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EDUCATION:

- 2016 Ph. D., Curriculum and Instruction Emphasis in Mathematics Education, Texas A&M University, College Station, TX.
- 2012 M. Ed., Curriculum and Instruction Emphasis in Mathematics Education, Texas A&M University, College Station, TX.
- 2006 Bachelor's of Science Emphasis in Mathematics, Celal Bayar University, Turkey.

AWARDS AND HONORS:

- 2021-2022, Presidential Scholarly Achievement Awards for early promising faculty, University of Wyoming.
- 2020-2021, Outstanding Research and Scholarship Award, College of Education, University of Wyoming.
- 2013-2014, Strategic Research Award, College of Education, Texas A&M University, College Station, TX.
- 2012-2013, Lechner Scholarship, Texas A&M University.
- 2009-2016, Graduate Education Scholarship, Ministry of Education, Turkey.
- 2002-2007, College Education Scholarship, Ministry of Education, Turkey.

PROFESSIONAL EXPERIENCES:

- 2018-Current, Assistant Professor, Mathematics Education, University of Wyoming, Laramie, WY.
- 2016-2018, Post-Doctoral Research Scientist, Aggie STEM, College of Education, Texas A&M University, College Station, TX.

2014-2016, Research Assistant, Aggie STEM, College of Education, Texas A&M University, College Station, TX.

2010-2014, Teaching and Research Assistant, Department of Teaching Learning and Culture, College of Education, Texas A&M University, College Station, TX.

2006-2009, Mathematics Teacher, Karsiyaka Education Center, Izmir, Turkey.

PUBLICATIONS

Books and Chapters

Bicer, A. (In press). Fostering mathematical creativity of 5th-grade students in Common Core adopted classrooms I. ISTES Organization.

Bicer, A. (Eds.). (In press). Mathematical creativity in 5th grade Common Core classrooms. ISTES Organization.

Macalalag, A. Z., Sahin, I., Johnson, J., & **Bicer, A.** (Eds.). (2022). *Internalization of STEM Education*. ISTES Organization.

Bicer, A., & Mann, E. L (2021). Mathematics tasks that promote creativity. In S. A. Chamberlin, S. & E.L. Mann (Eds.), *The relationship of affect and creativity in mathematical giftedness: How the five legs of creativity influence math talent*. Prufrock.

Nite, S. B., & **Bicer, A.** (2020). Online mathematics teacher professional development. In Wachira, P. & Keengwe, S. (eds.) *Handbook of Research on Online Pedagogical Models for Mathematics Teacher Education* (pp. 203-215). Hershey, PA: IGI Global.

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. Leatham (Ed.), *Designing, Conducting, and Publishing Research in Mathematics Education* (pp. 97-110). Springer, Cham.

Bicer, A., Nite, S. B., Capraro, M. M., & Capraro, R. M. (2016). Assessment techniques in mathematics: A literature review. In R. V. Nata (Ed.), *Progress in Education Volume 39* (270-288). Hauppauge, NY: Nova Science Publishers, Inc.

Bicer, A. (2016). Soap Making and Packaging. In M. M. Capraro, J. G Whitfield, M. J. Etchells, & R. M. Capraro (Eds.). *A Companion to Interdisciplinary STEM Project-Based Learning: For Teachers by Teachers* (2nd edition) (pp. 181-189). Rotterdam, The Netherlands: Sense.

Bicer, A., & Nite, S. B. (2016). Egg drop parachute PBL. In M. M. Capraro, J. G Whitfield, M. J. Etchells, & R. M. Capraro (Eds.). *A Companion to Interdisciplinary STEM Project-Based Learning: For Teachers by Teachers* (2nd edition) (pp. 47-52). Rotterdam, The Netherlands: Sense.

Refereed Journal Articles

- Bicer, A., & Bicer, A.** (Accepted with minor revision). Understanding young students' mathematical creative processes through eye-tracking simulated interview. Manuscript submitted to *Mathematics Education Research Journal*. (0.88 SJR Impact factor – SCOPUS/Scimago-**Q1**)
- Bicer, A., Bicer, A., Perihan, C., & Lee, Y.** (2022). Pre-service teachers' preparations for designing and implementing creativity-directed mathematical tasks and instructional practices. *Mathematics Education Research Journal*. <https://doi.org/10.1007/s13394-022-00409-x> (0.88 SJR Impact factor – SCOPUS/Scimago-**Q1**)
- Lee, Y., Capraro, R. M., Capraro, M. M., & **Bicer, A.** (2022). Cultural affordance, motivation, and affective mathematics engagement in Korea and the US. *Research in Mathematical Education*, 25(1), 21-43.
- Capraro, R. M., Capraro, M. M., Lewis, C., Grant, M., James, M., Mosqueda, E., Young, J., Young, J, **Bicer, A** ... & Chang, J. (2022). Reflecting Back to Forge the Path Forward. *Journal of Urban Mathematics Education*, 15(1), 1-8.
- Bicer, A.** (2021). Multiple representations and mathematical creativity. *Thinking Skills and Creativity*, 100823. (1.02 SJR Impact factor – SCOPUS/Scimago-**Q1**)
- Kitchen, R., Martinez, M. A., Gonzales, L., & **Bicer, A.** (2021). Actualizing change after experiencing significant mathematics PD: Hearing from teachers of color about their practice and mathematical identities. *Educational Sciences*, 11, 710. <https://doi.org/10.3390/educsci11110710> (0.45 SJR Impact factor – SCOPUS/Scimago-**Q2**)
- Bicer, A., Marquez, A., Colindres, K. V. M., Schanke, A. A., Castellon, L. B., Audette, L. M., ... & Lee, Y.** (2021). Investigating creativity-directed tasks in middle school mathematics curricula. *Thinking Skills and Creativity*, 100823. (1.02 SJR Impact factor – SCOPUS/Scimago-**Q1**)
- Bicer, A.** (2021). A systematic literature review: Discipline-specific and general instructional practices fostering the mathematical creativity of students. *International Journal of Education in Mathematics, Science, and Technology (IJEMST)*, 9(2), 252-281. <https://doi.org/10.46328/ijemst.1254> (0.47 SJR Impact factor – SCOPUS/Scimago-**Q2**)
- Perihan, C. & **Bicer, A.** (2021). The Effects of Function-Based Communication Intervention for a Student with Emotional Disturbance in a General Education Setting. *Journal of Research in Special Educational Needs*. <https://doi.org/10.1111/1471-3802.12499> (0.54 SJR Impact factor – SCOPUS/Scimago-**Q2**)
- Perihan, C., **Bicer, A.**, & Bocanegra, J. (2021). Assessment and Treatment of Anxiety in Children with Autism Spectrum Disorder in School Settings: A Systematic Review and

- Meta-Analysis. *School Mental Health*, 1-12. (1.02 SJR Impact factor – SCOPUS/Scimago-Q1).
- Capraro, R. M., Capraro, M. M., Leonard, J., Lewis, C., Grant, M., James, M., Mosqueda, E., Young, J., **Bicer, A.**, ... & Chang, J. (2021). The End or Beginning? Either Way, the Credits Are Not Rolling Yet!. *Journal of Urban Mathematics Education*, 14(1), 1-11.
- Bicer, A.**, Lee, Y., Perihan, C., Capraro, M. M., & Capraro, R. M. (2020). Considering mathematical creative self-efficacy with problem posing as a measure of mathematical creativity. *Educational Studies in Mathematics*, 1-29. (1.57 SJR Impact factor – SCOPUS/Scimago-Q1).
- Bicer, A.**, Chamberlin, S., & Perihan, C. (2020). A meta-analysis of the relationship between mathematics achievement and creativity. *The Journal of Creative Behavior*. <https://doi.org/10.1002/jocb.474> (0.63 SJR Impact factor – SCOPUS/Scimago-Q1).
- Bicer, A.**, Lee, Y., & Perihan, C. (2020). Inclusive STEM high school factors influencing ethnic minority students' STEM preparation. *Journal of Ethnic and Cultural Studies*, 7(2), 147-172. <http://dx.doi.org/10.29333/ejecs/384> (0.58 SJR Impact factor – SCOPUS/Scimago-Q1).
- Bicer, A.**, Perihan, C., & Lee, Y. (2020). A Meta-Analysis: The effects of cognitive behavioral therapy on students' mathematics anxiety. *International Electronic Journal of Mathematics Education*, 15 (2). doi.org/10.29333/iejme/7598 (0.24 SJR Impact factor – SCOPUS/Scimago-Q3)
- Perihan, C., Burke, M.D., Bowman-Perrott, L., **Bicer, A.**, Gallup, J. Thompson, J. & Salles, M.R. (2020). Effects of cognitive behavioral therapy for reducing anxiety in children with high functioning ASD: A systematic review and meta-analysis. *Journal of Autism and Developmental Disorders*. (1.675 SJR Impact factor – SCOPUS/Scimago-Q1)
- Bicer, A.**, & Lee, Y. (2019). Effect of STEM PBL embedded informal learning on student interest in STEM majors and careers. *Journal of Urban Mathematics Education*, 12(1), 49-65. Indexed in SCOPUS.
- Lee, Y., Capraro, R. M., & Bicer, A. (2019). Gender difference on spatial visualization by college students' major types as STEM and non-STEM: a meta-analysis. *International Journal of Mathematical Education in Science and Technology*, 50(8), 1241-1255. (.371 SJR Impact factor – SCOPUS/Scimago-Q2). Indexed in Web of Science (Clarivate Analytics), ERIC.
- Bicer, A.**, & Capraro, R. M. (2019). Mathematics achievement in the secondary high school context of STEM and non-STEM Schools. *School Science and Mathematics*. doi: 10.1111/ssm.12321. Indexed in Web of Science (Clarivate Analytics), SCOPUS, ERIC.

- Lee, Y., Capraro, R. M., & **Bicer, A.** (2019). Affective Mathematics Engagement: A Comparison of STEM PBL versus Non-STEM PBL Instruction. *Canadian Journal of Science, Mathematics and Technology Education*, 1-20. DOI: <https://doi.org/10.1007/s42330-019-00050-0> (.35 Impact factor – SCOPUS/Scimago-**Q2**)
- Kopparla, M., **Bicer, A.**, Vela, K., Lee, Y., Bevan, D., Kwon, H., Caldwell, C., Capraro, M. M., & Capraro, R. M. (2019). The effects of problem-posing intervention strategies on elementary students' problem solving. *Educational Studies*. (.442 SJR Impact factor-SCOPUS/Scimago-**Q2**)
- Lee, Y., **Bicer, A.**, Kwon, H., & Capraro, R. M. (2019). Pre-service teachers' preparedness for problem posing: Pedagogical content knowledge and subject matter knowledge. *Electronic International Journal of Education, Arts, and Science*, 4(10).
- Bicer, A.**, Capraro, R. M., Capraro, M. M. (2018). Hispanic students' mathematics achievement in the context of their high school types as STEM and non-STEM schools. *International Journal of Mathematical Education in Science and Technology (TMES)*. DOI : 10.1080/0020739X.2017.1410735. (.371 SJR Impact factor – SCOPUS/Scimago-**Q2**). Indexed in Web of Science (Clarivate Analytics), ERIC.
- Bicer, A.**, Perihan, & Lee, Y. (2018). The Impact of writing practices on students' mathematical attainment. *International Electronic Journal of Mathematics Education*, 13 (4), 1-9. Indexed in Web of Science (Clarivate Analytics), ERIC. (.24 SJR Impact factor – SCOPUS/Scimago-**Q3**)
- Lee, Y., Capraro, M. M., & Capraro, R. M., & **Bicer, A.** (2018). A meta-analysis: Improvement of algebraic reasoning through metacognitive training. *International Education Studies*, 11(10), 42-49. doi:[10.5539/ies.v11n10p42](https://doi.org/10.5539/ies.v11n10p42). (.228 SJR Impact factor – SCOPUS/Scimago-**Q3**)
- Barroso, L. R., **Bicer, A.**, Capraro, M. M., Capraro, R. M., Foran, A., Grant, M.,... Rice, D. (2017). Run! Spot. Run! - Vocabulary development and the evolution of STEM disciplinary language for secondary teachers. *Zentralblatt für Didaktik der Mathematik (ZDM)*. (.832 SJR Impact factor-SCOPUS/Scimago-**Q1**)
- Bicer, A.**, Capraro, R.M., & Capraro, M. M. (2017). Integrated STEM assessment model. *Eurasia Journal of Education in Mathematics, Science and Technology*, 13(7), 3959-39685. DOI: 10.12973/eurasia.2017.00766a (.325 SJR Impact factor-SCOPUS/Scimago-**Q2**)
- Bicer, A.**, & Capraro, R. M., (2017). Longitudinal effects of technology integration and teacher professional development on students' mathematics achievement. *Eurasia Journal of Mathematics, Science, and Technology Education*, 13(3), 1-19. (.325 SJR Impact factor – SCOPUS/Scimago-**Q2**)

- Capraro, M.M., **Bicer, A.**, Grant, M.A., & Lincoln, Y.S. (2017). Using precision in STEM language: A qualitative look. *International Journal of Education in Mathematics, Science and Technology*, 5(1), 29-39. DOI:10.18404/ijemst.15709. Indexed in Web of Science, SCOPUS.
- Hill, K. K., **Bicer, A.**, & Capraro, M. M. (2016). Do teachers have the opportunities they need to learn to teach with manipulatives? *Electronic International Journal of Education, Arts, and Science*, 2(3), 49-50.
- Hill, K. K., **Bicer, A.**, & Capraro, R. M. (2016). Effect of teachers' professional development from MathForward™ on students' math achievement. *International Journal of Research in Education & Science*. Indexed in SCOPUS, ERIC.
- Bicer, A.**, Boedeker, P., Capraro, R. M., Capraro, M.M. (2015). The effects of STEM PBL on students' mathematical and scientific vocabulary knowledge. *International Journal of Contemporary Educational Research*, 2(2), 69-75. Indexed in ERIC.
- Nite, S. B., Capraro, M. M., Capraro, R. M., & **Bicer, A.** (2015). Explicating the characteristics of STEM teaching and learning: A meta-synthesis. *Journal of STEM Teacher Education*, 52(1), 6.
- Navruz, B., Capraro, R. M., **Bicer, A.**, & Capraro, M. M. (2015). A review of higher-order factor analysis interpretation strategies. *Journal of Measurement and Evaluation in Education and Psychology*, 6(1), 72-94. Indexed in Web of Science (Clarivate Analytics).
- Bicer, A.**, Navruz, B., Capraro, R. M., Capraro, M.M., Oner, T.A., & Boedeker, P. (2015). STEM schools vs. non-STEM schools: Comparing students' mathematics growth rate on high-stakes test performance. *International Journal of New Trends in Education and Their Implications*, 6(1), 138-150. Indexed in EBSCO.
- Bicer, A.**, Capraro, R. M., & Capraro, M. M. (2014). Pre-service teachers' linear and quadratic inequalities understanding. *International Journal for Mathematics Teaching and Learning*. Retrieved from <https://www.cimt.org.uk/ijmtl/index.php/IJMTL/about/>
- Bicer, A.**, Navruz, B., Capraro, R. M., & Capraro, M. M. (2014). STEM schools vs. non-STEM schools: Comparing students' mathematics state-based test performance. *International Journal of Global Education*, 3(3), 8-18.
- Navruz, B., Erdogan, N., **Bicer, A.**, Capraro, R. M., & Capraro, M. M. (2014). Would a STEM school 'by any other name smell as sweet'? *International Journal of Contemporary Educational Research*, 1(2), 67-75. Indexed in ERIC.
- Oner, A. T., Navruz, B., **Bicer, A.**, Peterson, C. A., Capraro, R. M., & Capraro, M. M. (2014). T-STEM academies' academic performance examination by education service centers: A longitudinal study. *Turkish Journal of Education*, 3(4), 4-14. Indexed in Web of Science.
- Bicer, A.**, Capraro, R. M., & Capraro, M. M. (2014). Integrating writing into mathematics

classroom as one communication factor. *The Online Journal of New Horizon in Education*, 4(2), 58-67. Indexed in DOAJ.

Bicer, A., Capraro, M. M., & Capraro, R. M. (2013). The effects of parent's SES and education level on students' mathematics achievement: Examining the mediation effects of parental expectations and parental communication. *The Online Journal of New Horizons in Education*, 3(4), 89-97. Indexed in DOAJ.

Bicer, A., Capraro, R. M., & Capraro, M. M. (2013). Integrating writing into mathematics classroom to increase students' problem-solving skills. *International Online Journal of Educational Science*, 5(2), 361-369. Indexed in EBSCO.

Bicer, A., Capraro, M. M., & Capraro, R. M. (2013). The journey of a middle school student: Explorations of mathematics private tutoring in school life. *Sakarya University of Journal of Education*, 3(3), 123-136. Indexed in EBSCO.

Submitted for Review

Bicer, A., Jackson, T., Krall, G., & Chamberlin, S. (Major revision). The relationship between spatial visualization and mathematical creativity. Manuscript submitted to *Thinking Skills and Creativity*.

CONFERENCE PRESENTATIONS

National/International Presentations and Papers (Refereed)

Bicer, A., & Bicer, A. (2022, Accepted). The relationship between mathematical creativity and spatial visualization skills. Paper is accepted to be presented at the 2022 *School Science and Mathematics Association Convention*.

Lee, Y., Epling, B., & **Bicer, A.** (2022, Accepted). *Construction of Students' STEM Pipeline in Cognitive and Affective Contexts of Mathematics Education*. Paper is accepted to be presented at the 2022 *School Science and Mathematics Association Convention*.

Bicer, A., Bicer, A., & Chamberlin, S. (2022, Accepted). Young Students' Mathematical Creative Thinking Processes. Paper is accepted to be presented at the annual meeting of the *International Group for Mathematical Creativity and Giftedness*.

Bicer, A., Bicer, A., Perihan, C., & Lee, Y. (2022, April). Multiple representations and mathematical creativity. Paper presented at the annual virtual meeting of the *American Educational Research Association*.

Bicer, A., & Bicer, A. (2021, November). Investigating mathematical creativity in middle school curricula. Paper presented at the 2021 *virtual School Science and Mathematics Association Convention*.

- Bicer, A.**, Bicer, A., & Lee, Y. (2021, November). Multiple representational skills and mathematical creativity. Paper presented at the *2021 virtual School Science and Mathematics Association Convention*.
- Lee, Y., Epling, B., & **Bicer, A.** (2021, November). Professional STEM teacher identity of elementary teacher candidates. Paper presented at the *2021 virtual School Science and Mathematics Association Convention*.
- Bicer, A.** (2021, April). Pre-service Teachers' Preparations for Teaching Creativity in Mathematics. Paper presented at the annual virtual meeting of the *American Educational Research Association*.
- Bicer, A.**, & Lee, R. (2021, April). Mathematical Creativity: A statement of the particular aspect of affect associated with problem posing. Paper presented at the annual virtual meeting of the *American Educational Research Association*.
- Bicer, A.**, Lee, Y., Capraro, M. M., & Capraro, R. M. (2020, November). Mathematical Creativity and Creative Self-Efficacy. Paper presented at the *2020 virtual School Science and Mathematics Association*.
- Lee, Y., Capraro, R. M., Capraro, M. M., & **Bicer, A.** (2020, November). Analysis of affective mathematics engagement with hierarchical linear modeling (HLM). Paper presented at the *2020 virtual School Science and Mathematics Association Convention*.
- Bicer, A.**, Lee, R., & Perihan, C. (2020, April). *Discipline-Specific & General Instructional and Pedagogical Practices Fostering the Mathematical Creativity*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. Conference canceled due to COVID-19.
- Lee, Y., Capraro, R. M., Capraro, M. M., & **Bicer, A.** (2020, April). *Effects of motivation on students' affective mathematics engagement*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. Conference canceled due to COVID-19.
- Perihan, C., Burke, M., & **Bicer, A.** (, April). *Cognitive Behavioral Interventions for Reducing Anxiety in Children with ASD: The Quality of the Evidence-Base*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. Conference canceled due to COVID-19.
- Nite, S. B., **Bicer, A.**, Currens, K.A., & Tejani, R. (October, 2020). Increasing STEM interest through coding with microcontrollers. Paper presented at the *2020 virtual IEEE Frontiers in Education Conference: Education for a Sustainable Future*.
- Bicer, A.**, Lee, Y., Capraro, R. M., Capraro, M. M., Barroso, L. R., & Rugh, M. (2019, October). Examining the Effects of STEM PBL on Students' Divergent Thinking Attitudes Related

- to Creative Problem Solving. Paper presented at the 49th Annual IEEE Frontiers in Education Conference (FIE) (pp. 1-6). IEEE.
- Lee, Y., **Bicer, A.**, Kwon, H., Rugh, M. S., Capraro, R. M., Capraro, M. M., & Barroso, L. (2019, October). Post-Secondary Ready: Does the STEM curriculum Matter?. Paper presented at the 49th Annual IEEE Frontiers in Education Conference (FIE) (pp. 1-6). IEEE.
- Bicer, A.**, Lee, R., Capraro, R. M., Capraro, M. M., Barroso, L. R., & Rugh, M (2018, February). *Cracking the code: The effects of using microcontrollers to code on students' interest in computer and electrical engineering*. Paper presented at the 49th Annual IEEE Frontiers in Education Conference (FIE). IEEE, Cincinnati, OH. (IF = .159, SJR = .220).
- Lee, Y., **Bicer, A.**, Capraro, R. M., Capraro, M. M., Barroso, L. R., Kwon, H., & Rugh, M. (2018, February). Post-Secondary Ready: Does the STEM Curriculum Matter? Paper presented at the 48th Annual IEEE Frontiers in Education Conference (FIE). IEEE, Cincinnati, OH.
- Rugh, M. S., Calabrese, J. E., Madson, M. A., Capraro, R. M., Barroso, L. R., Capraro, M. M., **Bicer, A.** (2018, October). *STEM Language can be the Stem of the Problem*. Paper presented at the 48th Annual IEEE Frontiers in Education Conference (FIE). IEEE, Cincinnati, OH.
- Bicer, A.**, Lee, Y., & Chamberlin, S. (2019, October). Discipline-Specific & General Instructional and Pedagogical Practices Fostering the Mathematical Creativity. Paper presented at the 2019 *School Science and Mathematics Association Convention*, Salt Lake City, UT.
- Lee, Y., & **Bicer, A.**, (2019, October). Affective Mathematics Engagement: A Comparison of the United States and Korea. Paper presented at the 2019 *School Science and Mathematics Association Convention*, Salt Lake City, UT.
- Bicer, A.** & Nite, S. B. (2019, May). Dilutions of poisons as a toll for understanding proportions more deeply. Paper presented at the *National IBL Conference: Inquiry-based Learning and Teaching in Mathematics* (IBL SIGMAA). Denver, CO.
- Bicer, A.**, & Nite, S. (2019, April). *Effects of professional development series on math teachers' self-efficacy*. Paper presented at the NCTM Research Conference, San Diego, CA.
- Bicer, A.**, & Lee, Y. (2019, April). *The Effects of Informal Learning on Student Interest in STEM Fields*. Paper presented at the NCTM Research Conference, San Diego, CA.
- Lee, Y., Capraro, R. M., **Bicer, A.**, Capraro, M. M., & Park, J. (2019, April). *Gender difference on spatial visualization (STEM vs non-STEM)*. Paper presented at the NCTM Research Conference, San Diego, CA.

- Bicer, A.**, Kitchen, R., Lee, Y., Aydin, H., & Capraro, R. M. (2019, April). *Institutional Characteristics Influencing Underrepresented Students' STEM Preparation in Inclusive STEM High Schools*. Paper presented at the annual meeting of the American Educational Research Association, Toronto, ON, Canada.
- Lee, Y., Capraro, R. M., **Bicer, A.**, Capraro, M. M. (2019, April). *The impact of STEM PBL students' affective mathematics engagement*. Paper presented at the annual meeting of the American Educational Research Association, Toronto, ON, Canada.
- Lee, Y., Capraro, R. M., **Bicer, A.**, Capraro, M. M. (2019, April). *Gender difference on spatial visualization (STEM vs. non-STEM)*. Paper presented at the annual meeting of the American Educational Research Association, Toronto, ON, Canada.
- Capraro, M. M., Capraro, R. M. **Bicer, A.**, Lee, Y., & Kopparla, M. (2018, November). *Problem posing in elementary classrooms*. Paper presented at the International Conference on Urban Education, Nassau, Bahamas.
- Bicer, A.**, Lee, Y., Capraro, R. M., Capraro, M. M., Perihan, C. (2018, October). *Informal STEM Learning & Student Interest in STEM Fields*. Paper presented at the 2018 School Science and Mathematics Association Convention, Little Rock, AR.
- Lee, Y., Kwon, H., **Bicer, A.**, Capraro, R. M., & Capraro, M. M. (2018, October). *Mathematics Teacher Knowledge (SMK, KCT, and KCS) in Problem posing*. Paper presented at the 2018 School Science and Mathematics Association Convention, Little Rock, AR.
- Lee, Y., Kwon, H., **Bicer, A.**, Capraro, M. M., & Capraro, R.M. (2018, April). *Pre-service teachers' content and pedagogical knowledge in problem posing*. Paper presented at the *NCTM Research Conference*, Washington, D.C.
- Bicer, A.**, Capraro, R. M., Capraro, M.M., & Lee, R. (2018, April). *A-meta analysis: Writing in Mathematics Classroom*. Paper presented at the *NCTM Research Conference*, Washington, D.C.
- Bicer, A.**, Perihan, C., Capraro, R. M., Capraro, M. M., & Lee, Y. (2018, April). *The impact of writing practices on students' mathematical attainment*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Bicer, A.**, Capraro, R. M., Capraro, M. M., & Nite, S. B. (April, 2017). *Improving educational opportunities for underrepresented students: The educational impact of T-STEM academies*. Paper presented at the annual American Educational Research Association (AERA), San Antonio, TX.
- Bicer, A.**, Ozfidan, B., Capraro, M. M., Capraro, R. M., & Nite, S. B. (2017, April). *A meta-analysis: The effects of writing interventions on students' mathematics success*. Paper presented at the annual American Educational Research Association (AERA), San Antonio, TX.

- Bicer, A.**, Nite, S. B., Reeves, L., Capraro, R. M., & Morgan, J. R. (2017, April). *Mathematics teacher collaboration with online technology integration*. Paper presented at the *NCTM Research Conference*. San Antonio, Texas.
- Nite, S. B., Allen, G. D., Capraro, R. M., **Bicer, A.**, & Morgan, J. (2016, December). *Supporting engineering education through calculus success*. Paper presented at the 27th Australasian Association for Engineering Education Conference. Coffs Harbour, Australia.
- Nite, S. B., Allen, G. D., **Bicer, A.**, & Capraro, R. M. (2017, April). Strengthening precalculus skills in a summer program for engineering students. Paper presented at *2017 AERA Annual Meeting, Knowledge to Action: Achieving the Promise of Equal Education Opportunity*. San Antonio, Texas.
- Nite, S. B., Allen, G. D., **Bicer, A.**, & Capraro, R. M. (2017, April). *Precalculus program for prospective engineering students*. Paper presented at the NCTM Research Conference. San Antonio, Texas.
- Nite, S. B., Allen, G. D., Morgan, J., **Bicer, A.**, & Capraro, R. M. (2016, June). Engineering calculus bridge program success: Comparing variation results. In *Proceedings of the American Society for Engineering Education 2016*. Paper ID# 16610 presented at ASEE's 123rd National Conference and Exposition. New Orleans, LA: American Society for Engineering Education, Washington DC.
- Nite, S. B., Allen, G. D., **Bicer, A.**, & Morgan, J. (2016, June). Student engagement in a summer bridge program for engineering calculus success. *Electronic Proceedings of the 2016 Hawaii University International Conferences Science, Technology Engineering, Art, Math & Education Conference*. Honolulu, HI: Hawaii University International Conferences.
- Nite, S. B., Allen, G. D., Capraro, R. M., **Bicer, A.**, & Morgan, J. (2016, December). Supporting engineering education through calculus success. Paper presented at the 27th Australasian Association for Engineering Education Conference. Coffs Harbour, Australia.
- Bicer, A.**, Nite, S. B., Capraro, R. M., Barroso, L. R., Capraro, M. M., & Froyd, J. (2016, October). *Informal STEM Camp Influences on Engineering Confidence*. Paper presented at the 2016 IEEE Frontiers in Education Conference: The Crossroads of Engineering and Business. Erie, PA.
- Nite, S. B., **Bicer, A.**, & Capraro, R. M. (2017) Mathematics teacher two-year journey: Project-based learning. Paper presented at the *Annual Perspectives in Mathematics Education*.
- Nite, S. B., **Bicer, A.**, & Kirby, K. (2016, October). *Learning how to manage money: A financial literacy project for middle school students*. Paper presented at Annual Conference for Middle School Education. Austin, TX.

- Nite, S. B., Allen, G. D., Morgan, J., & **Bicer, A.**, & Capraro, R. M. (2016, June). *Engineering calculus bridge program success: Comparing program variation results*. Paper presented at the 123rd American Society for Engineering Education Annual Conference and Exposition. New Orleans, LA.
- Bicer, A.**, Capraro, R. M., & Capraro, M. M. (2016, April). *STEM schools vs. non-STEM schools: Comparing Hispanic students' mathematics growth rate on high-stakes test performance*. Paper presented at the American Educational Research Association (AERA), Washington, D.C.
- Bicer, A.**, Kopparla, M., Capraro, R. M., & Capraro, M. M. (2016, April). *Longitudinal effects of technology integration and teacher professional development on students' mathematics achievement*. Paper presented at the American Educational Research Association (AERA), Washington, D.C.
- Bicer, A.**, Boedeker, P., Kopparla, M., Capraro, R. M. (2015, October). Comparing students' mathematics achievement by their school types: Inclusive STEM schools that implemented PLTW curriculum with inclusive STEM schools that did not implement PLTW. In *Proceedings of the Frontiers in Education 2015: Launching a New Vision in Engineering Education* (pp. 1363-1367). El Paso, TX: IEEE.
- Boedeker, P., **Bicer, A.**, Capraro, R. M., Capraro, M. M., Morgan, J., & Barroso, L. (2015, October). STEM summer camp follow up study: Effects on students' SAT scores and postsecondary matriculation. In *Proceedings of the Frontiers in Education 2015: Launching a New Vision in Engineering Education* (pp. 1875-1882). El Paso, TX: IEEE.
- Bicer, A.**, Cavlazoglu, B., & Erdogan, N. (2013, March). *Integrating writing into mathematics classroom to understand students' mathematical background*. Paper presented at the Society for Information and Teacher Education, New Orleans, TX.
- Cavlazoglu, B., & **Bicer, A.** (2013, March). *Descriptive analysis of a 6th grade Turkish math text with recommendations for development of future e-resources for multi-touch tablets*. Paper presented at the Society for Information and Teacher Education, New Orleans, TX.
- Nite, S. B., Bicer, A., Reeves, L., Barroso, L., & Capraro, M. M. (2015, October). Online professional development: challenges of observation of secondary classroom simulation. Paper presented at the *E-Learn 2015: World Conference on E-Learning*. Kona, Hawaii.
- Bicer, A.**, Navruz, B., Capraro, R. M., & Capraro, M. M. (2015, April). *STEM schools vs. non-STEM schools: Comparing students' mathematics growth rate on high-stakes test performance*. Paper presented at the annual Educational Research Association (AERA), Chicago, IL.
- Navruz, B., Erdogan, N., **Bicer, A.**, & Capraro, R. M. (2013, October). *A longitudinal study: Does STEM education really help students achieve on math?* Paper presented at the annual meeting of School Science and Mathematics Association (SSMA), San Antonio,

TX.

- Goldsby, D., & **Bicer, A.** (2013, November). *Enhancing classroom communication of geometry through "Geometry Draw"*. Paper presented at the annual meeting of the School Science and Mathematics Associations (SSMA), San Antonio, TX.
- Goldsby, D., & **Bicer, A.** (2013, November). *Assessing students' perceptions of mathematics through writing prompt*. Paper submitted to annual meeting of the School Science and Mathematics Associations (SSMA), San Antonio, TX.
- Erdogan, N., Navruz, B., B., Cavlazoglu, B., & **Bicer, A.** (2013, October). *Does TAKS measure the same math knowledge in STEM and non-STEM schools?* Paper presented at the annual meeting of School Science and Mathematics Association (SSMA), San Antonio, TX.
- Bicer, A.**, Ritter, N., Capraro, M. M., Cavlazoglu, B., & Sahin, A. (2013, November). *Integrating writing into mathematics classroom through Facebook*. Paper presented at the annual meeting of the School Science and Mathematics Associations (SSMA), San Antonio, TX.
- Bicer, A.**, & Capraro, M. M. (2013, November). *Pre-service teachers' linear inequality understanding*. Paper presented at the annual meeting of the School Science and Mathematics Association (SSMA), San Antonio, TX.
- Bicer, A.**, Cavlazoglu, B., & Erdogan, N. (2013, March). *Integrating writing into mathematics classroom to understand students' mathematical background*. Paper presented at 24th annual meeting of the Society for Information and Teacher Education, New Orleans, TX.
- Cavlazoglu, B., & **Bicer, A.** (2013, March). *Descriptive analysis of a 6th grade Turkish math text with recommendations for development of future e-resources for multi-touch tablets*. Paper presented at 24th annual meeting of the Society for Information and Teacher Education, New Orleans, TX.
- Peterson, C. A, Oner, A. T., Nite, S., **Bicer, A.**, Capraro, R. M., Capraro, M. M., Morgan, J. R., & Sahin, A. (2013, September). *Aggie-STEM: Improving Student Outcomes with Professional Development that Incorporates STEM-Based Project-Based Learning and Professional Learning Communities*. Paper presented at the regional meeting of the MSP Program, Washington D.C.
- Cavlazoglu, B., & **Bicer, A.** (2013, September). *Descriptive analysis of a 6th grade Turkish math text with recommendations for development of future e-resources for multi-touch tablets*. Paper presented at the Creativity and Innovation in Educational Research. Istanbul, Turkey.

State/Local Presentations and Papers (Refereed)

- Bicer, A., & Kitchen, R.** (2019, April). The design and development of the discursive assessment protocol: An instrument intended to support the mathematical learning of ELLs. Paper presented at the 4th Annual Wyoming English as a Second Language Conference, Casper, Wyoming.
- Bicer, A., Nite, S. B., Capraro, M. M., Barroso, L. R., Suarez, M., Kwon, J., & Rice, D.** (2017, February). The effects of STEM summer camp on student interest in STEM careers. Paper presented at Southwestern Educational Research Association Conference, San Antonio, TX.
- Bicer, A., Perihan, C., Nite, S. B., Capraro, R. M., Currens, K. A., Suarez, M., & Lee, Y., & Capraro, R. M.** (2017, February). The effects of cognitive behavior therapy on students' mathematics anxiety. Paper presented at Southwestern Educational Research Association Conference, San Antonio, TX.
- Nite, S. B., **Bicer, A., Salazar, K., Lee, Y., Barroso, L. R., & Capraro, R. M.** (2017, February). The effect of STEM project-based learning on mathematics teacher instruction. Paper presented at Southwestern Educational Research Association Conference, San Antonio, TX.
- Nite, S. B., **Bicer, A., Currens, K. A., Salazar, K., & Capraro, M. M.** (2017, February). STEM summer camp affect on spatial drawing ability. Paper presented at Southwestern Educational Research Association Conference, San Antonio, TX.
- Nite, S. B., **Bicer, A., Currens, K. A., Lee, Y., Bevan, D., & Barroso, L. R.** (2017, February). Summer precalculus bridge program: Use of electronic resources. Paper presented at Southwestern Educational Research Association Conference, San Antonio, TX.
- Nite, S. B., **Bicer, A., & Kirby, K.** (2016, October). Learning how to manage money: A financial literacy project for middle school students. Paper presented at *Annual Conference for Middle School Education*. Austin, TX.
- Bicer, A., Kopparla, M., Capraro, R. M., Capraro, M. M.** (2016, February). *Longitudinal Effects of Technology Integration and Teacher Professional Development on Students' Mathematics Achievement*. Paper presented at the Southwest Educational Research Association 39th annual meeting, New Orleans, LA.
- Bicer, A., Boedeker, P. J., Foran, A. L., Hill, K., Lopez, N., Capraro, R. M., & Capraro, M. M.** (2015, February). *Examining the effects of STEM PBL on students' mathematical and scientific vocabulary knowledge*. Paper presented at the Southwest Educational Research Association 38th annual meeting, San Antonio, TX.
- Navruz, B., **Bicer, A., Capraro, M. M., Capraro, R. M.** (2015, February). *Should students enroll as freshmen in STEM high schools?* Paper presented at the Southwest Educational Research Association 38th Annual Meeting, San Antonio, TX.
- Bicer, A., Navruz, B., Capraro, R. M., & Capraro, M. M.** (2015, February). *STEM schools vs.*

- non-STEM schools: Examining Hispanic students' mathematics achievement.* Paper presented at the Southwest Educational Research Association 38th annual meeting, San Antonio, TX.
- Foran, A. L., **Bicer, A.**, & Boedeker, P. J. (2015, February). *Pre-service teachers' perception of mathematics.* Paper presented at the Southwest Educational Research Association 38th annual meeting, San Antonio, TX.
- Nite, S. B., Capraro, M. M., Capraro, R. M., **Bicer, A.**, Navruz, B. Metoyer, S., et al. (October, 2014). *Effective STEM teaching and learning: A meta synthesis and meta-analysis.* Presented at the NSTEM Collaborative Colloquium, Austin, TX.
- Navruz, B., **Bicer, A.**, & Ritter, N. L. (2015, February). *Reliability generalization of the survey of attitudes toward statistics (SATS).* Paper presented at the Southwest Educational Research Association 38th Annual Meeting, San Antonio, TX.
- Foran, A., **Bicer, A.**, Boedeker, P., Hill, T. & Kopparla, M. (2015, January). *Implementing STEM project-based learning in an inquiry-based classroom.* Paper presented at the 8th annual Texas STEM Conference: Pathways to Student Success in STEM, Austin, TX.
- Boedeker, P., **Bicer, A.**, Foran, A., Hill, K., & Kopparla, M. (2015, January). *Are you ready for the challenge? Teaching integrated STEM in grades 3-5. A model home and its thermostat.* Paper presented at the 8th annual Texas STEM Conference: Pathways to Student Success in STEM, Austin, TX.
- Bicer, A.**, Foran, A., Boedeker, P., Hill, K., & Kopparla, M. (2015, January). *Interdisciplinary STEM project based learning for meaningful understanding.* Paper presented at the 8th annual Texas STEM Conference: Pathways to Student Success in STEM, Austin, TX.
- Bicer, A.**, Capraro, M. R., & Cetin, C. S. (2012, February). *Parental involvement effects on students' mathematics achievement.* Paper presented at 35th annual meeting of Southwest Educational Research Association. New Orleans, LA.
- Bicer, A.**, Gallegos, C., & Capraro, R. M. (2013, February). *Problem solving and the writing process: A case of cognitive complexity.* Paper presented at 36th annual meeting of the Southwest Educational Research Association. San Antonio, TX.
- Bicer, A.** (2013, February). *A review of Pearson's r and Spearman's ρ , and what factors affect Pearson's r .* Paper presented at 36th annual meeting of the Southwest Educational Research Association. San Antonio, TX.
- Bicer, A.** (2013, February). *Pre-service teachers' mathematical inequality misconceptions.* Paper presented at 36th annual meeting of the Southwest Educational Research Association. San Antonio, TX.
- Bicer, A.**, Navruz, B., Perihan, C., Capraro, M. M., & Capraro, R.M. (2014, February). *Higher order confirmatory factor analysis.* Paper presented at 37th annual meeting of the Southwest Educational Research Association (SERA), New Orleans, LA.

Bicer, A., Capraro, M. M., & Capraro, R. M. (2014, February). *Distribution free vs. non-distribution free factor analysis*. Paper presented at 37th annual meeting of the Southwest Educational Research Association (SERA), New Orleans, LA.

Oner, A. T., Navruz, B., **Bicer, A.**, Erdogan, N., Peterson, C., Capraro, R. M., Capraro, M. M. (2014, February). *A longitudinal examination of T-STEM academies' academic performance by education service center*. Paper presented at 37th annual meeting of Southwest Educational Research Association (SERA), New Orleans, LA

Conference Proceedings (Refereed)

Bicer, A., Bicer, A., & Chamberlin, S. (2022, Accepted). Young Students' Mathematical Creative Thinking Processes. Proceedings of the annual meeting of the *International Group for Mathematical Creativity and Giftedness*.

Nite, S. B., **Bicer, A.**, Currens, K.A., & Tejani, R. (October, 2020). Increasing STEM interest through coding with microcontrollers. Proceedings of the 50th Annual *IEEE Frontiers in Education Conference (FIE): Education for a Sustainable Future*. (IF = .159, SJR = .220).

Bicer, A., Lee, Y., Capraro, R. M., Capraro, M. M., Barroso, L. R., & Rugh, M. (2019, October). Examining the Effects of STEM PBL on Students' Divergent Thinking Attitudes Related to Creative Problem Solving. Proceedings of the 49th Annual *IEEE Frontiers in Education Conference (FIE)* (pp. 1-6). IEEE.

Lee, Y., **Bicer, A.**, H Kwon., Rugh, M. S., Capraro, R. M., Capraro, M. M., & Barroso, L. (2019, October). Post-Secondary Ready: Does the STEM curriculum Matter?. Proceedings of the 49th Annual *IEEE Frontiers in Education Conference (FIE)* (pp. 1-6). IEEE.

Vela, K. N., **Bicer, A.**, Capraro, R. M., Barroso, L. R., & Caldwell, C. (2018, October). *What matters to my future: STEM int-her-est and expectations*. Proceedings of the 48th Annual IEEE Frontiers in Education Conference (FIE). IEEE, Piscatawy, NJ. (IF = .159).

Bicer, A., Lee, R., Capraro, R. M., Capraro, M. M., Barroso, L. R., Bevan, D., & Vela, K. N. (2018, October). *Cracking the code: The effects of using microcontrollers to code on students' interest in computer and electrical engineering*. Proceedings of the 48th Annual IEEE Frontiers in Education Conference (FIE). IEEE, Piscataway, NJ. (IF = .159, SJR = .220).

Lee, Y., **Bicer, A.**, Capraro, R. M., Capraro, M. M., Barroso, L. R., Kwon, H., & Rugh, M. (2018, October). *Comparing mathematics and science achievement of students from schools with PLTW versus schools without PLTW*. Proceedings of the 48th Annual IEEE Frontiers in Education Conference (FIE). IEEE, Piscataway, NJ. (IF = .159, SJR=.220).

Rugh, M. S., Calabrese, J. E., Madson, M. A., Capraro, R. M., Barroso, L. R, Capraro, M. M., **Bicer, A.** (2018, October). *STEM Language can be the Stem of the Problem*. Proceedings

- of the 48th Annual IEEE Frontiers in Education Conference (FIE). IEEE, Piscataway, NJ. (IF = .159, SJR=.220).
- Nite, S. B., Allen, G. D., Morgan, J., **Bicer, A.**, & Capraro, R. M. (2016, June). Engineering calculus bridge program success: Comparing variation results. In *Proceedings of the American Society for Engineering Education 2016*. Paper ID# 16610 presented at ASEE's 123rd National Conference and Exposition. New Orleans, LA: American Society for Engineering Education, Washington DC.
- Nite, S. B., Allen, G. D., Capraro, R. M., **Bicer, A.**, & Morgan, J. (2016, December). Supporting engineering education through calculus success. In S. T. Smith, Y. Y. Lim, A. Bahadori, N. Lake, R. V. Padilla, A. Rose, & K. Doust. *Proceedings of the 27th Annual Conference of the Australasian Association for Engineering Education*. Australasian Association for Engineering Education Conference: The Changing Role of the Engineering Educator for Developing the future Engineer. Coffs Harbour, Australia: Southern Cross University, Lismore, NSW 2480, Australia.
- Nite, S. B., Allen, G. D., **Bicer, A.**, & Morgan, J. (2016, June). Student engagement in a summer bridge program for engineering calculus success. *Electronic Proceedings of the 2016 Hawaii University International Conferences Science, Technology Engineering, Art, Math & Education Conference*. Honolulu, HI: Hawaii University International Conferences.
- Bicer, A.**, Nite, S. B., Capraro, R. M., Barroso, L. R., Capraro, M. M., & Froyd, J. E. (2016, October). Informal STEM camp influences on engineering confidence. Paper accepted to the *2016 IEEE Frontiers in Education Conference: The Crossroads Engineering and Business*. Erie, PA.
- Nite, S., **Bicer, A.**, Reeves, L., Barroso, L. & Capraro, M. (2015). Online Professional Development: Challenges of Observation of Secondary Classroom Simulation. In *Proceedings of E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2015* (pp. 358-364). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).
- Bicer, A.**, Boedeker, P., Kopparla, M., Capraro, R. M. (2015, October). Comparing students' mathematics achievement by their school types: Inclusive STEM schools that implemented PLTW curriculum with inclusive STEM schools that did not implement PLTW. In *Proceedings of the Frontiers in Education 2015: Launching a New Vision in Engineering Education* (pp. 1363-1367). El Paso, TX: IEEE.
- Boedeker, P., **Bicer, A.**, Capraro, R. M., Capraro, M. M., Morgan, J., & Barroso, L. (2015, October). STEM summer camp follow up study: Effects on students' SAT scores and postsecondary matriculation. In *Proceedings of the Frontiers in Education 2015: Launching a New Vision in Engineering Education* (pp. 1875-1882). El Paso, TX: IEEE.
- Bicer, A.**, Cavlazoglu, B., & Erdogan, N. (2013, March). *Integrating writing into mathematics*

classroom to understand students' mathematical background. In Proceedings of the Society for Information and Teacher Education, New Orleans, TX.

Cavlazoglu, B., & **Bicer, A.** (2013, March). *Descriptive analysis of a 6th grade Turkish math text with recommendations for development of future e-resources for multi-touch tablets.* In Proceedings of the Society for Information and Teacher Education, New Orleans, TX.

GRANT ACTIVITY

Pending. 8/1/2022-8/12027. *CAREER: Beginning Teachers' Mathematics Learning and Teaching for Creativity.* PI **Bicer, A.** Submitted to National Science Foundation Early Career Grant, \$1,248,736.

Funded. 5/20/2022-5/20/2023. *Creating open textbook for developing 5th-grade students' mathematical creativity.* PI **Bicer, A.** Accepted by the library of the University of Wyoming, \$3,000.

Funded. 5/20/2022-5/20/2023. *Who is Being Creative in Mathematics Classrooms? Individuals, Whole-Class, or Both?* PI **Bicer, A.**, with Fay Quiroz. Accepted by School of Teacher Education, College of Education, University of Wyoming, \$6,000.

Funded. 8/1/2019-5/1/2022. *Fostering Creativity in Mathematics Classroom.* PI **Bicer, A.** Awarded Mary Garland Early Career Fellowship by the John P. Ellbogen Foundation. School of Teacher Education, College of Education, University of Wyoming, \$25,000.

Unfunded. 8/1/2022-8/12027. *STEM PBL Professional Preparation Program for Pre-Service Elementary School Teachers.* Co-PI with Yujin Lee at the University of North Dakota. Submitted to National Science Foundation Early Career Grant, \$1,248,736.

Unfunded. 7/1/2022 - 6/30/2025. *Refining an Instructional Intervention Designed to Support English Learners During Problem Solving Lessons.* Co-PI with Kitchen, R. Submitted to U.S. Department of Education/Institute of Education Sciences, \$ 1,561,757.

Funded. 8/1/2019-5/1/2022. *Fostering Creativity in Mathematics Classroom.* PI **Bicer, A.** Awarded Mary Garland Early Career Fellowship by the John P. Ellbogen Foundation. School of Teacher Education, College of Education, University of Wyoming, \$25,000.

Unfunded. 8/1/2019-7/31/2022. *Design and Development of the Discursive Assessment Protocol.* Co-PI with Kitchen, R. Submitted to National Science Foundation Discovery Research PreK-12, \$3000,000.

Funded. 11/1/2019-6/30/2020. *Fostering Seeds for STEM.* PI **Bicer, A.** Awarded by the dean's office of College of Engineering, University of Wyoming, \$5,000.

Unfunded. 8/1/2019-7/31/2021. *Fostering STEM.* PI **Bicer, A.**, with Co-PIs Nite, S. B., & Griffiths, Shawn. Submitted to National Science Foundation Advancing Informal STEM Education, \$300,000.

Funded. 11/1/2018-6/30/2019. *Fostering Seeds for STEM.* PI **Bicer, A.**, with Co-PI Nite, S. B. Accepted by School of Teacher Education, College of Education, University of Wyoming, \$5,000.

Funded. 2016. *State Farm Empowering Underrepresented Students to Enter STEM Fields.* Accepted by State Farm, Bloomington, IL (2016). Co-PI with Robert M. Capraro, James Morgan, Mary Margaret Capraro, **Ali Bicer**, & Luciana Barroso. \$40,000.

PROFESSIONAL AFFILIATIONS (may include licenses and certifications)

American Educational Research Association (AERA)

National Council of Teachers of Mathematics (NCTM)

National Association for Research in Science Teaching (NARST)

Southwest Educational Research Association (SERA)

School Science and Mathematics (SSMA)

American Society for Engineering Education (ASEE)

Society for Information Technology and Teacher Education (SITE)

Frontiers in Education (FIE)

Licenses/Certificates

Advanced Research Method Certificate, Texas A&M University, USA

Secondary School Teacher of Mathematics, Ministry of Education, Turkey

SERVICE

Academic Service (National/International)

Editor

Journal of Urban Mathematics Education, 2019-Present (Role: International Research Editor)

Editorial Board Members of Journals

International Electronical Journal of Mathematics Education, 2018-Present (Editor)

Electronic International Journal of Education, Arts, and Science, 2016-Present (Editor)

Conferences Proposal Reviews:

Reviewer of proposals for National Council of Teachers of Mathematics Conference, 2015-present

Reviewer of proposals for *American Education Research Associate* Conference, 2015-Present

Reviewer of proposals for *Southwest Educational Research Association* Conference, 2015-Present

Reviewer of proposals for *Frontiers in Education Conference*, 2015-Present

Reviewer of proposals for *Undergraduate Mathematics Education Conference*, 2018-present

Conference Chair Roles:

Chair for AERA-2022 conference for the session “Research in Mathematics Education”

Chair for AERA-2022 conference for the session “Fostering Learning”

Chair for AERA-2021 conference for the session “Exploring pre-service teachers in mathematics education” in SIG-Research in Mathematics Education

Chair for AERA-2021 conference for the session “Problem-based learning in diverse places: Motivation, Processes, and Beliefs” in SIG-Research in Mathematics Education

Chair for AERA-2020 conference for the session “Improving mathematics teaching learning: Focus on problem posing and problem-based learning” in SIG-Research in Mathematics Education

Chair for AERA-2019 conference for the session “Research in Mathematics Education”

Chair for AERA-2019 conference for the session “Problem Activities and Assessment in PBL”

Chair for AERA-2018 conference for the session “Problem Activities and Assessment in PBL”

Invited manuscript reviews by academic journals:

Reviewer of manuscripts for *Journal of Mathematics Teacher Education*, 2020-present

Reviewer of manuscripts for *ZDM*, 2020-present

Reviewer of manuscripts for *Educational Studies in Mathematics*, 2019-present

Reviewer of manuscripts for *Mathematical Thinking and Learning*, 2018-present

Reviewer of manuscripts for *International Journal of STEM Education*, 2018-present

Reviewer of manuscripts for *Eurasia Journal of Mathematics, Science, and Technology Education*, 2016-present

Reviewer of manuscripts for *International Journal of STEM Education*, 2017-present

Reviewer of proposals for *Educational Research and Reviews*, 2016-present

Reviewer of proposals for *Educational Research*, 2016-present

Review of proposals for *International Research Journal of Teacher Education*, 2016-present

Review of proposals for *International Research Journal of Curriculum and Pedagogy*, 2016-present

Review of proposals for *Psychology Research*, 2015-present

Academic Service (University):

Academic Service (College and Department):

- Elementary school representative for ACTE, Fall 2019-Ongoing
- Elementary science education hiring committee member, Fall 2019-Summer 2020
- Starting Gold STEM summer camp for K-12 students, Spring 2019-Ongoing
- Member for Mursion implementation group, Spring 2019-Fall-2019

Courses Taught:

Graduate Level Teaching:

EMAT 5150 Elementary and Middle School *Mathematics from an Advanced perspective* (Spring 2022), University of Wyoming

EMAT 5200 *Mathematics Education Curriculum, Assessment, and Evaluation* (Spring 2020), University of Wyoming

EDCI 617 *Early Childhood and Elementary Mathematics* (Spring 2017), Texas A&M University

Undergraduate Level Teaching:

EDEL 4409 *Elementary Mathematics and Science Method* (Fall 2018, 2019, 2020), University of Wyoming

EDEL 2410 *Mathematics Seminar Course Section II-III* (Summer 2019, Spring, 2020), University of Wyoming

EDEL 1410 *Mathematics Seminar Course Section II-III* (Fall 2018, 2020), University of Wyoming

MASC 351 *Problem Solving* (Fall 2016, Spring, 2017, Fall 2017, Spring 2018), Texas A&M University

EDEL 4500 Residency in Teaching (Spring 2018, 2019, 2020, 2021), University of Wyoming

GRADUATE ADVISING

Chair for Shane Zeidler in EDCI, master degree (successfully completed, Summer, 2020)

Committee member for Amy Elizabeth Schick in EDCI, master degree (successfully completed, Fall, 2020)

Outside Committee member for Samuel David Neirman in EDCI, master degree (successfully completed, Spring 2019)

Committee member for Caitlin Luise Kennedy in EDCI, master degree (successfully completed, Summer-2021)

Committee member for Angela Ann Schanke in EDCI, PhD (ongoing)

Committee member for Karla Valesca Matute Colindres in EDCI, PhD (ongoing)

Committee member for Libni Berenice Castellon in EDCI, PhD (ongoing)

Committee member for Amy K. Kassel in EDCI, PhD (ongoing)

Temporary Advisor for Michael Gundlach in EDCI, PhD (ongoing)

Chair for Geoff Michael Krall in EDCI, PhD (ongoing)

Co-Chair for Helen Aleksani in EDCI, EdD (ongoing)

Temporary Advisor for Noel Davis in EDCI, master degree (ongoing)