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Dr. Gregory A. Moses is the Harvey D. Spangler Professor of Engineering Physics at the University of Wisconsin-Madison. He joined the faculty after graduating from the University of Michigan in 1976. His research is in high energy density physics, particularly inertial confinement fusion. In particular, he builds radiation hydrodynamics simulation codes used to design experiments and predict their outcome. His research is supported by the U.S. Department of Energy. He teaches undergraduate and graduate courses. In particular he has experimented with technology enhanced learning techniques since before the invention of the web browser. Most recently, he has focused on the blended learning format and developed pedagogy to improve student learning outcomes.

Abstract

14 Years of Blended Learning—Worth it or Not

Blended learning is emerging as a preferred pedagogical approach to teaching engineering science courses. However debate continues among faculty advocates and skeptics regarding the cost to benefit ratio of this pedagogy. In this presentation, the outcomes of 14 years of experimentation with blended learning pedagogies in an engineering course entitled: Engineering Problem Solving with Computers will be described. In Fall 2013, dramatic improvements in student learning outcomes compared to previous years, as measured on proctored exams, occurred. These learning outcomes will be shared. Detailed differences between the blended learning pedagogy used in Fall 2012 and early course offerings will be elucidated. This outcome of the blended learning format raises the stakes for advocates in favor of blended learning in the debate with those who argue it is not worth the additional faculty effort.