

KATHERINE NICOLE VELA

Current and accurate as of 9/30/21

Assistant Professor
School of Teacher Education and Leadership
College of Education and Human Services
Utah State University - Eastern

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Price, UT 84501
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PROFESSIONAL INTERESTS

STEM Education, Mathematics Education, Teacher Education, Mathematical Problem Solving/Posing

RESEARCH INTERESTS

My research has primarily been focused on attracting female students to STEM fields, and mathematics as embedded in STEM education. Secondary research projects have focused on vocabulary and language in STEM settings, the effect of STEM project-based learning on teacher instruction, and elementary students' engagement in problem-solving and problem-posing activities. Previously, I researched the effect of homework on student achievement and common misconceptions that student and pre-service teachers have regarding the equal sign.

EDUCATION

2016 – 2020	Texas A&M University Doctor of Philosophy Curriculum and Instruction emphasis in Mathematics Education	College Station, TX, United States
2013 – 2014	Lamar University Professional Preparation Program Principal Certification	Beaumont, TX, United States
2009 - 2011	Texas A&M University Master of Science Curriculum and Instruction emphasis in Mathematics Education	College Station, TX, United States
2003 - 2007	Texas A&M University Bachelor of Science Interdisciplinary Studies emphasis in Mathematics/Science 4-8	College Station, TX, United States

PROFESSIONAL LICENSES

2014 – 2025	Principal Certificate – Texas (EC-12)
2007 – 2025	Teaching Certificates – Texas Mathematics/Science (Grades 4-8) English as a Second Language Supplemental (Grades 4-8) Generalist (Grades 4-8)

EMPLOYMENT HISTORY

Fall 2020 – pres.	Assistant Professor , School of Teacher Education and Leadership, Utah State University – Eastern, Price, UT, United States.
Fall 2019 – Sum. 2020	College of Education and Human Development Strategic Research Fellow , College of Education, Texas A&M University, College Station, TX, United States.

- Spr. 2016 – Sum. 2019 **Graduate Research Assistant**, Aggie STEM, Department of Teaching, Learning, & Culture, College of Education, Texas A&M University, College Station, TX, United States.
- Spr. 2016 – Sum. 2019 **Aggie STEM Summer Camp Director**, Aggie STEM, Department of Teaching, Learning, & Culture (TLAC), College of Education, Texas A&M University, College Station, TX, United States.
- Fall 2016 **Graduate Teaching Assistant**, Department of Teaching, Learning, & Culture, College of Education, Texas A&M University, College Station, TX, United States.
- 2015 – 2016 **Assistant Principal**, Navarro Elementary, Bryan I.S.D., Bryan, TX, United States.
- 2015 – 2016 **Assistant Lecturer**, Texas A&M University, College Station, TX, United States.
- 2014 – 2015 **Mathematics/Science Instructional Coach**, Navarro Elementary, Bryan I.S.D., Bryan, TX, United States.
- 2009 – 2014 **Fifth Grade Mathematics Teacher**, Navarro Elementary, Bryan I.S.D., Bryan, TX, United States.
- 2007 – 2009 **Fifth Grade Mathematics/Science Teacher**, Thompson Elementary, Spring I.S.D., Houston, TX, United States.

LEADERSHIP

- 2021 – pres. TEAL/ELED 1010 Level I Coordinator
- 2021 – 2023 Southwest Educational Research Association, Board Member-At-Large
- 2019 – 2020 American Education Research Association, Division K Graduate Student Executive Board
- 2019 – 2020 American Educational Research Association, Division K Graduate Student Campus Liaison
- 2019 – 2020 Southwest Educational Research Association, SERA Graduate Student Representative
- 2019 – 2020 College of Education Graduate Student Advisory Council, Texas A&M University, Secretary
- 2019 – 2020 TLAC Graduate Student Association, Texas A&M University, Social Coordinator
- 2017 – 2020 Sophomores Leading and Motivating, Texas A&M University, Faculty Advisor
- 2018 – 2019 TLAC Graduate Student Association, Texas A&M University, President
- 2018 – 2019 Southwest Educational Research Association, Campus Graduate Student Representative
- 2017 – 2019 Aggie Research Leadership Program, Texas A&M University, Graduate Mentor
- 2017 – 2018 Kappa Delta Pi, Texas A&M University, Service Coordinator
- 2017 – 2018 TLAC Graduate Student Association, Texas A&M University, Service Coordinator

PUBLICATIONS

1. **Vela, K. N.** & Miles, S. (2022, in press). The relationship between self-efficacy and interest in a STEM career: A meta-analysis. In A. Z. Macalalag, I. Sahin, J. Johnson, & A. Bicer (Eds.), *Internalization of STEM Education*.
2. Younes, R. G., Capraro, R. M., Capraro, M. M., Rosli, R., Lee, Y., **Vela, K.**, & Bevan, D. (2021). Jack and Jill went up the hill but Jill won both ways: The true story about differential academic achievement. *International Journal of Innovation in Science and Mathematics Education*, 28(4), 44-57. (SJR 2019 = .220). <https://doi.org/10.30722/IJISME.28.04.004>
3. **Vela, K. N.**, Pedersen, R. M., & Baucum, M. N. (2020). Improving perceptions of STEM careers through informal learning environments. *Journal of Research in Innovative Teaching & Learning*, 13(1), 103-113. <https://doi.org/10.1108/JRIT-12-2019-0078>
4. Kwok, M., **Vela, K. N.**, Rugh, M. S., Lincoln, Y. S., Capraro, R. M., & Capraro, M. M. (2020). STEM words and their multiple meanings: The intricacies of asking a clarifying question.

Communication Education, 69(2), 176-198. (IF = 0.81; SJR = 0.758).

<https://doi.org/10.1080/03634523.2020.1723803>

5. Capraro, R. M., Bicer, A., Lee, Y., & **Vela, K.** (2019). Putting the quantitative pieces together to maximize the possibilities for a successful project. In K. R. Leatham (Ed.), *Designing, conducting, and publishing quality research in mathematics education* (97-110). Springer. <https://doi.org/10.1007/978-3-030-23505-5>
6. Kwon, H., **Vela, K.**, Williams, A., & Barroso, L. (2019). Mathematics and science self-efficacy and STEM careers: A path analysis. *Journal of Mathematics Education*, 12(1), 66-81. <https://doi.org/10.26711/007577152790039>
7. Kopparla, M., Bicer, A., **Vela, K.**, Lee, Y., Bevan, D., Kwon, H., Caldwell, C., Capraro, M. M., & Capraro, R. M. (2018). The effects of problem-posing intervention types on elementary students' problem solving. *Educational Studies*, 45(6), 708-725. (IF = 0.814; SJR = 0.501). <https://doi.org/10.1080/03055698.2018.1509785>
8. Bevan, D., **Vela, K. N.**, Burlbaw, L. M., & Capraro, R. M. (2017). Roaring twenties: What did it take to be a math teacher. *Electronic International Journal of Education, Arts, and Science*, 3(6), 109-139. <http://www.eijeas.com/index.php/EIJEAS/article/view/112>
9. **Vela, K.** (2011). *Pre-service teachers' and students' (mis)conceptions about the equal sign* [Master's thesis, Texas A&M University]. OAKTrust Digital Repository. <http://hdl.handle.net/1969.1/ETD-TAMU-2011-12-10447>

CONFERENCE PROCEEDINGS

10. **Vela, K. N.**, Caldwell, C., Capraro, R. M., & Capraro, M. M. (2019). The nexus of confidence, STEM, and engineering projects. *Proceedings of the Annual IEEE Frontiers in Education Conference (FIE)*, 49, 1-7. (IF = 0.51; SJR = 0.322). <http://doi.org/10.1109/FIE43999.2019.9028467>
11. Lee, Y., Capraro, R. M., Capraro, M. M., **Vela, K. N.**, Bevan, D., Caldwell, C. (2019). Students' conceptions of mathematical creative thinking and critical thinking in STEM PBL activities. In M. Nolte (Ed.), *Including the highly gifted and creative students – Current ideas and future directions* (pp. 197-201). WTM. http://wtm-verlag.de/OA_Download/Nolte_Ed_Including_the_Highly_Gifted_ISBN9783959871327.pdf
12. **Vela, K. N.**, Bevan, D., Caldwell, C., Capraro, R. M., Capraro, M. M., & Lee, Y. (2019). STEM project-based learning activities: Opportunities to engage in creative mathematical thinking? In M. Nolte (Ed.), *Including the highly gifted and creative students – Current ideas and future directions* (pp. 215-221). WTM. http://wtm-verlag.de/OA_Download/Nolte_Ed_Including_the_Highly_Gifted_ISBN9783959871327.pdf
13. Capraro, M. M., **Vela, K. N.**, Caldwell, C., Bevan, D., Lee, Y., & Capraro, R. M. (2019). Mathematizing creative STEM PBL activities. In M. Nolte (Ed.), *Including the highly gifted and creative students – Current ideas and future directions* (pp. 336-339). WTM. http://wtm-verlag.de/OA_Download/Nolte_Ed_Including_the_Highly_Gifted_ISBN9783959871327.pdf
14. **Vela, K. N.**, Bicer, A., Capraro, R. M., Barroso, L. R., & Caldwell, C. (2018). What matters to my future: STEM int-her-est and expectations. *Proceedings of the Annual IEEE Frontiers in Education Conference (FIE)*, 48, 1-7. (IF = 0.51; SJR = 0.322). <http://doi.org/10.1109/FIE.2018.8658488>

15. Bicer, A., Lee, R., Capraro, R. M., Capraro, M. M., Barroso, L. R., Bevan, D., & Vela, K. N. (2018). Cracking the code: The effects of using microcontrollers to code on students' interest in computer and electrical engineering. *Proceedings of the Annual IEEE Frontiers in Education Conference (FIE)*, 48, 1-7. (IF = 0.51; SJR = 0.322). <http://doi.org/10.1109/FIE.2018.8658617>

PUBLICATIONS IN REVIEW

16. Vela, K. N., Parslow, M., Hagevik, R., & Trundle, K. (2021, in review). Give plants an inch; they'll take a yard. *Mathematics Teacher: Learning and Teaching PK-12*.
17. Vela, K. N., Young, J., Capraro, M. M., & Capraro, R. M. (2021, in review). Content analysis: What is being measured? A retrospective review of psychological dispositions used in STEM educational research. *Educational Research Review* (IF = 6.962; SJR = 3.216).
18. Vela, K. N., Kwon, H., Caldwell, C., Capraro, M. M., & Barroso, L. (2021, in review). Too few women: Fostering adolescent female students' positive perceptions and self-efficacy in STEM fields. *Journal of Women and Minorities in Science and Engineering* (IF = 0.76; SJR = 0.468).
19. Vela, K. N., Caldwell, C., Lohmann, E. S., Rodriguez, S., & Capraro, M. M. (2021, in review). Female students' p"her"ceptions of STEM disciplines and careers. *International Journal of Science Education* (IF = 1.485; SJR = 1.058).

NATIONAL AND INTERNATIONAL PRESENTATIONS

1. Vela, K. N., & Miles, S. (2022, April 22-25). *Seeing Myself as a STEM Professional: Literature Synthesis* [Paper proposal submitted]. American Educational Research Association Annual Meeting, San Diego, CA, United States.
2. Vela, K. N., Kwon, H., Baucum, M., & Young, J. (2021, April 9-12). *Path analysis: Identifying factors influencing STEM career perceptions and interest after attending a STEM camp* [Paper presentation]. American Educational Research Association Annual Meeting, Virtual Conference, Orlando, FL, United States.
3. Kwon, H., Vela, K. N., Majzun, A., Capraro, R. M., & Capraro, M. M. (2021, April 9-12). *STEM perceptions and career interest* [Poster presentation]. American Educational Research Association, Virtual Conference, Orlando, FL, United States.
4. Vela, K. N., Caldwell, C., Capraro, R. M., Rodriguez, S., & Lohmann, E. (2020, April 17-21). *P"her"ceptions of females' mathematics and science abilities in single-gender vs co-educational STEM classes* [Paper presentation]. American Educational Research Association Annual Meeting, San Francisco, CA, United States. (Conference cancelled)
5. Vela, K. N., Barroso, L. R., Capraro, M. M., & Capraro, R. M. (2020, March 5-7). *Putting the M upfront in STEM* [Poster presentation]. The 47th Annual Conference of the Research Council on Mathematics Learning (RCML), Las Vegas, NV, United States.
6. Vela, K. N., Kwon, H., Caldwell, C., Capraro, M. M., Barroso, L. R. (2020, March 5-7). *Fostering female students' positive perceptions and self-efficacy in STEM* [Paper presentation]. The 47th Annual Conference of the Research Council on Mathematics Learning (RCML), Las Vegas, NV, United States.
7. Vela, K. N., Caldwell, C., Capraro, R. M., & Capraro, M. M. (2019, October 16-19). *The nexus of confidence, STEM, and engineering projects* [Paper presentation]. The 49th Annual IEEE Frontiers in Education Conference (FIE), IEEE, Piscataway, NJ, United States.
8. Lee, Y., Capraro, R. M., Capraro, M. M., Vela, K. N., Bevan, D., & Caldwell, C. (2019, August 22-24). *Students' conceptions of mathematical creative thinking and critical thinking in*

- STEM PBL activities* [Paper presentation]. The 11th International Conference on Mathematical Creativity and Giftedness, Hamburg, Germany.
9. **Vela, K. N.**, Bevan, D., Caldwell, C., Capraro, R. M., Capraro, M. M., & Lee, Y. (2019, August 22-24). *STEM project-based learning activities: Opportunities to engage in creative mathematical thinking* [Paper presentation]? The 11th International Conference on Mathematical Creativity and Giftedness, Hamburg, Germany.
 10. Capraro, M. M., Capraro, R. M., Rosli, R., Kopparla, M., Kwon, J., **Vela, K. N.**, Bevan, D., & Lee, Y. (2019, April 5-9). *Benefits of problem posing activities with elementary students and preservice teachers* [Paper presentation]. American Educational Research Association Annual Meeting, Toronto, ON, Canada.
 11. **Vela, K. N.**, Bevan, D., Caldwell, C., Capraro, R. M., Capraro, M. M. (2019, April 3-6). *Empowering girls, one STEM camp at a time* [Poster presentation]. National Council of Teachers of Mathematics Annual Research Conference, San Diego, CA, United States.
 12. **Vela, K. N.**, Bicer, A., Capraro, R. M., Barroso, L. R., & Caldwell, C. (2018, October 3-6). *What matters to my future: STEM int-her-est and expectations* [Paper presentation]. The 48th Annual IEEE Frontiers in Education Conference (FIE), San Jose, CA, United States.
 13. Bicer, A., Lee, R., Capraro, R. M., Capraro, M. M., Barroso, L. R., Bevan, D., & **Vela, K. N.** (2018, October 3-6). *Cracking the code: The effects of using microcontrollers to code on students' interest in computer and electrical engineering* [Paper presentation]. The 48th Annual IEEE Frontiers in Education Conference (FIE), San Jose, CA, United States.
 14. **Vela, K.** (2017, October 6-7). Stevens elementary: Still the same. In L. Burlbaw (Chair), *Telling the story: Schools and their lives* [Symposium]. Organization of Educational Historians Annual Meeting, Chicago, IL, United States.
 15. Digari, S., **Vela, K.**, Yan, S., & Slattery, P. (2017, April 24-27). *Philosophy of education: Through art based performance* [Oral presentation]. The American Association for the Advancement of Curriculum Studies, San Antonio, TX, United States.

REGIONAL, STATE, AND LOCAL PRESENTATIONS

16. **Vela, K. N.**, & Miles, S. (2021, February 3-5). *The relationship between self-efficacy and academic achievement or interest in a STEM career: A meta-analysis* [Paper presentation]. Southwest Educational Research Association Annual Meeting, Virtual Conference.
17. **Vela, K. N.**, Pedersen, R. M., & Baucum, M. N. (2020, February 12-14). *Improving perceptions of STEM careers through informal learning environments* [Paper presentation]. Southwest Educational Research Association Annual Meeting, Arlington, TX, United States.
18. Caldwell, C., Lohmann, E., Rodriguez, S., & **Vela, K. N.** (2019, March 18-22). *I think, therefore I can: Igniting self-confidence* [Oral presentation]. Texas A&M University Student Research Week 2019, College Station, TX, United States.
19. Lohmann, E., Rodriguez, S., Caldwell, C., & **Vela, K. N.** (2019, March 18-22). *Predicting STEM career interest based on p“her”ceptions of STEM disciplines* [Oral presentation]. Texas A&M University Student Research Week 2019, College Station, TX, United States.
20. Rodriguez, S., Lohmann, E., Caldwell, C., & **Vela, K. N.** (2019, March 18-22). *P“her”ceptions of females' mathematics and science abilities in single-gender vs co-educational STEM classes* [Oral presentation]. Texas A&M University Student Research Week 2019, College Station, TX, United States.
21. **Vela, K. N.** (2019, March 18-22). *Attitudes, perceptions, or confidence... Oh my: What am I measuring* [Oral presentation]? Texas A&M University Student Research Week 2019, College Station, TX, United States.

22. **Vela, K. N.**, Caldwell, C., Lohmann, E., Rodriguez, S., & Capraro, M. M. (2019, February 6-8). Females' p"her"ceptions of STEM disciplines and careers in single-gender and co-educational STEM camps [Paper presentation]. Southwest Educational Research Association, Annual Meeting San Antonio, TX, United States.
23. **Vela, K. N.**, Bevan, D., & Garza, K. (2018, April 27-28). *A glimpse into the lives of those who made a difference in Brazoria County* [Panel presentation]. Central Texas Historical Association Conference, Round Rock, TX, United States.
24. Lohmann, E., Rodriguez, S., Astorga, R., & **Vela, K. N.** (2018, March 19-23). *Math is hard for me: Perceptions of my abilities* [Oral presentation]. Texas A&M University Student Research Week 2018, College Station, TX, United States.
25. **Vela, K. N.**, Bicer, A., Lohman, E.S., Rodriguez, S., Astorga, R., Fidai, A., & Capraro, R. M. (2018, February 14-16). *The STEAM behind STEM* [Paper presentation]. Southwest Educational Research Association Annual Meeting, New Orleans, LA, United States.
26. **Vela, K. N.** (2018, February 14-16). Building and learning together through social constructivism. In R. Capraro (Chair), *Molding mathematics teachers: Theories behind mathematics education* [Symposium]. Southwest Educational Research Association Annual Meeting, New Orleans, LA, United States.
27. **Vela, K. N.** (2018, February 14-16). I have undergraduates, now what? In R. Capraro & L. Burlbaw (Chairs), *Greater than the sum of its parts: Co-constructing undergraduate research opportunities* [Symposium]. Southwest Educational Research Association Annual Meeting, New Orleans, LA, United States.
28. **Vela, K. N.** (2017, October 11-14). Arithmetic, algebra, and geometry: Expectations for teacher's content knowledge in the early 20th century. In L. Burlbaw (Chair), *What were they teaching our children: Teacher knowledge and certification tests* [Symposium]. The East Texas Historical Association Fall Meeting, Galveston, TX, United States.
29. **Vela, K. N.**, Bicer, A., Lohmann, E., Rodriguez, S., Astorga, R., & Capraro, R. M. (2017, October 4). *How does engagement in STEM PBL activities affect students' interest in the arts* [Poster presentation]. Texas A&M University Research Expo, College Station, TX, United States.
30. **Vela, K. N.**, & Bevan, D. (2017, April 28-29). To be a math teacher: Texas certification and teacher answers. In L. Burlbaw (Chair), *Schooling in early 20th century Texas and Brazoria County* [Symposium]. Central Texas Historical Association Annual Conference, Brenham, TX, United States.
31. Capraro, M. M., Kopparla, M., **Vela, K.**, Rice, D., Bevan, D., Bicer, A., Capraro, R. M., Caldwell, C., Kwon, J., Lee, R., & Martin, R. (2017, April 19). *Problem posing & solving*. [Brown Bag presentation]. Texas A&M University – Teaching, Learning, and Culture Department, College Station, TX, United States.
32. Bevan, D., & **Vela, K.** (2017, March 27-31). *Roaring twenties: What did it take to be a math teacher* [Poster presentation]. Texas A&M University Student Research Week 2017, College Station, TX, United States.
33. **Vela, K.**, & Bevan, D. (2017, February 15-17). *Pre-service teachers use of STEM language* [Paper presentation]. Southwest Educational Research Association Annual Conference, San Antonio, TX, United States.
34. Nite, S. B., Bicer, A., **Salazar, K.**, Lee, Y., Barroso, L. R., & Capraro, R. M. (2017, February 15-17). *The effect of STEM project-based learning on mathematics teacher instruction* [Paper presentation]. Southwest Educational Research Association Annual Conference, San Antonio, TX, United States.

35. Nite, S. B., Bicer, A., Currens, K. A., **Salazar, K.**, & Capraro, M. M. (2017, February 15-17). *STEM summer camp affect on spatial drawing ability* [Paper presentation]. Southwest Educational Research Association Annual Conference, San Antonio, TX, United States.
36. **Vela, K.** (2011, February 2-5). *Does homework increase student achievement* [Paper presentation]. Southwest Educational Research Association Annual Conference, San Antonio, TX, United States.

INVITED PRESENTATIONS

37. Capraro, M. M., **Vela, K. N.**, Caldwell, C., Bevan, D., Lee, Y., & Capraro, R. M. (2019, August 22-24). *Mathematizing creative STEM PBL activities* [Workshop]. The 11th International Conference on Mathematical Creativity and Giftedness, Hamburg, Germany.
38. Capraro, M. M, Capraro, R. M., Bevan, D., & **Vela, K. N.** (2018, April 9). *Supporting students in a summer bridge program* [Workshop]. Schreiner University, Kerrville, TX, United States.
39. **Vela, K. N.** (2017, August 10). *Problem posing in grades 1-5* [Workshop]. Lakeway Independent School District, Austin, TX, United States.

GRANTS AND RESEARCH PROJECTS

1. *Using Smart Foodscapes for the Enhancement of Sustainability in Western Rangelands*. Co-Investigator. USDA-Agricultural and Food Research Initiative (AFRI). Funded for \$6,800,000.
2. *Using Smart Foodscapes to Transform Cowherd Nutrition on Western Rangelands*. Co-Investigator. Utah Agricultural Experiment Station Seed Grant Program. 05/2021-04/2021. Funded for \$79,886.
3. *EmpowHERing STEM Summer Camps Scholarships*. Graduate Researcher with Co-Investigators: M.M. Capraro & R.M. Capraro. High Tech High Heels. 2/19/20–8/31/21. Funded for \$21,000.
4. *College of Education and Human Development Graduate Research Grant*. Graduate Researcher. College of Education and Human Development – Texas A&M University. 11/17 – 05/18. Funded for \$500 for undergraduate research team.
5. *Snook ISD Follow-up Study and Intervention Problem Posing and Problem Solving*, Graduate Researcher with Principal Investigator L. Burlbaw. Catapult Grant. College of Education and Human Development- Texas A&M University. Funded for \$37,931.
6. *Governor’s Summer Merit Program: Aggie STEM and Engage Summer Camp*. Graduate Researcher with Co-Investigators M. M. Capraro & S. Garcia. Texas Workforce Commission. 5/17-8/17. Funded for \$100,000.
7. *Experiencing STEM Through the Eyes of Women STEM Professionals*. Graduate Researcher with Co-Investigators: M. M. Capraro, R. M. Capraro, R.M., L. Barroso, L., S. B. Nite, & A.Bicer. High Tech High Heels. 5/17-8/17. Funded for \$14,000.

INVITED SPEAKER

1. **Vela, K.** (2021, August 23). Guest Speaker in K. Erickson (Instructor) for TEAL 1010: Introduction to Education. Sky View High School, Smithfield, UT.
2. **Vela, K.** (2021, March 18). Guest Discussant in J. Shumway (Instructor) for TEAL 7551: Mathematics Education Research Foundations. Utah State University, Logan, UT.
3. Shattuck, S., Lim, S., Radel, C., & **Vela, K.** (2021, March 2). Panelist in S. Freeman (Panel Discussion Coordinator) for *Picture a Scientist Online Film Screening and Panel Discussion*. Utah State University, Logan, UT.

UNIVERSITY TEACHING EXPERIENCE

ELED 1010 – Orientation to Elementary Education

Utah State University-Eastern, Price, UT, United States.

This course is designed for undergraduate students with an interest in exploring elementary education as a career and is intended as an introduction to the skills, knowledge, and attributes all successful teachers share.

Taught Face-to-Face: *Fall 2020, Fall 2021*, Web Broadcast: *Spring 2021*

ELED 4061 - Teaching Elementary School Mathematics I: Rational Numbers, Operations, and Proportional Reasoning

Utah State University-Eastern, Price, UT, United States.

This course is designed for undergraduate students to develop pedagogical content knowledge in rational number, operations, and proportional reasoning for teaching grades Preschool through Grade 6. Understanding characteristics of instruction, assessments, and intervention are considered critically.

Taught Online: *Fall 2021*

ELED 4062/4063 – Teaching Elementary School Mathematics II: Number, Operations, & Algebraic Reasoning

Utah State University-Eastern, Price, UT, United States.

This course is designed for undergraduate students to develop pedagogical content knowledge in number, operations, and algebraic reasoning for teaching grades Preschool to Grade 6. Methods for designing and implementing mathematics instruction, assessment, remediation, and intervention will be applied in a field-based placement. Includes supervision of students in field experiences.

Taught in Hybrid Format (Broadcast & Online): *Fall 2020, Spring 2021, Fall 2021*

Math Endorsement Classes (Block)

Utah State University-Eastern, Price, UT, United States.

TEAL 5521/6521: Mathematics for Teaching K-8: Numbers and Operations: This course is designed for Master's students to develop a comprehensive understanding of our number system and relate its structure to computation, arithmetic, algebra, and problem-solving.

TEAL 6522: Mathematics for Teaching K-8: Rational Numbers and Proportional Reasoning: This course is designed for Master's students to develop a deeper understanding of rational numbers, operations with rational numbers, and proportionality.

TEAL 5523/6523: Mathematics for Teaching K-8: Algebraic Reasoning: This course is designed for Master's Students develop a deeper understanding of algebraic expressions, equations, functions, real numbers.

TEAL 6524: Mathematics for Teaching K-8: Geometry and Measurement This course is designed for Master's Students develop a deeper understanding of the geometry and measurement context that exists in the state core.

TEAL 6300: Workshop in Mathematics Education This course is designed for Master's students to explore current topics and methods in mathematics education based on students' personal interest.

Taught Online: *Spring 2021*

MASC 450 – Integrated Mathematics

Texas A&M University, College Station, TX, United States.

This course is designed for undergraduate students to integrate and connect topics and ideas in mathematics and other disciplines; make connections between algebra and geometry and statistics and probability; focus on integration with authentic problems requiring various branches of mathematics.

ADVANCED PREPARATION

- 2021 **Teaching Documentation Workshop**, Utah State University, Logan, UT, United States.
- 2020 **Planning & Writing Successful Grant Proposals**, Utah State University, Logan, UT, United States.
- 2019 **Advanced Research Methods (ARM) Certificate**, Texas A&M University, College Station, TX, United States.
- 2019 **Academy for Future Faculty (AFF) Program**, Texas A&M University, August 2019 – May 2020, College Station, TX, United States.
- 2019 **Dissertation, Article & Thesis Assistance (DATA) Program**, Texas A&M University, March 2019-May 2019, College Station, TX, United States.
- 2019 **Proposal Writing Retreat**, Texas A&M University, March 12-13, 2019, College Station, TX, United States.
- 2018 **Research Internship**, Texas A&M University, March 9-18, 2018, Pueblo, CO, United States.
- 2016 **Mentoring Undergraduate Researchers: A Workshop for Graduate Students**, Texas A&M University, Presented by LAUNCH: Undergraduate Research on September 19, 2016, College Station, TX, United States.
- 2016 **Power Basic Writing Studio**, Texas A&M University, Presented by CEHD Writing Initiative – P.O.W.E.R. on October 7, 14, 21, and 28, 2016, College Station, TX, United States.

PROFESSIONAL ACTIVITIES AND MEMBERSHIPS

- 2017 – pres. American Educational Research Association
 - Division C - Learning and Instruction
 - Division K - Teaching and Teacher Education
 - Research in Mathematics Education SIG
- 2017 – pres. National Council of Teachers of Mathematics
- 2011 – pres. Southwest Educational Research Association
- 2006 – 2020 Kappa Delta Pi, Mu Chi Chapter
- 2019 – 2020 Bryan I.S.D. Superintendent Advisory Council
- 2018 – 2020 Graduate Student Advisory Council, College of Education and Human Development
- 2016 – 2020 Graduate Student Association, Teaching, Learning, and Culture
- 2016 – 2019 Graduate Student Association, Hispanic/Latino

NATIONAL AND INTERNATIONAL SERVICE

- 2021 Proposal Reviewer for the American Educational Research Association, Division C – Learning and Instruction (AERA, Division C)
- 2021 Proposal Reviewer for the American Educational Research Association, Division K – Teaching and Teacher Education (AERA, Division K)
- 2021 Proposal Reviewer for the American Educational Research Association, Special Interest Group for Research in Mathematics Education (AERA, SIG-RME)
- 2020 Reviewer for Journal of International Society of Teacher Education (JISTE)
- 2020 Proposal Reviewer for the American Educational Research Association, Division C – Learning and Instruction (AERA, Division C)
- 2020 Proposal Reviewer for the American Educational Research Association, Division K – Teaching and Teacher Education (AERA, Division K)
- 2020 Reviewer for the Journal of Urban Mathematics Education (JUME)

- 2019 Proposal Reviewer for the 14th International Congress on Mathematical Education Association (ICME) Conference
- 2019 Proposal Reviewer for the American Educational Research Association, Special Interest Group for Research in Mathematics Education (AERA, SIG-RME)
- 2019 Reviewer for Mathematics Teacher: Learning and Teaching PK–12 (MTLT), National Council of Teachers of Mathematics (NCTM)
- 2018 Proposal Reviewer for Frontiers in Education Conference
- 2018 Proposal Reviewer for the Organization of Educational Historians (OEH) Conference
- 2017 Proposal Reviewer for the National Council of Teachers of Mathematics Research Conference

REGIONAL, STATE, AND LOCAL SERVICE

- 2021 Reviewer for Journal on Empowering Teaching Excellence
- 2020 Texas State Science Fair Competition Judge
- 2019 Student Research Week Poster Presentation Judge
- 2019 Proposal Reviewer for the Southwest Educational Research Association (SERA) Conference
- 2018 Proposal Reviewer for the Southwest Educational Research Association (SERA) Conference
- 2018 Student Research Week Oral Presentation Judge
- 2017 Proposal Reviewer for the Southwest Educational Research Association (SERA) Conference

COMMUNITY OUTREACH ACTIVITIES

- 2021 Blue Blast Block Party, Utah State University-Eastern, Price, UT, United States.
- 2020 STEM Night at Cypress Game Night, College Station ISD, College Station, TX, United States. (Cancelled)
- 2019 STEM Day at Ross Elementary, Bryan ISD, Bryan, TX, United States.
- 2019 STEM Night at Roland Reynolds Elementary, Franklin ISD, Franklin, TX, United States.
- 2019 Texas A&M University Technology Summit, Galveston, TX, United States.
- 2019 Aggie STEM at Bryan ISD Showcase, Bryan ISD, Bryan, TX, United States.
- 2019 Aggie STEM Night at Roland Reynolds Elementary, Franklin ISD, Franklin, TX, United States.
- 2019 STEM Night at Pecan Trail Intermediate School, College Station ISD, College Station, TX, United States.
- 2018 Hour of Code Event, Texas A&M University, College Station, TX, United States.
- 2018 STEM Night at Roland Reynolds Elementary, Franklin ISD, Franklin, TX, United States.
- 2018 Steelworks Museum Brown Bag: CF&I Schools: Inspiring Int-her-est in Science through Cooking, Pueblo, CO, United States.
- 2018 Engineering Week Celebration: Girl Day Event at the Mayborn Museum Complex, Waco, TX, United States.
- 2017 STEM Night at Roland Reynolds Elementary, Franklin ISD, Franklin, TX, United States.
- 2017 Hour of Code Event, Texas A&M University, College Station, TX, United States.
- 2016 STEM Night at Oakwood Elementary, College Station ISD, College Station, TX, United States.
- 2016 Hour of Code Event, Texas A&M University, College Station, TX, United States.

HONORS, AWARDS & SCHOLARSHIPS RECEIVED

- 2020 Southwest Educational Research Association (SERA) Dean’s Award for Texas A&M University, \$150
- 2020 National Council of Teachers of Mathematics (NCTM) and National Science Foundation (NSF) Travel Grant Award for ICME-14, \$2,750 (Postponed to 2021 - Declined due to COVID)
- 2019 Texas A&M University 3 Minute Thesis (3MT) Finalist

- 2019 College of Education and Human Development Strategic Research Fellowship Award, \$34,895
- 2019 College of Education - Graduate Strategic Scholarship, \$2,000
- 2019 Association of Former Students Scholarship, Texas A&M University, \$2,000
- 2019 Southerland Aggie Leadership Scholarship, Brazos County A&M Aggie Leader Scholarship, \$1,000
- 2018 College of Education - Graduate Strategic Scholarship, \$4,500
- 2018 Murray Case Sells Scholarship, \$1,500
- 2018 Insight into Diversity - 2018 Inspiring Programs in STEM Award
- 2018 Student Research Week - Second Place Oral Presentation, \$150
- 2017 College of Education - Graduate Strategic Scholarship, \$2,000
- 2014 Bryan I.S.D. - Teacher of the Year