

Online Learning System Provides Interactive Electronic Textbooks

University of Massachusetts Amherst



Researchers at the University of Massachusetts-Amherst have developed an Internet-based software program that provides electronic homework, online examinations, interactive electronic textbooks, and online training and compliance materials.

“OWL” (Online Web-Based Learning) was originally developed in the late 1990s by the Chemistry and Physics Departments and the Center for Educational Software Development (formerly the Center for ComputerBased Instructional Technology). Initial funding was provided by the National Science Foundation, the U.S. Department of Energy, Five Colleges, Inc., Davis Educational Foundation, the Dreyfus Foundation, Cengage Learning (formerly Thomson Learning) and the university.

“OWL provides students with study questions that are graded automatically online. Algorithmically generated practice questions help students practice for tests or exams, which are also taken online (including high-stakes tests).”

Interactive electronic textbooks incorporate embedded graded questions that students can try to answer as they read,

providing instant feedback. OWL can also be customized for any age group of students, including middle school and high school.

The original version of OWL, a chemistry curriculum developed for the University of Massachusetts's chemistry department, was licensed to Thomson Learning in 2001 to support the company's line of chemistry textbooks. The success of this endeavor has led Thomson Learning to license other OWL programs, including organic chemistry and nursing chemistry. The university is seeking to expand OWL's reach to include a broader offering at the college and university level as well as to continuing education, high school and refresher courses.

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