



Collaborative Research: STEM Career Connections

John Ristvey, Tammy Sumner, Quentin Bidy, Mimi Recker, Melissa Rummel

NSF Award Number: |UCAR: [1949322](#)| |CU: [1948709](#)| |USU: [1948709](#)|

Dates: 2020-2023

Project type: Design and Testing of Innovations (DTI)

Project URL: <https://www.colorado.edu/program/schoolwide-labs/nsf-itest>

Project Overview: The goal for the STEM Career Connections project is to develop an innovative career readiness model for both in and out of school settings that will profoundly increase the knowledge of, and interest in, STEM and computing careers for middle school youth in a rural mountain community who are often underserved in STEM fields.

The STEM Career Connections (STEMCC) project develops and fosters a research+practice community partnership with the local school district, out-of-school time providers, local businesses, the local community college, parents, and youth in a rural mountain community working collaboratively to create and support youth engagement with STEM.

The STEMCC model shows promise for increasing youth awareness of and interest in STEM through investigating locally relevant problems while partnering with community STEM partners and mentors to engage in both technology-rich learning and integrated career experiences.

Lessons Learned & Insights Gained

- Our research project served as a platform to facilitate communication and collaboration across the STEM ecosystem.
- Start small by identifying key partners that can help bridge relationships with new partners interested in supporting STEM in their community.
- Youth have increased awareness of STEM careers in their community.
- Partnering with local STEM mentors has a positive impact on youth outlook on STEM.

Equity

STEM can be difficult to 'see' in many rural mountain communities and youth often feel the need to focus on a limited range of careers or to move away to larger cities. Our focus population are youth from low-income families, many are from LatinX/Hispanic ethnicity that are historically marginalized in STEM. To address inequalities in this community (e.g., extreme income inequality and language and cultural barriers) the STEMCC model embeds locally based, STEM career connections into middle school STEM and OST programming so youth can: (1) see/experience STEM in the community; (2) make relevant connections between their learning activities and local STEM. These experiences foreground locally relevant phenomena and design challenges for youth to make connections to STEM in ways that are important to them.

New Challenges & Next Steps

- What steps are needed to ensure that partnerships currently facilitated by STEMCC are sustainable? How do we transfer ownership to local community leaders?
- How does the STEMCC model mature in the community over time ?
- What aspects of the STEMCC model need to be adapted for other rural mountain contexts?