



## CAREER: Engaging Rural Students with Next Generation Physiological Interfaces

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Project type: ITEST, CSforAll

Project URL: <https://htilua.org/neuroblock>

Project Overview: Relatively little research exists on the use of experiences with physiological sensors to support STEM education. In this work, we draw on techniques from physiological computing and computer science education to explore novel ways to build students' computational thinking skills.

Building with interactive physiological data could promote novel computational thinking perspectives.

### Lessons Learned & Insights Gained

- Learning barriers related to **physiological expressions** and **physiological design** may be less common with EMG-based (muscle) activities in comparison to EEG (brain) activities.
- **Physiological design** events seem to be highly connected with the "**incremental & iterative**" computational practice.

### Equity

Our team recently held more focus group activities with groups commonly underrepresented in computing. These focus group sessions aimed to better understand educators' and students' perspectives of physiological technology. With these insights, we plan to build more equitable physiological computing technology.

### New Challenges & Next Steps

Hale and Greene County School systems had a brief resurgence of COVID during Spring 2022. This break pushed some user studies back. We are currently in the process of completing these studies.