

Abstract Submitted  
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**Sustaining Educational Transformation in a Physics Department (part 1 of 2)**<sup>1</sup> NOAH FINKELSTEIN, STEVEN POLLOCK, Department of Physics, University of Colorado — The CU Boulder Physics Department has been engaged in the systematic transformation and study of many of its physics courses for the last five years. We report on two interrelated research threads: 1) sustaining and 2) scaling of educational innovations. In this first, of two talks, we examine the sustainability of two of the most widespread PER-based innovations, Peer Instruction and the University of Washington's Tutorials in Introductory Physics, at our institution. We demonstrate measures of improved student conceptual mastery, and that these achievements can be reliably maintained as the introductory sequence is taught by a variety of faculty. Applying a contextual constructivist framework, we document key factors that might account for the success and variation in student performance.

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