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**Project-Based Learning Courses: The Relationship Between
Faculty-Intended Course Implementation and Students' Perceptions¹**

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F. W. Olin College of Engineering — Project-based learning (PjBL) has been shown to improve students' performance and satisfaction with their coursework, particularly in science and engineering courses. Specific aspects of PjBL that contribute to this improvement are student autonomy, course scaffolding, and instructor support. This study investigates two PjBL courses required for engineering majors at a small technical school, *Introductory Mechanics Laboratory* and *Introductory Engineering Design*. The three data sources used in this work are classroom observations (one laboratory and four design sessions) and semi-structured in-depth interviews with twelve students and six faculty. Grounded theory approach is used in a two-step fashion by (1) analyzing each data set individually and (2) performing full triangulation of all three data sets. In this talk, we demonstrate the relationship between faculty intentions and student perceptions regarding the three PjBL aspects – student autonomy, course scaffolding, and instructor support – within the context of these two courses. We further discuss implications for the course design and professional development of faculty.

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