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Does requiring graded online homework improve physics exam performance? NORMA CHASE, Massachusetts College of Pharmacy and Health Sciences — In a first experiment with using Mastering Physics in a first semester calculus-based course, homework and exam performance was tracked periodically during the semester. As expected, the use of novel technology (and its ability to track which students were persistently working at problem exercises) motivated many students to become more involved with work on assigned physics problems. Although there did appear to be a significant correlation between exam averages and homework scores in the upper half of the exam average distribution, individuals spanning the full range of exam averages (down to 45 percent) earned homework scores as high as those who had performed outstandingly well in exams. In this work, we present results and proposed plausible explanations for the apparent anomaly.

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