

# High School Improvement



## The Promising Practice

High schools are seeking to build systems that ensure success for every student. This is being further emphasized by the Obama administration, which has identified the following four Race to the Top priority areas in the Race to the Top Executive Summary (2009): “adopting standards and assessments that prepare students to succeed in college and the workplace and to compete in the global economy; building data systems that measure student growth and success, and inform teachers and principals about how they can improve instruction; cultivating effective teachers and principals, especially where they are needed most; and turning around struggling schools” (p.1) .

In May 2010 the National Association of State Directors of Career Technical Education Consortium (NASDCTEC) identified three schools (urban, suburban and rural) that appear to be meeting at least one of the Race to the Top priorities. In a three-part article, *Already at the Top*, posted on their website, NASDCTEC described the efforts of each school.

## Goal

To make systemic changes to improve CTE student achievement and success.

## Research Question

By making systemic changes that meet at least one of the Race to Top priorities, can an urban, suburban, or rural school transform a traditional CTE program into a rigorous college and career readiness program with positive outcomes and impact student achievement?

## Target Audience

High school students

## Research Design & Results

Each of the three schools made systemic changes and gathered data utilizing a variety of measures. The following are summaries of the school settings, the systemic changes made, the dates implemented, the data-gathering methodology used, and the outcomes from each school.

### **URBAN SCHOOL: Newark Tech High School Essex County Vocational Technical Schools, New Jersey**

Newark Tech, part of the Essex County Vocational Technical Schools (ECVTS) district in Essex County, New Jersey, is in the New York Metropolitan area. Essex County is the second most populous and

second most densely populated county in the state. The school provides college preparatory academic and CTE to a population of more than 700 high school students; more than 85% of the students in the district are eligible for free or reduced-price lunch. Only 63% of students at Newark Tech speak English as a first language at home.

**Systemic changes.** Since 2003, Newark Tech has transformed a CTE program into a college and career readiness program by making comprehensive changes in academic offerings. In addition to competency-based technical courses in areas such as health, music production, and computer-aided drafting, students are required to take four years of mathematics, a minimum of three years of science, four years of English and physical education, and three years of social studies. The Academy and Tech Prep Programs include a total of four years of science and four years of mathematics, culminating with physics, pre-calculus, calculus and Spanish.

**Evaluation.** Students at Newark Tech are evaluated through a competency-based education approach. Demonstration of specified skill competencies and the use of project task sheets enable the students to attain a high school diploma and a certificate listing areas of mastery. Data gathered include state assessments in mathematics, language arts, graduation rates, and percent of students going on to postsecondary education after graduation.

**Outcomes.** From 2003 to 2009, Newark Tech's passing rate for mathematics on the statewide High School Proficiency Assessment increased from 39.7% to 88% and language arts scores climbed from 73% to 97.6%. The graduation rate of the class of 2009 was 98.8%, and 86% of students reported going on to postsecondary education after graduation. The class of 2010 passed the language arts portion of the New Jersey state standardized assessment (HSPA) at 100% proficiency and math at 88% proficiency.

### **SUBURBAN SCHOOL: Livonia Career Technical Center, Michigan**

Livonia Career Technical Center (LCTC) is located 14 miles west of Detroit. Livonia has a population of more than 100,000. LCTC serves about 800 students in Grades 11-12 from three Livonia high schools. Students attend LCTC for two or three hours daily and return to the home high school for the remainder of the day. LCTC offers 17 programs in areas ranging from architectural technology to sports medicine to fashion merchandising.

**Systemic changes.** Since 2006, LCTC has transformed a traditional CTE program into a college and career readiness program by offering rigorous, relevant, real-world instruction aligned with postsecondary institutions through articulation agreements. Algebra II is the most recent addition to the curriculum. One of the keys to the success of the changes has been that faculty and staff are supported through extensive professional development.

**Outcomes.** Data were collected by the state's Career Technical Education Information Services (CTEIS); data included results of a follow-up survey of the students who took courses in the state's career and technical centers and graduated. These data were analyzed, identifying the percent of students who found employment in a field relevant to their CTE studies, along with the percent of students who pursued continuing education.

About 76% of students who completed studies at LCTC in 2008 had a job with about 1% of those jobs related to their CTE studies. About 79%

secured part-time jobs and about 52% of those jobs related to the students' CTE studies. Although the rate of employed graduates declined from 89% among 2006 graduates to 76% among 2008 graduates, the rate of students who pursued continuing education – particularly in community colleges and universities – increased steadily. In 2008, of the 469 students surveyed, about 87% were continuing their education primarily at a community college or college/university. About 57% were enrolled in a community college and 56% of those students were studying in a field related to their CTE programs. Students enrolled in colleges/universities increased from about 37% in 2006 to about 42% in 2008.

### **RURAL SCHOOL: Loving High School, New Mexico**

Loving High School (LHS) is 12 miles from the city of Carlsbad in a rural southeast New Mexico community of approximately 1,400 people. The school serves a student body that is 85% Hispanic, 14% White and 1% representing other ethnicities. Ninety percent of students qualify for free or reduced-price lunch and nearly 40% are English Language Learners.

**Systemic changes.** In 2004, LHS became a High Schools That Work site. The systemic changes included the adoption of curriculum aligned to the National Career Clusters model. As a result, students do not have to choose between a job-specific vocational or college-bound track. Partnerships were developed with local colleges and universities to offer students concurrent and dual credit courses.

New courses of study were developed as a result of a community needs assessment. That assessment identified the lack of quality, affordable housing as a barrier to economic development. As a result, a home construction course was developed to serve as a capstone for the architecture and construction program. Students in the course apply acquired knowledge and skills while building a home to be sold to a family in the community. In addition, a building trades project was established. The school adopted the Career Clusters model by collaborating with business leaders, educators and other stakeholders to establish the construction of energy-efficient, single-family homes.

**Evaluation.** District-wide content standards were completed in 2005, putting in place a standards-driven curriculum that allows school leaders to use assessment data to measure the progress of student achievement. All courses and daily lesson plans were tied directly to a set of standards developed and adopted by the New Mexico Public Education. The standards were developed for the core subjects (mathematics, science, social studies, and language arts) as well as CTE areas. Data regarding student achievement, including graduation and college attendance rates, are routinely gathered.

**Outcomes.** Students can earn up to 24 college credits prior to graduation. Students interested in earning a state license in carpentry only need to attend one additional year of postsecondary training. The average on-time graduation rate of the three most recent ninth-grade cohorts is above 95%. From 2004 to 2009, college attendance rates have averaged 60%.

## Sources

Race to the Top Executive Summary.

Retrieved from: [www2.ed.gov/programs/racetothetop/executive-summary.pdf](http://www2.ed.gov/programs/racetothetop/executive-summary.pdf)

National Association of State Directors of Career Technical Education Consortium. (2010, May). *Already at the top: CTE programs show positive impact on student achievement*. Retrieved from: [www.careertech.org/](http://www.careertech.org/). At that website, see a summary of each school, under Resources, Publications, High School Improvement.

## Other Resources

U.S. Department of Education: [www2.ed.gov/programs/racetothetop/executive-summary.pdf](http://www2.ed.gov/programs/racetothetop/executive-summary.pdf)

Southern Regional Education Board: [www.sreb.org/page/1078/high\\_schools\\_that\\_work.html](http://www.sreb.org/page/1078/high_schools_that_work.html)

Career Clusters: [www.careerclusters.org/](http://www.careerclusters.org/)

Loving Schools: [www.lovingschools.com/High%20School/HighSchool.htm](http://www.lovingschools.com/High%20School/HighSchool.htm)

Essex County Vocational Technical Schools: [www.essextech.org/nt/nt.htm](http://www.essextech.org/nt/nt.htm)

Livonia Career Technical Center: [www.livoniapublicschools.org/CareerTechCenter.cfm](http://www.livoniapublicschools.org/CareerTechCenter.cfm)

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Promising practices as a concept has many operational definitions. The NRCCTE approach to this designation is to identify research from reputable sources (e.g., major funded studies, institutional research, district or state analyses of data) and share this with you. Some of the research identified here is a result of very rigorous research (e.g., longitudinal designs with carefully matched samples, experimental designs). However, other studies may not rise to that level of rigor but nonetheless suggest a practice worth examining. We invite readers to follow the links provided and form their own judgments regarding the quality of the research.