar]. Savvas Learning Company.

Johnson, H., Arias, A., Criswell, B., Ellis, J., Escalada, L., Forsythe, M., Riccio, J. (2022, July). *Collaborative Research: Building Capacity for Cross-site Research on Promoting Noticing for Equity and Equitable Science Teaching Practice through Video Analysis*. [Poster presentation] 2022 NOYCE Summit. Washington, DC.

Forsythe, M. (2022, March). *Simple strategies for connecting students to local phenomena.* [Invited session] National Science Teaching Association Annual Conference. Houston, TX. Invited by Savvas Learning Company.

Forsythe, M. (2021, April 7). *NSTA Twitterchat.* Featured author for National Science Teaching Association twitterchat on engineering design in science classrooms.

Forsythe, M**.** (2020, December 10). *NSTA Twitterchat.* Featured author for National Science Teaching Association twitterchat on using literature in science classrooms.

Forsythe, M**.** (2020, October 8). *NSTA Twitterchat.* Featured author for National Science Teaching Association twitterchat on using current events in science classrooms.

Forsythe, M. (2017, October). *Negotiating sources of variation in ecological data* [Conference session]. 4th Life Discovery: Doing Science Biology Education Conference, Norman, OK.

Cotterman, M. (2015, August). *SAFE (Saving animals from extinction): Engaging the public in AZA's new conservation initiative* [Conference session]. Association of Zoo and Aquarium Docents and Volunteers Annual Conference, Nashville, TN.

Regional or Local

Forsythe, S. (2024, June 17). *Making Sense of the New Science TEKS.* Meadows Center for Water and the Environment, Texas State University. San Marcos, TX.

Fong, C., Forsythe, M., Lang, R., & Robinson, B. (2023, October 27). *Using AI in the university* [Discussion panel]. Department of Curriculum and Instruction Meeting, Texas State University. San Marcos, TX.

Forsythe, M., Hastings, C., Lowe, S., & Shroff, P. (2023, October 12). AIdeas for faculty: Implementing artificial intelligence activities in the classroom. Faculty Development Series, Texas State University. San Marcos, TX.

Forsythe, M. (2023, August 12). *To see the world anew: Connecting students to everyday phenomena* [Keynote presentation]. Mansfield ISD Middle Level Science Teacher Orientation. Mansfield, TX.

Forsythe, M. (2023, August 10). *To see the world anew: Connecting students to everyday phenomena* [Keynote presentation]. Mansfield ISD Secondary Science Teacher Orientation. Mansfield, TX.

Forsythe, M. & Chan, Y.-W. (2021, April). *How environmental education perspectives and praxis can inform and improve science teaching and learning in the COVID-19 era*. Texas Informal Science Education Association Lunch & Learn, Virtual.

Spencer, R., Daniel, K. L., Forsythe, M., & Witzig, S. (2021, January). *Education and environmental mindfulness at informal learning centers.* Society for the Advancement of Biology Education Research West Conference, Virtual.

Forsythe, M. (2019, March 29). *Seeding statistical reasoning through interaction with ecological variation.* TXST Mathematics Department Statistics Seminar, San Marcos, TX.

Forsythe, M. (2018, November 16). *Stats, streams, and students: The synergistic development of middle school students' ecological field investigations and informal statistical reasoning.* TXST Mathematics Department Mathematics Education Seminar, San Marcos, TX.

Forsythe, M. (2017, December 1). *The co-development of students' scientific knowledge and practice during ecological fieldwork.* TXST College of Education Research Symposium, San Marcos, TX.

Forsythe, M. (2017, June). *To see or not to see? That is our question* [Conference session]. Preparing E.L.I.T.E. Teachers: A Noyce Regional Dialogue on Stimulating Research and Innovation for Preservice Education of STEM Teachers in High-Needs Districts. Kennesaw, GA.

Cotterman M., & Smith, Z. (2012, April 25). *Take ME to school: An award-winning collaboration with Peabody.* Mechanical Engineering External Advisory Committee Annual Meeting. Nashville, TN.

3. Consultancies:

Author and content consultant for 2024 Texas K-5 Science textbook series *Texas Experience Science* and for 2025 National K-5 Science textbook series *Experience Science*, SAVVAS Learning Company (formerly Pearson K-12), 2021-present.

Content consultant, CAREER: Supporting Model Based Inference as an Integrated Effort Between Mathematics and Science (NSF Grant #1942770) PI Ryan Jones. 2021-2022.

4. Workshops: (Note: three local workshops listed under service)

Forsythe, M. (2023, July 24). *Simple Strategies for Connecting Local Phenomenon in Elementary Science.* Plano ISD Faculty Professional Development. Plano, TX.

Forsythe, M. (2023, July 24). *Amplifying Literacy within the 5E Instructional Model for Elementary Science.* Plano ISD Faculty Professional Development. Plano, TX.

Arias, A., Criswell, B., Escalada, L., Forsythe, M., Johnson, H., Riccio, J. (2020, August 12-13). *ATLAS and FAVSTE: A tool and a framework for using video in teacher preparation* [Webinar]. American Association of Colleges for Teacher Education.

Forsythe, M. (2018, March). *Integrating engineering into K-8 life science lessons* [Refereed conference short course]. National Science Teachers Association annual conference. Atlanta, GA.

5. Other Works not in Print:

a. Works "under review":

Chan, Y.-W., & Forsythe, M. E. (Revised & resubmitted, 2024). Making sense of social sustainability: How teacher candidates analyze local sustainability challenges. *The Journal of Environmental Education.*

b. Works "in progress":

Forsythe, M., & Jackson, J. (In preparation). *The Student-Centered Elementary STEM Classroom.* Kendall Hunt Publishing. Contract for university textbook.

Forsythe, M. (In preparation). *A duty of care: Weaving equity throughout an elementary science methods course.*

c. Other Works Not in Print:

Forsythe, M. (2019, April). *Giraffe Feeding Report.* External evaluation of educational programming at the San Antonio Zoo.

C. Scholarly / Creative Grants and Contracts:

1. Funded External Grants and Contracts:

Qasem, A. (PI), Forsythe, M. (Co-PI), Ashford-Hanserd, S. (Co-PI), Booth, C. (Co-PI), Sriraman, V. (Co-PI). (2024). *HSI Institutional Transformation Project: STEM-CLEAR: Creating Contextualized Learning Pathways across Academic and Cultural Boundaries*. NSF. $2,621,557 over 3 years.

Forsythe, M. (PI). (2024). *Collaborative Research: Equitable Noticing of Teaching Across Sites in Science.* NOYCE program, NSF. $105,316 over three years. Collaborative proposal with faculty from six other partnering universities.

Forsythe, M. (PI). (2022). *Collaborative Research: Building Capacity for Cross-site Research on Promoting Noticing for Equity and Equitable Science Teaching Practice through Video Analysis.* NOYCE program, NSF. $31,500 over 1 year. Collaborative capacity building proposal with faculty from six other partnering universities.

Dussler, R. (PI) & Spring Lake VR Team. (2021). *VR at Spring Lake.* Summerlee Foundation. $15,000. Role: Co-PI.

Forsythe, M. (2016). *TxSTATE ScienceATLAS.* National Board for Professional Teaching Standards' Science Teacher Education utilizing ATLAS Video Cases, 5 years of funded

collaborative research meetings with national partners and access to ATLAS database (Approximately $10,000 of in-kind support for initial 3-year project with supplemental ongoing access to ATLAS library through 2024).

2. Submitted, but not Funded, External Grants and Contracts:

Daniel, K. (PI), Forsythe, M. (Co-PI), & Williamson, P. (Co-PI). (2023). *Minding the Hill Country.* Advancing Informal STEM Learning, NSF. Proposed funding $1,999,966, over 5 years.

Qasem, A. (PI). (2022). *CUE-T: Transforming Engineering Computing Education Using a Scalable Competency-Driven Approach.* Improving Undergraduate STEM Education: Computing in Undergraduate Education, NSF. Proposed funding $1,998,879, over 5 years. Role: Key Personnel in culturally responsive pedagogy and education research methodology.

Daniel, K. (PI), Forsythe, M. (Co-PI), & Williamson, P. (Co-PI). (2022). *Minding the Hill Country.* Advancing Informal STEM Learning, NSF. Proposed funding $2,987,196, over 5 years.

Van Overschelde, J. (PI), Polat, Nihat (Co-PI), Forsythe, M. (Co-PI). (2021). *4+1 TEACH: An Extended Teacher Preparation Model to Meet the Needs of Central Texas Area Schools*, US Department of Education. Proposed funding $1,501,503.00.

Forsythe, M. (PI). (2021). *Pedagogies of Place - Science Teaching as Relation-building (POPSTAR).* CAREER program, NSF. Proposed funding $760,386 over 5 years.

Forsythe, M. (PI), Daniel, K. (Co-PI), Dussler, R. (Co-PI), Meitzen, K. (Co-PI). (2021). *LoQuest – Transforming Local STEM Questions into Global Geoscience Journeys.* Improving Undergraduate STEM Education – GEOPAths Informal Education Track, NSF. Proposed funding $349,648 over 3 years.

Daniel, K. (PI), Forsythe, M. (Co-PI), Rodriguez, D. (Co-PI), & Williamson, P. (Co-PI). (2021). *Minding the Hill Country.* Advancing Informal STEM Learning, NSF. Proposed funding $2,999,822 over 5 years

Daniel, K. (PI), Forsythe, M. (Co-PI), Rodriguez, D. (Co-PI), & Dussler, R (Co-PI). (2020). *Nayade: Learning to Tell Nature's Stories.* Improving Undergraduate STEM Education – Hispanic Serving Institute Program IEP Track 2, NSF. Proposed funding $500,000. Internal LOI not selected to proceed.

Wait, M. (PI), Daniel, K. (Co-PI), Forsythe, M. (Co-PI), Lobban, M. (Co-PI)., Massey, S. (Co-PI). (2020). *Investigating our Changing Planet – Meadows Center EcoExplorers.* Teams Engaging Affiliated Museums and Informal Institutions Remote Opportunities Rapid Response, NASA, Proposed funding $130,561.

Ellis, J. (PI), FAVSTE Team (Co-PI/Collaborators). (2020). *Adapting to the Challenges of COVID-19 for Teacher Preparation: Surveying, supporting, and studying the use of*

video tasks across multiple contexts. Spencer Research Grants on Education: COVID-19, Spencer Foundation. Proposed funding $50,000.

Forsythe, M**.** (PI), Daniel, K. (Co-PI), Dussler, R. (Co-PI). (2020). *Ways Informal Science Educators and Responding (WISER) to COVID-19.* Spencer Research Grants on Education: COVID-19, Spencer Foundation. Proposed funding $49,417.

Daniel, K. (PI), Forsythe, M. (Co-PI), Rodriguez, D. (Co-PI), & Williamson, P. (Co-PI). (2019). *Minding the Hill Country.* Advancing Informal STEM Learning, NSF. Proposed funding $2,999,304 over 5 years.

Dussler, R. (PI), & Spring Lake VR Team. (2019). *VR at Spring Lake LOI.* Disney Conservation Fund. Proposed funding $20,000. Role: Key Study Personnel.

Stephens, L. (PI), & Forsythe, M. (Co-PI). (2019). *WILD for Science*. LRNG Innovators Challenge. Proposed funding $20,000.

Daniel, K. (PI), Forsythe, M. (Co-PI), & Williamson, P. (Co-PI). (2018). *Minding the Hill Country.* Advancing Informal STEM Learning, NSF. Proposed funding $2,990,225 over 5 years.

3. Funded Internal Grants and Contracts:

Forsythe, M. (PI), & Spring Lake VR Team (Co-PIs). (2020). *Enhancing Environmental Education through an Innovative Virtual Reality Application.* Texas State University Office of Research and Sponsored Programs Big Ideas Solicitation. Project is now part of the TXST Big Ideas Portfolio.

Forsythe, M**.** (PI), & Spring Lake VR Team (Co-PIs). (2019). *Enhancing Environmental Education through an Innovative Virtual Reality Application.* TXST College of Education Social Innovation Research Accelerator 2019. $7000.

Kipp, L. (PI), Griffen, K. (Co-PI), Deringer, A. (Co-PI), Mettler, J. (Co-PI), & Forsythe, M. (Co-PI). (2019). *Enhancing Well-Being of Children and Adolescents Through Nontraditional Afterschool Programs*. TXST College of Education Social Innovation Research Accelerator 2019. $7000.

Forsythe, M. (PI), & Jackson, J. (Co-PI). (2016). *The impact of reflective video cases on preservice teachers' science instruction.* Texas State University Research Enhancement Program FY 2017. $12,000.

Forsythe, M. (2016). *Seeing science: Elementary teachers' critique and adaptation of representations in informational trade books.* Alkek Library New Faculty Research. $160.

4. Submitted, but not Funded, Internal Grants and Contracts:

Deringer, A. (PI), Forsythe, M. E. (Co-PI). (2021) *Experiences, representations, and meaning in a mindfulness-based environmental education program.* Texas State University Research Enhancement Program FY 2022. Proposed funding $16,000.

Griffen, K. (PI), Deringer, A. (Co-PI), Thomas, A. (Co-PI), Kipp, L. (Co-PI), Dussler, R. (Co-PI), Norton, C. (Co-PI), & Forsythe, M. (Co-PI)**.** (2020). *Big Idea Proposal: Spring Lake Outdoor Education Program (SLOEP),* Texas State University Office of Research and Sponsored Programs Big Ideas Solicitation.

Forsythe, M., (PI), Daniel, K. (Co-PI). (2020). *Pollinator Partners: Scaffolding Outdoor Elementary Science Investigations.* Texas State University Research Enhancement Program FY 2021. Proposed funding $16,000.

Chan, Y.-W. (PI), & Forsythe, M**.** (Co-PI). (2019). *Engaging San Marcos Youth in Deliberations about Sustainability*. Texas State University Research Enhancement Program FY 2020. Proposed funding $16,000.

Forsythe, M. (2018). *Steps towards STEM: A district-driven local adaptation of a national STEM curriculum*. Texas State University Research Enhancement Program FY 2019, Proposed funding $7,825.

D. Scholarly / Creative Fellowships, Awards, Honors:

2021-2023 LBJ Institute Faculty Research Fellow, LBJ Institute for STEM Education and Research, TXST.

E. Scholarly / Creative Professional Development Activities Attended:

Conference Attendance

CSOTTE Annual Conference, Consortium of State Organizations for Texas Teacher Education (October 2024).

ASTE Annual Conference, Association for Science Teacher Education. (January 2024).

ASTE Annual Conference, Association for Science Teacher Education. (January 2023).

NAAEE Annual Conference, North American Association for Environmental Education. (October 2022)

2022 NOYCE Summit, National Science Foundation. (July 2022).

ASTE Annual Conference, Association for Science Teacher Education. (January 2022).

AERA Annual Conference (virtual), American Educational Research Association. (April 2021).

NARST Annual Conference (virtual), National Association for Research in Science Teaching. (March 2021).

ASTE Annual Conference (virtual), Association for Science Teacher Education. (January 2021).

NARST Annual Conference (virtual), National Association for Research in Science Teaching. (April 2020).

ISEA Annual Conference, Texas Informal Science Education Association. (February 2020).

ASTE Annual Conference, Association for Science Teacher Education. (January 2020).

NARST Annual Conference, National Association for Research in Science Teaching. (April 2019).

ASTE Annual Conference, Association for Science Teacher Education. (January 2019).

NARST Annual Conference, National Association for Research in Science Teaching. (March 2018).

ASTE Annual Conference, Association for Science Teacher Education. (January 2018).

NARST Annual Conference, National Association for Research in Science Teaching. (April 2017).

AERA Annual Conference, American Educational Research Association. (April 2017).

Qualitative Research Conference, Texas State University. (February 4, 2017).

Continuing Education Program

Grant Proposal Development Series, Office of Research and Sponsored Programs, TXST. (Jan 2020 - May 2020). By competitive invitation.

Grant Development Scholars Program, College of Education, TXST. (Feb 2019-Dec 2019).

Seminars, Symposia, and Workshops

Assorted Departmental Research Seminars, Biology Department, Texas State University. (April 2017 – Present).

Assorted Departmental Math Education Research Seminars, Mathematics Department, Texas State University. (September 2018 – Present).

Highlighting the research and voices of our faculty, Department of Curriculum and Instruction, Texas State University (April 15, 2022).

Connecting to Place – Virtually (a water cooler webinar), Ecological Society of America (April 24, 2020).

Assorted Departmental Statistics Research Seminars, Mathematics Department, Texas State University. (March 2019 - December 2019).

NBPTS Science ATLAS collaboration meeting, National Board for Professional Teaching Standards. (May 2019).

NBPTS Science ATLAS collaboration meeting, National Board for Professional Teaching Standards. (August 2018).

CoE Research Symposium, College of Education, Texas State University. (March 26, 2018).

CoE Research Symposium, College of Education, Texas State University. (January 30, 2018).

NBPTS Science ATLAS collaboration meeting, National Board for Professional Teaching Standards. (January 2018).

CoE Research Symposium, College of Education, Texas State University. (December 1, 2017).

How to Find Funding, Texas State University. (November 1, 2017).

NBPTS Science ATLAS collaboration meeting, National Board for Professional Teaching Standards. (January 2017).

Becoming a Scholar is More than Being a Publisher, Texas State University. (October 2016).

Effective Strategies for Crafting Competitive Research Proposals for External Funding, Texas State University. (October 2016).

Transforming Good Ideas into Funded Research, Texas State University. (October 2016).

How to Find Funding, Texas State University. (September 2016).

Overview of the Research Enhancement Program, Texas State University. (September 2016).

F. Media Recognition:

North American Association for Environmental Education. (2022, November 2). In a research paper by Michelle E. Forsythe and Yun-Wen Chan, the authors explore what aspects of teaching constrain effective decision-making and intensify social inequities compared to the proposal of a transboundary justice-centered educational system. *@TheNAAEE Facebook.* https://www.facebook.com/TheNAAEE

North American Association for Environmental Education. (2022, November 2). Researchers Michelle E. Forsythe and Yun-Wen Chan explore what aspects of teaching intensify social

inequities and how a transboundary justice-centered educational system could be the solution. *@TheNAAEE Twitter.* https://twitter.com/thenaaee

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IV. SERVICE

A. Institutional

1. University:

Texas State University

2024-pres	College of Education Representative, University Scholars Scholarship Review Committee
2024	College of Education Representative, University MWF Task Force, Office of the Provost and Executive Vice President for Academic Affairs
2022-23	Member, Sustainability Research Symposium Planning Committee
2021-23	College of Education Representative, Minor in Innovation and Entrepreneurship Working Group and Proposal for New Minor Writing Team
2019-22	College of Education Representative, Faculty Senate Environment and Sustainability Committee

2019 Member, *Center for Nature Research* Big Idea Proposal for University Advancement

2017 Faculty Sponsor, TXST NASA MUREP Educator Institute Team, John Glenn Space Center (July 9-14)

Vanderbilt University

2011-12 Outreach Coordinator for "Take ME (Mechanical Engineering) to School", Department of Teaching and Learning & Vanderbilt Aerospace Design Lab

2. College:

Texas State University, College of Education

2024-pres Member, College of Education Research Office Advisory Committee

2022-pres Member, College Curriculum Committee

2022-pres Member, Teacher Education Council

2018-pres Member, College Scholarship Committee

2023 Member, Search Committee College of Education Round Rock Coordinator. Resulted in successful hire of Dr. Brenda Agnew.

2017-20 Department of Curriculum and Instruction Representative, Faculty Advisory Council (Treasurer, 2018-20)

3. Department/School:

Texas State University, Department of Biology

2023 Member, Search Committee, Assistant Professor of Biology Education. Resulted in successful hire of Dr. Carrie Jo Bucklin.

Texas State University, Department of Curriculum and Instruction

2024-pres Chair, Department Curriculum Committee

2024-pres Member, Search Committee Elementary Education

2021-pres Member, Research Enhancement Committee

2020-pres Department ATLAS Coordinator - Manage access of faculty and students to the ATLAS video case library and troubleshoot all associated needs

2016-pres Member, Undergraduate and Graduate Elementary EC-6 ESL Program

- 2021-22 Science Representative, US Prep Residency Program Curriculum

Design Committee
- 2020-21 Science Representative, Program Redesign Task Force
- 2018-19 Member, Scope and Sequence Committee
- 2018-19 Member, Comprehensive Exam Replacement Committee
- 2017-18 Course Lead for CI 4355, Curriculum Alignment and TEA Audit

2024 Volunteer, Graduate and Professional Fair (October 10, 2024)

2019-23 Member, Undergraduate and Graduate Middle Level Education Program

2023 Member, Ed.D. in Curriculum and Instruction, Proposal for New Doctoral Program Writing Team.

2023 Chair, Search Committee, Director of Teacher Residency and Assistant Professor of Practice. Resulted in successful hire of Dr. Deidra Williams

2022 Volunteer, Bobcat Day (February 19, 2022)

2021-22 Member, Search Committee Elementary Bilingual/Bicultural Education. Resulted in successful hire of Dr. Mitch Ingram.

2019-22 Department Raise Your Hand Texas / Raising Texas Teachers Working Group
- 2022-22 Member, Assessment Jigsaw Committee
- 2022-22 Member, Practice-Based Teaching Jigsaw Committee
- 2019-22 Member, Curriculum and Standards Jigsaw Committee (2020-21 Co-Chair with Jodi Brooks)

2020-21 Member, Undergraduate and Graduate Secondary Education Program

2019 Invited Guest Speaker, Bilingual Education Student Organization (BESO) meeting (December 4, 2019).

2018-19 Member, Search Committee Elementary Education Social Studies. Resulted in successful hire of Dr. Yun-Wen Chan.

2018 Volunteer, Asian Student Welcome Reception (September 10, 2018)

2016-18 Member, Department Scholarship Committee

2017 Volunteer, Bobcat Preview Day

Vanderbilt University, Department of Teaching and Learning

2014-15 Co-Chair, Department Doctoral Student Association

2012 Representative to Faculty, Department Doctoral Student Association

B. Professional:

Research Proposal Review

National Science Foundation
- Robert Noyce Teacher Scholarship Program (2022)

Manuscript Review

Contemporary Justice Review: Issues in Criminal, Social, and Restorative Justice.
- Invited guest manuscript reviewer (2024)

Innovations in Science Teacher Education
- Editorial review board (2019-pres)

Teaching in Higher Education
- Invited guest manuscript reviewer for special edition *Higher Education Teaching of Environmentally Just Sustainability* (2022-23)

Environmental Education Research
- Invited guest manuscript reviewer (2021)

Science & Education
- Invited guest manuscript reviewer for special edition *Scientific Practices, Epistemic Aims, and Learning Progressions* (2018-19)

Organization and Conference Service

ASTE: Association for Science Teacher Education
- Co-coordinator of Environmental / Ethnoscience Education Strand (2023-25)
- Southwest Regional Conference Planning Committee (2022)
- Co-coordinator of Informal / Out-of-School Science Education Strand (2021-2023)
- Reviewed proposals for Annual Conference (2017, 2018, 2019, 2020)
- Annual Conference Session Presider (2020, 2021)

NSTA: National Science Teaching Association
- Reviewed proposals for Annual Conference (2024)

NARST: National Association for Research in Science Teaching
- Reviewed proposals for Annual Conference (2013, 2014, 2016, 2017, 2018, 2019, 2020)
- Annual Conference Session Presider (2015, 2017, 2018, 2019)

AERA: American Education Research Association
- Reviewed proposals for Annual Conference (2017, 2018, 2019)

STAT: Science Teachers Association of Texas
- Volunteer at Annual Conference (2017)
- Central Texas mini-CAST Coordinator for Preservice Teacher Volunteers (2016-2017)
- Central Texas mini-CAST Planning Committee (2016-2017)

AZADV: Association of Zoo and Aquarium Docents and Volunteers
- Regional Conference Program Chair (2014-2015)

C. Community:

NASA FAMA 3: High School IDEA program 2022-23
- Instructor and curriculum designer for Saturday enrichment program for local HS students.

Dry Comal Creek and Comal River Watershed Protection Plan 2017-20
- Education and Outreach Initiatives Working Group Member

San Antonio Zoo, Volunteer Educational Consultant for Program Evaluation 2017-19
- Supported development of logic model for evaluation of Will Smith Zoo School (2019)
- External evaluation of Giraffe Feeding Interpretation Program (2019)

ESC Region 13 Central Texas Mini-CAST 2017
- Designed and Led Workshop: *Finding your "Hidden Figures*"
- Designed and Led Workshop: *Spiraling students' engagement with phenomena*

FAMA Family Nights - Centro Cultural Hispano de San Marcos 2017
- Designed and Led Workshop: *Finding your "Hidden Figures*"

Nashville Zoo at Grassmere, Volunteer Docent 2011-16

Montgomery Co. Science Day, Committee & Special Awards Coordinator 2006-10

Cincinnati Zoo & Botanical Garden, Volunteer Educator & Ambassador 2004-08

Organization Memberships:

Association for Science Teacher Education (ASTE)	2017 - Present
Science Teachers Association of Texas (STAT)	2016 - Present
National Science Teaching Association (NSTA)	2013 - Present
North American Association for Environmental Education (NAAEE)	2021 - 2024
National Association for Research in Science Teaching (NARST)	2008 - 2023
American Educational Research Association (AERA)	2010 - 2022
Ecological Society of America (ESA)	2017 - 2022
Association of Zoo and Aquarium Docents and Volunteers (AZADV)	2015 - 2016

D. Service Honors and Awards:

2021 College Achievement Award for Service, Rank of Assistant Professor, College of Education, Texas State University

2020 College Achievement Award for Service, Rank of Assistant Professor, College of Education, Texas State University

2019 College Achievement Award for Service, Rank of Assistant Professor, College of Education, Texas State University

2012 NASA University Student Launch Initiative 1st Place Award for Educational Engagement

2012 American Institute of Aeronautics and Astronautics Special Award for Outstanding Aerospace Outreach

2008 Institute of Electrical and Electronics Engineers Dayton Chapter Outstanding Educator

E. Service Grants:

Collins, K. (PI) & Torres, A. S. (Co-PI). (2022). *The NASA Future Aerospace Engineers and Mathematicians Academy 3 (FAMA 3): High School IDEA (Innovation, Discovery, Exploration in Aerospace and Science).* NASA MUREP Aerospace Academy. $479,800 over three years. Role: Key Personnel – Curriculum development and implementation for Earth Observation components.