Meeting a Need

Students in Ann Marie Wellhouse’s classroom are instructed in the use of Moodle.

TeacherTECH Community Portal homepage was created using the Moodle learning management system.
The San Diego Supercomputer Center answers the call for an online resource for teachers.

The San Diego Supercomputer Center’s (SDSC) TeacherTECH program, on the campus of the University of California, San Diego, was established in 2001 with the goal of providing face-to-face and online instructional resources for kindergarten through two-year community college educators (K-14) in the greater San Diego and southern California region. The program emphasis was and continues to be based on the growing role played by leading-edge high-end computing technologies beyond standard office tools instruction.

The demands on K-14 teachers to provide students with anchored inquiry-based learning experiences in science, especially those teaching grades 9-12 were increasing. In response to these demands, many teachers were looking for more advanced science curricula for their students and they recognized technologies like the Internet could help with just-in-time learning experiences not only for their students but also for themselves. They recognized that the Internet was becoming a primary focal point for online instructional content delivery and they needed help. The SDSC Education Department had an established history of local outreach programs and through these efforts had established close working relationships with researchers at SDSC, UCSD and leading science and engineering researchers at other research institutes including the Scripps Institution of Oceanography and The Scripps Research Institute.

“In the late 1990’s we were aware of a very successful program at Rice University in Houston called Girl Tech that had been established by Cynthia Lanius. The idea of bringing technology-focused workshops and resources to young girls as a means of keeping them interested in science and technology was such a wonderful idea. We took the program one step further and turned it into a comprehensive STEM-focused program for teachers in an attempt to serve the needs of our local educator community. This initial endeavor continues to drive the program to this day,” says Ange Mason, Director of SDSC’s TeacherTECH program.

Today, the TeacherTECH program regularly delivers high quality workshops taught by leading practitioners in their fields on such wide-ranging topics in science, engineering, and technology as earthquakes and seismology, marine biology, genomics, bioinformatics, space science, astrophysics, mathematics, scientific visualization, video creation and podcasting. The program has reached over 10,000 teachers and over 20,000 hours of face-to-face instruction and has become arguably the most successful education outreach program of its kind in southern California.

Yet, through regular feedback from the TeacherTECH workshop audience, it became evident that the teachers had another unmet need.

Teachers participating in TeacherTECH technology workshops and science seminars expressed interest in putting their instructional curriculum online, including their lesson plans, grades, assignments, and links to supplementary resources on the web. Some were considered to be technology leaders at their schools and were willing to take initial steps in this direction but had limited options. The SDSC Education Department had already gained some experience with online portal development through other Education Department outreach projects and felt they might be able to provide the critical support teachers needed in the form of a permanent, reliable online instructional web site that would be free of charge.

And soon, the Moodle™-based TeacherTECH Community Portal (TTCP) was born. Moodle was already a proven tool for online course delivery with thousands of courses being taught to tens of thousands of students by hundreds of teaching institutions. Concomitant with the creation of the portal, workshops were provided on how to use Moodle so teachers could get up and running quickly with their online teaching.

It did not take long before the TTCP was supporting hundreds of teachers teaching hundreds of lessons to thousands of students. Each day, there are hundreds to thousands of individual “learning events” occurring, such as postings to discussion forums, a quiz being taken, a journal entry being made, an assignment submitted, and more. With over 5,000 registered students, over 400 registered teachers, and over 200 actively delivered courses, the TTCP is currently one of the largest and most active educational Moodle installations in California.

Most courses hosted on the TTCP are actually face-to-face classes supplemented by the portal, which then serves as a very effective organizational tool for some teachers. Rose Ann Morris, a middle school math teacher at Mountain Empire Junior High School, says, “I really appreciate having my information in one place and being able to easily hide or reveal part of it at the click of a button.” Ann Marie Wellhouse, a high school science teacher at Arroyo Paseo Charter High School, expressed appreciation for similar reasons, “I teach over ninety science students and use the TTCP to organize assignments, provide differentiation, and assign quizzes so that I can use class time for labs.” “The classroom engagement that the TTCP supports allows my students to have enhanced classroom collaboration and discussion,” says Mary Laiuppa, a middle school librarian at Bell Junior High School in San Diego.

Recently the program has broadened its outreach to lower division undergraduate educators with the larger goal of HPC outreach in mind. “There is no limit to the potential of the TeacherTECH Community Portal. We will continue to grow it in response to the needs of the education community. Our goal is to meet their needs,” says Jeff Sale, Programmer Analyst with SDSC’s Education Department.

Relevant link: TeacherTECH Community Portal http://education.sdsc.edu/teachertech/community/ttmoodle/
San Diego Supercomputer Center: http://www.sdsc.edu