

## **Developing Writing-to-Learn Assignments for the Engineering Statics Classroom**

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Research in pedagogy has argued for the efficacy of writing as a means to improving student learning in the engineering classroom. Unfortunately there are few models of such assignments. Our project, the result of cooperation between faculty in civil engineering and technical communication, was based on a simple approach: we asked students to describe the steps they used to set up and solve engineering statics homework problems. As the assignment template stated, “the goal of this course is to understand the material, not just to plug numbers into equations. An effective way to demonstrate understanding of the material is to describe how you use it.” During the ten-week course, students were asked to articulate the thought processes they used to solve problems so their work would be comprehensible to others. This strategy models, we believe, engineering workplace practice; we believe it is a distinct advantage if students can articulate their thought process clearly and concisely when working with other engineers. In this paper, we will share the assignment template we developed and discuss the evaluation rubric that the instructors used to grade assignments. We will also identify the learning outcomes specified for the assignment and show how student writing correlated to student performance in the course. Finally we will discuss the advantages and disadvantages of the writing-to-learn approach in the engineering classroom.