

Abstract Submitted  
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**Integrating pre-, in- and post-lecture activities to improve students' learning in a large introductory physics course**<sup>1</sup> KWAN CHENG, MEHMET CAGLAR, AMY PIETAN, HANI DULLI, Texas Tech University — Monitoring and assessing the students' learning activities before, during and after lecture teaching in a large (more than 150 students) introductory physics class setting are important to evaluate the efficacies of various teaching pedagogies and methods. At Texas Tech, an online and integrative computer-based approach of using an interactive pre-lecture tutorial, an in-class concept test using a wireless student response system and a homework/tutorial system has been implemented in Fall 2010. The strategy of implementation of this integrative approach and the assessment results from various in-house and standard Mechanics tests will be presented. In addition, how this approach may create synergism of lab and lecture teaching efforts will also be addressed.

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