Terri L. Kurz, Ph.D.

Mary Lou Fulton College for Teaching and Learning Innovation
STEM Education
terri.kurz@asu.edu (480) 727-5204

EMPLOYMENT

Arizona State University, STEM Education
- Associate Professor (May 2014 - Current)
- Assistant Professor (August 2008 - April, 2014)
- Barrett, The Honors College Faculty (2012 - 2019)
- Doctoral Advisor (2019 - 2023)

California State University, Bakersfield, Mathematics Education
- Assistant Professor (August 2004 - July, 2008)

Arizona State University (2002-2004)
- Research and Teaching Assistant, Educational Technology

Secondary Teacher, Canyon Country, California (1994-2002)
- Algebra, Pre-Algebra, General Math, World History, United States History, Independent Study, Gifted, Special Education, Historically Underserved

EDUCATION

Ph.D. Arizona State University (2002-2004)
- Major: Curriculum and Instruction (Mathematics Education) Minor: Gifted Education
- Dissertation Chair: Dr. James Middleton

M.A. California State University, Northridge (1998-1999)
- Major: Education (Curriculum and Instruction)

Clear Single Subject Teaching Credential, California Lutheran University (1992-1993)
- Primary: Single Subject, Social Science
- Supplementary: Mathematics
- Expiration: March 1, 2029

B.A. California State University, Northridge (1988-1992)
- Major: History

SCHOLARSHIP

FUNDED NATIONAL GRANTS

Year	Title and Allocation	Agency and Role	Amount
2024	*Using Visual Computing to Deepen Mathematical Learning in Preservice K-8 Teacher Education* Allocation: 40% (2024 to current)	National Science Foundation (NSF) Principal Investigator	$750,000
2020	*ImageSTEAM: Middle School Teacher and Student Experiences with Artificial Intelligence via Computational Cameras* Allocation: 15% (2020 to 2025)	NSF Co-Principal Investigator	≈ $800,000
2019	*The Physics of Elementary Mathematics* Allocation: 28% (when funded) 56% (2019 to 2023)	NSF Principal Investigator	$300,000
2018	*Developing Resilient STEM Teachers for High-Need Middle Schools* Allocation: 25% (2018 to 2019) 50% (2019 to 2024)	NSF Co-Principal Investigator	≈$1,200,000
2015	*Teacher Preparation to Promote Successful Schooling Outcomes for English Language Learners "Success for ELLs"* Allocation: 5% (proposal recognition)	United States Department of Education Co-Principal Investigator	≈$11,900,000
			≈$14,950,000

INTERNALLY FUNDED GRANTS

Year	Title	Funding Source	Role	Amount
2019	*Creating a Hybrid Version of MTE 281* Allocation: 100%	Arizona State University	Principal Investigator	$5,000

JOURNAL PUBLICATIONS

Kurz, T., Mendonca, M.* & Ganesh, T. (accepted with minor revisions). The Set Model: A Flexible Approach for Dividing Fractions. *School Science and Mathematics*.

Kurz, T. Ganesh, T., Covert, J. & Nation, M. (2025). Persistence patterns among secondary STEM teachers: A comparative study of Noyce scholar cohorts in face-to-face and blended learning environments amid the pandemic. *Frontiers in Education,10,* 1-11. Available: https://www.frontiersin.org/articles/10.3389/feduc.2025.1571711 doi: 10.3389/feduc.2025.1571711

Kurz, T.L., Kurban, F., Jayasuriya, S. & Swisher, K. (2025). Exploring the intersection of engineering and technology: Tinkercad in the middle school classroom. *Technology and Engineering Education, 2*(3), 25-29.

Kurz, T., Swisher, K. & Jayasuriya, S. (2024). Computer vision activities for the k–8 mathematics classroom emphasizing feature recognition using teachable machine. *AMTE (Association of Mathematics Teacher Educators) Connections,* Summer. Available: https://amte.net/sites/amte.net/files/Connections%20%28Kurz%29.pdf

Kurz, T. & Kurban, F. (2024). Attending to geometric properties. *Mathematics Teacher: Learning and Teaching PK-12, 117*(8), 594-600.

Kurz, T., Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R. & Robinson, D.T. (2024). The impact of teachable machine on middle school teachers' perceptions of science lessons after professional development. *Education Sciences 14,* (417), 1-17. Available: https://www.mdpi.com/2227-7102/14/4/417

Kurz, T. (2024). Using machine learning to identify triangles with early elementary children. *Technology and Engineering Education, 2*(2) 20-23.

Kurz, T. & Lee, M. (2024). Preservice teachers' errors in the creation and extension of sequences using color tiles: An exploratory study. *School Science and Mathematics 124* (2) 126-140.

Jackson, K.,** **Kurz, T**. & Marian, M. (2023). Dietetic students' changes in attitudes after participating in online interprofessional education. *Journal of Dietetic Education 1*(2). Available at: https://ecommons.udayton.edu/jde/vol1/iss2/5

Kurz, T. & Ganesh, T. (2023). Visualizing fraction multiplication with circles and hexagons. *The California Mathematics Council's ComMuniCator, 47*(3), 25-7.

Kurz, T., Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R. & Robinson, D.T. (2022). Investigating changes in teachers' perceptions about artificial intelligence after virtual professional development. *Journal of Interactive Learning Research, 33*(4), 225-241.

Kurz, T. (2020). Three Approaches to Dividing Fractions Using Tools. *California Mathematics Council's ComMuniCator, 44*(3), 14-17.

Bloom, P.*, **Kurz, T.** & Yanik, H. (2020). Probabilities of sickle cell disease. *Mathematics Teacher: Learning and Teaching PK-12, 113*(2), 152-155.

Pestridge, G.*, Mullenmeister, M.* & **Kurz, T.** (2019). Visualizing Factors and Multiples. *Oncore (Spring)*, 5-14.

Mullenmeister, M.*, Pestridge, G.*, & **Kurz, T.** (2019). Using Venn diagrams to visually represent the GCF and LCM. *California Mathematics Council's ComMuniCator, 43*(4), 16-17.

Mullenmeister, M.* Pestridge, G.*, & **Kurz, T.** (2019). Venn diagrams with GCF and LCM. *California Mathematics Council's ComMuniCator, 43*(4), 36-39.

Kurz, T. & Yanik, B. (2019). Learning algebra through motion: An examination of preservice teachers' misconceptions when using motion detectors for the first time. *Investigations in Mathematics Learning, 11*(1), 44-55.

Kurz, T., Lee, M., Leming, S.*, & Landis, W.*, (2019). Visualizing equations using color tiles. *Mathematics Teaching in the Middle School, 24*(5), 304-314.

Fefolt, M.*, & **Kurz, T.** (2018). Problem solving with the Greek gods. *Teaching Children Mathematics 25* (1), 14-15.

Connor, C., Mazzocco, M., **Kurz, T**., Crowe, E., Tighe, E., Wood, T., & Morrison, F. (2018). Using assessment to individualize early mathematics instruction. *Journal of School Psychology, 66,* 97-113.

Kurz, T. & Lee, M. (2018). Making sense of right triangles using tools. *Mathematics Teaching in the Middle School, 23*(4), 226-230.

Kurz, T., Gómez, C. & Jimenez-Silvia, M. (2017). Guiding preservice teachers to adapt mathematics word problems through interactions with ELLs. *Journal of Urban Mathematics Education, 10*(1), 32-51. Available: https://jume-ojs-tamu.tdl.org/jume/article/view/291

Lee, M. & **Kurz, T.** (2017). Lights, Shadow, Action! *Teaching Children Mathematics, 24*(2), 136-9.

Kurz, T. & Bloom, P.* (2017). Investigating linear ratios using reasoning. *California Mathematics Council's ComMuniCator, 41*(4), 30-37.

Kurz, T. (2017). Finding linear and quadratic equations in integer patterns. *Mathematics Teacher 110* (6), 454-460.

Kurz, T., Yanik, H.B., & Lee, M. (2016). Dog mathematics: Exploring base-4. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas 89*(6), 185-190.

Kurz, T. & Robles, R.** (2016). Building an amusement park ride. *Teaching Children Mathematics, 22*(9), 564-566.

Kurz, T. & Serrano, A.* (2016). Let's get movin'. *Teaching Children Mathematics 22*(5), 311-314.

Kurz, T., Yanik, B. & Lee, M. (2015). The geometry of scoliosis. *Teaching Children Mathematics 21*(6), 372-375.

Kurz, T. & Garcia, J. (2015). Covering the bases: Exploring alternative base systems. *Mathematics Teacher 108*(7), 549-552.

Leung, M. *& **Kurz, T.** (2015). Pizza parlor mathematics. *Teaching Children Mathematics 21*(7), 400-401.

Kurz, T. & Kokić, I. (2014). Predilections on requisite pedagogical content for mathematics and science video cases. *Technology, Instruction, Cognition and Learning, 9*(4), 275-293.

Yanik, H. B., **Kurz, T.** & Memis, Y. (2014). Using archeological data to model mathematics. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 87*(4), 249-253.

Sibley, A.* & **Kurz, T.** (2014). Celebrating Earth Day with sustainability. *Teaching Children Mathematics, 20*(8), 516-520.

Kurz, T. (2014). Mathematics in the context of tiling. *Teaching Children Mathematics, 20*(7), 416-7.

Sibley, A.* & **Kurz, T.** (2014). Keep on rollin'. *Teaching Children Mathematics, 20*(5), 326-329.

Sibley, A.* & **Kurz, T.** (2013). Exploring nature through mathematics. *Teaching Children Mathematics 20*(1), 16-17.

Kurz. T. (2013). Setting up symmetrical structures. *Teaching Children Mathematics, 20*(2), 116-119.

Kurz, T. (2013). Using technology to balance algebraic explorations. *Teaching Children Mathematics, 19*(9), 554-562.

Kurz, T. & Bartholomew, B. (2013). Conceptualizing mathematics using narratives and art. *Mathematics Teaching in the Middle School, 18*(9), 552-559.

Kurz, T. (2013). Quilting is sew mathematical! *Teaching Children Mathematics 19*(7), 416-7.

Kurz, T., Yanik, H. & Santi, L.*(2013). Symmetric Grids. *Oncore,* (Spring), 20-28.

Kurz, T. (2013). Get your bearings. *Teaching Children Mathematics, 19*(6), 352-353.

Kurz, T. (2013). Target zombies with plants and math. *Mathematics Teaching in the Middle School, 18*(7), 440-443.

Kurz, T. & Garcia, J. (2012). The complexities of teaching prime decomposition and multiplicative structure with tools to preservice elementary teachers. *Journal of Research in Education 22*(2), 169-193.

Kurz, T. & Bartholomew, B. (2012). Supporting math skills with children's stories. *Kappa Delta Pi Record 48* (4), 184-188.

Kurz, T. & Bartholomew, B. (2012). Rethinking Dr. Seuss' *The Lorax*-mathematically. *Mathematics Teaching in the Middle School, 18*(3), 180-187.

Kurz, T. & Kokić, I. (2012). Designing and incorporating mathematics-based video cases highlighting virtual and physical tool use. *Journal of Digital Learning in Teacher Education, 29*(1), 23-29.

Kurz, T. & Garcia, J. (2012). Moving beyond factor trees. *Mathematics Teaching in the Middle School, 18*(1), 52-60.

Kurz, T. (2012). A super way to soak in linear measurement. *Teaching Children Mathematics, 18*(9), 536-541.

Kurz, T. & Garcia, J. (2012). Discovering Mexico through mathematics. *Teaching Children Mathematics 18*(8), 472-473.

Kurz, T. (2011). Online algebraic tools for teaching. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 84*(6), 260-3.

Kurz, T. & Kokić, I. (2011). Preservice teachers' observations of children's learning during family math night. *Journal of Research in Education, 21*(2), 24-36.

Gómez, C., **Kurz, T.** & Jimenez-Silva, M. (2011). Your inner English teacher. *Mathematics Teaching in the Middle School 17*(4) 238-243.

Kurz, T. (2011). Establishing field-based learning by incorporating family math night into a mathematics methodology course. *Problems Resources and Issues in Mathematics Undergraduate Studies (PRIMUS) 21*(3), 225-237.

Kurz, T. (2011). Discovering features of web-based algebraic tools via data analysis to support technology integration in mathematics education. *Journal of Curriculum and Instruction 5*(1), 85-100.

Gómez, C. & **Kurz, T.** (2011). Using Bloom's taxonomy with English language learners. *Mathematics Teaching in the Middle School 16*(7), 388-391.

Kurz, T. & Garcia, J. (2010). Prime decomposition using tools. *Teaching Children Mathematics, 17*(4), 256-259.

Kurz, T. & Garcia, J. (2010). Going green. *Teaching Children Mathematics 17*(3), 138-9.

Kurz, T. & Batarelo, I. (2010). Constructive features of video cases to be used in teacher education. *TechTrends, 54*(5), 46-52.

Kurz, T., Batarelo, I. & Middleton, J. (2009). Examining elementary preservice teachers' perspectives concerning curriculum themes for video case integration. *Educational Technology, Research and Development 57*(4), 461-485.

Kurz, T. & Batarelo, I. (2009). Aligning theory with practice. *Teaching Children Mathematics 15*(7), 404-9.

Kurz, T. & Middleton, J. (2006). Using a functional approach to change preservice teachers' understanding of mathematics software. *Journal of Research on Technology in Education 39*(1)*,* 51-71.

Kurz, T., Llama, G., & Savenye, W. (2005). Issues and challenges of creating video cases to be used with preservice teachers. *TechTrends, 49*(4)*,* 67-73.

Kurz, T., Middleton, J. A., & Yanik, H. B. (2005). A taxonomy of software for mathematics instruction. *Contemporary Issues in Technology and Teacher Education* [Online serial], *5*(2). Available: http://www.citejournal.org/vol5/iss2/mathematics/article1.cfm

Kurz, T. & Batarelo, I. (2004-2005). Using anchored instruction to evaluate mathematical growth and understanding. *Journal of Educational Technology Systems, 33*(4)*,* 421-436.

BOOK

Kurz, T., Lee, M., Harris, P. & Leith, K. (2017). 100 Practice Questions to Prepare for the NES Middle School Mathematics Exam. (ebook, currently inactive) Available: www.amazon.com

PEER-REVIEWED CHAPTERS IN EDITED VOLUMES

Kurz, T. L. & Ganesh, T. (2025). Bridging Theory and Practice through Family Math Night. In D. Polly, E. Garin & C. Martin, *Clinically Based Teacher Education in Action: Cases from Mathematics Teacher Educators* (pp. 105-118). Information Age Publishing: Charlotte, North Carolina, United State of America.

Kurz, T.L. & Meltzer, D. (2023). Using a Motion Simulator to Support Learning About Linear Functions. In R. Ferdig, R. Hartshorne, E. Baumgartner, R. Kaplan-Rakowski, & C. Mouza, *What PreK-12 Teachers Should Know About Educational Technology in 2023: A Research-to-Practice Anthology* (pp. 241-51). AACE2023. Retrieved July 30, 2023 from https://www.learntechlib.org/p/222690/.

Kurz, T.L., Kurban, F., Jayasuriya, S. & Swisher, K. (2023). Middle School Mathematics Lessons Emphasizing Art and Modeling Using Visual Computing. In R. Ferdig, R. Hartshorne, E. Baumgartner, R. Kaplan-Rakowski, & C. Mouza, *What PreK-12 Teachers Should Know About Educational Technology in 2023: A Research-to-Practice Anthology* (pp. 159-66). AACE2023. Retrieved July 30, 2023 from https://www.learntechlib.org/p/222690/.

Kurz, T. L., Meltzer, D. E., & Nation, M. L. (2023). Integrating Physics into a Mathematics Content Course for Preservice K–8 Elementary Teachers. In C. Martin, B. Miller, & D. Polly (Eds.), *Technology Integration and Transformation in STEM Classrooms* (pp. 1-18). IGI Global. https://doi.org/10.4018/978-1-6684-5920-1.ch001

Yanik, H. B., **Kurz, T. L.,** & Memis, Y. (2022). Learning from Programming Robots: Gifted Third Graders Explorations in Mathematics Through Problem Solving. In I. Management Association (Ed.), *Research Anthology on Computational Thinking, Programming, and*

Robotics in the Classroom (pp. 900-925). IGI Global. https://doi.org/10.4018/978-1-6684-2411-7.ch039 (REPRINT)

Kurz, T. & Bloom, S.** (2022). Designing Problem Posing Mathematics Lessons for Remote Instruction: Discovering Geometry and Measurement Relationships. In B. Bromer & C. Crawford (Eds). *Handbook of Research on Learner-Centered Approaches to Teaching in an Age of Transformational Change* (pp 166-184). Hershey, PA. IGI Global.

Yanik, H. B., **Kurz, T. L**., & Memis, Y. (2018). Learning from Programming Robots: Gifted Third Graders Explorations in Mathematics Through Problem Solving. In H. Ozcinar, G. Wong, & H. Ozturk (Eds.), *Teaching Computational Thinking in Primary Education* (pp. 230-255). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-3200-2.ch012

Kurz, T., Bartholomew, B., Sibley, A.* & Fraser, S.* (2015). Contextualizing algebraic word problems through story using technology. In. D. Polly (Ed.), *Cases on Technology Integration in Mathematics Education.* Hershey, Pennsylvania: IGI Global.

Kurz, T. & Batarelo, I. (November, 2008). Learning to Self-Assess then Self-Assessing to Learn: Integrating the RTOP into Mathematics Teacher Preparation. In P. Michael Lutz (Ed.), *Secondary Mathematics Methods Courses in California* (pp. 20-38). Monograph published by California Association of Mathematics Teacher Educators. Available: http://edweb.csus.edu/projects/camte/monograph1.pdf

Savenye, W., Brush, T., Middleton, J., Igoe, A., & **Kurz, T.** (2004). Developing online teacher video cases for learning technology integration. In C. Vrasidas, & G. Glass (Eds.), *Current perspectives on applied information technologies: Online professional development for teachers*. Greenwich, CT: Information Age Publishing.

CONFERENCE PROCEEDINGS

Kurz, T.L. & Covert, J. (2025). Embracing Generative Artificial Intelligence (GenAI) to Support Equitable Higher Education Experiences of Secondary Teachers' Creation of Curricular Materials. In *Proceedings of SITE 2025* (pp. 708-711). Waynesville, NC USA: Association for the Advancement of Computing in Education (AACE). Retrieved March 25, 2025 from https://www.learntechlib.org/primary/p/225597/.

Kurz, T.L., Jayasuriya, S., Swisher, K., Covert, J., Mativo, J., Pidaparti, R. & Robinson, D.T. (2025). Visual Computing Professional Development and Title I Middle School Teachers' STEM Computational Thinking. In *Proceedings of SITE 2025* (pp. 40-45). Waynesville, NC USA: Association for the Advancement of Computing in Education (AACE). Retrieved March 26, 2025 from https://www.learntechlib.org/primary/p/225499/.

Kurz, T.L., Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R. & Robinson, D.T. (2025). Using Tinkercad in Middle School Mathematics and Science Classrooms. In *Proceedings of SITE 2025* (pp. 398-401). Waynesville, NC USA: Association for the Advancement of Computing in Education (AACE). Retrieved March 24, 2025 from https://www.learntechlib.org/primary/p/225551/.

Kurz, T., Ganesh, T. & Nation, M. (2024, January). Teaching Persistence in Title I Schools: The

Trajectory of Three STEM Noyce Scholar Cohorts. In *Proceedings of the Hawaii International Conference on Education*. Waikoloa, HI. Available: https://hiceducation.org/wp-content/uploads/2024/05/EDU2024.pdf

Jayasuriya, S., Swisher, K., Rego, J. D., Chandran, S., Mativo, J., **Kurz, T.**, Robinson, D. & Pidaparti, R. (2024, March). ImageSTEAM: Teacher Professional Development for Integrating Visual Computing into Middle School Lessons. In *Proceedings of the AAAI Conference on Artificial Intelligence* (Vol. 38, No. 21, pp. 23101-23109). Available: https://doi.org/10.1609/aaai.v38i21.30355

Covert, J.** & **Kurz, T.L**. (2023). Career-Focused Instructional Videos: Online Adult Learners' Perceptions of Utility Value. In Elizabeth Langran (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 491-497). New Orleans, LA, United States: Association for the Advancement of Computing in Education (AACE). Retrieved March 21, 2023 from https://www.learntechlib.org/primary/p/221915/.

Covert, J**. & **Kurz, T.L.** (2023). Developing a Survey to Measure Online Adult Learners' Perceptions of Usefulness in Career-Focused Instructional Videos. In Elizabeth Langran (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 108-112). New Orleans, LA, United States: Association for the Advancement of Computing in Education (AACE). Retrieved March 21, 2023 from https://www.learntechlib.org/primary/p/221859/.

Swisher, K., **Kurz, T.**, Jayasuriya, S., Covert, J.**, Mativo, J., Pidaparti, R. & Robinson, D.T. (2023). Middle School Teachers' Perceptions of Computer Vision. In Elizabeth Langran (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 1824-1829). New Orleans, LA, United States: Association for the Advancement of Computing in Education (AACE). Retrieved March 21, 2023 from https://www.learntechlib.org/primary/p/222123/.

Kurban, F., Yanik, H.B. & **Kurz, T.L.** (2023). Designing a technology-based instruction to support the development of learners' spatial orientation skills. In Elizabeth Langran (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 1336-1340). New Orleans, LA, United States: Association for the Advancement of Computing in Education (AACE). Retrieved March 21, 2023 from https://www.learntechlib.org/primary/p/222046/.

Kurz, T.L., Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R. & Robinson, D. (2022). Mapping In-Service Teachers' Thinking about Artificial Intelligence Before and After Professional Development. In *Proceedings of EdMedia + Innovate Learning Online 2022* (pp. 126-136). Retrieved November 4, 2022 from https://www.learntechlib.org/p/221672/.

Kurz, T.L., Meltzer, D. & Nation, M. (2022). Physics through Algebra for Preservice Elementary Teachers: A Comparison of Asynchronous and Hybrid/Face-to-Face Learning. In *Proceedings of EdMedia + Innovate Learning Online 2022* (pp. 32-36). Retrieved November 4, 2022 from https://www.learntechlib.org/p/221654/**.**

Kurz, T.L., Jayasuriya, S., Swisher, K., Mativo, J. & Pidaparti, R. (2022). Researching the Impact of Artificial Intelligence Curriculum on Teachers' Thinking. In L. Langran & D. Henriksen (Eds.), *Proceedings of SITE Interactive Conference* (pp. 330-333). Online: Association for

the Advancement of Computing in Education (AACE). Retrieved October 11, 2022 from https://www.learntechlib.org/primary/p/221614/.

Kurz, T.L., Meltzer, D. & Nation, M. (2022). Researching How Physics Technology in an Elementary Mathematics Methods Course Impacted Preservice Teachers' Efficacy. In L. Langran & D. Henriksen (Eds.), *Proceedings of SITE Interactive Conference* (pp. 234-236). Online: Association for the Advancement of Computing in Education (AACE). Retrieved October 11, 2022 from https://www.learntechlib.org/primary/p/221597/.

Kurz, T.L., Ganesh, T., Kurban, F. & Yanik, H.B. (2022). Using Virtual Manipulatives to Conceptually Teach the Division of Fractions Using the Set Model. In L. Langran & D. Henriksen (Eds.), *Proceedings of SITE Interactive Conference* (pp. 79-82). Online: Association for the Advancement of Computing in Education (AACE). Retrieved October 11, 2022 from https://www.learntechlib.org/primary/p/221572/**.**

Mativo, J., Collins, C., Robinson, D., Pidaparti, R., Swisher, K., Jayasuriya, S., O'Donnell, M., Barnard, W., & **Kurz, T**. (2022) AI through Computational Cameras for K6-K8 Teachers and Students: Preliminary Results from a Virtual Workshop, *Proceedings of ASEE SE Conference*, held at the Citadel, Charleston, SC. Available: https://par.nsf.gov/biblio/10343203

Strong, M.** & **Kurz, T.L**. (2021). Middle School Teachers' Experiences Remotely Teaching Social and Emotional Learning in a Professional Learning Community During a Pandemic. In E. Langran & D. Rutledge (Eds.), *Proceedings of SITE Interactive Conference*(pp. 451-456). Online, United States: Association for the Advancement of Computing in Education (AACE). Retrieved October 30, 2021 from https://www.learntechlib.org/primary/p/220237/.

Jackson, K.** & **Kurz, T.L.** (2021). The Impact of an Online IPE Curriculum Unit on Dietetic Students' Thinking Regarding A Dietitian's Role in Healthcare. In E. Langran & D. Rutledge (Eds.), *Proceedings of SITE Interactive Conference* (pp. 175-180). Online, United States: Association for the Advancement of Computing in Education (AACE). Retrieved October 30, 2021 from https://www.learntechlib.org/primary/p/220186/.

Kurz, T.L., Meltzer, D., Nation, M. & Lee, M.Y. (2021). Teaching Algebra in an Online, Asynchronous Environment for the First Time: Insight from University Mathematics Education Instructors. In E. Langran & D. Rutledge (Eds.), *Proceedings of SITE Interactive Conference* (pp. 405-409). Online, United States: Association for the Advancement of Computing in Education (AACE). Retrieved October 30, 2021 from https://www.learntechlib.org/primary/p/220230/.

Kurz, T.L., Jayasuriya, S., Rego, J.**, Jackson, K.**, Swisher, K., Mativo, J., Pidaparti, R., Robinson, D. & Collins, C.** (2021). Changes in Middle School Teachers' Thinking after Engaging in Professional Development Emphasizing Computer Vision. In E. Langran & D. Rutledge (Eds.), *Proceedings of SITE Interactive Conference* (pp. 313-317). Online, United States: Association for the Advancement of Computing in Education (AACE). Retrieved October 30, 2021 from https://www.learntechlib.org/primary/p/220213/.

Kurz, T.L., Harris, P.J., Ganesh, T., Nation, M., Dyer, P. & Clark, P. (2021). How remote teaching impacted our STEM Noyce scholars: Some successes, some struggles. In E. Langran & L. Archambault (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 818-821). Online, United States: Association for

the Advancement of Computing in Education (AACE). Retrieved April 13, 2021 from https://www.learntechlib.org/primary/p/219222/.

Kurz, T.L., Jackson**, K. & Harris, P.J. (2021). Using statistical software to map a university instructor's perceptions of teaching algebra. In E. Langran & L. Archambault (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference*(pp. 1403-1407). Online, United States: Association for the Advancement of Computing in Education (AACE). Retrieved April 13, 2021 from https://www.learntechlib.org/primary/p/219298/.

Kurz, T.L. & Harris, P.J. (2021). Using a virtual motion simulation to create hands-on activities to support preservice teachers' algebraic growth. In E. Langran & L. Archambault (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 420-422). Online, United States: Association for the Advancement of Computing in Education (AACE). Retrieved April 13, 2021 from https://www.learntechlib.org/primary/p/219165/.

Harris, P.J., Ganesh, T.G., **Kurz, T.L**. & Velez, J. (2020, November). Solving a logistical challenge with a virtual engineering challenge: Investigating engineering with middle school students in a social distancing environment. In T. Bastiaens & G. Marks (Eds.), *Proceedings of Innovate Learning Summit 2020* (pp. 311-315). Association for the Advancement of Computing in Education (AACE). Retrieved January 20, 2021 from https://www.learntechlib.org/primary/p/218815/.

Kurz, T.L., Harris, P.J. & Starr**, J. (2020, November). Virtual algebraic explorations: The impact of motion on slope. In T. Bastiaens & G. Marks (Eds.), *Proceedings of Innovate Learning Summit 2020* (pp. 418-422). Association for the Advancement of Computing in Education (AACE). Retrieved January 20, 2021 from https://www.learntechlib.org/primary/p/218831/.

Bloom, S.* & **Kurz, T.L.** (2020, October). Algebraic patterns using virtual color tiles: Interactively engaging leaners through online constructions. In E. Langran (Ed.), *Proceedings of SITE Interactive 2020 Online Conference* (pp. 745-746). Online: Association for the Advancement of Computing in Education (AACE). Retrieved November 10, 2020 from https://www.learntechlib.org/primary/p/218257/.

Kurz, T.L., Meltzer, D., Lee, M.Y. & Harris, P. (2020, October). Converting algebra lessons that emphasize movement into online lessons using a simulation. In E. Langran (Ed.), *Proceedings of SITE Interactive 2020 Online Conference* (pp. 752-756). Online: Association for the Advancement of Computing in Education (AACE). Retrieved November 10, 2020 from https://www.learntechlib.org/primary/p/218258/.

Starr, J.** & **Kurz, T.L**. (2020, October). Designing For Transfer: Instructional Design for Active Learning in Online Teacher Professional Development. In E. Langran (Ed.), *Proceedings of SITE Interactive 2020 Online Conference* (pp. 213-218). Online: Association for the Advancement of Computing in Education (AACE). Retrieved November 10, 2020 from https://www.learntechlib.org/primary/p/218146/.

Jackson, K.** & **Kurz, T.L.** (2020, October). Exploring Online Interprofessional Education in Dietetics. In E. Langran (Ed.), *Proceedings of SITE Interactive 2020 Online Conference* (pp. 356-359). Online: Association for the Advancement of Computing in Education (AACE). Retrieved November 10, 2020

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Kurz, T. , Kleinsasser, R., & Kokić, I. (2019, March). The use of Personal Construct Theory to research the benefits and constraints of technologies from the participants' perspectives. In *Proceedings of the Society of Information Technology and Teacher Education International Conference* in Las Vegas, NV. Available: https://www.learntechlib.org/primary/j/SITE/v/2019/n/1/

Yanik, H.B., **Kurz, T.** & Kurban, F. (2019, March). Investigating the development of pre-service teachers' spatial ability in a technology enhanced environment. In *Proceedings of the Society of Information Technology and Teacher Education International Conference* in Las Vegas, NV. Available: https://www.learntechlib.org/primary/j/SITE/v/2019/n/1/

Batarelo Kokić, I., Blažević, I., & **Kurz, T.** (2019). Primary School Teachers' Readiness for Online Professional Development. In *Beseda, Jan, Rohlíková, Lucie, Duffek, Václav (ur.). E-learning: Unlocking the Gate to Education around the Globe-14th conference reader* (pp. 370-379).

Kurz, T., Kokić, I. & Novosel, V. (2019, March). The depth and breadth of learning how to trade stocks through simulated play. In *Proceedings of the Society of Information Technology and Teacher Education International Conference* in Las Vegas, NV. Available: https://www.learntechlib.org/primary/j/SITE/v/2019/n/1/

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Kurz, T. & Yanik, H.B. (2016, May). Evidences of understandings and misconceptions of graphs after exploring using technology. In *Proceedings of the International Conference on Research in Education and Science (ICRES)* in Bodrum, Turkey. Available: http://2016.icres.net/ICRES_Proceeding_Book.pdf?rnd=20157021

Yanik, H.B., **Kurz, T.** & Memis, Y. (2016, May). Exploring graphing through programmable robots. In *Proceedings of the International Conference on Research in Education and Science (ICRES)* in Bodrum, Turkey. Available: http://2016.icres.net/ICRES_Proceeding_Book.pdf?rnd=20157021

Kurz, T. & Yanik, H.B. (2015, March). The impact of using the CBR2 on preservice teachers' understanding of graphs. In *Proceeding of the 26th International Conference on the Society for Information Technology and Teacher Education* in Las Vegas, Nevada. Available: http://www.editlib.org/j/SITE/v/2015/n/1/

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Yanik, H. B., **Kurz, T.** & Memis, Y. (2014, January). Insightful Models Created by Students Investigating a STEM Task. In *Proceedings of the Hawaii International Conference on Education*. Honolulu, HI.

Kurz, T. & Bartholomew, B. (2014, January). Constructing narratives as a context for algebra. In

Proceedings of the Hawaii International Conference on Education. Honolulu, HI.

Kurz, T. (2013, January). Preservice teachers' growth in understanding divisibility using tools and reasoning. In *Proceedings of the Hawaii International Conference on Education*. Honolulu, HI.

Kurz, T. (2011, October). Themes for video case integration in mathematics and science. In Wiest, L. R., & Lamberg, T. (Eds.) *Proceedings of the 33rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education.* Reno, NV: University of Nevada, Reno.

Kurz, T., Yanik, H.B. & Garcia, J. (2009, September). Helping a young child connect fact family addition and subtraction using tools. In L. Paditz and A. Rogerson (Eds.), *Proceedings of the 10th International Conference for The Mathematics Education into the 21st Century Project, "Models in Developing Mathematics Education,"* Dresden, Saxony, Germany. Available: http://math.unipa.it/~grim/21_project/Kurz353-357.pdf

Kurz, T., Middleton, J. A., & Yanik, H. B. (2004). Preservice teachers' conceptions of mathematics-based software. In *Proceedings of the International Group for the Psychology of Mathematics Education Conference PME-28*, Bergin, Norway.

Savenye, W., Middleton, J. A., Oksuz, C., **Kurz, T.,** Llama, G., Li, J., Igoe, A., Mann, M., Louis, E., & Puligundla, P. (2003). Developing and researching videocases for teacher education. In *Proceedings of E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, & Higher Education.* Phoenix, AZ: AACE.

PEER-REVIEWED CONFERENCE PRESENTATIONS

Kurz, T., & Covert, J. (2025, March). *Embracing Generative Artificial Intelligence (GenAI) to Support Equitable Higher Education Experiences of Secondary Teachers' Creation of Curricular Materials.* Paper to be presented at Society for Information Technology and Teacher Education (SITE) annual conference Orlando, FL, United States.

Kurz, T., Ganesh, T., & Covert, J. (2025, March). *Investigating How Learning and Teaching Modes Shaped STEM Novice Teacher Retention Rates.* Paper to be presented at Society for Information Technology and Teacher Education (SITE) annual conference Orlando, FL, United States.

Kurz, T., Jayasuriya, S., Swisher, K., Covert, J., Mativo, J., Pidaparti, R. & Robinson, D.T. (2025, March). *Visual Computing Professional Development and Title I Middle School Teachers' STEM Computational Thinking.* Paper to be presented at Society for Information Technology and Teacher Education (SITE) annual conference Orlando, FL, United States.

Kurz, T., Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R. & Robinson, D.T. (2025, March). *Using Tinkercad in Middle School Mathematics and Science Classrooms.* Paper to be presented at Society for Information Technology and Teacher Education (SITE) annual conference Orlando, FL, United States.

Jayasuriya, S., Swisher, K., Rego, J. D., Chandran, S., Mativo, J., **Kurz, T.**, Robinson, D. & Pidaparti, R. (2024, March). *ImageSTEAM: Teacher Professional Development for Integrating Visual Computing into Middle School Lessons*. Paper presented at the AAAI Conference on Artificial Intelligence in Vancouver, British Columbia.

Kurz, T., Ganesh, T. & Nation, M. (2024, January). *STEM teachers' perceptions of their well-being in Arizona Title I schools*. Paper presented at the Hawaiian International Conference on Education, Waikoloa, Big Island, Hawaii, United States.

Kurz, T., Ganesh, T. & Nation, M. (2024, January). *Teaching Persistence in Title I Schools: The trajectory of three STEM Noyce scholar cohorts.* Paper presented at the Hawaiian International Conference on Education, Waikoloa, Big Island, Hawaii, United States.

Dyer, P., Ganesh, T. & **Kurz, T.** (2023, March). *ASU's Noyce scholars and remote teaching: Lessons learned in the field*. Paper presented at the NSF's Western Regional Noyce Network Conference, Sacramento, CA, United States.

Covert, J.** & **Kurz, T**. (2023, March). *Career-Focused Instructional Videos: Online Adult Learners' Perceptions of Utility Value*. Paper presented at Society for Information Technology and Teacher Education (SITE) annual conference New Orleans, LA, United States.

Covert, J.** & **Kurz, T.** (2023, March). *Developing a Survey to Measure Online Adult Learners' Perceptions of Usefulness in Career-Focused Instructional Videos.* Paper presented at Society for Information Technology and Teacher Education (SITE) annual conference New Orleans, LA, United States.

Kurban, F., Yanik, H.B. & **Kurz, T.** (2023, March). *Designing a technology-based instruction to support the development of learners' spatial orientation skills*. Paper presented at Society for Information Technology and Teacher Education (SITE) annual conference New Orleans, LA, United States.

Swisher, K., **Kurz, T.**, Jayasuriya, S., Covert, J.,** Mativo, J., Pidaparti, R. & Robinson, D.T. (2023, March). *Middle School Teachers' Perceptions of Computer Vision*. Paper presented at Society for Information Technology and Teacher Education (SITE) annual conference New Orleans, LA, United States.

Jayasuriya, S., **Kurz, T.,** Swisher, K., Mativo, J., & Pidaparti, R. (2023, January). *Artificial Intelligence Activities for Teachers: What and How They Learned*, Paper presented at the Hawaiian International Conference on Education, Honolulu, Oahu, Hawaii, United States.

Kurz, T., Meltzer, D. & Nation, M. (2023, January). *Physics and elementary mathematics in undergraduate teacher preparation.* Paper presented at the Hawaiian International Conference on Education, Honolulu, Oahu, Hawaii, United States.

Kurz, T. & Meltzer, D. (2023, January). *The Mathematics and Science Backgrounds of Elementary Preservice Teachers.* Paper presented at the International Academic Forum's (IAFOR) International Conference on Education – Hawaii (IICE), Honolulu, Oahu, Hawaii, United States.

Kurz, T., Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R. & Robinson, D. (2022, November). *Mapping In-Service Teachers' Thinking about Artificial Intelligence Before and After Professional Development*. Paper virtually presented at EdMedia + Innovate Learning Annual

Online Conference.

Kurz, T., Meltzer, D. & Nation, M. (2022, November). *Physics through Algebra for Preservice Elementary Teachers: A Comparison of Asynchronous and Hybrid/Face-to-Face Learning*. Paper virtually presented at EdMedia + Innovate Learning Annual Online Conference.

Jayasuriya, S., Pidaparti, R., Swisher, K., Mativo, J., **Kurz, T**., & Robinson, D. (2022, November). *Middle School Teachers' and Students' Experiences with Artificial Intelligence via Computational Cameras*. Presented at the NSF virtual Innovative Technology Experiences for Students and Teachers (ITEST) Principal Investigator (PI) meeting.

Kurz, T., Meltzer, D., & Nation, M., (2022, October). *Researching How Physics Technology in an Elementary Mathematics Methods Course Impacted Preservice Teachers' Efficacy.* Paper virtually presented at Society of Information Technology and Teacher Education (SITE) Interactive Online Conference.

Kurz, T., Jayasuriya, S., Swisher, K., Mativo, J., & Pidaparti, R., (2022, October). *Researching the Impact of Artificial Intelligence Curriculum on Teachers' Thinking*, Paper virtually presented at Society of Information Technology and Teacher Education (SITE) Interactive Online Conference.

Kurz, T., Ganesh, T., Kurban, F., & Yanik, H.B. (2022, October). *Using Virtual Manipulatives to Conceptually Teach the Division of Fractions Using the Set Model.* Paper virtually presented at Society of Information Technology and Teacher Education (SITE) Interactive Online Conference.

Mativo, J., Collins, C., Robinson, D., Pidaparti, R., Swisher, K., Jayasuriya, S., O'Donnell, M., Barnard, W., & **Kurz, T**. (2022) AI through Computational Cameras for K6-K8 Teachers and Students: Preliminary Results from a Virtual Workshop, Paper presented at the *American Society for Engineering Education Conference*, held at the Citadel, Charleston, SC, United States.

Collins, C., Robinson, D., Mativo, J., Pidaparti, R., Jayasuriya, S., Swisher, K., O'Donnell, M., & **Kurz, T.** (2022, April) Using Affect Control Theory to Test the Effectiveness of a Middle School STEM Workshop, Abstract presented at *the Annual Meeting of the Southern Sociological Society*, April 6-9, 2022, Birmingham, Alabama, United States.

Kurz, T. & Bloom, S.** (2021, October). *Integrating Movement into an Algebra Course for Preservice Teachers While Social Distancing.* Paper virtually presented at School Science and Mathematics Association (SSMA) annual conference.

Kurz, T. & Bloom, P.* (2021, October). *Mapping Perceptions of Mathematics and Physics Curriculum Approaches.* Paper virtually presented at School Science and Mathematics Association (SSMA) annual conference.

Kurz, T., Meltzer, D., Nation, M., & Lee, M. (2021, October). *Teaching Algebra in an Online, Asynchronous Environment for the First Time: Insight from University Mathematics Education Instructors.* Paper virtually presented at Society of Information Technology and Teacher Education (SITE) Interactive Online Conference.

Jackson, K.** & **Kurz, T.** (2021, October). *The Impact of an Online IPE Curriculum Unit on Dietetic Students' Thinking Regarding A Dietitian's Role in Healthcare.* Paper virtually presented at Society of Information Technology and Teacher Education (SITE) Interactive

Online Conference.

Strong, M.** & **Kurz, T.** (2021, October). *Middle School Teachers' Experiences Remotely Teaching Social and Emotional Learning in a Professional Learning Community During a Pandemic.* Paper virtually presented at Society of Information Technology and Teacher Education (SITE) Interactive Online Conference.

Kurz, T., Jayasuriya, S., Rego, J.**, Jackson, K.**, Swisher, K., Mativo, J., Pidaparti, R., Robinson, D. & Collins, C.** (2021, October). *Changes in Middle School Teachers' Thinking after Engaging in Professional Development Emphasizing Computer Vision*. Paper virtually presented at Society of Information Technology and Teacher Education (SITE) Interactive Online Conference.

Batarelo Kokić, I., **Kurz, T.**, & Tudor, A. (2021, September). Self-perceived problematic Internet use among Croatian adolescents. DisCo 2021: Active Learning in Digital Era: How Digital Tools promote a Conscious, Open-minded, Creative and Social-Oriented Thinking, Prague, Czech Republic, September 6-7, 2021. https://disconference.eu/cs/programme/

Lee, M. & **Kurz, T.** (2021, May). *Developing preservice teachers' algebraic reasoning through pattern generalization activities*. Paper virtually presented at the International Online Conference on Mathematics Education annual conference in Istanbul, Turkey.

Kurz, T. & Harris, P. (2021, March). *Using a virtual motion simulation to create hands-on activities to support preservice teachers' algebraic growth.* Paper virtually presented at Society for Information Technology and Teacher Education (SITE) annual conference.

Kurz, T., Harris, P., Ganesh, T., Nation, M., Dyer, P. & Clark, P. (2021, March). *How remote teaching impacted our STEM Noyce scholars: Some successes, some struggles.* Paper virtually presented at Society for Information Technology and Teacher Education (SITE) annual conference.

Kurz, T., Jackson, K.**, & Harris, P. (2021, April). *Using statistical software to map a university instructor's perceptions of teaching algebra.* Paper virtually presented at Society for Information Technology and Teacher Education (SITE) annual conference.

Harris, P., Ganesh, T., **Kurz, T.**, and Velez, J. (2020, November). *Solving a logistical challenge with a virtual engineering challenge: Investigating engineering with middle school students in a social distancing environment.* Paper virtually presented at the Association for the Advancement of Computing in Education's Innovate Learning Summit.

Kurz, T., Harris, P. & Starr, J.** (2020, November). *Virtual algebraic explorations: The impact of motion on slope.* Paper virtually presented at the Association for the Advancement of Computing in Education's Innovate Learning Summit.

Kurz, T., Meltzer, D., Lee, M., & Harris, P. (2020, October). *Converting algebra lessons that emphasize movement into online lessons using a simulation.* Paper virtually presented at Society of Information Technology and Teacher Education (SITE) Interactive Online Conference.

Jackson, K.** & **Kurz, T.** (2020, October). *Exploring online interprofessional education in dietetics.* Paper virtually presented at Society of Information Technology and Teacher Education (SITE) Interactive Online Conference.

Bloom, S.* & **Kurz, T.** (2020, October). *Algebraic patterns using virtual color tiles: Interactively engaging learners through online constructions.* Paper presented at Society of Information Technology and Teacher Education (SITE) Interactive Online Conference.

Starr, J.** & **Kurz, T.** (2020, October). *Designing for transfer: Instructional design for active learning in online teacher professional development.* Paper presented at Society of Information Technology and Teacher Education Interactive (SITE) Online Conference.

Kurz, T. & Lee, M. (2020, February*). Preservice teachers' inaccuracies when constructing and analyzing algebraic patterns.* Paper presented at the Twenty-Fourth Annual Association of Mathematics Teacher Educators Conference in Phoenix, AZ.

Harris, P., **Kurz, T**., Ganesh, T., & Dyer, P. (2020, February). *The challenges and success of recruiting STEM teachers for ASU's Noyce Scholarship Program*. Paper presented at the Twenty-Fourth Annual Association of Mathematics Teacher Educators Conference in Phoenix, AZ.

Batarelo Kokić, I., Blažević, I., & **Kurz, T.** (2019, June). *Primary School Teachers' Readiness for Online Learning.* DISCO 2019: 14th International Conference E- learning: Unlocking the Gate to Education around the Globe Prague, Czech Republic, June 20-21, 2019.

Kurz, T., Kleinsasser, R., & Kokić, I. (2019, March). *The use of Personal Construct Theory to research the benefits and constraints of technologies from the participants' perspectives.* Paper presented at Society of Information Technology and Teacher Education International Conference in Las Vegas, NV.

Yanik, H.B., **Kurz, T.** & Kurban, F. (2019, March). *Investigating the development of pre-service teachers' spatial ability in a technology enhanced environment.* Paper presented at Society of Information Technology and Teacher Education International Conference in Las Vegas, NV.

Kurz, T., Kokić, I. & Novosel, V. (2019, March). *The depth and breadth of learning how to trade stocks through simulated play.* Paper presented at Society of Information Technology and Teacher Education International Conference in Las Vegas, NV.

Novosel, V., Batarelo Kokić, I. & **Kurz, T.** (2017, September), *The Pulse of the "Heart of the University": Exploring Higher Education Teacher–Librarian Partnership*. Paper presented at The Fourth European Conference on Information Literacy (ECIL) in Saint-Malo, France.

Kurz, T. Batarelo Kokić, I. & Novosel, V. (2017, September). *Acquiring Stock Market Literacy*. Paper presented at The Fourth European Conference on Information Literacy (ECIL) in Saint-Malo, France.

Kurz, T., (2016, October). *Using Dendrograms to Contrast Preservice Teachers Concepts of Mathematics and Science Teaching*. Paper presented at the School Science and Mathematics Association (SSMA) Annual Convention in Phoenix, AZ.

Kurz, T., (2016, October). *The Interactive Nature of Rectangles in Teaching Algebra Reasoning to Preservice Teachers.* Paper presented at the School Science and Mathematics Association (SSMA) Annual Convention in Phoenix, AZ.

Kurz, T. (2016, October). *Position as elevation? Difficulties understanding position/time graphs*. Paper presented at the National Council of Teachers of Mathematics (NCTM) Regional Conference and Exposition in Phoenix, Arizona.

Kokić, I., **Kurz, T.** & Novosel, V. (2016, October). *Student Teachers' Perceptions of an Inclusive Future.* Paper presented at the Fourth European Conference on Information Literacy (ECIL) in Prague, Czech Republic.

Kurz, T., Kleinsasser, R. & Kokić, I. (2016, October). *Enhancing understanding of participants' thinking about technology using Personal Construct Theory*. Paper presented at the Association for Educational Communications and Technology (AECT), Learning from Las Vegas Annual Conference in Las Vegas Nevada.

Kurz, T. & Kokić, I. (2016, October) *Mathematics, the Stock Market and Technology: Learning How the Market Works Using an Interactive Game*. Paper presented at the Association for Educational Communications and Technology (AECT), Learning from Las Vegas Annual Conference in Las Vegas Nevada.

Kurz, T. & Yanik, H.B. (2016, May). *Evidences of understandings and misconceptions of graphs after exploring using technology.* Paper presented at the International Conference on Research in Education and Science (ICRES) in Bodrum, Turkey.

Yanik, H.B., **Kurz, T**. & Memis, Y. (2016, May). *Exploring graphing through programmable robots*. Paper presented at the International Conference on Research in Education and Science (ICRES) in Bodrum, Turkey.

Kurz, T. & Kokić, I. (2015, December). *Preservice teachers' challenges with slope after using motion detectors.* Paper presented at the Arizona Educational Research Organization Annual Conference in Tempe, Arizona.

Kurz, T. & Yanik, H.B. (2015, March). *The impact of using the CBR2 on preservice teachers' understanding of graphs.* Paper presented at the 26th International Conference on the Society for Information Technology and Teacher Education in Las Vegas, Nevada.

Kurz, T. (2015, March). *Insight into perceptions of mathematics using Wordle*. Paper presented at the 26th International Conference on the Society for Information Technology and Teacher Education in Las Vegas, Nevada.

Yanik, H. B., **Kurz, T.** & Memis, Y. (2014, January). *Insightful Models Created by Students Investigating a STEM Task*. Paper presented at the Hawaii International Conference on Education. Honolulu, HI.

Kurz, T. & Bartholomew, B. (2014, January). *Constructing narratives as a context for algebra.* Paper presented at the Hawaii International Conference on Education. Honolulu, HI.

Kokić, I. & **Kurz, T.** (2013, September). *Content analysis of the online asynchronous discussion on the intercultural issues in an undergraduate educational policy course.* Paper presented at the International Association for Intercultural Education in Zagreb, Croatia.

Kurz, T. (2013, January). *Preservice teachers' growth in understanding divisibility using tools and reasoning.* Paper presented at the Hawaii International Conference on Education. Honolulu, HI.

Kurz, T. (2011, October). *Themes for video case integration in mathematics and science.* Paper presented the 33rd Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Reno, NV: University of Nevada, Reno.

Yanik, H.B. & **Kurz, T.** (2010, November). *The influence of the level determination exam on a middle school mathematics teacher's classroom practices*. Paper presented at the annual meeting of Arizona Education Research Organization, Mesa, Arizona.

Kurz, T., Yanik, H.B. & Garcia, J. (2009, September). *Helping a young child connect fact family addition and subtraction using tools*. Paper presented at the 10th International Conference for The Mathematics Education into the 21st Century Project, Dresden, Germany.

Batarelo, I. & **Kurz, T.** (2008, June). *Hybrid course opportunities: Investigating two undergraduate courses for future teachers*. Paper presented at the annual meeting of ED-MEDIA, World Conference on Educational Multimedia, Hypermedia and Telecommunications, Vienna, Austria.

Kurz, T., Batarelo, I. & Lopez, D.**(2008, June). *Elementary preservice teachers designing website supported mathematical investigations for students performing below grade level*. Paper presented at the annual meeting of ED-MEDIA, World Conference on Educational Multimedia, Hypermedia and Telecommunications, Vienna, Austria.

Baratelo, I., **Kurz, T**., Andrews, S. & Middleton, J. (2007, April). *Preservice teachers' observations on teaching and learning: Investigating the use of the best practices video cases.* Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, IL.

Savenye, W., Ho, C., Middleton, J., Brush, T., Igoe, A., Julian, M., Oksuz, C., **Kurz, T**., & Li, J. (2004, June). *Digital videocases for preservice teacher education: Lessons learned.* Paper presented at the Annual Meeting of the American Educational Research Association. San Diego, CA.

Kurz, T., Middleton, J. A., & Yanik, H. B. (2004). *Preservice teachers' conceptions of mathematics-based software*. Paper presented at the International Group for the Psychology of Mathematics Education Conference PME-28, Bergin, Norway.

Kurz, T., Llama, G., Savenye, W. & Li, J. (2003). *The beginnings of a case: The best practices project.* Paper presented at the Annual Meeting of E-Learning, Phoenix, AZ.

Llama, G., **Kurz, T.**, & Savenye, W. (2003). *Video case instruction for preservice teachers.* Paper presented at the Annual Meeting of E-Learning, Phoenix, AZ.

Li, J., Middleton, J. A., Oksuz, C., Savenye, W., Louis, E., & **Kurz, T**. (2003). *Digitizing classroom video: Technical considerations in video editing.* Paper presented at the Annual E-learning Conference, Phoenix, AZ.

Savenye, W., Middleton, J. A., Oksuz, C., **Kurz, T**., Llama, G., Li, J., Igoe, A., Mann, M., Louis, E., & Puligundla, P. (2003). *Developing and researching videocases for teacher education.* Paper presented at E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, & Higher Education. Phoenix, AZ: AACE.

Savenye, W., Brush, T., Middleton, J., Julian, M., Igoe, A., Brush, J., Horn, P., Chadwick, J., Oksuz, C., Li, J., **Kurz, T**., & Llama, G. (2003, April). *Developing and evaluating online teacher video cases for learning technology integration.* Annual Meeting of the American Educational Research Association. Chicago, IL.

Savenye, W., Brush, T., Middleton, J. A., Blocher, M., Horn, P., Oksuz, C., Li, J., Ziobrowski, C., Tan, A., Brush, J., **Kurz, T.**, Chadwick, J., & Perko, K. (2003). *Teacher video cases for learning how to integrate technology: The PT3 - "teaching practices" project.* Paper presented at the Annual Meeting of the Society for Information Technology and Education. Albuquerque, NM.

Savenye, W., Brush, T., **Kurz, T**., Igoe, A, & Middleton, J. (2002). *A multimedia database to improve teaching with technology: The "best practices" digital video project*. Paper presented at the National Conference for the Association for Educational Communications and Technology, Dallas, TX.

Savenye, W., Brush, T., Middleton, J., Blocher, M., Horn, P., Oksuz, C., Li, J., Ziobrowski, C., Tan, A., Brush, J., **Kurz, T**., Chadwick, J., & Perko, K. (2002, April). *Improving teaching with technology: The "best practices" digital video project.* Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Brush, T., Savenye, W., Ziobrowski, C., Middleton, J., Horn, P., Blocher, J. M., Chadwick, J., Oksuz, C., Li, J., Tan, A., & **Kurz, T.** (2002). *Developing digital video resources to improve teaching with technology*. Proceedings of the 13th International Conference of the Society for Information Technology and Teacher Education. Nashville, TN.

CONFERENCE WORKSHOPS

Kurz, T. & Ganesh, T. (2025, July). *An Introduction to the Use of Tinkercad in Algebra.* Workshop presented at the NSF's Annual Noyce Conference, Washington DC, United States.

Kurz, T. & Ganesh, T. (2024, February). *Making Sense of Fraction Multiplication and Division in the Middle School Classroom*. Workshop presented at the NSF's Western Regional Noyce Network Conference, Portland, OR, United States.

Ganesh, T. & **Kurz, T.** (2024, February). *Let's Table This: An Engineering Habits of Mind Task*. Workshop presented at the NSF's Western Regional Noyce Network Conference, Portland, OR, United States.

Kurz, T. (2024, January). *Exploring the Logic of Fractional Operations with Pattern Blocks.* Workshop presented at the iTeach 2024 Conference, organized by the Imagine Schools Southwest Regional Conference, Apache Junction, AZ.

Kurz, T. & Ganesh, T. (2023, June). *All Set to Teach the Division of Fractions.* Workshop presented at the NSF's Annual Noyce Conference, Washington DC, United States.

Meltzer, D. **Kurz, T.**, & Lee, M. (2022, June). *Workshop on Teaching Algebra Through Physics-of-Motion Activities.* Workshop presented at the NSF, Improving Undergraduate STEM Education National Conference Summit. Washington D.C.

Kurz, T. (2022, January). Using Technology to Help Algebra Students Connect the Slope-Intercept Equation to Movement. Workshop virtually presented at the Annual Mathematics Educator Appreciation Day (MEAD) Conference organized by the Center for Recruitment and Retention of Mathematics Teachers in Tucson, AZ.

Kurz, T. (2022, January). What does multiplying and dividing fractions look like? Workshop virtually presented at the Annual Mathematics Educator Appreciation Day (MEAD) Conference organized by the Center for Recruitment and Retention of Mathematics Teachers in Tucson, AZ.

Kurz, T., Collins, B. & Harris, P. (2021, January). *Exploring slopes and y-intercepts in algebra using a virtual motion simulation.* Workshop virtually presented at the Annual Mathematics Educator Appreciation Day (MEAD) Conference organized by the Center for Recruitment and Retention of Mathematics Teachers in Tucson, AZ.

This hour-long workshop was presented twice during the conference.

Kurz, T. Harris, P. & Ganesh, T. (2021, January). *Designing mosaics using pattern blocks: Investigating fractional meanings in context.* Workshop virtually presented at the Annual Mathematics Educator Appreciation Day (MEAD) Conference organized by the Center for Recruitment and Retention of Mathematics Teachers in Tucson, AZ.

This 45 minute-long workshop was presented twice during the conference.

Kurz, T., Lee, M., Leming, S.* & Landis, W.*(2017, January). *Colorful Algebra.* Workshop presented at the 13th Annual Mathematics Educator Appreciation Day (MEAD) Conference organized by the Center for Recruitment and Retention of Mathematics Teachers in Tucson, AZ.

Kurz, T. (2017, January). *Building Fractions using Pattern Blocks.* Workshop presented at the 13th Annual Mathematics Educator Appreciation Day (MEAD) Conference organized by the Center for Recruitment and Retention of Mathematics Teachers in Tucson, AZ.

Kurz, T., Landis, W.* & Leming, S.*(2016, October). *Colorizing quadratics so they make sense.* Workshop presented at the National Council of Teachers of Mathematics (NCTM) Regional Conference and Exposition in Phoenix, Arizona.

Kurz, T. (2015, November). *Exploring position graphs using CBRs*. Workshop presented at the California Mathematics Council (CMC)-South Annual Conference in Palm Springs, California.

Kurz, T. (2015, November). *Linear and quadratic algebraic patterns using color tiles*. Workshop presented at the California Mathematics Council (CMC)-South Annual Conference in Palm Springs, California.

Kurz, T. (2015, September). *Contextualizing fractional understanding using pattern blocks*. Workshop presented at the Arizona Association of Teachers of Mathematics (AATM) Annual Conference in Tempe, Arizona.

OTHER WORKSHOPS

Kurz, T. & Ganesh, T. (2022, December). *Reestablishing a Successful Learning Environment in the STEM Classroom*. Workshop virtually presented to Noyce Scholars organized by the Ira A. Fulton Schools of Engineering, Tempe, AZ.

Kurz, T. & Ganesh, T. (2022, September). *Maintaining a Successful Learning Environment in the STEM Classroom*. Workshop virtually presented to Noyce Scholars organized by the Ira A. Fulton Schools of Engineering, Tempe, AZ.

Kurz, T. & Ganesh, T. (2022, July). *Establishing a Successful Learning Environment in the STEM Classroom*. Workshop virtually presented to new teachers (including Noyce Scholars) organized by the Ira A. Fulton Schools of Engineering, Tempe, AZ.

Ganesh, T., Velez, J., Harris, P. & **Kurz, T.** (2021, January). *Engineering Design Challenge for Noyce Scholars, Part I.* Workshop virtually presented to Noyce Scholars organized by the Ira A. Fulton Schools of Engineering, Tempe, AZ.

Ganesh, T., Velez, J., Harris, P. & **Kurz, T.** (2021, January). *Engineering Design Challenge for Noyce Scholars, Part II.* Workshop virtually presented to Noyce Scholars organized by the Ira A. Fulton Schools of Engineering, Tempe, AZ.

Ganesh, T., Velez, J., Harris, P. & **Kurz, T.** (2021, April). *Engineering Design Challenge for Noyce Scholars, Part III.* Workshop virtually presented to Noyce Scholars organized by the Ira A. Fulton Schools of Engineering, Tempe, AZ.

Kurz, T. (2019, September). *STEM: Architecture emphasizing mathematics.* Workshop presented at Pendergast Elementary School District organized by Arizona State University, Noyce Scholarship Program in Phoenix, AZ.

Kurz, T. (2017, July). *Preparing for the NES Middle School Mathematics Exam*. Workshop presented at the NES Preparation Workshop organized by Arizona State University in Phoenix, AZ.

VIDEOS

Swisher, K., Jayasuriya, S., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *What is a Pixel?* Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Swisher, K., Jayasuriya, S., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Red, Green and Blue Pixels and Displays.* Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

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Swisher, K., Jayasuriya, S., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Green*

Screen and Compositing. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Swisher, K., Jayasuriya, S., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Edge Detection*. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Swisher, K., Jayasuriya, S., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Pixlr Overview*. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Swisher, K., Jayasuriya, S., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Every Tool in Pixlr: Introduction*. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Project: Investigating Visual Illusions using Image Editing (Pixlr)*. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Swisher, K., Jayasuriya, S., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Project: RGB Zoo with Pixlr*. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Swisher, K., Jayasuriya, S., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Project: Pixel Art with Pixilart.com*. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Lights, Camera, Computation!* Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Life of a Photon*. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Object and Image Classification*. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

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Swisher, K., Jayasuriya, S., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Teachable Machine Image Classification, Step-by-Step*. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Swisher, K., Jayasuriya, S., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Teachable Machine-Saving and Sharing your Work*. Arizona State University and University of

Georgia, Available: https://www.imagesteam.org/videos

Swisher, K., Jayasuriya, S., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Teachable Machine-How Does it Actually Work?* Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Teachable Machine Audio Project, Step-by-Step*. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

Jayasuriya, S., Swisher, K., Mativo, J., Pidaparti, R., **Kurz, T.** & Robinson, D.T. (2022). *Teachable Machine Lesson: Hurricane Harvey Damage Prediction*. Arizona State University and University of Georgia, Available: https://www.imagesteam.org/videos

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Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *Intro to King Arthur Unit.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *Newton's Second Law.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *Digital Cameras.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *3D Shapes.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

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Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *Plant Parts.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *Rectangles.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

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Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *The Growth Cycle of a Pumpkin.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

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Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *Sound Waves Activity.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *DNA Extraction.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *iMovie.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *Virtual Fetal Pig Dissection.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

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Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *Living Things Classification on Kidspiration.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

Savenye, W., Middleton, J. A., Brush, T., Igoe, A., Oksuz, C., **Kurz, T**., & Li, J. (2004). *Rocket Day.* Arizona State University, (Active 2004-2011). http://pt3.ed.asu.edu/bestpractices/index2.html.

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TEACHING

UNIVERSITY TEACHING

Doctoral Courses

- Research
- Dissertation

Content Courses

- Investigating Change: Patterns, Functions and Modeling
- Investigating Quantity: Number, Operations and Numerical Systems
- Investigating Space: Geometry, Measurement, and Visualization
- Mathematics for Elementary School Teachers I
- Mathematics for Elementary School Teachers II

Methodology Courses

- Secondary Mathematics Methods and Assessments
- Mathematics Methods and Assessment
- Mathematics Methodology for the Elementary Classroom (STEM emphasis)
- Mathematics Methodology for the Elementary Classroom (Special Education emphasis)
- Mathematics Methodology for the Elementary Classroom
- Mathematics Methodology for the Early Childhood Classroom
- Curriculum and Instruction of Elementary Mathematics (CSUB)

Technology Courses

- Computers in Education
- Computers in Education (Mathematics Emphasis)

General Education Courses

- Professional Education: Educational Policies
- Childhood and Adolescence (Educational Psychology)
- Secondary School Curriculum Development
- Secondary Principles, Curriculum and Methods
- Creating Classroom Climates (Secondary STEM emphasis)
- Instruction and Management in the Inclusive Classroom (Elementary and Special Education)
- Classroom Assessment (K-12)
- Instruction and Management in the Inclusive Classroom (Secondary Education)
- Classroom Learning Theories and Management (CSUB)
- Introductory Fieldwork (CSUB)
- Advanced Fieldwork (Student Teaching Supervision) (CSUB)

INTERNATIONAL TEACHING

South Sudan (2015)

An external donor provided ASU funding to teach a cohort of teachers from South Sudan through the Center for Advanced Studies in Global Education. I was responsible for teaching them mathematics methodology during a 15-week course. They explored lessons that emphasized problem-solving and mathematical reasoning emphasizing learning using manipulatives, tools and technology. Technology was provided to the teachers to support their teaching in South Sudan.

India (2014)

As part of the India Support for Teacher Education Program (In-STEP) grant awarded to my colleagues by the U.S. Agency for International Development and the US Department of State, a cohort of teachers from India came to ASU. I was responsible for teaching them mathematics methodology during a 15-week course. They explored lessons that emphasized problem-solving and mathematical reasoning emphasizing learning using manipulatives, tools and technology. A class set of manipulatives was provided to the teachers to support their teaching back in India.

LOCAL COMMUNITY TEACHING

Workshops (2015-current)

Previously described in the *Scholarship* section, I guided community members by providing workshops.

Integrated Family Math Night into Mathematics Methodology Courses (2005-2015)

Family Math Night was integrated into my mathematics methodology courses, bridging the university, local schools, and the broader community. Families, children, preservice teachers and in-service teachers explored mathematics together. Preservice teachers designed, implemented, and facilitated interactive mathematics activities that promote mathematical thinking for diverse age groups. For preservice teachers. Family Math Night offered a practical setting to develop their communication skills, experiment with instructional strategies, and receive immediate feedback from a non-traditional audience.

Professional Development School (2005-2009)

I worked with preservice teachers, in-service teachers, the Professional Development School coordinator and elementary children to integrate theory and practice into elementary school experiences. I focused on developing innovative teaching methodologies, engaging in action research, and implementing evidence-based practices to improve both student learning outcomes and teacher effectiveness. There was a focus on bridging academic research with practical classroom applications, thereby fostering a robust environment for preparing future mathematics educators.

Integrated Elementary Children into Mathematics Methodology Courses (2005-2008)

The integration of about 90 children into a mathematics methodology course was designed as a hands-on, collaborative learning experience to support the development of preservice teachers. The children participated weekly for about an hour as part of a structured practicum, where preservice teachers were given opportunities to plan, implement, and reflect on instructional strategies in real-time. Preservice teachers initially observed children's mathematical thinking. Then, they taught elementary students through guided activities to understand their problem-solving approaches. After each session, preservice teachers engaged in reflective discussions, analyzing the effectiveness of their instructional methods, and receiving feedback from peers and the course instructor. This integration allowed preservice teachers to bridge the gap between theory and practice, refine their instructional techniques, and develop confidence in managing a diverse classroom environment.

DOCTORAL STUDENT MENTORING

- EdD in Leadership and Innovation (Chaired)
  - Covert, Jason (2023)
    Online Adult Learners' Perceptions of Usefulness in Career-Focused Instructional Videos
  - Hacker, Jayci (2021)
    Participatory Action Research: Honors Students and Online Honors Seminar Courses

- Jackson, Kelly (2021)
  Delivering Interprofessional Education to Online Dietetics Students
- Starr, Jeffrey (2021)
  Designing for Transfer: Instructional Design for Active Learning in Online Teacher Professional Development
- Strong, Melissa (2021)
  Developing Teacher Efficacy Toward Social Emotional Learning through an Advisory Professional Learning Community

UNDERGRADUATE STUDENT MENTORING

Barrett, The Honors College

- Honors Thesis
  - Stuart, Risa & Stuart, Dorothy (2016) (Chaired)
    Problem solving with algebra I students: The effect on accuracy, attitude and fluency
  - Leung, Miranda. (2015) (Chaired)
    Tools to teach eighth grade geometry: A five day lesson kit
  - Sibley, Amanda (2013) (Committee Member)
    Preparing global thinkers: Teaching sustainability

Barrett Honors Course Contracts Yielding Publications (Barrett student authors are bolded)

- Kurz, T., **Mendonca, M.** & Ganesh, T. (accepted with minor revisions). The Set Model: A Flexible Approach for Dividing Fractions. *School Science and Mathematics*.
- **Pestridge, G.A, Mullenmeister, M.** & Kurz, T. (2019). Visualizing Factors and Multiples. *Oncore (Spring)*, 5-14.
- **Mullenmeister, M. Pestridge, G.A**, & Kurz, T. (2019). Using Venn diagrams to visually represent the GCF and LCM. *California Mathematics Council's ComMuniCator, 43*(4), 16-17.
- **Mullenmeister, M. Pestridge, G.A,** & Kurz, T. (2019). Venn diagrams with GCF and LCM. *California Mathematics Council's ComMuniCator, 43*(4), 36-39
- **Fefolt, M**., & Kurz, T**.** (2018). Problem solving with the Greek gods. *Teaching Children Mathematics 25* (1), 14-15.
- Kurz, T**.** & **Serrano, A**. (2016). Let's get movin'. *Teaching Children Mathematics 22*(5), 311-314.
- Kurz, T., Bartholomew, B., **Sibley**, A. & Fraser, S. (2015). Contextualizing algebraic word problems through story using technology. In. D. Polly (Ed.), *Cases on Technology Integration in Mathematics Education*. Hershey, Pennsylvania: IGI Global.

- **Carrillo**, J. (2015/2016) wrote mathematics questions that were published in the journal *Mathematics Teaching in the Middle School.* No authorship was given, but credit was noted in the Palette of Problems section of the journal. *Mathematics Teaching in the Middle School, 21*(5), 270-271.
- **Carrillo**, J. (2015) wrote mathematics questions that were published in the journal *Mathematics Teaching in the Middle School.* No authorship was given, but credit was noted in the Palette of Problems section of the journal. *Mathematics Teaching in the Middle School, 21*(4), 206-207.
- **Carrillo**, J. (2015) wrote mathematics questions that were published in the journal *Mathematics Teaching in the Middle School.* No authorship was given, but credit was noted in the Palette of Problems section of the journal. *Mathematics Teaching in the Middle School, 21*(3), 140-141.
- **Leung**, M. & Kurz, T. (2015). Pizza parlor mathematics. *Teaching Children Mathematics 21*(7), 400-401.
- **Sibley**, A. & Kurz, T. (2014). Celebrating Earth Day with sustainability. *Teaching Children Mathematics, 20*(8), 516-520.
- **Sibley**, A. & Kurz, T. (2014). Keep on rollin'. *Teaching Children Mathematics, 20*(5), 326-329.
- **Sibley**, A. & Kurz, T. (2013). Exploring nature through mathematics. *Teaching Children Mathematics 20*(1), 16-17.

PROFESSIONAL DEVELOPMENT

Visual Computing Professional Development for University Faculty (Summer 2024 to current)

ASU faculty who teach mathematics content courses attended professional development with in-service teachers for two weeks, attending for about three hours per day. University faculty explored various technologies to be integrated into their mathematics content course. Explored technologies included: generative artificial intelligence, Pixlr, Teachable Machine, Quickdraw, and Tinkercad. My colleagues and I led the professional development experiences.

Visual Computing Professional Development for In-service Teachers (Summer 2021 to 2024)

Meeting with in-service teachers for two or three weeks for about three to four hours per day across four summers, professional development in visual computing across all subject areas was provided. Professional development was offered at ASU and University of Georgia, Athens. Teachers explored various topics including object detection, machine learning, computer vision, digital image processing, and generative artificial intelligence. My colleagues led the professional development experiences, and I supported their efforts.

Physics-based Mathematics Professional Development for University Faculty (Summer 2020 to 2022)

ASU faculty who teach mathematics content courses attended professional development for one week, attending for about four hours per day for two years. University faculty were instructed regarding how to use physics-based technologies to support student-based algebra experiences. I led the professional development experiences.

OPEN-SOURCE CURRICULUM

Overview: Our *ImageSTEAM: Middle School Teacher and Student Experiences with Artificial Intelligence via Computational Cameras* emphasized the co-development of STEM curriculum with middle school teachers in Arizona and Georgia (University of Georgia, Athens). Content was developed in all subject areas focusing on the integration of visual computing. Below is list of co-developed curriculum created by middle school teachers with the support of project personnel. Lessons are open-source and available at: https://www.imagesteam.org/co-designed-curriculum.

State & Year	Title	Teacher Author	Brief Description	Subject
[75] AZ 2023	Fill Text with an Image	Brenda Frank	Students use an image editing program and learn the basics of masking to create a text/image fill of their own design	Arts and Design
[74] AZ 2023	Poster using AI Imagery	Robert Biles	Students use Pixlr to generate an image using text to image AI model and then use that image to create a poster	Arts and Design
[73] GA 2023	AI for Design	Stevie Griffing	Students are introduced to the concept of Artificial Intelligence (AI) and its applications in the field of design, providing them with examples and references to inspire their own creative work.	Arts and Design
[72] AZ 2024	Exposure Triangle Data Visualization Project	Bonnie Castillo	Students learn the exposure triangle by taking images of the same subject at different settings and then graphing them onto the exposure triangle.	Arts and Design
[71] AZ 2024	Editing Color in Images (Special Education 6th grade Art and Tech project)	Emma Piaseczynski	Special Education students learn about image editing and digital color and create their own edited version of the same image as classmate	Arts and Design
[70] AZ 2024	Design a Room For Yourself Using 3D modeling	Emma Piaseczynski	Special Education students use Tinkercad to design their own ideal room	Arts and Design
[69] AZ 2024	Create a Virtual 3D Set Design	Ariel Roller	Students recreate a famous set from a novel they are familiar with	Arts and Design
[68] AZ 2024	AI Color Clothing Assistant	Matthew Scilley	Students use a pre-trained model to show what color outfit they are wearing. They can explore the dataset and learn about colorblindness.	Arts and Design

[67] AZ 2024	Storyboard creation with GenAI as a visual helper	Marian Scott	Students use a generative AI image tool to help generate imagery for their storyboard for a project they are working on	Arts and Design
[66] AZ 2024	Digital Storyboard	Natalie Worthington	Students will create a digital storyboard with Pixlr to summarize either an entire short story or a portion of a novel. Students will create scenes for their story board with Pixlr to retell, capture, and reimagine events from the story.	Arts and Design
[65] AZ 2023	Visualizing Literature Through AI Text-to-Image	Samuel Young	Students use a text-to-image generator to explore visual characteristics of a main character in a novel.	English/ Language Arts
[64] AZ 2023	Through the Eyes of the Animal	Nicki Mann	Students imagine what it is like to see through the eyes of an animal and learn about how researchers understand animal vision.	English/ Language Arts
[63] AZ 2024	Novel Studies and AI Designs	Kathleen Johnson	This lesson challenges students to search for certain details provided in a text and then change the details into new sentences using synonyms. Students will then engage in a STEM based activity generating AI images in Canva using the original text and the rewritten text in two different images. They will then compare and contrast the two AI generated images.	English/ Language Arts
[62] AZ 2024	What if the Hunger Games had AI?	Kathleen Johnson	Students will take actions and/or sounds from a book they are reading and see if AI technology would have allowed them to pick up faster and be discovered sooner than they did in the book.	English/ Language Arts
[61] AZ 2024	Word Related Images with GenAI	Matthew Scilley	Students explore definitions of common vocabulary words and use a generative AI tool to create imagery related to that word	English/ Language Arts
[60] AZ 2024	Character Room Design in Tinkercad	Natalie Worthington	Students design a hypothetical room for a character in a novel they are reading	English/ Language Arts
[59] AZ 2024	Book Poster using GenAI and Graphic Design	Sam Young	Students design their own book jacket or poster for a novel they are reading	English/ Language Arts
[58] AZ 2022	Engineering Design Process, Sign Language, and ML	Daniel Schack	Students use their understanding of the engineering and design process to design a teachable machine to translate American Sign Language.	Engineering/ STEM
[57] AZ 2023	Autonomous Vehicles Ethics and Decision making	Wendy Landis	Students learn how to construct a flow chart while exploring the ethical realities of self-driving car decision-making	Engineering/ STEM
[56] GA 2022	Universal System Design	Jaime Knapp	Students use their understanding of the Universal System Design to draw and revise a GauGAN painting, learning about Generative Adversarial Networks in the process.	Engineering/ STEM
[55] GA 2023	Designing assistive devices using Pixlr X and TinkerCAD	Lashandia Hill	Students use digital tools and the iterative engineering design process to design a device they can use in a kitchen to help organize things used everyday	Engineering/ STEM

[54] AZ 2024	Product Design and Entrepreneurship Using Tinkercad	Bonnie Castillo	Students design a 3d printable object that can also be sold to classmates or teachers, learning about entrepreneurship, fundraising and 3D design	Engineering/ STEM
[53] AZ 2024	It's All In the Face - AI Facial Recognition and Detection Unit	Mandy Fierro	In this week-long unit, students research and create AI generated faces and explore the ethics of generative AI	Engineering/ STEM
[52] AZ 2024	Design a Boat!	Brenda Frank	As part of the Design Thinking Process, students will work as part of a team to create a cardboard boat that can race across a pool carrying one passenger, without sinking or falling apart, using only cardboard, duct tape and bubble wrap. This lesson is part of the third step, Design, where students will take their hand-drawn sketches and create a 3D prototype of their boat using shapes, the scribble tool and notes in TinkerCad.	Engineering/ STEM
[51] AZ 2024	Illuminated Pendants Design and 3D printing Design Project	Christi Jones	Students design a 3D printable, wearable light up object.	Engineering/ STEM
[50] AZ 2024	Melanoma Identification Dataset analysis and creation	Patricia Morgan	Identifying Melanoma Skin Cancer Versus Normal Moles Using Pixlr (for future use of training a neural network for early detection)	Engineering/ STEM
[49] AZ 2024	Drone To The Rescue! Computer Vision and Rescue Missions Lab	Brian Piendl	Students will use various toys and their drones to train “Teachable Machine” to recognize the toys in different environments to simulate a search and rescue.	Engineering/ STEM
[48] AZ 2024	Drone To The Rescue! Part 2, 3D printed components to assist rescue team	Brian Piendl	Brief: Using Tinkercad and their drones, students will create a device that can rescue “Jim,” a toy stuck on a Mountain.	Engineering/ STEM
[47] AZ 2024	Do You Hear What I Hear?	Ariel Roller	PBL and Computational Thinking project using sound making toys and devices as computer interfaces	Engineering/ STEM
[46] AZ 2024	Leonardo Da Vinci Inventions - Design Process	Magdalena Tejada	Students work together to invent something new in the vein of Leonardo Da Vinci	Engineering/ STEM
[45] AZ 2022	What is a pixel?	Ariel Roller	Students create pixel art using a digital tool, pixil.art, and complete a design challenge that allows them to practice ratios and fractions. Assessment is built-in to the calculations required for the final design challenge submission. Allows for creativity, strategic thinking, and an optional opportunity for friendly competition.	Mathematics

[44] AZ 2022	Making it All Fit	Teresa Munoz	In a design challenge, students explore image editing software, Pixlr.com to create a collage of a "dream room" for a fictional magazine. Students explore design concepts of layout and theme, mathematical concepts of scale factors, and computational concepts of file handling, image editing and masking.	Mathematics
[43] AZ 2023	Geometric Transformations in Pixlr	Myranda Carbone	Students use an image editing program and masking and transformation tools to create an image collage	Mathematics
[42] AZ 2023	Teachable Machines and Probabilities, Sampling, and Bias	Ariel Roller & Teresa Munoz	Students learn to use Google's Teachable Machine, and then apply their knowledge to create a dance move identifier using a pose model and an iterative process that helps them learning about probabilities, sampling, and bias.	Mathematics
[41] AZ 2023	Volume of an Action Figure	Kyle Scatena	Students use TinkerCAD to create an action figure design and then calculate the compound volume, and end with a battle royale using the simulation of gravity and the projectile feature	Mathematics
[40] GA 2022	Convex and Concave Identification	Isaac Robles	This lesson focuses on convex and concave shape identification and uses TinkerCAD to create the shapes and Teachable Machine to train a machine learning image classification algorithm to identify the objects.	Mathematics
[39] GA 2023	Surface Area and Volume using TinkerCAD	Linda Fortune	Students find the surface area and volume of a rectangular prism by designing and constructing a house in TinkerCAD 3D modeling	Mathematics
[38] AZ 2024	Cats, Dogs, and Sample Sizes: Bias, Classification, and Statistics in AI	Myranda Carbone	Students train their own image classifier using different sample sizes and evaluate the system for bias based on dataset bias and sample size	Mathematics
[37] AZ 2024	Designing Effective Packaging (Geometry Project)	Myranda Carbone	Students design unique but efficient packaging using a 3D modeling program and exploring geometry concepts	Mathematics
[36] AZ 2024	Scaling the Planets	LaDawn Click	Students use an image editing program and image sizes via pixel values to scale the earth and moon to the appropriate size in a collage	Mathematics
[35] AZ 2024	Scaling Space in Tinkercad	Mandy Fierro	Students use Tinkercad modeling to create a scale model of planets in the solar system	Mathematics
[34] AZ 2024	The Amazing Town	Kyle Scatena	Students practice spatial math skills as they design a new town using an image editing program with a template and specific instructions	Mathematics
[33] AZ 2024	Bop It!	Kyle Scatena	Students create a game using AI Image classification to practice types of angles	Mathematics
[32] AZ 2024	Budget your Build	Kyle Scatena	Students use Tinkercad to create building or town with specific instructions for how much money they can spend	Mathematics

[31] AZ 2024	Recycling and Trash Classification Using AI Image Classification	Robert Biles	Students use a data set to train Teachable Machine on recyclables, trash and compostable items.	Science
[30] AZ 2022	Predicting Hurricanes with AI	Cassandra Tejeda	Students use a real data set of 10,000 satellite images from after Hurricane Harvey to train a machine learning model to predict flood damage areas	Science
[29] AZ 2022	Sound Waves and AI	Juliet Lugo	Students learn about properties of sound waves, including amplitude, frequency, and wave length, and then use Teachable Machine's audio project as a class to build a model to recognize the difference between spoken words, demonstrating the concept of voice recognition employed by smart home devices such as Amazon's Alexa and Google Home.	Science
[28] AZ 2022	Human Vision vs. Computer Vision	Nancy Holt	How is human vision related to computer vision? Students will be able to compare and contrast how a human eye and a computer camera perceive color. Students investigate and analyze visual illusions using image editing software.	Science
[27] AZ 2023	Plate Tectonics, Sonar and Machine Learning	Natalie Carpenter	Students use Teachable Machine to create an audio model that distinguishes between sounds that are 3ft vs 6ft away	Science
[26] GA 2022	Plant Leaf Identification	Rita Mathew	This lesson focuses on Georgia agriculture and using computer vision to identify plant leaves. Students gain an understanding of image classification algorithms and a practical application in the real world, assisting agriculture. Students use pre-collected samples to train their own model, and can also be guided to take images of leaves in their own gardens, if applicable.	Science
[25] GA 2022	Geology and AI	Avalla Cleveland	This lesson focuses on Georgia agriculture, rock identification, and landforms. Students learn about classification of rocks, and use teachable machine to identify rock types. Then they use GauGAN, an AI painter, to draw a landform, and Teachable Machine to train a classification algorithm and to identify rock types.	Science
[24] GA 2022	Classifying Translucent, Transparent, and Opaque	Jennifer Deckard	This lesson asks students to learn the differences between translucent, transparent, and opaque materials and how light flows through each. The students partake in a lab where they shift the transparency of water using juice or milk and compare the computer's ability to see through it.	Science

[23] GA 2023	Plant Vs. Animal Cells	Hannah Quehl	Students learn about plant and animal cells and how they are different in structure, shape, and function. Students train a teachable machine to tell the difference between a plant cell and an animal cell, and then create their own 3D model in Tinkercad. They will run their created model through the teachable machine to see if the AI can tell which type of cell they created.	Science
[22] GA 2023	Distinguishing Acids, Bases, and Indicators with Teachable Machine	Daniel Bayah	Integrate teachable machine's computer vision into a traditional acids and bases science lab.	Science
[21] AZ 2024	Forces and Motion	Tara Collier	Students will use their prior knowledge of force and motion to create and train a machine learning model on Teachable Machine.	Science
[20] AZ 2024	Selective Breeding Lab using GenAI (8th grade science lab)	Roger Peck	Students learn about genetics and selective breeding and use GenAI to attempt to create images of specific dog breeds	Science
[19] AZ 2024	Identifying Finch Calls with Teachable Machine Audio Model	Roger Peck	Students learn about specifics of Finch calls and then use a pre-trained model to try to get AI to differentiate between the finch calls.	Science
[18] AZ 2024	Beginning Circuits, Series vs Parallel, in Tinkercad Circuits	Roger Peck	Students learn series vs parallel using Tinkercad Circuits	Science
[17] AZ 2024	Cell Design in Tinkercad	Dan Schack	This lesson introduces students to the structure and function of cell organelles through hands-on activities using Tinkercad to design 3D models of cells. Students will work in pairs to create accurate and labeled 3D models of either a plant or animal cell.	Science
[16] AZ 2024	Atom Classification using Computer Vision Image Classification	Kara Somers	Students create an image classification algorithm to distinguish between models of atoms (simple)	Science
[15] AZ 2024	Designing Buildings to Withstand Earthquakes	Kara Somers	Students use Tinkercad's 3D design tools to create a building and then test how sturdy it is with the earthquake simulator in Tinkercad Sim Lab	Science
[14] AZ 2021	Image Classification with Mitosis and Non-Mitosis Slides	Dan Schack	Students learn about mitosis and then train Teachable Machine to distinguish between mitosis and non-mitosis slides using a real dataset	Science

[13] GA 2022	Mexican Art History and AI Image Classification	Antonio Duran	This lesson asks students to learn the differences between styles of two famous Mexican artists, Diego Rivera and Frida Kahlo, and then recreate their own version and test it using a pre-trained model to see if they can accurately recreate the style of each painter.	Social Studies
[12] GA 2023	The Cotton Gin and The Westward Expansion	Zonila Robinson	Students will use their Teachable Machine and TinkerCAD to create states listed in the Western Expansion era & train their machine to identify two regions using their color.	Social Studies
[11] AZ 2024	Cultural Heritage, Clothing, and Image Identification with Teachable Machine	Emma Piaseczynski	Special Education students learn about traditional cultural clothing in two cultures, Mexican and Native American, and train an image classification algorithm to understand the difference between them.	Social Studies
[10] AZ 2024	Ancient Artifacts in Tinkercad	Tara Collier	Students research artifacts from ancient civilizations and then try to 3D model a replicate	Social Studies
[9] GA 2023	Middle East Water Conflict	Cody Arrington	After reading three source texts, students write a claim supported with evidence about why water is causing conflict in the Middle East, then use Pixlr to create a visual representation of the water issues in the Middle East.	Social Studies
[8] GA 2023	Visualizing African Population and Trade	Derek McVey	Compare and contrast regions of Africa and use AI art to help visualize the differences	Social Studies
[7] AZ 2024	Time Travel Photo Op Image Editing and GenAI	Dustin Brockman	Students use image editing software and a generative AI image tool to create a historically accurate image of themselves in a different time period.	Social Studies
[6] AZ 2024	Design an alter for Day of the Dead using Tinkercad	Edna Morales	Using introductory 3D design skills, students design their own alter for Day of the Dead using Tinkercad	Social Studies
[5] AZ 2024	Propaganda creation with GenAI	Bradley Mucha	Using World War II propaganda as analysis and inspiration, students use a generative AI image tool to create their own version of propaganda	Social Studies
[4] AZ 2024	Ancient River Civilizations Identification using Image Classification AI	Bradley Mucha	Students learn the differences between several ancient river civilizations and use imagery from each one to build their own image classification algorithm	Social Studies
[3] AZ 2024	Plague Tracking and Mapping	Audrey Stoner	Students learn about how the plague spread and go on an imaginary trip to see if they get the plague and keep a visual journal about this process	Social Studies

[2] AZ 2024	Modern vs Medieval Architecture classification with computer vision	Audrey Stoner	Students test a pre-trained model to see if it can distinguish between modern and medieval architecture	Social Studies
[1] AZ 2024	Consumerism, Fast Fashion, and Teachable Machine	Natalie Worthington	Students learn about fast fashion and consumerism and then use an existing fashion data set to experiment with image classification	Social Studies

SERVICE

EDITOR POSITIONS

- Editorial Board Member for *Teaching and Teacher Education: An International Journal of Research and Studies*. This is a leading journal in teacher education and is published by Elsevier (2020-current)
- Consulting Editor for *Journal of Educational Psychology*. This journal is the leading journal in Educational Psychology and is published by the American Psychological Association (2014-2020)
- Editorial Review Board Member for *The Teacher Educator* (2020-current)
- Editorial Board Member for *Anadolu University Journal of Education Faculty* (2019-2022)
- Co-editor with Jorge Garcia (2012-2014) and H. Bahadir Yanik (2014-2015) of iSTEM: Integrating Science, Technology, and Engineering into the Mathematics Classroom department in *Teaching Children Mathematics* (2012-2015)
- Editorial Advisory Board, IGI Global *Technology Integration and Transformation in STEM Classrooms* (2023)

REVIEWING

- *International Journal of Virtual and Personal Learning Environments* (2017)
- *Investigations in Mathematics Learning* (2015-current)
- *Journal of Mathematics Teacher Education* (2010-2015)
- *Mathematics Teacher Educator* (2011-2014)
- Monograph on Mathematics Teacher Retention (2012)
- *Problems Resources and Issues in Mathematics Undergraduate Studies* (2011-2024)
- Reviewer for *North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA)* Annual Conference (2016)

- *School Science and Mathematics Association (SSMA)* Annual Conference (2021)
- *Society for Information Technology and Teacher Education* Annual Conference (2017)
- *School Science and Mathematics* (2017)
- *School Science and Mathematics Annual Conference* (2021)
- *Teaching and Teacher Education* (2016-current)
- *Teaching Education* (2009)
- *TechTrends* (2012-current)
- *The Mathematics Educator* (2011-2022)
- *The Teacher Educator* (2015-2016; 2019-current)

INTERNATIONAL LEVEL

- Grant Reviewer for the Social Sciences and Humanities Research Council of Canada (2018-2019) and (2022-2023)

NATIONAL LEVEL

- Panel Member for a NSF's National STEM Teacher Corps Pilot Program (2024)
- Planning Committee Member for the Western Regional Noyce Network (2024)
- Committee Member, Awards and Endowment for the School Science and Mathematics Association (SSMA) (2022-current)
- Co-chair, Local Arrangements Committee for the Annual Conference of the Association of Mathematics Teacher Educators (AMTE) in Phoenix, AZ (2019-2020)
- Panel Member for National Selection Committee (NSC) administered through the NSF for the Presidential Awards in STEM:
    - Presidential Award for Excellence in Mathematics and Science Teaching (2019)
    - Presidential Award for Excellence in Mathematics and Science Teaching (2021)
    - Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (2021)
    - Chair, Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (2022)
    - Presidential Award for Excellence in Mathematics and Science Teaching (2023)
    - Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring (2023)

STATEWIDE LEVEL

- Committee Member, Arizona Higher Education Mathematics Committee (2022-2023)

UNIVERSITY LEVEL

- Appointed to the Graduate College, Faculty Review Committee for the *Focus on Finishing Your Degree* Award (2025-current)
- Appointed to the General Studies Council (2023-current)
- Chair, General Studies Council Quantitative Reasoning Subcommittee (2024-current)
- Chair, General Studies Council Mathematics Subcommittee (2024-current)
- Appointed to the General Studies Council Computer Statistics and Quantitative Applications Subcommittee (2023-2024)
- Appointed to the General Education Quantitative Applications Working Group (2023)
- Appointed to the General Education Quantitative Applications Steering Committee (2022)
- Appointed to the University Undergraduate Standards Committee (2019-2023)
- Elected to the Academic Senate (2016-2019)
- Elected to the Committee on Academic Freedom and Tenure (2015-2018)
- Faculty Hearing Panel Committee Member (2007-2008)
- Gender, Race and Equity Committee Member (2007-2008)
- Academic Senate Alternate (2007-2008)

COLLEGE LEVEL

- Led the redesign of a 10-week unit of MTE 311, leading training as well as course restructuring to include visual computing content (2024-current)
- Redesign Lead of SED 403--Secondary Principles Curriculum and Methods, (2023)
- Redesign Lead of SED 512--Secondary Mathematics Methods & Assessments, (2023)
- Course Coordinator SED 403--Secondary Principles Curriculum and Methods, (2022-current)
- Course Coordinator ECD 527--Mathematics in Early Childhood Education, (2023-2024)
- Course Coordinator SED 512--Secondary Mathematics Methods & Assessments, (2023-2024)
- Course Coordinator EED 537--K-8 Mathematics Methods and Assessment (2023-2024)
- Appointed as the Staffing and Scheduling TAG Representative for Secondary Undergraduate Programs (2022-2023)
- Led the redesign of a 5-week unit of MTE 301/311, leading training as well as course restructuring (2019-2023)
- Appointed as a member of the Admissions Review Committee for Learning, Literacies, and Technologies (LLT) Ph.D. (2019-2023)
- Appointed as a member of the Admissions Review Committee for Leadership and Innovation Ed.D. program (2020-2022)
- Elected as a member of the Personnel Evaluation Committee (2019-2020)
- Member, Design of new Assessment course (2020)

- Member, Design of two new Mathematics Education courses: MTE 310, 311 (2020)
- Member, Redesign of mathematics education course: MTE 280 (2020)
- Member, Faculty Search, Full Professor, Mathematics Education (2019-2020)
- Redesign of MTE 281, converting the course to a hybrid format (2018-2019)
- Chair, Mathematics Instructor Search Committee (2018-2019)
- Elected as a member of the Curriculum Review Committee (2018-2019)
- Secondary Program Coordinator (2016-2018)
- Appointed to the Program Committee of the Learning, Literacies, and Technologies (LLT) Ph.D. program (2015-2016)
- Assisted in the development of the Major Map for our new Elementary Education STEM program of study (2014)
- Community College Liaison for Course Equivalency in Mathematics Education (primarily focusing on MTE 280 and 281) (2015-2019)
- Taught a course for the teachers from South Sudan that focused on mathematics (2015)
- Member, Faculty Search, Assistant/Associate Professor, Early Childhood Education (2015-2016)
- Member, Faculty Search, Assistant/Associate Professor, Elementary Education (2015-2016)
- Chair, Faculty Lecturer Search, Mathematics Education (2 positions) (2015)
- Course Coordinator for Investigating Quantity: Number, Operations and Numerical Systems (MTE 280) (2014-2019)
- Course Coordinator Investigating Space: Geometry, Measurement, and Visualization (MTE 281) (2014-2019)
- Served as the Mathematics Methodology instructor for the InSTEP grant (2014)
- Education Economics Faculty Search Committee Member (2014-2015)
- Collaborated with colleagues on meeting the needs in mathematics for National Council on Teacher Quality (NCTQ) (2014)
- Mentoring New Faculty (2013-2015)
- Worked with PBS on the development of an early education mathematics methodology course (2014)
- Elementary Mathematics Education Faculty Search Committee Member (2014-2015)
- Assisted with the Mathematics Coursework descriptions for a grant with Mexico (2014)
- Mathematics Faculty Search Committee Member (2013-2014)
- Mathematics Education Faculty Search Committee Member (2012-2013)
- Master's Degree (Helped design a new program of study) (2011-2012)
  Curriculum and Instruction: Accomplished Teaching (Mathematics Education)
- Mathematics Endorsement (K-8) Program of Study (2011-2012)
- TEAMS Group Member (2011-2012)
- Mathematics Faculty Search Committee Member (2011)
- Science Faculty Search Committee Member (2011)
- Student Services Working Group (2009-2011)
- Proctored the Writing and Mathematics Assessments (2009)
- Quality Research Recommendations Working Group (2009)
- Standards Committee (2008-2009)
- Special Consideration Committee Member (2005-2008)

- Prospective Student Orientation Meetings (Participant) (2007-2008)
- Technology in Education Committee Member (2006-2007)

COMMUNITY LEVEL

Family Math Night Events Coordinator

- American Elementary, Bakersfield, CA
  - Spring, 2007; Fall 2007
- Burk Elementary, Gilbert, AZ
  - Spring 2011
- Canyon Rim, Gilbert AZ
  - Spring 2009
- Centennial Elementary, Bakersfield (Rosedale), CA
  - Fall, 2005
- Endeavour Elementary, Bakersfield, CA
  - Fall, 2007
- Harris Elementary, Bakersfield, CA
  - Winter 2005; Winter 2006; Winter 2007; Winter 2008
- Harris Elementary, Gilbert, AZ
  - Fall, 2008
- Jefferson Elementary, Bakersfield, CA
  - Spring, 2005
- Longfellow Elementary, Mesa AZ
  - Spring 2009
- Maricopa Elementary, Maricopa, CA
  - Spring, 2005; Fall, 2005; Winter, 2007; Fall 2007
- Mendoza Elementary, Mesa, AZ
  - Spring 2011; Spring 2012; Spring 2103; Spring 2014; Spring 2015
- McKee Elementary, Bakersfield, CA
  - Spring, 2006; Winter 2007; Winter 2008
- Norris Elementary, Bakersfield, CA
  - Winter, 2006; Spring 2007
- Palla Elementary, Bakersfield, CA
  - Winter, 2005
- Quailwood Elementary, Bakersfield, CA
  - Winter 2008
- Rosedale North Elementary, Bakersfield (Rosedale), CA
  - Spring, 2006

RECOGNITION

2013 Received the *Integrating Scholarship with Teaching* Award
Teachers College, Arizona State University

2013 Nominated for the *ASU Centennial Professor* Award by student(s) (anonymously)
Arizona State University

2008 Received the *Faculty Research* Award
School of Education, California State University, Bakersfield