March 29, 2021

Dr. Gary White
Editor: *The Physics Teacher*
American Association of Physics Teachers
College Park, MD

Dear Dr. White and referee,

Thank you for your thoughtful review of our article entitled *Introductory Physics Labs: A Tale of Two Transformations*. We have considered your review and are responding to your feedback in the following ways.

Institutional support for students needs Dr. White wanted to know more about the ways that our institution attempted to support students during the pandemic. Our office of student affairs developed programs and outreach to help support students such as disseminating CARES Act funding to students demonstrating need. We do discuss academic measures taken by the university such as extending the withdrawal date, exempting withdrawals during the Spring 2020 and Fall 2020 semesters from the overall limit on withdrawals, and allowing students to be graded pass/fail after seeing their final grade (and having that grade not count toward their GPA).

Comparing ADI to Modeling Instruction We've added a few sentences to the introduction comparing ADI to Modeling Instruction. We also discuss ISLE (Investigative Science Learning Environment) as it is also a similar pedagogical approach driven by learning cycles. Both Modeling and ISLE tend to be implemented in lecture courses, while ADI was designed to mimic the ways that scientists learn in the laboratory, and has been designed to be implemented in laboratory courses regardless of the approach used in lecture. We find it to be particularly useful in our context as students in each of our lab courses take two different intro physics lecture courses (algebra-based and calculus-based).

Clarity about proposals and proposal approvals We've added a few sentences talking about how we generated datasets during Spring 2020 and approve proposals in general. We want to point out that we do allow some proposals to go forward even if they have a flaw once data is collected. Students are free to revise their proposals and gather more data. Dealing with unexpected results can be a powerful teacher. As far as creating datasets goes, we tried to make these data as raw as possible, for example sharing videos of a object oscillating on a spring and the mass of that object rather than giving them mass and period data directly.

Details about Fall 2020 For the Fall 2020 semester, all data were collected by the students. This includes images and videos as appropriate, often collected with students' smartphones. Additional text has been added to Section IV.B.

Details about the survey The survey was conducted during the spring/early summer of 2020. Results were released to the faculty before the fall 2020 semester began. This was intended to help the faculty better understand the difficulties that were impacting our students. The date of the survey has been added to the text in the conclusion.

Thank you for your time.

Sincerely,

The Authors of *Introductory Physics Labs: A Tale of Two Transformations*