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Implementing Learning Assistants and Tutorials in the Laboratory Environment JOHN STEWART, RACHEL HENDERSON, PAUL MILLER, West Virginia University — This talk describes the results of a novel implementation of a Learning Assistant (LA) program where the LAs facilitated the presentation of the Tutorials in Introductory Physics as part of an otherwise traditional laboratory. LAs received both general training in the teaching of science and specific training in the presentation of the Tutorials. The LAs acted as the lead laboratory instructor for one hour each lab. The program required very little interaction from the lecturer. The program showed a substantial increase in learning gains on the Force and Motion Conceptual Inventory in the first semester course, but weaker improvement of learning gains on the Conceptual Survey of Electricity and Magnetism in the second semester course. Multiple linear regression showed that gender, student ability, and whether the student was on-sequence were significant regressors. The instructor was a substantial random effect (SD= 0.10), but the teaching assistant (SD= 0.00) and learning assistant (SD= 0.01) were much weaker random effects on the normalized gain. The instructor standing (tenure-track, teaching faculty, or adjunct) was a weakly significant regressor ($p < 0.05$).

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