

June 2006

Commentary: New Evidence of Convergence

A common concern in states that are considering raising high school graduation standards is that it is unfair -- and some would say unnecessary -- to require students bound for work to take the same rigorous curriculum as those planning on going to college. Not all students will go to college, the argument goes, so they do not all need a college-preparatory curriculum.

This may have been true in the past, but no longer. The American Diploma Project (ADP) interviewed college professors and employers from around the country and found that the skills needed to succeed in freshman-level courses in two- and four-year colleges *are the same* as the skills needed for living-wage, entry-level jobs and careers. To be successful, all high school graduates need advanced reading, writing, communications and mathematics skills equivalent to four years of grade-level or honors English and math classes through at least Algebra II.

A new study from the ACT draws the same conclusion. In [Ready for College and Ready for Work: Same or Different?](#) ACT studied results from high school juniors who took both the college admissions test and the WorkKeys tests, which measure the academic skills needed to perform various jobs. Researchers honed in on training programs for occupations that offer a salary sufficient for a family of four and that include opportunities for

News Clips

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1. **NAEP science results.** Results from the recently released [National Assessment of Educational Progress](#) in science followed the same pattern as performance on the test in other subjects -- 4th grade scores improved, 8th grade scores held steady and 12th grade scores declined. As the report from the congressional Committee on Science, Engineering and Public Policy, [Rising Above the Gathering Storm](#), points out, improving student performance in this subject is vital because our economy will suffer without high-quality, knowledge-intensive jobs and innovation.
2. **Students meeting the challenge.** Every year at this time, newspapers are filled with dire predictions about large percentages of high school seniors who will be denied their diplomas because they have not passed state exit exams. But state leaders in **Virginia** and **Massachusetts** have shown that if states stick to their policies and provide schools and students with intensive supports, then once the test counts, nearly everyone rises to the challenge. Now, [Arizona](#) joins this list -- in a state where just two years ago more than half the seniors were failing the AIMS test, 98 percent of students passed and are ready to don cap and gown and walk down the aisle on graduation day.
3. **Exit exams on trial.** This is the first year **California's** senior class had to pass a 10th grade math and English exam to graduate, but now the state is embroiled in a lawsuit, and this year's senior class is caught in

career advancement. They found that those programs require the same knowledge foundation as colleges do. ACT recommends that all students take a common core curriculum, similar to the one suggested by ADP.

This convergence of skills is a hard concept for some to get their arms around. In the past, students bound for the workforce needed less rigorous preparation than those bound for college, so we ended up with different tracks in high school. The college-bound took the more rigorous curriculum; the rest were put in a vocational or general track and typically took less challenging courses. That worked fine in the days when a high school diploma guaranteed good jobs. But times have changed.

In 1950, 60 percent of jobs were classified as unskilled, attainable by young people with high school diplomas and even high school dropouts. In 2005, only 14 percent of jobs were unskilled, while 86 percent were skilled or professional jobs requiring higher levels of education and training. Two-thirds of new jobs created by 2010 will require some postsecondary education or training.

And it is not only white-collar jobs that demand higher skills. Due to advancements in technology, the level of education required to get blue-collar jobs is higher than ever before. Tool and die makers must have four or five years of apprenticeship training after high school, and they need to master the content and skills covered in algebra, geometry and trigonometry. Those in the construction industry today, including electricians, pipe fitters, sheet metal workers, draftsmen and surveyors, all need algebra, geometry, trigonometry and physics to be successful

the middle -- will those who have yet to pass both portions of the test graduate? The case opened in February when students sued the state to halt the exam, arguing that those in low-performing schools haven't had an equal chance to pass. In May, a [superior court](#) judge struck down the exam. State Superintendent Jack O'Connell then appealed to the [supreme court](#), which put the exam results back in place for the graduation season but also sent the case to the [appellate court](#), where arguments will be heard July 25. California isn't the first state to be taken to court over its exit exam; **Texas** and **Massachusetts** also have been involved in lawsuits. But in both states, courts upheld the tests, finding that the expectations were fair and that the states had done an adequate job of providing students with opportunities and supports.

4. **Texas places focus on math and science.** Tucked away within a property tax bill that has been the center of an imbroglio in the **Texas** Legislature is an item that will require high school students to complete four years of math through at least Algebra II and four years of science. Only **Arkansas** and **Michigan** have a similar standard in math, and only **Alabama** has a similar one in science. Gov. Rick Perry recently [signed](#) the legislation, which follows his move earlier this year, when he dedicated [\\$71 million](#) to help students prepare for careers in technology,

in their jobs.

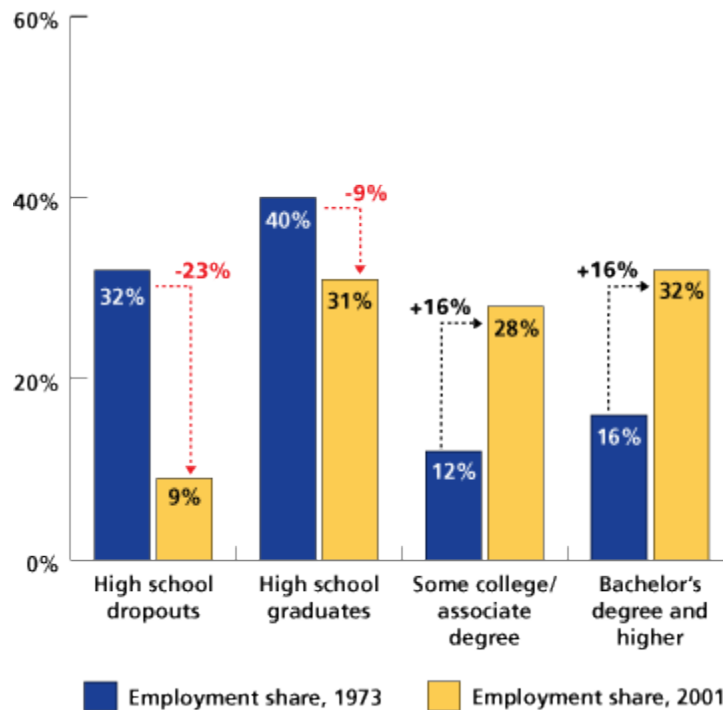
Critics often like to point to service-sector jobs, such as cashiers and food service workers, as evidence that high school students do not need rigorous preparation to get jobs after they graduate. It is true that jobs like these are available, but it also is true that these jobs provide low pay, few benefits and little room for career advancement. Preparing students only for the lowest rung of the economic ladder is neither educationally sound nor socially responsible. It is our responsibility to give graduates more options.

engineering, math and science via special academies focused on the four subjects. These complementary programs should do much to ensure all students are prepared for college or work.

Did You Know?

Jobs in Today's Workforce Require More Education than Ever Before

Change in distribution of education in jobs, 1973 vs. 2001



Source: Carnevale, Anthony P. and Donna M. Desrochers, *Standards for What? The Economic Roots of K-16 Reform*, Educational Testing Service, 2003.

More and more jobs in today's economy require some form of postsecondary education. Jobs that once required a high school diploma and paid \$50,000 a year plus retirement

benefits are disappearing, and new jobs require more knowledge and skills. What's more, earning potential increases dramatically the more education young people receive. The typical bachelor's degree recipient can expect to earn 73 percent more over a 40-year working life than a high school graduate; those with an associate degree will earn 25 percent more.

New Resources

- With as many as two-thirds of new jobs requiring some form of postsecondary education, it is more important than ever for students to graduate high school prepared to succeed in college. In its new policy report, [*What We Must Do to Create a System That Prepares Students for College Success*](#), WestEd reviews emerging policy trends aimed at improving the alignment between high school and college. It also makes recommendations for what policymakers, high school educators, postsecondary faculty and administrators, students and parents can do to ensure that students make a smooth transition to college. These recommendations include aligning high school graduation and postsecondary entrance expectations and adding a college readiness assessment to state testing systems.
- Spurred on by concerns about the increasingly global nature of the innovation economy, the Ohio Business Roundtable's new report, [*The Talent Challenge*](#), calls on Ohio policymakers to build on their successful efforts to raise academic standards and align student assessments and take the next steps to better prepare Ohioans for success. Priority one, according to the report, is developing Ohio's talent base, particularly in the science, technology, engineering and mathematics disciplines. Strategy one is requiring all high school students to take more rigorous and challenging courses.
- Over the past several years, significant attention has been focused on closing the achievement gap that separates the performance of white students from their black and Hispanic peers. In its new issue of [*Reality Check 2006*](#), Public Agenda looks at how black and Hispanic families rate their schools compared to white families. Among the findings, about half of students from all groups say they could work harder in school, and the vast majority of students in all groups support higher academic standards, even if it means going to summer school. But minority students are far more likely to report academic shortfalls, and although many minority students want to go to college, fewer believe they will succeed there.

New from Achieve

High standards and high graduation rates. As states raise high school graduation requirements, they also must raise graduation rates. In a new report that will be released early next week, Achieve provides education officials a brief overview of research about the dropout problem and identifies the best strategies for building an early warning data system that can signal which students and schools are most in need of interventions.

Perspective is sent to you monthly by Achieve, a bipartisan, non-profit organization founded by the nation's governors and CEOs to help states raise standards, improve assessments and strengthen accountability to prepare all young people for postsecondary education, work and citizenship. Please feel free to circulate this e-newsletter to your colleagues.

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