

Abstract Submitted
for the APR11 Meeting of
The American Physical Society

Using Technology to Facilitate and Enhance Project-based Learning in Mathematical Physics GINTARAS DUDA, Creighton University — Problem-based and project-based learning are two pedagogical techniques that have several clear advantages over traditional instructional methods: 1) both techniques are active and student centered, 2) students confront real-world and/or highly complex problems, and 3) such exercises model the way science and engineering are done professionally. This talk will present an experiment in project/problem-based learning in a mathematical physics course. The group project in the course involved modeling a zombie outbreak of the type seen in AMC's "The Walking Dead." Students researched, devised, and solved their mathematical models for the spread of zombie-like infection. Students used technology in all stages; in fact, since analytical solutions to the models were often impossible, technology was a necessary and critical component of the challenge. This talk will explore the use of technology in general in problem and project-based learning and will detail some specific examples of how technology was used to enhance student learning in this course. A larger issue of how students use the Internet to learn will also be explored.

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Date submitted: 19 Jan 2011

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