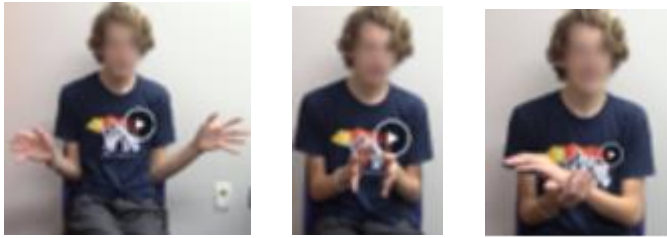


Use of Representative Gestures is Related to Statistics Understanding

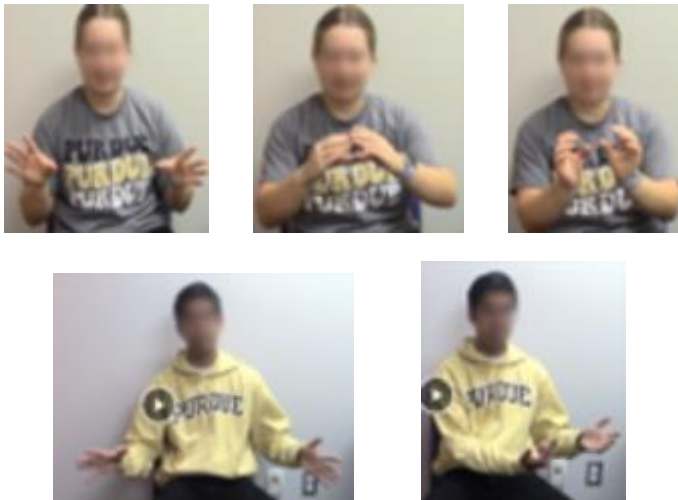


#2400568: Collaborative Research: Understanding Cueing Gesture within Video Learning Environments for Statistics Education

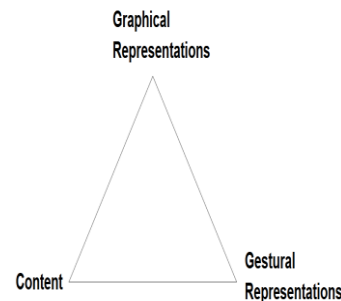
Intriguing Result 1



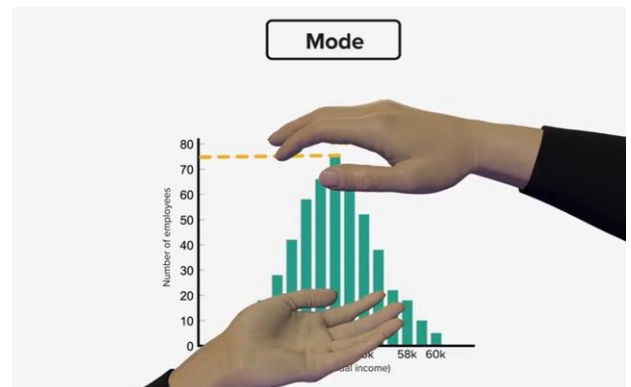
- Gestures aligned with understanding
- Gestures of procedures = Limited.
- Gestures of metaphors = Aligned.



Intriguing Result 2



- Gestures integrated into online video instruction



Methods

Interviews

Randomized Control Trial

- Collected interviews from 20 undergraduate students (STEM and non-STEM majors).
- Analyzed gestures with thematic analysis and grounded theory
- Randomized Control Trials are currently ongoing.

Challenge Overcome

Statistics

- Choosing topics that participants could learn in 10 minutes.
- Developing conceptual rather than procedural assessments.
- Determining productive gestures for learning.

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<https://peer.asee.org/57250>: link to manuscript

<https://engineering.purdue.edu/i2Engineering>

