Reducing language obstacles for future Deaf Scientists

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Motivation
Disparities in achieving advanced research training for Deaf and Hard of Hearing (HoH)

Reasons for the disparities
Deaf students whose first language is ASL must learn STEM in a second language where most of the words have no direct ASL counterpart.

Besides language interpreters, there are very few resources available to help hearing STEM faculty mentor Deaf students in research and career advancement.

Cross-cultural dynamics:
- Sign language
- Deaf culture

Professional soft skills:
- Communication
- Academic culture
- Conflict resolution

Hypothesis
Information technology that interactively links material that is highly visual to specific STEM terms and phrases will improve Deaf students topic comprehension.

Innovation
A novel browser plug-in:
- Interactively links material that is highly visual to specific STEM terms and phrases
- Works with narrative (Wikipedia) and visual (YouTube) websites

Project Research Goal
Empirically evaluate the prototype to determine if it improves Deaf students accuracy on AP Biology test questions.

Team
Multidisciplinary members from three schools and two universities

Potential Impact
Follow on funding:
- National Science Foundation, National Library of Medicine

Shared data:
- Annotated ASL STEM videos that will inform novel language models

Technology:
- Pittsburgh Invention Disclosure Number: 04688.2018