

# Expanding CTE opportunities through blended learning

Online/blended learning can open up access to courses important to preparing students for careers and college.

**T**he global economy, 21st century skills, knowledge society, college and career readiness, digital and project-based learning are all common terms to educators who are expanding their learning environments beyond the classroom to meet the needs of all students.

It is common knowledge that the rapid technological advances of this century have replaced the industrialized model of education with one that is centered on mastery of competencies and knowledge through student individualized education plans. These plans integrate both core academics with high-level technical skills to ensure students become life-long learners who can be successful in postsecondary education and also adapt to an ever-changing workplace.

This vision is the basis for the Antelope Valley Union High School District's (AVUHSD) mission statement: "To pro-

vide a safe and secure learning environment that promotes a rigorous curriculum and enables our students to develop the necessary academic, technical, and work-related skills of the 21st century. Every student who graduates will be prepared to pursue college or any career to which he/she aspires." This mission has driven the direction for the virtual portion of the newly formed Academies of the Antelope Valley charter schools, that addresses both college and career readiness.

### Rigor and relevance

A Title 1 district, located in the northernmost part of Los Angeles County, spanning a geographic area of approximately 1,200 square miles, AVUHSD serves more than 24,000 high school students. The district consists of more than eight comprehensive high schools, three alternative schools and one early college high school.

The importance of providing rigor and

relevance to their student population is evident in the support of seven California Partnership Academies, a strong employer advisory board and six schools with Project Lead the Way engineering programs.

But even with this strong foundation, it became increasingly more difficult for students who were placed in intervention courses and other programs to access career technical education courses. In addition, the onset of Tier 3 funding led to more innovative thinking that concentrated on CTE curriculum alignment across the district within each industry sector. All of these factors worked together to create a perfect storm opportunity to develop online/blended career technical education courses.

Three CTE courses with approximately 60 students enrolled were piloted using dis-

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*By Elizabeth McKinstry*

district-approved curriculum three years ago. The most important lesson learned from this pilot was the professional development and tools teachers needed to understand the pedagogy of a virtual/blended classroom.

Student retention was low in these classes for a variety of reasons. Many students felt the courses were too hard. Counselors needed to increase their understanding of virtual/blended learning. Yet, to prepare students for both college and career, it was imperative the online blended learning component would need to be an essential part of CTE curriculum.

With a strong belief that all students need to be prepared to learn, apply for college and jobs, take industry and college entrance exams, access digital content and work virtually, a plan was developed to support students and teachers within the online/blended learning environments. An administrator with a background in online teaching and technology integration met with teachers to share best practices and resources through organizations such as the International Society of Technology Educators (ISTE) and Computer Using Educators (CUE).

Administrator access to classes allowed teachers to get feedback on lessons and curriculum. Counselors were assigned to increase communication regarding coursework. By addressing areas of growth through initiating these support measures, the CTE courses increased student enrollment by 300 percent by the 2011-12 school year.

### Setting curriculum and teacher criteria

It was important that the online courses would stay true to the district's mission. The CTE courses needed to be able to integrate the anchor standards of the Common Core as well as the national career technical education standards, prepare for industry certifications and postsecondary education.

To ensure that the courses being taught virtually were preparing students for both college and career, criteria was developed to determine which courses would benefit from online/blended delivery. The selected courses were part of an approved pathway with a program of study established. They were approved a-g and/or articulated with a community college.

Due to the need to balance theoretical and applied knowledge of a CTE course, the curriculum had to lend itself to a blended model that engaged students within face-to-face labs and supported the concepts of a flipped classroom. An example of this is the Emergency Medical Technician course,



which is the first blended learning model to be approved through Los Angeles County EMS. Other courses, such as International Business, allow students to access content online and still participate in internship opportunities with Northrop Grumman and the cities of both Lancaster and Palmdale.

To maintain the engaging classroom environment of the career technical education courses, teachers needed to use instructional Web 2.0 tools effectively. This past year the CTE teachers completed the Leading Edge Online Teacher Certification training. Professional development opportunities such as AVID training and industry certifications such as Adobe were offered to teachers. For the 2012-13 school year, teachers applied and were interviewed for these positions.

### Virtual Academy

The district's Virtual Academy has allowed the blended CTE courses to be offered through this new charter school. There are now more than 500 students accessing career technical education courses in this new model. These students are both full-time and part-time virtual students. Part-

time students take a full load of courses at their high school site and additional classes through the Virtual Academy. The blended learning model for CTE courses still allows for labs, field trips to colleges and businesses, internships, involvement in Career Technical Student Organizations and integrated project-based learning.

Through the use of Web 2.0 tools, CTE teachers have been able to address the workplace skills of collaboration and digital citizenship. The access to the CTE classes has increased for students in remote areas of the district and for students who could not fit a CTE class in their schedule due to AP or intervention classes. Comments from students range from wanting college-level coursework to the desire to experience a career exhibit the scope of this new venture.

### The cutting edge

According to the International Association for K-12 Online Learning, there were more than 1.8 million enrollments in distance-education courses in K-12 districts in 2009-2010, almost all of which were online courses, with 74 percent of these high school enrollments. The organization also states one of the top reasons school districts make online learning available at their schools is to provide courses not otherwise available.

These facts, coupled with the goal of career technical education to be on the cutting edge of preparing students for the workplace of the future, make accessing CTE through a blended online learning environment a viable option to address the challenges of maintaining rigorous CTE courses that prepare students for both college and career. This will make them competitive in the global economy of the 21st century. ■

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