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Investigating Student Ownership of Projects in Upper-Division Physics Laboratory Courses[1]

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In undergraduate research experiences, student development of an identity as a scientist is coupled to their sense of ownership of their research projects. As a first step towards studying similar connections in physics laboratory courses, we investigate student ownership of projects in a lasers-based upper-division course. Students spent the final seven weeks of the semester working in groups on final projects of their choosing. Using data from the Project Ownership Survey and weekly student reflections, we investigate student ownership as it relates to students' personal agency, self-efficacy, peer interactions, and complex affective responses to challenges and successes. We present evidence of students' project ownership in an upper-division physics lab. Additionally, we propose a model for student development of ownership through cycles of frustration and excitement as students progress on their projects.

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