

# The New CTE: Secretary Duncan's Remarks on Career and Technical Education

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Thank you for shining the spotlight on the critical field of career and technical education.

The Pathways to Prosperity study envisions a new system of career and technical education that constitutes a radical departure from the vocational education of the past.

The need for that transformation is pressing. I applaud your report's frank discussion of the shortcomings of our current CTE system and its call to strengthen the rigor and relevance of career and technical education.

I am not here today to endorse the specifics of your policy recommendations. I want instead to suggest two takeaway messages from your study and the Department's reform efforts.

First, for far too long, CTE has been the neglected stepchild of education reform. That neglect has to stop. And second, the need to re-imagine and remake career and technical education is urgent. CTE has an enormous, if often overlooked impact on students, school systems, and our ability to prosper as a nation.

The mission of CTE has to change. It can no longer be about earning a diploma and landing a job after high school. The goal of CTE 2.0 should be that students earn a postsecondary degree or an industry-recognized certification--and land a job that leads to a successful career.

There is a lot of talk these days about the need to boost college and career-readiness. But the truth—and I include myself here—is that most of the current debate is about college-readiness. Too often, career-readiness is an afterthought.

It seems easier to define college-readiness than career-readiness, even if there is a great deal of overlap. At the Department, we define a college-ready student as someone who has the knowledge and skills to succeed in credit-bearing courses from day one, without remediation. That standard must be the new bar for success for all high schools, for all students--instead of the old goal of getting students a diploma.

The bar for a career-ready student is just as demanding. CTE students also must have the academic skills to be able to engage in postsecondary education and training without the need for remediation. The cause of strengthening CTE programs should never be an excuse for reducing rigor and tracking students away from pursuing a college degree.

Students pursuing non-degree postsecondary credentials still need college-ready academic skills. Telecom workers and HVAC technicians may not need a four-year degree. But they do need higher-order math skills, including Algebra II.

Yet a career-ready student must also have the knowledge and skills that employers need from day one. That means having critical thinking and problem-solving skills, an ability to synthesize information, solid communication skills, and the ability to work well on a team.

Students headed for four-year colleges need to know these important life skills as well. The truth is that we want all students, whether they are in CTE programs or not, to develop employability skills. And I am pleased to say that the Common Core standards developed by the states deliberately incorporate what is often thought of as career-ready skills, such as problem-solving and communication skills. The next generation of assessments currently being developed by the states under the Race to the Top assessment competition will also assess these higher-order skills.

So I start with the basic premise that it is the responsibility of K-12 educators to prepare all students for both college and a career. This must be "both/and", not "either/or." High school graduates themselves--not the educational system--should be choosing the postsecondary and career paths they want to pursue.

For too long, public schools have gotten this all wrong. Too often, the K-12 system made these choices for children, tracking them into dead-end courses--instead of providing them with the skills necessary to succeed in college and careers and the guidance students needed to make good decisions about their future.

When you consider that the average age of a community college student today is now 29, I think it becomes all the more clear that college and career-ready skills are really no longer two, separate tracks.

Students need the same set of skills for both college and the workplace, particularly in reading and math. And it's the job of the K-12 system to prepare them for both options. In our globally-competitive, knowledge-based economy, all Americans are likely to face the challenge of a lifetime of continued learning. And all need a common core of skills.

Today, these employability skills are poorly-defined in America's K-12 system. But they are one of the universal hallmarks of world-class education systems in the 21st century.

U.S. students will need both the hard skills of math and English language arts and science, and the soft employability skills, to thrive in our flattened world. In fact, many of the nations that are out-performing us educationally today have far more effective vocational educational systems than the United States.

We can't just copy the vocational education systems of other high-performing countries. But we can learn from them about how to build rigorous educational and work-experience programs with strong links to high-wage, high-demand jobs.

As your report spells out, the rising demands of that knowledge economy dealt an especially painful blow to the nation's teenagers during the recession. Fortunately, in the years ahead, the information age also will present rich opportunities for students exploring high-quality CTE.

One of the most troubling findings in your report is that teens were hit harder than any other age group by the Great Recession. The percent of teens and young adults who were working fell to its lowest level since the end of the Depression.

Even more disturbing, only nine percent of older, low-income black teens and 15 percent of low-income Hispanic teens now have jobs.

That devastating reality is contrasted with that of white teenagers from middle- to upper-income families, who are four times more likely to be working than low-income black teens. They are getting the on-the-job experience and contacts that will one day give them a foot-up in the job market.

If education is to be the great equalizer in America, disadvantaged black and Hispanic students cannot have less opportunity to work and ready themselves for successful careers or college than affluent white students.

Now, even as graduates desperately search for work, we also know that the information age is going to produce millions of new jobs for the so-called "middle-skill" occupations. These jobs require employees to have more than a high school diploma but less than a bachelor's degree.

One recent study from Georgetown University projects that, from 2008 to 2018, about two-thirds of the job openings in the U.S. will require at least some postsecondary education and training. Fourteen million of those job openings will be in the middle-skill occupations, filled by workers with an associate's degree or occupational certificate.

To be a winner in the future, President Obama has urged every American to get at least a year of higher education or post-secondary career training. "Whatever the training may be," the President says, "every American will need to get more than a high school diploma."

In effect, the President has suggested that every American earn a minimum of two pieces of paper—a high school diploma, and a degree or industry-recognized certification. In the years ahead, young adults are likely to need those two credentials to secure a good job. That will become the ticket to success and a positive future. For all its importance, the role that CTE plays in building the nation's economic vitality often gets overlooked. Too many educators assume that career and technical training is for the last century, not this one. Many reformers treat CTE as old school--rather than as a potential source of cutting-edge preparation for careers.

This narrow picture of CTE is surprising, given the size of our CTE system. More than 90 percent of high school graduates take at least one occupational course. About four out of ten students take at least three full-year courses.

Nationwide, more than 15 million high school and post-secondary students are enrolled in CTE courses. And more than half of high school graduates who participate in CTE today now go on to some form of postsecondary education.

To be fair, the uneven quality of career and technical education is one reason CTE fails to receive the attention it deserves. The shortcomings of the old vocational educational system are well-known. And unfortunately many of them persist today.

Too often, vocational educational programs have perpetuated inequality. We all know that when there were two tracks, students of color and those growing up in poverty were far more likely to be pushed into the "work" track--and far less likely to get access to the college-ready track. Many programs were considered to be dumping grounds for students tracked with weaker academic skills.

Technical education was typically focused in a relatively small number of program areas--and failed to provide adequate student work-based experience or quality internships.

Voc ed lacked academic rigor and relevance. It was a last-stop destination—rather than serving as a launching pad to postsecondary education and industry-recognized certifications leading to a good job.

At the same time, career guidance and counseling in the vocational education system was too often poor to simply non-existent. Many training facilities and labs were run-down, instead of state-of-the-art. High school vocational programs often had ill-defined or ineffective articulation agreements with two-year colleges and trade schools. Business partnerships, designed to define industry-recognized credentials and provide internships and training opportunities, were spotty.

These challenges are very real to me. I saw them firsthand when I became CEO of the Chicago Public Schools in 2001. Our CTE programs were absolutely stuck in their programmatic silos. Capital programs were not aligned with actual program needs. We had culinary equipment sitting on the roofs of schools for years, useless, because the internal plumbing, electrical, and carpentry work hadn't been aligned with the use of Perkins dollars to acquire the equipment.

So, we launched an overhaul of Chicago's CTE program. To date, CPS has closed 50 low-performing CTE programs citywide. In their place, CPS built 12 College and Career Academy sites modeled after high-performing career and training academies that have flourished in other cities. CPS put \$8 million into funding new labs and lab repairs.

The district didn't stop there. We set out to develop 40 standardized curriculums over four years that integrated core academics and employability skills and were aligned with industry and postsecondary standards. The 10 new curriculums implemented by CPS last year included IT-Game Programming, Early Childhood Education, and Broadcast Technology. And CPS launched a novel Employability Assessment last fall that assesses student skills in areas like problem-solving abilities, work ethic, and computer literacy.

Perhaps most important, we made CTE a program of choice. We established a citywide admission policy for our CTE programs. Last year, out-of-area students accounted for 75 percent of admission offers accepted by students.

Like every other big-city district, Chicago's CTE system still has a long way to go. But it is making the transition to CTE 2.0. The number of industry certifications earned by CTE students in Chicago nearly tripled from 2008-09 to 2009-10, going from less than 1,000 students to almost 2,800 students. Internships citywide increased by about a third during the same time, from about 1,000 to almost 1,400. And the percentage of eligible programs offering certification jumped from 40 percent to 60 percent.

Most important, the percentage of CTE graduates enrolled in college rose 2.3 percentage points during the most recent school year. In fact, CTE graduates in Chicago today are slightly more likely to have enrolled in college and be employed than other CPS graduates.

At the national level, our vision for transforming CTE contains a number of the elements that Chicago and other districts have begun putting in place. But our goals are even more ambitious. In the new CTE we are working towards, all CTE programs would serve as viable and rigorous pathways to postsecondary and career success.

Career pathways now spelled out in the Rigorous Programs of Study initiative would span secondary and postsecondary education by design, and concentrate much more on high-demand, high-wage occupations.

Statewide articulation agreements must become the norm. Employers will be much more engaged in designing programs of study and promoting stackable, industry-recognized credentials. And instead of applying the RPOS framework to just a few CTE initiatives, we would like to see it applied to many more Perkins-funded CTE programs.

In short, the mission moving forward here is to refine and scale what works. And as your report spells out, there are great models of the new CTE succeeding all across the country, from the Career Academy Movement, to Project Lead the Way's pathway to engineering curriculum, to Wisconsin's Youth Apprenticeship Program.

Northern Virginia Community College, as you'll hear shortly, has started an early college CTE academy that allows students to graduate with associate's degrees in year 13 of school. They are working with schools as early as eighth grade to get students interested in STEM careers.

The United States has much to learn from other high-performing countries about strengthening and modernizing career and technical education. But one of my favorite examples of the new CTE is homegrown.

It comes from Washington State, where the Granite Falls High School Shop Girls built homemade cars focused on fuel-efficient designs. They designed a diesel-powered vehicle that got a staggering 470 miles to the gallon. They called their car the "Iron Maiden." You won't be surprised to hear that the Iron Maiden won the diesel fuel design competition--and the cash award that went with it.

These exemplary programs are changing student's lives for the better. MDRC conducted a rigorous randomized assessment of the nation's Career Academies and found that they boosted young men's earnings by 17 percent--or nearly \$30,000 over eight years.

But the new CTE is still largely confined to islands of excellence. I want success to be the norm. I want rigor and relevance. Our nation's high schools must be a springboard to higher education and postsecondary training, not a dead-end.

I am admittedly impatient for reform. But patience is not called for in the face of opportunity gaps. Children get only one chance at an education. They cannot wait on reform. It is time to finish the transformation of the old vocational education system into the new CTE.