

Abstract for an Invited Paper
for the SES10 Meeting of
The American Physical Society

Recitations for the Rest of Us¹

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Two-thirds of Physics Departments in the United States offer a Bachelor's degree as their highest degree. At these institutions, the ability to offer a separate recitation for introductory physics courses can be severely limited by the lack of graduate Teaching Assistants and existing teaching commitments within the department. At Louisiana State University in Shreveport a combination of course redesign and technology have been used over the last three years to add an active-learning problem solving recitation within the existing framework of introductory physics courses. One day per week of a three-day-per-week, 50 minute class period is now used for a tablet-computer based recitation, in which students work in collaborative groups on problems while the professor monitors group progress and presents exemplar student solutions to the class in real time. This talk will discuss the structural redesign to the courses, the technology tools (hardware and software) that are being used, and suggest alternative methods that do not require technology. In addition, student data relating to course outcomes in the redesigned courses will be presented for conceptual learning gains, problem solving skills, overall course success, and student-reported attitudes towards course outcomes, showing the positive results of these changes.

¹This work was funded by a 2007 Hewlett-Packard Technology for Teaching Grant.