JiTT and Peer Instruction in the General Physics Sequence at Dominican College: A One-Year Retrospective

KATHLEEN HINGE, Dominican College — Energized by the New Faculty Workshop of November, 2007, the author returned to Dominican College of Blauvelt with dreams of colossal gains on Force Concept Inventory (FCI) scores. Replicating the reported successes at Harvard and the US Air Force Academy would be difficult at Dominican: More than one-third of Dominican’s physics students are minority, and an even greater portion of students come from secondary education without the ability to synthetically apply concepts. Undeterred, the author was committed to overhauling the General Physics sequence around NFW tenets. Beginning in January, 2008, material presentation went from traditional lecture format to a combination of Just in Time Teaching (JiTT) and Peer Instruction. This paper presents a one-year retrospective on this process, with emphasis on lessons learned, the impact on student learning and satisfaction, and next steps. Student response to the change has been uniformly enthusiastic. The actual FCI gain achieved in this first year was $G=0.31$, a modest advance over the 0.25 reported for traditionally taught courses. Spurred by this early success, implementation of JiTT has spread to courses in Biology and Mathematics.

Kathleen Hinge
Dominican College

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