Using Moodle to Deliver Online Case-Based Science Curriculum

Project LOGgED ON, a federal (U.S.) grant funded by the Jacob Javits program, designs and implements science curriculum for underserved gifted learners in web-based and CD-ROM formats. Giving underserved gifted learners access to challenging science curriculum is our goal. Technology, specifically the open-source learning management system called Moodle, has provided part of that access. Moodle has the features we envisioned from the start (such as automated multiple choices quizzes, essays, instant feedback), and is a good fit for our case-based format, threaded-discussions, multimedia, and problem solving approach to science.

Initially, we envisioned a technological infrastructure that would facilitate many of our pedagogical expectations – aural and visual stimulus, reflective journaling, interactivity, peer collaboration, online evaluations and instant feedback. Although, modifications to both the curriculum and delivery medium had to be made to in order for active learning to occur, the end result is many lessons learned and a product, of minimal, if any, cost, that, if implemented effectively, will help learners overcome the barrier of access to appropriate content. We plan to share these lessons learned, and offer the best practices for implementing online learning, while demonstrating the curriculum developed. Through the sharing of our technology and frank discussions about our successes and failures, we hope to inspire and enlighten administrators, researchers, and in-service teachers alike, so that good curriculum and innovative online pedagogy can come together to better serve students of all ages.