DD04: 9:30-9:40 a.m. Use of Pre-instruction Tests to Predict Student Course Performance*

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I will review research related to use of pre-instruction diagnostic tests such as the Force Concept Inventory as predictors of student course performance in introductory physics. In addition to both old and new data from Arizona State University, I will examine data from other institutions, both published and unpublished. I will explore both potential benefits and limitations of using pre-instruction data as prognostic measures of student performance. In particular, I will address the potential influence of instructional method on the predictive value of diagnostic tests, such as whether research-based active-learning instruction[1] might or might not significantly alter the observed pre-post correlation.

1. D. E. Meltzer and R. K. Thornton, "Resource Letter ALIP-1: Active-Learning Instruction in Physics," *Am. J. Phys.* **80**, 478 (2012).

Session DD: Assessment Issues in Undergraduate Instruction

Location: STSS 330
Sponsor: Committee on Research in Physics Education
Co-Sponsor: Committee on Physics in Undergraduate Education
Date: Tuesday, July 29
Time: 8–10 a.m.

Presider: Eleanor Sayre