Synergistic Activities Examples

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| Good | Great! |
| 2020-2024: Co-Principal Investigator, developing a Network to Coordinate Research on Equity Practices and Cultures in STEM Maker Education, National Science Foundation (NSF) ($499,985) | Developing an NSF funded DRL equity and interdisciplinary “making in STEM” education program; collaborating with researchers across 4 universities with specific emphasis on building capacity for research knowledge and dissemination of research related to ‘making’ and equity, to improve STEM-focused maker participation. |
| Senior Researcher, National Science Foundation Grant, Developing and Validating a Scalable, Classroom-focused Measure of Usable Knowledge for Teaching Mathematics: The Classroom Video Analysis Instrument, (2017-2021) | Part of an NSF DRK-12 grant, developed a set of scalable, classroom-focused measures of usable mathematics teaching knowledge that are aligned with state standards to extend the classroom video analysis approach to inform researchers, policy makers, and school districts on how to monitor teacher knowledge over time, and to gauge teacher preparedness for implementing state standards in mathematics and enhance learning and teaching of STEM. |
| Principal Investigator, Research Experiences for Undergraduates Supplemental for The Z-factor Program: A Data-Driven, Sleep Education Program to Improve STEM in Elementary School Students, sponsor: National Science Foundation | PI which Integrated NSF’s ‘Research Experiences for Undergraduates’ program with an existing NSF grant ‘A Sleep Education Program to Improve STEM education in Elementary School’ to mentor undergraduate students in meaningful ways in conducting research to better understand and promote practices that increase students' motivations and capacities to pursue careers in fields of science, technology, engineering, or mathematics (STEM). |
| 2018-2019: Principal Investigator, Synthesis and Design Workshop: Principles for the equitable design of digitally-distributed, studio-based STEM learning environments, National Science Foundation ($99,825) | As PI of NSF Conference Grant, designed a workshop bringing together a community of collaborators from multiple stakeholder groups to engage in activities that invite experimentation with distributed learning technologies to examine ways to adapt learning to the changing technological landscape and create robust, dynamic online STEM learning environments. |