An online and integrative computer-based approach to improve students’ learning in a large introductory physics course\textsuperscript{1} KWAN CHENG, MEHMET CAGLAR, Texas Tech University — It is always a challenge to monitor, gauge and assess the students’ learning activities before, during and after lecture teaching in a large (more than 150 students) introductory physics class setting. At Texas Tech, an online and integrative computer-based approach of using an interactive pre-lecture tutorial, an in-class real-time concept test assessment using a wireless student response system and a homework/tutorial system has been implemented to meet the above challenge in Fall 2010. The strategies of implementation of this integrative approach and how this approach may create synergism of lab and lecture teaching efforts will also be discussed.

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