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Preparing Undergrads to Teach (Well): The Colorado Learning Assistant Model¹

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We report here on efforts at the University of Colorado, Boulder, to implement and investigate a model program with undergraduate Learning Assistants [1], a program designed to facilitate educational reforms while also recruiting and supporting future K-12 teachers. We use the LA program to support the implementation of innovations developed by the Physics Education Research community [2,3], and we document sustained learning gains from multiple instructors that exceed twice the national average for traditional courses, as well as the promotion of expert-like beliefs about the nature of physics and learning physics[4]. A central theme of our studies is to measure and understand the impact of these reforms on three populations - faculty, students in the class, and of course the Learning Assistants themselves.

[1] V. Otero et al., *Science* 28 (2006) 445-446.

[2] E. Redish, "Teaching Physics with the Physics Suite," Wiley 2003

[3] L. McDermott, P. Shaffer and the PEG, "Tutorials in Introductory Physics," Prentice Hall 2002

[4] S. Pollock, N. Finkelstein, *Phys. Rev. ST PER* 1 (2005) 010101

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