

Abstract Submitted
for the APR17 Meeting of
The American Physical Society

Situated Self-efficacy in Introductory Physics Students RACHEL HENDERSON, SETH DEVORE, West Virginia University, LYNNETTE MICHALUK, West Virginia University Center for Excellence in STEM Education, JOHN STEWART, West Virginia University — Within the general university environment, students perceived self-efficacy has been widely studied and findings suggest it plays a role in student success. The current research adapted a self-efficacy survey, from the “Self-Efficacy for Learning Performance” subscale of the Motivated Learning Strategies Questionnaire and administered it to the introductory, calculus-based physics classes ($N=1005$) over the fall 2015 and spring 2016 semesters. This assessment measured students self-efficacy in domains including the physics class, other science and mathematics classes, and their intended future career. The effect of gender was explored with the only significant gender difference ($p < .001$) existing within the physics domain. A hierarchical linear regression analysis indicated that this gender difference was not explained by a students performance which was measured by test average. However, a mediation analysis showed that students overall academic self-efficacy, measured by their math and science self-efficacy, acts as a mediator for the effect of test average on self-efficacy towards the physics class domain. This mediation effect was significant for both female ($p < .01$) and male students ($p < .001$); however, it was more pronounced for male students.

Rachel Henderson
West Virginia University

Date submitted: 19 Sep 2016

Electronic form version 1.4