

Abstract Submitted
for the NWS12 Meeting of
The American Physical Society

Measuring the Effectiveness of Simulations in Preparing Students for the Laboratory MARK PAETKAU, DAN BISSONNETTE, COLIN TAYLOR, Thompson Rivers University — For the past few years we have been using online simulations to help students prepare for their Introductory Physics labs. We have created online animations allowing students to simulate the lab before arriving, which, ideally, more effectively prepares students for the lab. To test whether the simulations are more effective than traditional pen-and-paper questions as pre-lab exercises, we attempted to measure the “level-of-preparedness” of our students. Using our preparedness measure, we compare the preparedness for the two forms of pre-lab exercises. A statistically significant change in “preparedness” is found with the use of online simulations over the pen-and-paper pre-labs.

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Date submitted: 23 Aug 2012

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