Curriculum Vitae

Ezgi Yesilyurt, Ph.D.
Utah State University

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EDUCATION

Ph.D. in Science Education (2020)
University of Nevada, Las Vegas
Las Vegas, NV
Major: Science Education
Concentration: STEM Education
Dissertation Title: Epistemic Aspects of Engineering for K-12 Education

Master of Science in Elementary Science and Mathematics Education (2014)
Middle East Technical University
Ankara, Turkey
Major: Science Education
Concentration: Evolution Education, Argumentation
Dissertation Title: Conceptual, Structural, and Epistemic Aspects of Science Teachers' Argumentation Practices in the Context of Evolutionary Theory

Bachelor of Science in Elementary Science Education (2010)
Middle East Technical University
Ankara, Turkey
Major: Science Education

Certification
K-8- General Teaching Certificate Science Endorsements

SCHOLARSHIP & AWARDS

Nevada Women in STEM- Senator Jacky Rosen highlights female role-models can help combat negative stereotypes that hold women back from pursuing careers in STEM. **Graduate College Medallion Recipient (2020)-**Awarded by UNLV Graduate College that honors exceptionally involved and high-achieving students.

Sandra K. Abell Scholar (2019) - Awarded by the National Association of Research in Science Teaching (NARST) towards mentoring and supporting young scholars in developing their research agenda

Summer Doctoral Research Fellowship (2018-2019-2020) – Awarded by the UNLV Graduate College to support research activities during the summer term, $7000/yr., total $21,000

Jumki Basu Scholar Award (2019) – Awarded by the NARST Equity and Ethics (E&E) Committee to support graduate students' participation in the NARST conference

UNLV Graduate & Professional Student Association Conference Travel Grant (2016-2019), Awarded to support graduate students' participation in professional conferences, University of Nevada, Las Vegas (2016-2019) $350/yr., total $1,400

Dr. Bea Babbitt Scholarship (2019) - Awarded for a record of accomplishment in science education, $1000

Graduate and Professional Student Association Merit Award (2019) – Awarded for "outstanding contributions towards the development and continuing growth of the GPSA at the University of Nevada, Las Vegas"

IMPACT Award for Community Engagement (2019)- Awarded for outstanding commitment to advancing learning and social change through organizing and providing Saturday STEM School workshops for elementary students

Edward Pierson Scholarship (2017-2018), Awarded for a record of accomplishment in science education, $1000/yr, total $3000

PROFESSIONAL WORK EXPERIENCE

Assistant Professor of Science and STEM Education, Utah State University (2025-present)
Logan, Utah

Responsibilities include teaching science/STEM courses to pre-service teachers and doctoral students.

Assistant Professor in Life Science Education, Weber State University (2020-2025)
Ogden, Utah

Responsibilities include teaching life science courses to pre-service elementary science teachers and undergraduate non-biology majors.

Co-researcher/Program evaluator, 2020-present
Weber State University, Center for Science and Mathematics Education ASTEP (Aligning the Science Teacher Education Pathway) Project

Graduate Assistant, **University of Nevada, Las Vegas (2015-2020)**
Las Vegas, NV

Research Assistant (2015-2020)

Responsibilities include data collection and analysis of both qualitative and quantitative data and writing for publications.

Research Project (2015-2020)

NSF-funded Project - Developing Integrated Elementary Science, Engineering, and Language Arts Curricula Aligned with Next Generation Science Standards Principal Investigator and Instructor of record Dr. Hasan Deniz
-- Responsibilities include assisting in STEM workshops for elementary students in grades K 3-5, and science and engineering professional development programs for science teachers, and dissemination of results

Research Project (2018-2019)

NSF-funded Project-Collaborative Research: Teachers Engineering Project-based STEM Environments to Impact Diverse Learning Groups: Spanning Astronomical and Mathematical Spaces (Project SAMS) Principal Investigator Dr. Jennifer
Wilhelm and Co- Principal Investigator Dr. Merryn Cole
--Responsibilities include assisting in the preparation of materials and documents for the professional development program.

***Teaching Assistant (2015*-2020)**

- **Instructor of EDEL 443/CIE 543 Elementary Science Methods (2016-2020)**

Researcher at the Center for Mathematics, Science and Engineering Education (2019-2020)
Las Vegas, NV
Responsibilities included working on grant projects and developing workshops in collaboration between Colleges of Sciences, Education, and Engineering to enhance STEM education
https://www.unlv.edu/cmsee/staff

Discourse Couching (2018-2019)
Las Vegas, NV
Project-funded by NV Great Teaching and Leading Fund: Argumentation and Learning in Secondary Science (Project ALSS) Principal Investigator Dr. Michael Nussbaum and Co-Investigator Dr. LeAnn Putney
--Responsibilities include supporting individual teachers (and teams) engaging more productive classroom discourse through teacher and student talk moves, lesson design, and lesson implementation, observing individual teachers during the year, providing feedbacks, attending institute and group professional development sessions in which observing and leading small group discussions, and helping with lesson planning and critiquing.

Education Specialist in EPODIM (Educational and Professional Development through Innovative Methods) (2014-2015) Ankara, Turkey

--Responsibilities included structuring and providing professional development programs funded by Amgen Teach European Program and Chain Reaction FP7 (European Union's Seventh Framework Program). The program also involved on-site support for science teachers to implement inquiry and argumentation-based science teaching in their schools, analyzing survey and interview data, writing scientific reports.

Science Center Educator in the Children's Museum and Science Center (2013-2014)
Ankara, Turkey

--Responsibilities included designing and organizing science and engineering workshops for students (Grades 1-12).

Science Teacher in Private Cakil Tasim Education Center (2011-2013)
Ankara, Turkey

--Responsibilities included teaching science and mentoring elementary students (Grades 3-8)

English Assistant in Liceo Scientifico E. Majorana (2010-2011)
Rome, Italy

Comenius project, part of the European Union Lifelong Learning Program -- Responsibilities included co-teaching English to high school students

PUBLICATIONS

Book Chapters

Yesilyurt, E., Kaya, E., & Deniz, H. (under review). Achieving Consensus: The Delphi Method as a Methodological Tool in Engineering Education. EER Methods 2026 (International Handbook of Engineering Education Research Methods).

Deniz H., **Yesilyurt E**., Newman S.J., Kaya E. (2020) *Toward defining nature of engineering in the next generation science standards era*. In: Akerson V.L., Buck G.A. (eds) Critical Questions in STEM Education. Contemporary Trends and Issues in Science Education, vol 51. Springer, Cham. https://doi.org/10.1007/978-3-030-57646-2_3

Peer-Reviewed Journal Articles

E: Empirical; P: Practitioner

Yesilyurt, E., Deniz, H., & Kaya, E. (2024). Exploring epistemic aspects of engineering for K–12 science and engineering education. *Journal of Engineering Education*, *113*(2), 439-467. https://doi.org/10.1002/jee.20593 **(E)**

Yesilyurt, E., Deniz, H., & Kaya, E. (2024). Adapting the science teaching efficacy beliefs instrument to assess engineering teaching efficacy beliefs of pre-service elementary teachers: Rasch model and confirmatory factor analysis. *EURASIA Journal of Mathematics, Science and Technology Education.* https://doi.org/10.29333/ejmste/14882

Kaya, E., Deniz, H., & **Yesilyurt, E.** (2023). Toward developing a valid and reliable assessment of adults' nature of engineering views. *Journal of Engineering Education, 112*(3), 634–673. https://doi.org/10.1002/jee.20524 **(E)**

Yesilyurt, E. (2022). Investigating elementary preservice teachers' beliefs about teaching and learning science. *Journal of College Science Teaching, 51*(5), 23–30. https://doi.org/10.1080/0047231x.2022.12290578 **(E)**

Kaya, E., Deniz, H., & **Yesilyurt, E.** (2022). Can't Pick It Up? Student engineers solve big trash problem using a 3D printer. *Science & Children*, *60*(1), 65–69. **(P)**

Yesilyurt, E., Deniz, H., & Kaya, E. (2021). Exploring sources of engineering teaching self-efficacy for pre-service elementary teachers. *International Journal of STEM Education*, *8*(1). https://doi.org/10.1186/s40594-021-00299-8 **(E)**

Deniz, H., **Yesilyurt, E.,** & Kaya, E. (2021). Teaching nature of engineering with picture books. *Science and Children, 58*(3), 83–89. https://doi.org/10.1080/00368148.2021.12291643 **(P)**

Deniz, H., Kaya, E., **Yesilyurt, E.,** Newley, A., & Lin, E. (2021). Integrating engineering, science, reading, and robotics across grades 3-8 in a STEM education era. *Journal of Learning and Teaching in Digital Age*, 6(1), 40-45. **(E)** https://dergipark.org.tr/en/download/article-file/1225839

Deniz, H., **Yesilyurt, E**, & Kaya, E. (2021). Teaching Nature of Engineering with Picture Books. *Science and Children, 58*(3), 83–89. https://doi.org/10.1080/00368148.2021.12291643 ***(*P)**

Deniz, H., Kaya, E., **Yesilyurt, E.,** & Trabia, M. (2020). The influence of an authentic engineering design experience on elementary teachers' nature of engineering views. *International Journal of Technology and Design Education, 30,* 635-656. **(E)** https://doi.org/10.1007/s10798-019-09518-4

Kaya, E., Newley, A., **Yesilyurt, E.,** & Deniz, H. (2020). Measuring computational thinking teaching efficacy beliefs of preservice elementary teachers. *Journal of College Science Teaching, 49*(6), 55–64. https://doi.org/10.1080/0047231x.2020.12290665 **(E)**

Yesilyurt, E., Oztekin, C., Cakiroglu, J., & Deniz, H. (2019). Novice and experienced science teachers' conceptual knowledge of evolutionary theory within the context of micro-and macroevolution. *Journal of Biological Education, 55*(2), 109–127. https://doi.org/10.1080/00219266.2019.1667404 **(E)**

Kaya, E., **Yesilyurt, E.,** Newley, A., & Deniz, H. (2019). Examining the impact of a computational thinking intervention on pre-service elementary science teachers' computational thinking teaching efficacy beliefs, interest and confidence. *Journal of Computers in Mathematics and Science Teaching*, *38*(4), 385-392. **(E)** https://www.learntechlib.org/p/210970/

Kaya, E., Newley, A., **Yesilyurt, E.,** & Deniz, H. (2019). Improving preservice elementary teachers' engineering teaching efficacy beliefs with 3D design and printing. *Journal of College Science Teaching, 48*(5), 76–83. https://doi.org/10.1080/0047231x.2019.12290480 **(E)**

Newley, A., Kaya, E., **Yesilyurt, E.,** & Deniz, H. (2019). Engineering Encounters: Animatronic lions, and tigers, and bears Oh! My! *Science and Children, 56*(8), 64–71. https://doi.org/10.2505/4/sc19_056_08_64 (**P**)

Deniz, H., Kaya, E., & **Yesilyurt, E.** (2018). Engineering Encounters: The soda can crusher challenge: Exposing elementary students to engineering design process. *Science and Children, 56*(2), 74–78. https://doi.org/10.2505/4/sc18_056_02_74 **(P)**

Newley, A., Kaya, E., Deniz, H., & **Yesilyurt, E.** (2018). Making in the Middle New!: Celebrity statues: Learning computational thinking by designing biomimetic robots. *Science Scope, 42*(1), 74–81. https://doi.org/10.2505/4/ss18_042_01_74 **(P)**

Kaya, E., Newley, A., Deniz, H., **Yesilyurt, E.,** & Newley, P. (2017). Introducing engineering design to a science teaching methods course through educational robotics and exploring changes in views of preservice elementary teachers. *Journal of College Science Teaching, 47*(2), 66–75. https://doi.org/10.2505/4/jcst17_047_02_66 **(E)**

Newley, A., Deniz, H., Kaya, E., & **Yesilyurt, E.** (2016). Engaging elementary and middle school students in robotics through hummingbird kit with snap! visual programming language. *Journal of Learning and Teaching in Digital Age*, *1*(2), 20-26. https://dergipark.org.tr/en/download/article-file/1175551 **(E)**

Kaya, E., Deniz, H., Newley, A., **Yesilyurt, E.,** & Khalilov, F. (2016). Preparing Ugandan secondary teachers for robotics and technology competitions. *Journal of Learning and Teaching in Digital Age*, *1*(1), 12-17. https://dergipark.org.tr/tr/download/article-file/1175522 **(E)**

Sen, M., & **Yesilyurt, E.** (2014). The Development of Paranormal Belief Scale (PBS) for Science Education in the Context of Turkey. *International Journal of Education in Mathematics, Science and Technology, 2*(2). https://doi.org/10.18404/ijemst.40479 **(E)**

Manuscripts Under Review

Yesilyurt, E., Kaya, E., Turgut, R., Adibelli-Sahin, E., Kara-Zorluoglu, D. & Deniz, H. (under review). Unpacking the Sources of Computer Science Teaching Efficacy in In-service Elementary Teachers. *Computer Science Education* **(E)**

Kaya, E., **Yesilyurt, E.,** & Deniz., H. (under review). Assessing teachers' nature of engineering views. *Journal of Engineering Education.* **(E).**

Kaya, E., **Yesilyurt, E.,** Deniz., H. (under review). Straight from the Source: Exploring Engineering Experts' Views of Nature of Engineering through an Open-ended Views of Nature of Engineering - Version B Instrument. *European Journal of Engineering Education*. **(E)**

Yesilyurt, E., Adibelli-Sahin, E., Turgut, R., Kaya, E., Kara-Zorluoglu, D., & Deniz, H. (under review). Integrating Computer Science with Elementary Science through Robotics: Teaching Life Cycles with Programming. *Science & Children* **(P)**

Claesgens, J., **Yesilyurt, E.,** Sinapuelas, M., Bedford, D., & Scott, R. (under review). A NGSS professional development model for high school biology and chemistry teachers. *Science Educator Journal*. **(P)**

Marti, E., Kaya, E., **Yesilyurt, E** & Deniz, H. (under review). High school science teachers' views of nature of engineering through sustainable engineering design. *Journal of Science Education and Technology*. **(E)**

Developing Manuscripts to be Submitted to Refereed Journals

Yesilyurt, E., Deniz, H. & Kaya, E. (in preparation). Philosophy of engineering for K-12 engineering education. (**E)**

Yesilyurt, E., Deniz, H., Kaya, E. (in preparation) Exploring upper elementary students' nature of engineering views with authentic engineering design challenge.

Yesilyurt, E., & Claesgens, J. (in preparation). Biology and chemistry of the COVID-19 pandemic: A science and engineering approach. American Biology Teacher. **(P)**

Deniz, H., Orgill, M., Carroll, K., Kaya, E., & **Yesilyurt, E.** (in preparation). Concept mapping changes in elementary teachers' content knowledge about energy**. (E)**

Yesilyurt, E. & Turgut, R. (in preparation) General education pre-service teachers' attitudes, and beliefs/knowledge regarding second language acquisition and English language learners. (**E)**

Refereed Proceedings

Kaya, E., **Yesilyurt, E.,** Mjavanadze, E., & Deniz, H. (2024, March 25-29). Artificial intelligence education in teacher preparation programs: Initial strategies and insights in ai education for pre-service elementary teachers. In E. Langran (Ed.), *Proceedings of Society for Information Technology & Teacher Education International (SITE). Conference*. Las Vegas, NV, United States: Association for the Advancement of Computing in Education (AACE). https://academicexperts.org/conf/site/2024/papers/63242/

Kara-Zorluoglu, D., Zorluoglu, M., Yesilyurt, E., **Kaya, E.**, Turgut, R., Adibelli-Sahin, E. & Deniz, H. (2025). *Predicting Students' Computer Science Interest Using Pretest Data: A Machine Learning Approach*. In R. Jake Cohen (Ed.), Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 1361-1367). Orlando, FL, USA: Association for the Advancement of Computing in Education (AACE). Retrieved March 31, 2025 from https://www.learntechlib.org/primary/p/225679/.

Ali, F., **Yesilyurt, E.,** Deniz, H., Mjavanadze, E., & Kaya, E. (2024, March 25-29). Exploring the computational thinking teaching efficacy beliefs of pre-service elementary teachers including undergraduate and graduate students. In E. Langran (Ed.), *Proceedings of Society for Information Technology & Teacher Education International (SITE) Conference*. Las Vegas, NV, United States: Association for the Advancement of Computing in Education (AACE). https://academicexperts.org/conf/site/2024/papers/63113/

Turgut, R., **Yesilyurt, E.,** Kaya, E., Adibelli-Sahin, E., & Deniz, H. (2024, March 25-29). Empowering emergent multilingual learners in computer science education through a linguistically inclusive elementary curriculum. In E. Langran (Ed.), *Proceedings of Society for Information Technology & Teacher Education International (SITE) Conference*. Las Vegas, NV, United States: Association for the Advancement of Computing in Education (AACE). https://academicexperts.org/conf/site/2024/papers/62820/

Kaya, E., **Yesilyurt, E.,** Turgut, R., Sahin, B., Adibelli-Sahin, E., & Deniz, H. (2023). Integrating computer science into elementary math education for linguistically diverse

classrooms. *Proceedings of Society for Information Technology & Teacher Education International (SITE) Conference*. New Orleans, LO, United States: Association for the Advancement of Computing in Education (AACE). Retrieved Feb 3, 2023, from http://academicexperts.org/conf/site/2023/papers/61816/

Yesilyurt, E., Turgut, R., Kaya, E., Sahin, B., Adibelli-Sahin, E., & Deniz, H. (2023). Multilingual elementary school students' computer science and stem learning through robotics. *Proceedings of the 2023 ACM Conference on International Computing Education Research* V.2 (ICER '23 V2), August 07–11, 2023, Chicago, IL, USA. ACM, New York, NY, USA. https://doi.org/10.1145/3568812.3603480

Yesilyurt, E., Kaya, E., Turgut, R., Adibelli-Sahin, E., Sahin, B. & Deniz, H. (2022). Teaching elementary computer science with physical computing for linguistically diverse classrooms. In E. Langran (Ed.), *Proceedings of Society for Information Technology & Teacher Education International (SITE) Conference* (pp. 1950-1955). San Diego, CA, United States: Association for the Advancement of Computing in Education (AACE). Retrieved May 3, 2022, from https://www.learntechlib.org/primary/p/221007/.

Kaya, E., Newley, A., **Yesilyurt, E.,** & Deniz. H. (2021). Nature of computer science: Identification of K-12 accessible nature of computer science tenets and development of an open-ended nature of computer science instrument. *Proceedings of the 17th ACM Conference on International Computing Education Research (ICER 2021)*. Association for Computing Machinery, New York, NY, USA, 426. DOI: https://doi.org/10.1145/3446871.3469784

Deniz, H., **Yesilyurt, E.,** Kaya, E., Newley, A. & Lin, E. (2020). Integrating engineering, science, reading, and robotics across grades 3-8 in a STEM education era. In D. Schmidt-Crawford (Ed.), *Proceedings of Society for Information Technology & Teacher Education International (SITE) Conference* (pp. 869-875). Online: Association for the Advancement of Computing in Education (AACE). Retrieved April 21, 2020, from https://www.learntechlib.org/primary/p/215840/.

Marti, E., Kaya, E., Deniz, H., **Yesilyurt, E.,** & Iglesias, J. (2018). *Assessing high school science teachers' nature of engineering (NOE) perceptions with an open-ended NOE instrument*. The paper is published in *Conference Proceedings of American Society for Engineering Education Conference (SITE), 2018.*

Marti, E., Deniz, H., Kaya, E. & **Yesilyurt, E.** (2017). *High school science teachers' views of nature of engineering and applications of engineering design practices.* The paper is published in *Conference Proceedings of American Society for Engineering Education Conference (SITE), 2017.*

Newley, A., Kaya, E., Deniz, H. & **Yesilyurt, E.** (2017). *Measuring Engineering Perceptions of Fifth-grade Minority Students with the Draw-an-Engineer-Test (DAET).* The paper is published in *Conference Proceedings of American Society for Engineering Education Conference (SITE), 2017.*

Conference Presentations

Turgut, R., **Yesilyurt, E.,** Kaya, E. Adibelli-Sahin, E., Kara-Zorluoglu, D., & Deniz, H. (January, 2026). *Language, literacy, and AI: Designing elementary curriculum to support students' AI learning*. Paper accepted to present at the 24th Annual Hawaii International Conference on Education, Honolulu, Hawaii.

Yesilyurt, E., Kaya, E. & Deniz, H. (March, 2025). *Analyzing item endorsement difficulty of the engineering teaching efficacy beliefs instrument using wright maps*. Paper presented at 2025 National Association for Research in Science Teaching (NARST) Annual International Conference, National Harbor, MD.

Yesilyurt, E. & Claesgens, J. (March, 2025) *Implementing phenomenon-based instruction in secondary science classrooms: a case study of science teachers' approaches*. Paper presented at 2025 National Association for Research in Science Teaching (NARST) Annual International Conference, National Harbor, MD.

Yesilyurt, E., Kaya, E., Turgut, R., Deniz, H., Kara-Zorluoglu, D., & Adibelli-Sahin, E. (March, 2025). *Integrating AI concepts in elementary education: Enhancing AI learning through engineering and educational robotics*. Paper presented at the annual meeting of the Society for Information Technology & Teacher Education International (SITE) Conference, Orlando, Florida.

Kara-Zorluoglu, D., Zorluoglu, M., **Yesilyurt, E.**, Kaya, E., Turgut, R., Adibelli-Sahin, E., & Deniz, H. (March, 2015). Predicting students' computer science interest using pretest data: A machine learning approach. Paper presented at the annual meeting of the Society for Information Technology & Teacher Education International (SITE) Conference, Orlando, Florida.

Deniz, H., Kara-Zorluoglu, D., Kaya, E., **Yesilyurt, E.,** Turgut, R. & Adibelli-Sahin, E. (March, 2025). *Exploring factors influencing elementary teachers' future implementation of computer science curricula integrated with math/science.* Paper presented at 2025 National Association for Research in Science Teaching (NARST) Annual International Conference, National Harbor, MD.

Turgut, R., Adibelli-Sahin, E., **Yesilyurt, E.,** Kara-Zorluoglu, D., Kaya, E. & Deniz, H. (March, 2025). *Elementary teachers' perceptions of implementing a linguistically inclusive computer science curriculum*. Paper presented at the annual meeting of the Society for Information Technology & Teacher Education International (SITE) Conference, Orlando, Florida.

Yesilyurt, E. *Integrating science and computer science: robotics in diverse classrooms.* [Webinar] [Online]. National Association for Research in Science Teaching (NARST), August 15, 2024.

Yesilyurt, E., Kaya, E. Turgut, R., Adibelli-Sahin, E., & Deniz, H. (2024, February). *Investigating in-service elementary teachers' computer science teaching efficacy*. Paper presented at 2024 Eastern Educational Research Association (EERA), Annual International Conference, Clearwater, Florida, USA.

Yesilyurt, E., Claesgens, J., & Sinapuelas, M. (2024, February). *NGSS-aligned professional development programs for secondary science teachers*. Paper presented at 2024 Eastern Educational Research Association (EERA), Annual International Conference., Clearwater, Florida, USA.

Kaya, E., **Yesilyurt, E.,** & Deniz, H. (2024, March 17-20). *Understanding the nature of engineering: Insights from faculty and practicing engineers via open-ended VNOE-B questionnaire.* Paper presented at 2024 National Association for Research in Science Teaching (NARST) Annual International Conference, Denver, CO, US.

Pleasants. J., Antink-Meyer, A., Aydin, S., Roehrig, G., Barak, M., Erduran, S., Deniz, H., **Yesilyurt, E.,** & Kaya, E. (2024, March). *The Nature of Engineering: Exploring key questions to move research forward.* Symposium presented at 2024 National

Association for Research in Science Teaching (NARST) Annual International Conference., Denver, CO, USA.

Yesilyurt, E., Kaya, E., Kara-Zorluoglu, D., Adibelli-Sahin, E., Turgut, R., & Deniz, H., (2024, July 16-19). *Integrating CS with science and mathematics in linguistically diverse upper elementary classrooms*. Poster presented at 2024 Computer Science Teachers Association Annual Conference. Las Vegas, NV, USA https://conference.csteachers.org/event/f0c0e0a8-5ac1-4333-90c9-2eab9723af76/websitePage:03ec16c0-72ae-4baf-9e20-c727f880b8d1?session=8f317d74-6415-42a5-8755-67671ed0515b&shareLink=true

Yesilyurt, E., Kaya, E., & Deniz, H. (2023, April*). Validation of an instrument for assessing engineering teaching efficacy beliefs: Rasch and confirmatory factor analyses*. The paper presented at AERA Annual Meeting, Chicago, IL.

Kaya, E., **Yesilyurt, E.**, & Deniz, H. (2023, April). *Assessing elementary teachers' nature of engineering views via open-ended views of nature of engineering instrument.* Paper presented at 2023 National Association for Research in Science Teaching (NARST) Annual International Conference., Chicago, IL, USA

Deniz, H., **Yesilyurt, E.,** Kaya, E. (2023, April). *Nature of engineering in the framework and the next generation science standards*. The paper is accepted to present at National Association for Research in Science Teaching (NARST), Chicago, IL.

Adibelli-Sahin, E., Deniz., H., **Yesilyurt, E**., Turgut, R., Sahin., B., & Kaya, E. (2023, July). *Integrated CS via educational robotics*. Poster presented at 2023 Computer Science Teachers Association Annual Conference.

Turgut, R. & **Yesilyurt, E.** (2023, April). *From English-only to Multilingualism: Elementary teachers' practices of translanguaging in mainstream classrooms*. The paper presented at AERA Annual Meeting, Chicago, IL.

Kaya, E, **Yesilyurt, E.,** Trugut, R., Adibelli-Sahin, E., Sahin, B., & Deniz, H. (2023, March) I*ntegrating computer science into elementary math education for linguistically diverse classrooms.* The paper presented at the annual meeting of the Society for Information Technology & Teacher Education International (SITE) Conference, New Orleans, Louisiana.

Yesilyurt, E., Deniz, H., & Kaya, E. (2022, April*). Philosophy of engineering for k-12 engineering education*. The paper presented at AERA Annual Meeting, San Diego, CA.

Kaya, E., **Yesilyurt, E.,** & Deniz, H. (2022, April). *Assessing learners' nature of engineering views*. The paper presented at AERA Annual Meeting, San Diego, CA.

Yesilyurt, E., Turgut, R., Kaya, E. Adibelli-Sahin, E., Sahin, B., & Deniz, H. (April, 2022). *Teaching elementary computer science with physical computing for linguistically diverse classrooms*. The paper presented at the annual meeting of the Society for Information Technology & Teacher Education International (SITE) Conference (Virtual).

Kaya, E., **Yesilyurt, E.,** & Deniz, H. (March, 2022). *Meaningful assessment of engineering experts' and teachers' conceptions of nature of engineering*. The poster presented at the annual meeting of the National Association for Research in Science Teaching (NARST), Vancouver, British Columbia, CANADA.

Turgut, R., **Yesilyurt, E.,** Kaya, E., Adibelli-Sahin, E., Sahin, B., & Deniz, H. (2022, May). *Development of integrated computer science curriculum for linguistically diverse elementary classrooms*. Poster presented at 2022 Research in Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT) Conference.

Deniz, H., Kaya, E. & **Yesilyurt, E.** (2022, March). *Searching for nature of engineering in the framework for k-12 science education*. The paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST), Vancouver, British Columbia, CANADA.

Yesilyurt, E., Deniz, H., & Kaya, E. (2021, December). *Features of engineering for K–12 education* (NARST-Sponsored Session). The paper presented at the meeting of National Science Teacher Association (NSTA), Los Angeles, CA.

Yesilyurt, E., Deniz, H. & Kaya, E. (2021, March). *Epistemic aspects of engineering for K-12 education*. The paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST) (Virtual).

Yesilyurt, E., Deniz, H. & Kaya, E. (2020, Apr 17 - 21) *Sources of self-efficacy in an engineering professional development program for in-service teachers* [Paper Session]. AERA Annual Meeting San Francisco, CA http://tinyurl.com/tht6tw8 (Conference Canceled).

Yesilyurt, E. (2020, Apr 17 - 21) *Examining preservice teachers' beliefs about teaching and learning science* [Roundtable Session]. AERA Annual Meeting San Francisco, CA http://tinyurl.com/tbal2b2 (Conference Canceled).

Yesilyurt, E. (2020, March). *History of engineering and engineering education*. The paper presented in the Sandra K. Abell Symposium at the annual meeting of the National Association for Research in Science Teaching (NARST). Portland, OR. (Conference Canceled)

Yesilyurt, E. (2020, March). *Examining elementary students' images of engineers and interests in engineering careers*. The paper presented in the Basu Scholars Symposium at the annual meeting of the National Association for Research in Science Teaching (NARST). Portland, OR. (Conference Canceled).

Deniz, H., **Yesilyurt, E.,** & Kaya, E. (2020, April). *The Influence of an engineering design experience with robotics on k-12 teachers' nature of engineering views*. Paper presented at 2020 National Association for Research in Science Teaching (NARST) Annual International Conference, Portland, OR, USA.

Deniz, H., **Yesilyurt, E.** & Kaya, E. (2020, Apr 17 - 21) *Toward Defining Nature of Engineering in the Next Generation Science Standards Era* [Poster Session]. AERA Annual Meeting San Francisco, CA http://tinyurl.com/whny5tb (Conference Canceled)

Deniz, H. **Yesilyurt, E.,** Kaya, E., Newly, A. & Lin E. (2020, April). *Integrating engineering, science, reading, and robotics across grades 3-8 in a stem education era*. Paper presented at the annual meeting of the Society for Information Technology & Teacher Education International (SITE) Conference. (Online)

Deniz, H. **Yesilyurt, E.,** & Kaya, E. (2020, March). *Engineering professional development with robotics and assessment of k-12 teachers' understandings of nature of engineering*. Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST). Portland, OR. (Online).

Liu, K., Arroyo, M., Preston, B. & **Yesilyurt, E.** (2020, February). *Using critical counternarrative to prepare teacher educators of color to teach about race and equity*. Paper presented at the annual meeting of the Association of Teacher Educators, Atlantic City, NJ.

Wilhelm J., Cole, M., Driessen, E., **Yesilyurt, E.**, ….(2019, November). *Spatial-scientific snapshots of middle-level students' lunar understanding.* Paper presented at the 2019

Annual Convention of the School Science and Mathematics Association Salt Lake City, Utah.

Kaya, E., **Yesilyurt, E.,** & Deniz, H. (2019, April). *Assessing the impact of a computational thinking intervention on k-12 science teachers' robotics teaching efficacy beliefs, interest and knowledge in educational robotics.* Paper presented at 2019 National Association for Research in Science Teaching (NARST) Annual International Conference. Baltimore, MD, USA.

Yesilyurt, E., & Raeisi, M. (2019, April). *Exploring the factors related to pre-service teachers' approaches to teaching evolution*. Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST). Baltimore, MD.

Yesilyurt, E., Deniz H., & Kaya E. (2019, April). *Sources of engineering teaching self-efficacy for pre-service elementary teachers*. Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST). Baltimore, MD.

Yesilyurt, E., Deniz H., & Kaya E. (2019, April). *Development and validation of the engineering teaching efficacy belief instrument.* Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST). Baltimore, MD.

Yesilyurt, E., & Raeisi, M. (2019). *Examining pre-service teachers' perceived approaches to teaching evolution*. Global Conference on Education and Research *(GLOCER 2019)* USA.

Yesilyurt, E., Deniz H., & Kaya E. (2019, January). *Improving upper elementary students' nature of engineering views with an engineering design ex*perience. Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Savannah, Georgia, USA.

Kaya, E., Deniz, H., **Yesilyurt, E.,** & Newley, A. (2019, March). *Examining the impact of a computational thinking intervention on pre-service elementary science teachers' computational thinking teaching efficacy beliefs, interest, and confidence*. Paper presented at the Society for Information Technology and Teacher Education (SITE). Las Vegas, NV, USA.

Deniz, H., Orgill, M., Carroll, K., Kaya, E., **Yesilyurt, E.** (2019, January). *Concept mapping changes in elementary teachers' content knowledge about energy.* Paper Presented at the 2019 Association for Science Teacher Education Conference. Savannah, GE, USA

Marti, E. J., & Kaya, E., & Deniz, H., & **Yesilyurt, E.,** & Iglesias, J. (2018, June), *Assessing high school science teachers' nature of engineering (NOE) perceptions with an open-ended NOE instrument (Fundamental).* Paper presented at 2018 ASEE Annual Conference & Exposition, Salt Lake City, Utah. https://peer.asee.org/29821

Kaya, E., **Yesilyurt, E**., Newley, A. D., & Deniz, H. (2018, June), *Investigating computational thinking self-efficacy beliefs of pre-service elementary teachers* Paper presented at 2018 ASEE Annual Conference & Exposition, Salt Lake City, Utah. https://peer.asee.org/30721

Yesilyurt, E., & Deniz H. (2018, April). *Investigating science teachers' causal schemas in the context of evolutionary theory.* Paper presented at the annual meeting of the American Educational Research Association (AERA). New York, NY.

Newley, A., & Kaya, E., & Deniz, H., & **Yesilyurt, E.** (2018, June). *Teaching K-8 Students engineering design process through Zoombinis.* Paper presented at 2018 ASEE Annual Conference & Exposition, Salt Lake City, Utah. https://peer.asee.org/31055

Deniz, H., Kaya, E., & **Yesilyurt, E.** (2018, April). *The differential impact of two engineering professional development programs on elementary teachers' engineering teaching efficacy beliefs.* Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST). Atlanta, Georgia, USA.

Kaya, E., Deniz, H., & **Yesilyurt, E.** (2018, January*). Examining the impact of a relatively short intervention on science teachers' robotics teaching efficacy beliefs and interest in educational robotics.* Paper presented at the annual meeting of the Association for Science Teacher Education (ASTE). Baltimore, MD, USA.

Yesilyurt, E., &Liu, K. (2018, February). *Single-Case study: Critical storytelling in a doctoral teacher education course*. Paper presented at the annual meeting of the Conference on Academic Research in Education (CARE). Las Vegas, NV.

Yesilyurt, E., & Turgut, R. (2018, February). *Investigating pre-service teachers' knowledge, attitudes, and beliefs about second language acquisition and English language learners.* Paper presented at the annual meeting of the American Association of Behavioral & Social Science Conference (AABSS). Las Vegas, NV.

Kaya, E., Newley, A. D., Deniz, H., & **Yesilyurt, E.** (2017, June), Board # 115: EEGRC Poster: *Improving pre-service elementary teachers' nature of engineering views with the use of ev3 robotics.* Paper presented at 2017 ASEE Annual Conference & Exposition, Columbus, Ohio. https://peer.asee.org/27698

Marti, E. J., Deniz, H., Kaya, E., & **Yesilyurt, E.** (2017, June), *Board # 98: High school science teachers' views of nature of engineering and application of engineering design practices.* Paper presented at 2017 ASEE Annual Conference & Exposition, Columbus, Ohio. https://peer.asee.org/27967

Newley, A. D., Kaya, E., & **Yesilyurt, E.,** & Deniz, H. (2017, June), *Board # 104: Measuring engineering perceptions of fifth-grade minority students with the draw-an-engineer-test (DAET).* Paper presented at 2017 ASEE Annual Conference & Exposition, Columbus, Ohio. https://peer.asee.org/27675

Yesilyurt, E., Turgut, R., Kaya, E. & Deniz, H. (2017, April). *General education preservice teachers' attitudes, and beliefs/knowledge regarding second language acquisition and English language learners*. Paper presented at the annual meeting of American Educational Research Association (AERA). San Antonio, TX.

Deniz, H., **Yesilyurt, E.,** Kaya, E. & Trabia, M. (2017, April). *The Influence of an authentic engineering design experience on elementary teachers' engineering teaching efficacy beliefs.* Paper presented at the annual meeting of National Association for Research in Science Teaching (NARST). San Antonio, TX.

Deniz, H., **Yesilyurt, E.,** Kaya, E., Trabia, M. (2017, April). *The Influence of an authentic engineering design experience on elementary teachers' nature of engineering views.* Paper presented at 2017 National Association for Research in Science Teaching (NARST) Annual International Conference, San Antonio, Texas.

Kaya, E., Newley, A., **Yesilyurt, E.,** & Deniz, H. (2017, April). *Improving pre-service elementary teachers' engineering teaching efficacy beliefs through 3D printing (Work in Progress).* Poster presented at the 2017 American Society for Engineering Education Pacific Southwest (ASEE PSW) Section. Tempe, AZ, USA.

Yesilyurt, E, Cakiroglu J. & Oztekin, C. (2015, April). *Conceptual, structural and epistemic aspects of argumentation practices within the evolutionary context.* Paper presented at the

annual meeting of the National Association for the National Association for Research in Science Teaching (NARST). Chicago, IL.

Aydin, G. Ç., Evren, E., Atakan, İ., Sen, M., Yilmaz, B., Pirgon, E., **Yesilyurt, E.** ... & Ebren, E. (2016, January). *Delphi technique as a graduate course activity: Elementary science teachers' TPACK competencies*. Paper presented at the *SHS Web of Conferences* (Vol. 26). EDP Sciences.

Lightning Talks

Yesilyurt, E., Turgut, R., Kaya, E., Sahin, B., Adibelli-Sahin, E., & Deniz. H. (2023). Lightning Talk. Multilingual Elementary School Students' Computer Science and STEM Learning through Robotics. *Proceedings of the 2023 ACM Conference on International Computing Education Research* V.2 (ICER '23 V2), August 07–11, 2023, Chicago, IL, USA. ACM, New York, NY, USA. https://doi.org/10.1145/3568812.3603480

Kaya, E., Newley, A., **Yesilyurt, E.,** & Deniz, H. (2021). Lightning Talk. Nature of computer science: identification of K-12 accessible nature of computer science tenets and development of an open-ended nature of computer science instrument. *Proceedings of the 17th ACM Conference on International Computing Education Research* (ICER 2021), August 16-19, 2021, Virtual Event, USA. ACM, New York, NY, USA. Pages. https://doi.org/10.1145/3446871.3469784

Workshops

Yesilyurt, E., Claesgens, J., Korb, M. & Scott, R. (May, 2025). *Unpacking the science behind a steaming compost pile: using phenomena for 3d science learning*. Virtual Workshop accepted to present at Association for Science Teacher Education (ASTE) Conference.

Kaya, E., **Yesilyurt, E.,** Turgut, R., Sahin, B., Adibelli-Sahin, E., E.Kara-Zorluoglu, D., & Deniz, H. (2024, March). *Teaching elementary science and mathematics integrated with computer science at linguistically diverse classrooms via educational robotics.* Workshop conducted at the Society for Information Technology and Teacher Education (SITE). Las Vegas, NV.

Kaya, E., **Yesilyurt, E.,** Turgut, R., Adibelli-Sahin, E., & Sahin, B., & Deniz, H. (2023, April). *Integrating science with computer science for linguistically diverse classrooms at upper elementary grades via educational robotics.* Pre-conference workshop conducted at National Association for Research in Science Teaching (NARST), Chicago, IL.

Yesilyurt, E., Turgut, R., Adibelli-Sahin, E., Sahin, B. Miranda, J., Deniz, H., & Kaya, E. (2022, October). *Incorporating computer science with STEM using the affordances of educational ro*botics. Workshop conducted at the Computer Science for Virginia Regional Conference. CSforVA Conference –Activating Computer Science. Steven F. Udvar-Hazy Center. Chantilly, VA. Retrieved from https://www.codevirginia.org/event/activate-cs-conference/

Deniz, H., **Yesilyurt, E.,** & Kaya, E. (2019, November). *Integrating engineering and computational thinking with 3D-printed engineering design.* Workshop conducted at 2019 Annual Convention of the School Science and Mathematics Association. Salt Lake City, Utah.

Deniz, H., **Yesilyurt, E.,** & Kaya, E. (2019, March). *Integrating 3D design and printing with mechanical trash grabber design challenge within the context of the Next Generation Science Standards*. Workshop conducted at the Society for Information Technology and Teacher Education (SITE). Las Vegas, NV.

Deniz, H., Kaya, E., & **Yesilyurt, E.** (2018, October). *Integrating engineering design with science and language arts within the context of NGSS*. Workshop conducted at the National Science Teachers Association (NSTA) 2018 Conference. Reno, NV. Association for Science Teacher Education (ASTE) sponsored session.

Deniz, H., Kaya, E., & **Yesilyurt, E.** (2018, January). *Integrating engineering design with science and language arts within the context of the Next Generation Science Standards.* Workshop conducted at the 2018 Association for Science Teacher Education (ASTE). Baltimore, MD. A preconference workshop held at the annual meeting of the Association for Science Teacher Education (ASTE), Baltimore, MD.

GRANTS & EXTERNAL FUNDING

NSF Grant (Current)

Grant Title: EducateAI DCL: Cultivating AI literacy through linguistically inclusive integrated elementary curriculum via educational robotics

Co-PI: Responsibilities include co-leading teacher training, overseeing curriculum development, co-leading qualitative analyses, overseeing quantitative data analyses, and writing and disseminating findings.

Source of Support: National Science Foundation/ Computer Science for All

Start and End Dates: October 1, 2024-September 30, 2027

Received Amount: $ 999,999

Award Link:
https://www.nsf.gov/awardsearch/showAward?AWD_ID=2434803&HistoricalAwards=false&fbclid=IwY2xjawFPwldleHRuA2FlbQIxMQABHcPbEbLu_WQPRlhkwN-wGyRu1s1H2T4ZM75zF7V8rFr5XEjq3OMK6SSY8w_aem_WEJDScwKVKSVEGmnXOBRlA

NSF Grant (Current Year 4 No-cost Extension)

Grant Title: Collaborative Research: Developing an integrated computer science curriculum for culturally and linguistically diverse classrooms in grades 3-5.

Co-PI: Responsibilities include co-leading teacher training, overseeing curriculum development, co-leading qualitative analyses, overseeing quantitative data analyses, and writing and disseminating findings.

Source of Support: National Science Foundation/ Computer Science for All

Start and End Dates: September 1, 2021- August 31, 2025 (Estimated)

Total Received Amount: $999,454/ Weber State University-- $202,253.00

Award Link: **https://www.nsf.gov/awardsearch/showAward?AWD_ID=2122201**

NSF Grant (Current Year 6 No-cost Extension)

Grant Title: Aligning the Science Teacher Education Pathway: A Networked Improvement Community

Co-PI: Responsibilities involve implementing the ASET Toolkit to assist teachers in aligning their curriculum and instruction with the NGSS vision. This role also includes collaborating with campus pathway partners to expand the use of ASET tools within local teacher education pathways.
Source of Support: National Science Foundation/DRK-12
Start and End Dates: July 1, 2019 - June 30, 2025 (Estimated)
Total Received Amount: $3,577,306.00
Award Link: https://www.nsf.gov/awardsearch/showAward?AWD_ID=1908900

NSF Grant (Submitted)

Grant Title: DRK12: Preparing Tomorrow's Educators: Integrating Artificial Intelligence with Elementary Science and Engineering in Pre-Service Teacher Education
PI: If awarded, responsibilities would include leading teacher training, overseeing module development, leading qualitative analyses, overseeing quantitative data analyses, and writing and disseminating findings.
Source of Support: National Science Foundation/CAREER
Requested Amount: $ 870, 261

Department of Education Grant (Submitted)

Grant Title: AI for All: Integrating artificial intelligence with science, mathematics, and language arts instruction at linguistically diverse upper elementary classrooms.
Co-PI: If awarded, responsibilities would include co-leading teacher training, overseeing curriculum development, co-leading qualitative analyses, overseeing quantitative data analyses, and writing and disseminating findings.
Source of Support: Department of Education/ Education Innovation and Research (EIR)
Requested Amount: $ 3,019,071.00

NSF Grant (Submitted)

Grant Title: DSC: DS for ALL: Integrating data science with science instruction at linguistically diverse middle school classrooms
Co-PI: If awarded, responsibilities would include co-leading teacher training, overseeing curriculum development, co-leading qualitative analyses, overseeing quantitative data analyses, and writing and disseminating findings.
Source of Support: National Science Foundation/ Data Science Corps
Requested Amount: $1,199,820

NSF Grant (Working in Progress)

Grant Title: Creating a computer science curriculum tailored for culturally and linguistically diverse K-2 classrooms.
Co-PI: If awarded, responsibilities would include co-leading teacher training, overseeing curriculum development, co-leading qualitative analyses, overseeing quantitative data analyses, and writing and disseminating findings.
Source of Support: National Science Foundation/ CSforAll

NSF Grant (Working in Progress)

Grant Title: AI for All Educators: Integrating Artificial Intelligence across pre-service science teacher curricula to foster inclusive and innovative teaching practices
Co-PI: If awarded, responsibilities would include co-leading teacher training, overseeing curriculum development, co-leading qualitative analyses, overseeing quantitative data analyses, and writing and disseminating findings.
Source of Support: National Science Foundation/ CAREER

Mini-Grant Proposals (UNLV Completed)

Grant Title: Introducing engineering to elementary pre-service teachers through 3D printing and educational robotics (2017)
Co-PI: Responsibilities included co-leading teacher training, overseeing curriculum development, co-leading qualitative analyses, overseeing quantitative data analyses, and writing and disseminating findings.
Source of Support: Office of the Executive Vice President and Provost
Received Amount: $2738

Grant Title: Introducing Engineering to Elementary Pre-service Teachers through Educational Robotics (2016)
Co-PI: Responsibilities included assisting with the research, writing practitioner and/or research-oriented manuscripts and overall program administration**.**
Source of Support: UNLV
Received Amount: $2000

TEACHING EXPERIENCE

College Teaching

2021-Present **Instructor-Foundations of Science Education (3570)**
This course is designed to introduce science teaching to pre-service secondary science teachers by examining what science is and how we learn it. Students investigate science by engaging in it themselves, understanding its nature, and analyzing its classroom portrayal. Additionally, they gain a deeper understanding of how science is taught and where it is not taught as it should be. Through volunteering in informal learning settings, they reflect on, teach, and apply knowledge about student learning. Integrating these concepts will help students align their understanding with discipline-specific content knowledge and scientific practices, consistent with the 3D science outlined in the SEEd Standards and NGSS.

2021-Present **Instructor of Principles of Life Sciences (1370)**
This course is designed for elementary education majors. Through scientific inquiry, students learn biology constructively and actively. This course covers cells, cell chemistry, genetics, plant and animal anatomy, physiology, evolution, and ecology. Also, this course emphasizes the unifying concepts of all living things. The course consists of a 100-minute

lecture followed by a 3-hour lab/lecture segment, where students can apply newly acquired knowledge in designing experiments and obtaining hands-on experience.

2020-Present **Instructor of Animal Biology (1010)**

This course reviews the evolution of the animal kingdom from unicellular sponges to multicellular invertebrates to mammalian vertebrates. This course designed for non-majors introduces to the principles of genetics, evolution, ecology, and animal diversity. My aim in this course is to help my students learn the basic principles of evolution, understand the diverse adaptations of animals to different environments, ecological relationships, and their importance to our planet. Through this course, students have an opportunity to explore how animals evolved, function, and interact with their environment.

2021-Present **Instructor of History of Life Sciences (4700)**

The purpose of this course is to explore the ways in which personalities, instruments, and ideas have contributed to the development of biology through history, the present, and the future. Students examine various attempts to explain the living world from antiquity to the twentieth century. The course emphasizes three basic areas of conceptual biology: evolution, genetics, and developmental biology. From a historical perspective, we examine animal, plant, and human life from various scientific perspectives and explore their interrelationships. Its primary goal is to provide students with an understanding of the nature of the life sciences in the past.

2020-Present **Instructor of Principle of Zoology Labs (1110)**

The lab focuses on development of basic scientific skills like proposing testable hypotheses, designing studies, collecting data, along with interpreting and communicating findings. Students have an opportunity to learn how to craft a scientific manuscript. The lab covers important concepts including surface area to volume ration, cell division, resource partitioning, and evolution.

2016 – 2020 **Instructor – Elementary Science Teaching Methods (EDEL 443/CIE 543)**

Responsibilities entailed creating course syllabi and instructing the elementary science teaching methods course, emphasizing inquiry-based learning, the nature of science (NOS), integration of science with language arts, engineering, and computational thinking. The course and its assignments were revamped for undergraduate elementary education majors and Teach for America graduate students, focusing on engaging with science content, NGSS standards, and pedagogical content knowledge (PCK). Additionally, the role involved assessing students' written assignments and performance.

2018-2020 **Graduate Teaching Assistant - Teaching Secondary Science (CIS 563)**

This course is designed for pre-service secondary science teachers. The course covers a range of topics such as evaluating student knowledge prior to instruction, curriculum development, lesson planning, fostering an inquiry-based teaching approach, instruction on evolution and the nature of science, enhancing scientific literacy, ensuring laboratory safety, adhering to national and state educational standards, integrating technology in teaching, and assessing student learning outcomes. Instructor of record: Dr. Merryn Cole.

2017 **Graduate Teaching Assistant – Introduction to Secondary Education (EDU 202)**

This course engages pre-service teacher candidates in self-evaluation, analysis of their own and practical teaching models, and activities connected to the challenges of modern secondary education. It highlights current issues and the multicultural, social, and

psychological underpinnings of education. Includes up to 25 hours of fieldwork and/or structured video observation. The instructor of record: Dr. Chia-Liang Dai.

2015 **Graduate Teaching Assistant – Curriculum Development Secondary Science Education (CIG 639)**

This course engages teachers in investigating studies and research related to both the content and methods used in secondary school science curriculums. The instructor of record: Dr. Hasan Deniz

2016-2020 **Instructor of STEM Saturday Program**

Saturday STEM program is designed to provide STEM education for the elementary and middle school students in Las Vegas. This program provides grades 1-8 students an opportunity to experience a major STEM topic through a 5-week course in both fall and spring semesters. My responsibilities included developing and providing STEM workshops.

2019 **Instructor - The Robotics Academy of Nevada (RAN)**

I provided a professional development initiative across the state supported by Tesla's K-12 Education Investment Fund. This program, executed through DRI's Science Alive—a PreK-12 STEM education and outreach effort—is in collaboration with the Colleges of Engineering at UNLV and UNR. My duties involved educating participating teachers on K-12 Computer Science standards.

Teaching related activities

Population Education Trainer (2019-continue)

Population Education, a national program, places a strong emphasis on curriculum resources and professional development for K-12 educators, focusing on human population issues. My responsibilities included conducting annual workshops for teachers and non-formal educators at conferences and in-service programs, as well as for prospective teachers in their education methods and content classes at colleges.

K-12 Teaching experience

Science Teacher in Private Cakil Tasim Education Center (2011-2013)

My responsibilities included teaching science and mentoring elementary students (Grades 3-8)

MENTORSHIP EXPERIENCE

Mentee	Mentor Responsibilities	Dates
Mina Raeisi Undergraduate Student College of Education	Responsibilities entail not only contributing to and supporting the professional development of undergraduate mentees but also leading research projects, and managing the writing and submission of conference proposals to national conferences	2018-2019--The Graduate College Rebel Research and Mentorship Program (RAMP)
Nicole Thomas Master's Student	Responsibilities encompass providing support and contributing to the professional development of the master's student by offering insights into the	2020

College of Education	discipline of science education. This includes guiding the student in the creation of an academic paper.	
Erick Hansen Undergraduate Student College of Education	Responsibilities entail contributing to and supporting the professional development of the undergraduate mentee, leading research projects, writing, and submitting conference proposals to national conferences	2021-2023
Samuel Leake Undergraduate Student	I am working in an NSF project (NSF Propel Project) as a mentor. In this project, scholarships are awarded to deserving STEM majors to fulfill the requirements for science teaching endorsements. A critical component of the scholarship program involves pairing each scholar with a faculty member. As a mentor, my aim is to guide the emerging teacher through reflective practices during their teaching residency, preparing them for teaching and the PPAT assessment portfolio.	2023-Continue
Burak Sahin and Dilara Kara-Zorluoglu Graduate Students	In one of my NSF projects, I have been collaborating with graduate assistants at UNLV. Part of my responsibilities involves contributing to and supporting the professional development of these graduate students.	2022-Continue

SERVICES

2024-Present NSF DRK Proposal Reviewer
2019-Present Journal of Science Teacher Education (JSTE) Editorial Board Member
2022-2025 Member of the NARST Research Committee/Co-chair of the NARST Research Network Subcommittee
2023-Present ASEE Commission on P-12 PCEE At-Large Member, Teacher Representative
2017-Present American Educational Research Association (AERA) reviewer for Division C (Science) and Division K (Teaching & Teacher Education)
2017-Present National Association for Research in Science Teaching (NARST) reviewer for Strand 1 (Science Learning, Understanding and Conceptual Change,), 7 (Pre-service Science Teacher Education and Strand) and 13 (History, Philosophy, Sociology, and Nature of Science)
2018-Present Association for Science Teacher Education (ASTE) reviewer for strand pre-service science teacher preparation.
2017-Present American Society for Engineering Education (ASEE) Reviewer for strand:

Pre-college engineering education

2017-2018 AERA Division K campus liaison at UNLV (2017-2018). Responsibilities include organizing meetings to inform master and Ph.D. students about AERA conferences.

2022-Presenr Science Fair Judge at Ritchey Science Fair

2016- 2020 Science Fair Judge at Coral Academy of Science Las Vegas: CASLV

2021-Present Science Fair Judge at Regeneron ISEF/Society for Science

PROFESSIONAL SKILLS

Languages: Turkish (Native), English (Fluent),
Computer Skills*:* SPSS (Advanced), AMOS(Advanced), R(Advanced), Phyton (Intermediate) Mplus(Intermediate), Lisrel(Intermediate), Pajek(Intermediate), MS Office Suite (Expert), C# (Intermediate), JAVA (Advanced), MATLAB (Intermediate),
AutoCAD (Intermediate), HTML, CSS, JavaScript (Intermediate), Photoshop (Intermediate), LiveCode (Intermediate)

PROFESSIONAL MEMBERSHIPS

- National Science Teachers Association (NSTA)
- American Society of Engineering Education (ASEE)
- National Association for Research in Science Teaching (NARST)
- American Educational Research Association (AERA)
- Association for Science Teacher Education (ASTE)
- Society for Information Technology & Teacher Education International (SITE)
- International Technology and Engineering Educators Association (ITEEA)

CERTIFICATIONS

- 2023- Machine Learning Professional Development Intensive for Teachers
  https://verified.sertifier.com/en/verify/80152232870001/
- 2022- Inclusive Teaching for Equitable Learning Course (Micro credential)
- AI Learning Community
- Quantum Computing (2 semesters course) by "Qubit by Qubit"
- Google Data Analytics_
  https://www.credly.com/badges/63db288b-f496-4ee0-b046-76a0404520e8/linked_in_profile
- 2018 - University of Nevada, Las Vegas Graduate College Mentorship Certificate
- 2017 - University of Nevada, Las Vegas Graduate College Communication Certificate
- 2016 - University of Nevada, Las Vegas Graduate College Teaching Certificate
- 2016 - University of Nevada, Las Vegas Graduate College Research Certificate