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Addressing Gender Disparity in Introductory Physics Courses: Are existing reforms enough?[1] NOAH FINKELSTEIN, STEVEN POLLOCK, MICHAEL DUBSON, University of Colorado at Boulder — Previously researchers have reported that by transforming teaching practices in introductory physics, it is possible to eliminate the disparity in achievement of males and females on measures of conceptual learning. [1] We follow-up on the studies of the original researchers by comparing achievement of male and female students on measures of conceptual learning in the introductory physics courses at a large public research university. Just as the original authors find, we observe that reform teaching practices, such as the use of Peer Instruction [2] increase the learning gains of all students in introductory physics. Additionally, we observe a significant reduction in this gender gap in learning gains in some but not all of our transformed courses. Notably, however, the gender gap does not completely disappear in any of our courses. In addition to discussing learning gains, we analyze shifts in student beliefs [3] and examine correlations between student beliefs and learning gains.

[1] Lorenzo, M et al. (2006).Am. J. Phys. 74(2): 118-122
[2] Mazur, E. (1997). Peer Instruction (Prentice Hall).
[3] Adams, W.K et al. Physical Review, ST:PER. 2,1,010101.

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