

## Research Question

How does the presenter type (human vs tutorbot) during adaptive segments affect math performance, engagement, and gaze behavior?

## Methods

Participants consisted of adults 18 years old and older. Participants watched a video about square roots taught by a human instructor. During the lesson, two adaptive segments occurred with one taught by the human instructor and one taught by a virtual instructor, Tutorbot. The order of adaptive segment instructor was counterbalanced (106 saw human first, 118 saw Tutorbot first). Even though participants were presented problems in the main video and adaptive segments, participants did not solve any problems during the lesson. During the video and adaptive segments, participants were probed for task-unrelated thought, difficulty disengaging, valence, and boredom. Participants also gave instructor ratings during the probe segments in the adaptive segments. Four probes occurred during the main video and two occurred during the adaptive segments (1 in each). After the video, participants answered 13 math questions and answered demographic questions.

## Summary of results

Participants preferred the human instructor over Tutorbot. However, they were more engaged when the instructor was Tutorbot.