



College and Career Readiness

The sustained two-decade effort to raise standards and ensure all high school students are prepared for and encouraged to go to college has made its mark in at least one area: the expectations of U.S. students. A majority of middle school students say they are very likely to go to college, but unfortunately, not even half turn that dream into reality.

Students' desire for postsecondary education is not unjustified. As the U.S. economy shifted in the late 20th century from agricultural and industrial jobs to service jobs, the share of jobs available for students without postsecondary education has plummeted. The number of opportunities for workers who are high school graduates or dropouts has been shrinking. (Symonds, Schwartz, & Ferguson, 2011, p. 2).

Worse, current trends suggest that an increasing number of workers will not have the right

skills for the jobs that are available. As many as 12 to 24 million U.S. jobs, most of which require technical skills and training in 21st century technologies, may go unfilled between now and 2020 because too few workers have the requisite skills (Goodwin, 2012). A Georgetown Center study recently announced the United States will need to add an additional 20 million postsecondary-educated workers to the economy by 2025 to keep pace with future economic requirements. These credentials included 15 million bachelor's degrees, 4 million non-degree postsecondary credentials, and 1 million associate's degrees (Carnevale & Rose, 2011). These additional 20 million workers would raise the share of the workforce having at least one year of postsecondary education to 75 percent, up from the 65 percent expected according to current trends. In addition, the percentage of the workforce with an associate's degree would rise to 55 percent, compared to 42 percent today (Carnevale & Rose, 2011). There were more than 780,000 associate's degrees awarded in 2008-09 and 1.6 million bachelor's degrees.

Carnevale and Rose noted that in 2005, of the nation's 135 million workers, 40 million had an associate's degree or some college, and another 40

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million had earned a bachelor's or graduate degree.

While the United States had led the world in educating its workforce from the mid-19th century through the end of the 20th century, it has not maintained that lead in recent years. Although the college completion rates of other major industrialized countries have shot up, the United States' rate has plateaued, putting the nation at just 15th out of 20 industrialized countries in the percentage of adults ages 25-34 with bachelor's degrees (Rothman, 2012). It is also the only country whose college completion rate is lower among younger workers than older workers.

Other industrialized nations are graduating a greater share of their students from college, and some say it is in part because they are making stronger connections in high school to the world of college and career. Other countries also provide more career counseling, vocational, and technical education than the United States.

Many worry that students graduate high school unprepared for college or career, and also that colleges are failing many of the students who enroll and want to earn a credential. College enrollment has risen 38 percent in the last decade, yet graduation rates have plateaued. Significant numbers of students enroll in remedial courses, but the majority of those never earn a degree. College costs have risen more than 400 percent in the last 25 years, but too many students leave college having lost time and money but not having earned a credential.

About two-thirds of 2007-08 bachelor's degree recipients borrowed money to attend college, up from 45 percent of graduates in 1992-93, with the average debt rising to \$23,000 in 2011. Overall, there are more than \$1 trillion in student loans outstanding in the United States. In light of the high rates of remediation and college dropouts, many argue that postsecondary education is more concerned with enrolling students than helping them complete their degree. To learn more about rising remediation rates, read the online sidebar at www.ascd.org/pp-fall12-remediation.

What Needs to Be Done?

To truly prepare our students for career and college, we need to do more to help them earn a postsecondary degree, from better high school preparation through increased college supports and more concrete paths to success. If so many middle schoolers insist they will definitely go to college, and so many jobs require a postsecondary degree, what happens between middle school and young adulthood to cause so many to fall off track? Students need increasing knowledge and skills to prosper in the 21st century; however, a narrow "college for all" path has proven ineffective when it is taken to mean "bachelor's degree" for all. In reality, there are a wide array of options for postsecondary and career success to which the nation is now turning its attention. How can we better connect what students



David Conley, PhD, an educator with a background in college- and career-readiness issues, spoke with ASCD about what students need in order to prepare for life after high school. He discusses the most important parts of being college- and career-ready. **Scan the code to listen to the interview; or, if you don't have a smartphone, go to www.ascd.org/pp-fall12-qr-audio.**



learn in school to what they need to succeed after high school? That is the question addressed by education leaders from the vast majority of U.S. states through both the Common Core State Standards and the Common Career Technical Core (CCTC).

Under the Common Core State Standards movement, state educational leaders and major stakeholders have agreed for the first time that American high schools should focus explicitly on college and career readiness. Forty-five states have adopted the standards, and states and schools already are working to better prepare students for the wide world of college and career success. The Common Core was designed to provide students with the knowledge and skills to successfully complete entry-level college coursework.

Additionally, in June 2012, Career Technical Education (CTE) state directors announced the CCTC, a set of standards developed by 42 states for each of the 16 career clusters, a framework that organizes CTE by industry. The CCTC addresses the knowledge, skills, and

dispositions that are important to becoming career-ready.

Are High School Graduates Prepared for College and Careers?

What does it mean for American students to be prepared for college and career success? Increasingly, it means being prepared for some sort of postsecondary education. Speaking to the U.S. Congress in 2009, President Barack Obama called for “every American to commit to at least one year or more of higher education or career training. This can be community college or a four-year-school; vocational training or an apprenticeship. But whatever the training may be, every American will need to get more than a high school diploma” (Achieve, 2011b).

American high school graduates must be prepared for postsecondary education, but not necessarily a four-year institution. A large percentage of available jobs will go to people with an associate’s degree or occupational certificate. Many of these will be in the middle-skill jobs, such as electrician, construction manager, dental hygienist, paralegal, or policy officer. Middle-skill jobs are exploding in health care—nurses and health technologists, nursing aides, home health aides, and attendants (Symonds, Schwartz, & Ferguson, 2011, p.3). In high-demand occupations, middle-skill jobs provide salaries that surpass those of college graduates. Americans with two-year degrees in STEM (science, technology, engineering, and math) areas have greater average lifetime earnings than college graduates in

most other career areas; computer software engineers (\$3 million), aircraft mechanics (\$2.3 million), and electricians (\$2.1 million) all exceed average lifetime earnings of college-educated school administrators (\$2 million), writers and editors (\$2 million), and teachers (\$1.8 million), according to Carnevale, Rose, and Cheah (2011).

Whether they are headed for two- or four-year colleges, technical certificates, or apprenticeships, many are concerned that high school graduates do not possess the necessary levels of readiness for either career or college. Evidence is growing that regardless of their destination after high school, students need high levels of academic proficiency. ACT found that the level of math skills required by electricians, construction workers, upholsterers, and plumbers is now equal to what’s necessary to succeed in college-level courses (Achieve, 2011b). The Pioneer Institute found that manuals for auto mechanics, plumbers, and those who repair appliances are written “up to a Grade 14 reading level” (Achieve, 2011b). Yet, in 2011, just one in four students who took the ACT met the benchmark scores in all four subjects (Rothman, 2012).

In a 2005 survey, U.S. employers stated that 39 percent of high school graduates were unprepared for entry-level work, and only 8 percent of college instructors said students came to their classes extremely or very well prepared. Thirty-nine percent of high school graduates said they were unprepared for college or the workplace (Rothman, 2012). A 2010 study by the Education Trust found that more than one in five recent

high school graduates could not pass the test to enter military service, which measures reading, mathematics, science, and problem solving (Achieve, 2011b).

College enrollment has risen 38 percent in the last decade, from 14.8 million in 1999 to 20.4 million in 2009, affected by both population growth and rising rates of enrollment. In the previous decade, enrollment in postsecondary institutions increased 9 percent from 1989 to 1999. More and more students are enrolling in college. But rather than completing a degree, too many are leaving with student loan debt and no credential, potentially worse off than when they enrolled.

College costs have risen more than 400 percent in the last 25 years, while the median family income has increased less than 150 percent. The high and rising cost of college tuition is certainly part of the problem, but it is not the only reason students drop out. Examining studies from recent years, Public Agenda identified several possible explanations: “rising tuition costs, poor academic preparation and study skills, minimal student support and advisory services in higher education, too many young people going to college even though they don’t really want to, and too many professors and advisers complaining because, as they see it, completion is the student’s responsibility.”

How Do We Measure Readiness?

Many are looking for ways to ensure that all students who exit high school are prepared for career and college-level work. They are

not, however, looking to exit exams to accomplish this. The Center on Education Policy found that fewer states are requiring students to take exit exams to graduate from high school (Gewertz, 2011). In 2010–11, 25 states required students to pass

those scores being used by an array of postsecondary training and education programs.

Until the common assessments are operational, Indiana has proposed other means of measuring college readiness as part of its NCLB-waiver

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a comprehensive exam or end-of-course test to earn a diploma—down from 28 states the year before. However, testing is an integral part of the policy focus on the transition from high school to postsecondary education. States increasingly are using the SAT, PSAT, and ACT college-admissions exams, as well as PLAN, EXPLORE, and WorkKeys tests to measure college and career readiness (Gewertz, 2011). More than 40 states that have adopted the Common Core standards are now working to design the next generation of assessment systems via two multistate consortia, the SMARTER Balanced and the Partnership for Assessment of Readiness for College and Careers (PARCC). The common assessments will align with the Common Core State Standards, and thus are expected to explicitly measure college and career readiness when they are administered for the first time in the 2014–15 school year. Indeed, as Catherine Gewertz has reported, PARCC officials envision

application. The state will use ACT’s and SAT’s college-readiness benchmarks in the interim in all of its reporting (Gewertz, 2011). Many other states are also using the ACT and other assessments to improve the transition from high school to college, particularly to lower rates of remediation.

In Kentucky, the state’s higher education system will allow students who meet the ACT’s college-readiness benchmark to skip remedial courses. In California, the Early Assessment Program uses a version of its 11th grade standards test to determine which students need extra help in their senior year. Florida has designed a test in collaboration with its higher education system that allows students who reach the cut score to go straight to credit-bearing courses in public colleges and universities. The test also identifies students for postsecondary preparatory instruction while they are still in high school. 2008 state legislation mandated the use of that test, but it

did not require schools to offer transitional courses or provide funding for them, and as of 2010–11, many schools were still not offering them. That will change under new legislation mandating that schools provide the courses to all students who do not meet the college-ready cut score, not just to students who say they will attend college. Evidence has found that the programs in Florida and California that aim to remediate students while they are still in high school both show promise for reducing remedial education at the college level (Burdman, 2011).

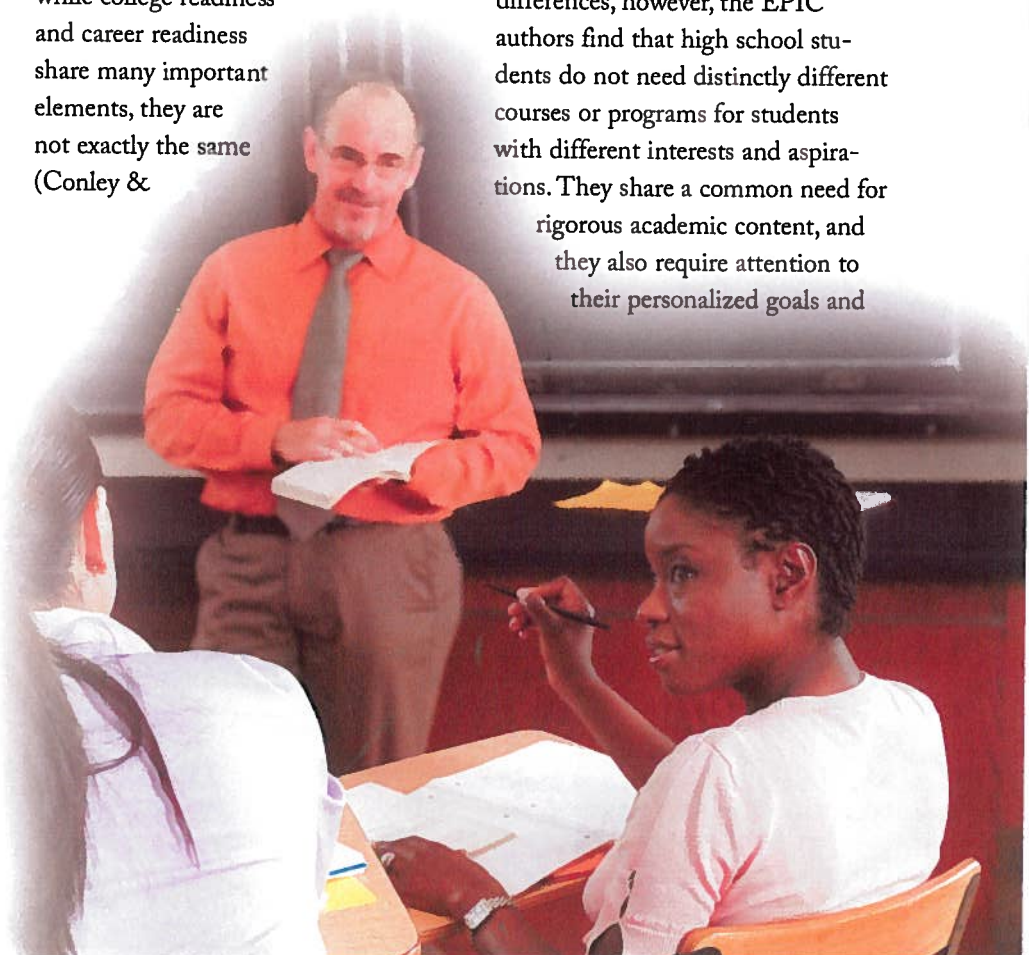
What Do College and Career Readiness Look Like in High Schools?

The Common Core State Standards Initiative defines college and career readiness as the ability “to succeed in entry-level, credit-bearing academic college courses and in workforce-training programs” (Common Core State Standards Initiative, 2010). Studies have shown that career-bound students need math and reading skills that are just as rigorous as their college-bound peers. But are the skills needed for college and careers the same? In 2006, an ACT study compared the levels of math and reading skills needed for students entering college and workforce training and suggested they were essentially the same (Achieve, 2011b). ASCD has called on all major U.S. stakeholders to clearly define college and career readiness to embrace all core academic subjects and the comprehensive knowledge and cognitive skills required of students

after high school. As stated in the ASCD Legislative Agenda, “Any true definition of college, career, and citizenship readiness is not limited to proficiency in reading and math, but includes all core academic subjects—English, reading or language arts, mathematics, science, foreign languages, civics and government, economics, arts, history, geography, physical education, and health education—and the comprehensive knowledge and cognitive skills required of students after high school graduation. The public needs a common and clear definition of what is meant by ‘college and career readiness’ so that states’ early education programs, elementary and secondary systems, and postsecondary institutions do not set widely varying levels of expectations.”

A recent study concluded that while college readiness and career readiness share many important elements, they are not exactly the same (Conley &

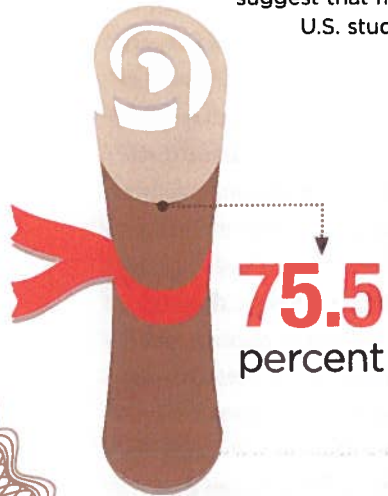
McGaughy, 2012). Using a survey of 2,000 faculty in 25 subject areas at more than 500 two- and four-year institutions, the Educational Policy Improvement Center (EPIC) found that some skills were important in both academic and career-oriented courses: speaking and listening, reasoning and problem solving, reading informational texts, and writing in a variety of genres. However, some notable differences existed as well, primarily among prerequisite academic content, with some disciplines, such as nursing and computer programming, needing stronger skills in science and math. “As convenient as it would be to declare that college readiness and career readiness are one and the same,” the study authors caution, “evidence suggests it’s more complicated than that” (Conley & McGaughy, 2012). Despite these differences, however, the EPIC authors find that high school students do not need distinctly different courses or programs for students with different interests and aspirations. They share a common need for rigorous academic content, and they also require attention to their personalized goals and



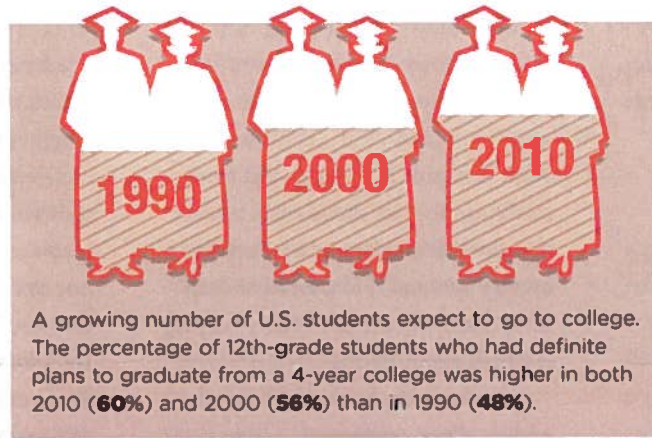
Ready, Set—Not So Fast!

Are U.S. Students Prepared for College and Careers?

Today's students become tomorrow's workers. Research shows that, although many U.S. students have quite high aspirations, employers and colleges reveal that the realities are quite different. While the American workforce will continue to grow until 2020, current trends suggest that many workers will not have the right skills for the available jobs. And although more U.S. students aspire to achieve college degrees, the graduation rate from our nation's colleges and universities has not risen to match those numbers.



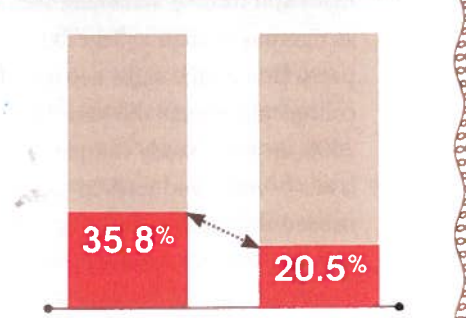
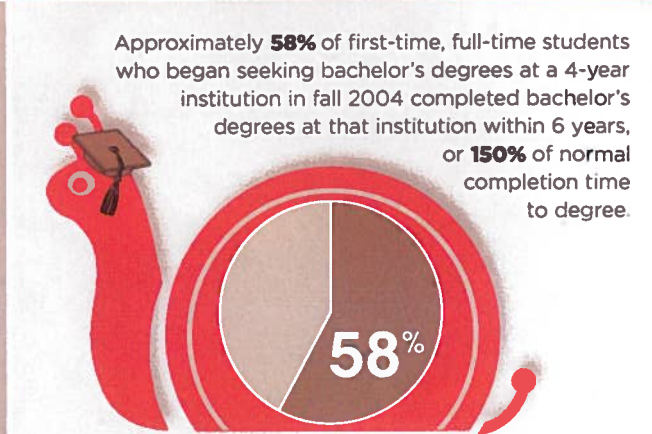
In the school year 2008-09, more than three-quarters of public high school students graduated on time with a regular diploma. The average freshman graduation rate was **75.5%**, that is, just over **3 million students** graduated on time.



The U.S. college graduation rate increased from 42 percent in 2000 to 49 percent in 2009, but the rate increased much faster in other countries. In 2009, **U.S. ranked 16th among 20** major industrialized countries in college graduation rates.



However, while the U.S. high school graduation rate has changed little, other industrialized countries have improved. In 2009, the **U.S. ranked 21st out of 26** OECD countries when it came to high school graduation rate.



Also, the U.S. is the only country in the OECD where the college completion rate is lower among younger than older workers. The global share of the U.S. population with a tertiary degree has slipped by over **15 percentage points** from **35.8%** among 55- to 64-year-olds to **20.5%** among the 25- to 34-year-olds who have just entered the labor market.

support for building more targeted skills for their particular interests.

Increasing the connection between high school education and students' future goals is a popular strategy in American schools. About 70 percent of teachers and principals believe connecting classroom learning to real-world experiences would help a lot in reducing the number of dropouts (Achieve, 2011a). A recent Pathways to Prosperity report argued that "Students drop out of high school and college for many reasons...underpreparation for the required academic work; financial pressures; competing claims of family and jobs—the list of causes are long and varied. But certainly a major reason is that too many can't see a clear, transparent connection between their program of study and tangible opportunities in the labor market." The authors argue that the United States must now follow the example of countries that have achieved markedly better results by offering "more diverse, robust pathways to careers and practical-minded postsecondary options than we do in the U.S." (Symonds, Schwartz, & Ferguson, 2011, p. 18).

Other countries provide their students with far more career counseling than is typical in the United States. Nearly all secondary schools in countries like Japan, the United Kingdom, and Norway include career guidance in the school day (Symonds, Schwartz, & Ferguson, 2011, p.28). Yet, in the United States, the average ratio of students to counselors in middle and high schools is nearly 500 to 1. Counselors are hard-pressed to address students' personal, psychological, and social problems, while also finding

"As convenient as it would be to declare that college readiness and career readiness are one and the same," the study authors caution, "evidence suggests it's more complicated than that" (Conley & McGaughy, 2012).

time to provide career counseling. Pathways to Prosperity director William C. Symonds argues that "students are not well-informed about career options, let alone the best pathways for pursuing them" (Symonds, 2012).

The report lauds the success of European countries such as Finland, Denmark, Switzerland, and Germany in emphasizing vocational education as a mainstream system that helps a majority of young people make the transition from adolescence to productive adulthood. In those countries, between 40 and 70 percent of young people spend three years of their education combining classroom and workplace learning. Employers are engaged with the schools and there is respect for the vocational system, which provides work experience along with education. The authors caution that while the systems in place in these countries are not necessarily a good fit for the United States, particularly those that track students early in

their educational careers, America would benefit from a more comprehensive system with a variety of pathways to success (Symonds, Schwartz, & Ferguson, 2011, p.18).

Biases against vocational and technical education as second-best are deep-seated in the United States, but high school career and technical programs boast completion rates of close to 90 percent, far higher than the 75 percent rate of U.S. high schools in general or the 60 percent graduation rate of colleges (Goodwin, 2012). There are many examples of promising schools across the nation already raising student achievement and better preparing students for college and career. To read more about successful examples of career programs, read the online sidebar at www.ascd.org/pp-fall12-careers.

If the nation's stakeholders who came together to call for college and career readiness succeed, there is hope that all high schools and colleges will instill in students clearer expectations and deeper connections between what they learn in school and their success in realizing their dreams of succeeding in college and career. New policies and innovative schools are beacons of hope, but much more will need to be done to create lasting, comprehensive change for all of America's students.

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For a list of references for this issue of Policy Priorities, check out the issue online at www.ascd.org/publications/policy-priorities/vol18/num03/References.aspx.



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AN INFORMATION BRIEF FROM ASCD

POLICY PRIORITIES

Executive Summary



Executive Summary

A growing share of American jobs require at least some postsecondary education, and a majority of U.S. middle school students say they are very likely to earn those credentials; but judging by college completion rates, something is happening along the way to keep them from achieving that goal.

While other countries' college graduation rates have skyrocketed, the U.S. rate has plateaued, putting it behind other industrialized nations. These countries graduate a greater share of their students from college, and they are also credited

with making stronger connections between high school learning and the world of college and career.

Some argue that a failed focus on "college for all" has led American high school graduates to be unprepared for either career or college. They cite low rates of college completion and high rates of remediation, and surveys that find employers, professors, and even students themselves believe young people are unprepared. The remedy, some argue, is to recognize the many distinct paths to both college and career.

Under the Common Core Standards movement, major U.S. stakeholders have

agreed for the first time that high school should focus explicitly on college and career readiness. But what does it mean for American students to be prepared for college and career? Are the knowledge and skills needed to succeed in college the same as those needed for career readiness?

This issue of *Policy Priorities* examines the focus on college and career readiness, as well as some of the things educators and policymakers are doing in both the United States and other nations to more fully connect and prepare students for life after high school, whatever comes next.

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