Do Online Simulations Improve High School Physics Labs?

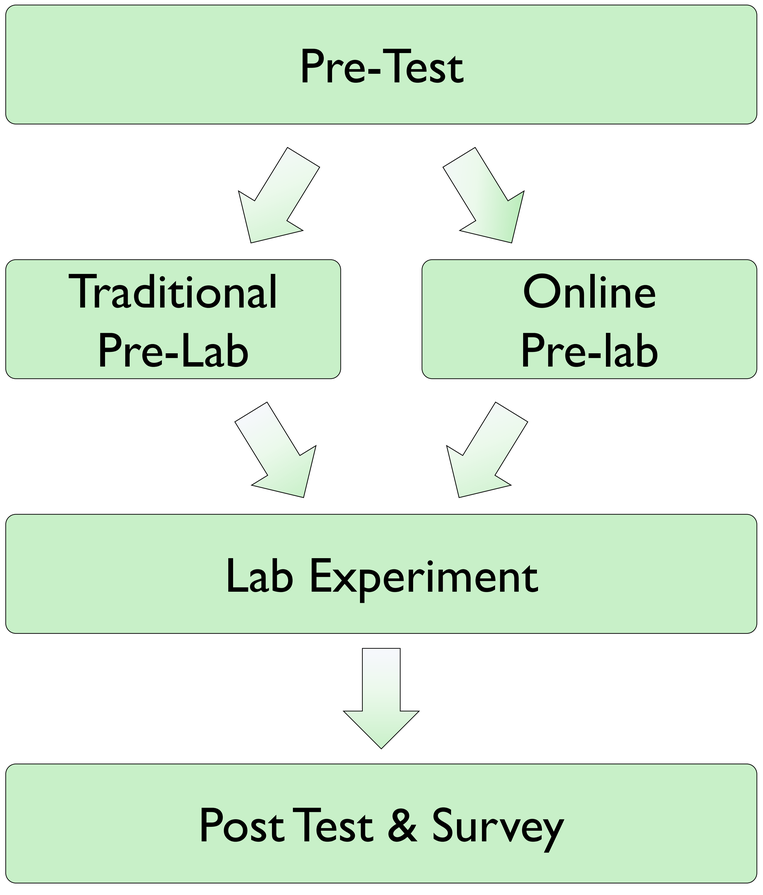
Jaden Chin (PH), Gracie Lodge-McIntire (AE), Joseph Murphy (ECE), Molly Youngs (EVE)
Dr. Joseph Beck (CS), Dr. Robert Traver (US)
PLA: Troy Bergeron (AE)

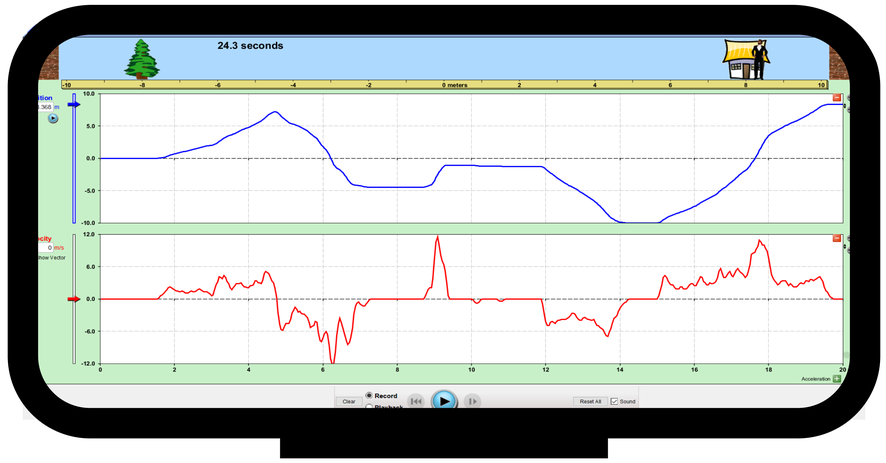
Problem

High school physics labs do not effectively reinforce the material taught in class.

Solution

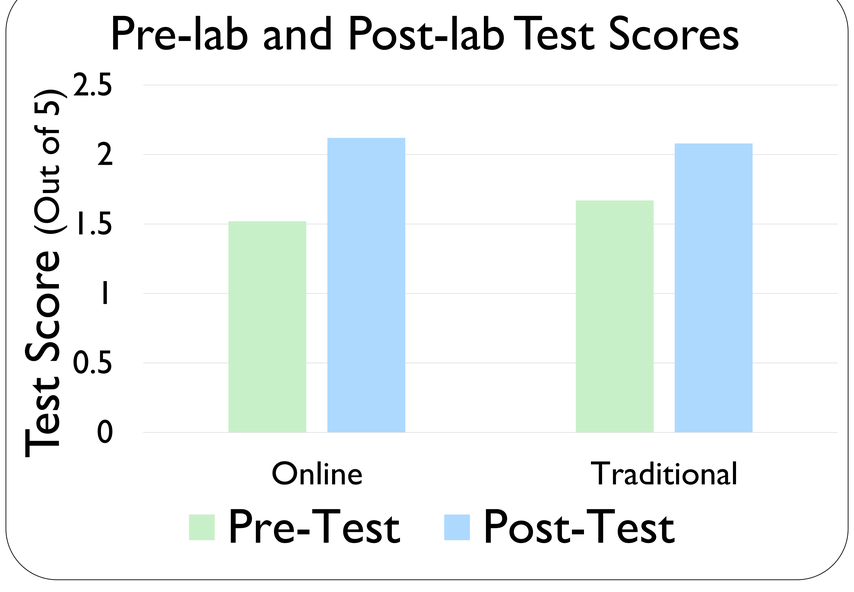
Online pre-labs provide students with a better understanding of the material than traditional pre-labs.

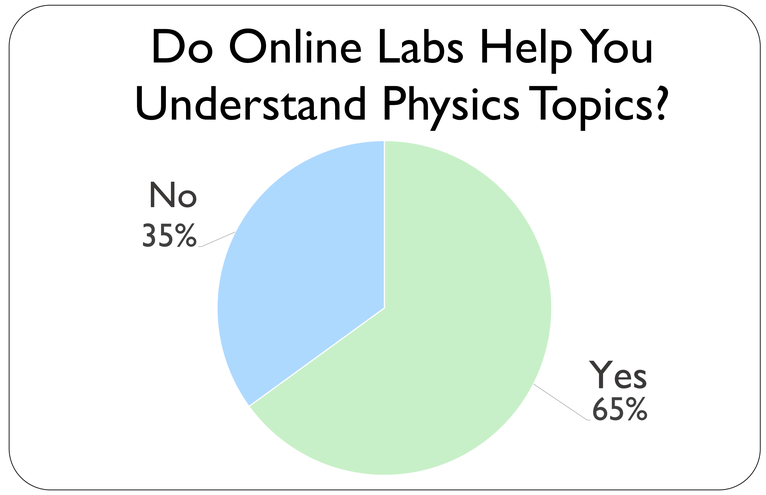




The Lab

- Online PhET Simulation: The Moving Man
- Focus on properties and relationships of position vs. time and velocity vs. time graphs
- 25 students use online pre-lab
- 24 students use traditional pre-lab





Conclusions

Our data was inconclusive.

- 12% score increase for online pre-lab students
- 8% score increase for traditional pre-lab students

This difference is too small to draw any conclusions without further research.

However, our survey results indicate students prefer online to traditional pre-labs.

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