



GET HELP FINDING DATA

It can be difficult to find the data you need in the American Community Survey or other data sources. Fortunately, you don't have to.

Virginia CTE professionals can contact Trailblazers any time for help with data needs for anything from program planning to preparing grant proposals. Don't waste time looking for information that we can help you find in five minutes. Just call, 434-982-5582.

VACTEA 2011 ANNUAL CONFERENCE

The annual VACTEA meeting will be in Fredericksburg this year on October 5-7. I will be there to talk about employer partnerships, both in a regular session and at the advisory board meeting.

WE'RE STILL LOOKING FOR NEW IDEAS ABOUT NONTRADITIONAL

The more options students experience, the better chance they have of finding successful and rewarding careers. That's why it's important that the traditionally gender-specific CTE courses are welcoming to both female and male students.

With that goal in mind, we have been visiting schools and looking for fresh ideas about attracting and retaining nontraditional students. We would love to continue this work, visit more schools, and talk to more teachers. If you are interested in sharing what you have done, please let us know.

COMPLETER FOLLOW-UP

The 2011 Follow-up of 2010 CTE completers has been concluded. Virginia exceeded the 75 percent response rate target, as did all but 12 school divisions or regional technical centers. CONGRATULATIONS! Survey results will be available in the fall.

TRAILBLAZERS BLOG

There is more to say about *Trailblazers'* topics than will fit in our newsletter, so we're writing a blog now. Take a look: <http://ctetrailblazers.blogspot.com/>

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How To Find Data When You Need It

You see a grant opportunity, but the application form asks "What percentage of families in your area with children under 18 are in poverty?" Where do you find that information? What about the percentage of people in your school division without a high school diploma? Or the percentage who speak a language other than English at home? Or the median household income?

The Census Bureau's new [American Community Survey](#) asks all of these questions and many more. It is the best resource for information about the population, social characteristics, and economy of your community. It shows, for example, that in Virginia:

- 11% of families with children under 18 live in poverty;
- 14% of people 25 years and over do not have a high school diploma;
- 13% of people speak a language other than English at home; and
- \$60,316 is the median household income.

In the past, the Census Bureau collected information from all the households in America once every decade. They asked everyone for a few basic facts, such as age, gender, and race; and they asked a smaller sample of people for more detailed information on topics, such as education, employment, and income.

Now the Census Bureau changed the way they collect information. They still conduct the main national census every ten years, asking a few basic questions of everyone. But they have now introduced a new survey in which three million American housing addresses — across every city and county in the nation — are contacted annually. Today we now have up-to-date information about our population every year instead of every ten years.

Having an annual survey also gives the Census Bureau the chance to add new questions and collect new information when we really need it, instead of having to wait ten years to find the answers to pressing questions. For example, in 2009, the American Community Survey first asked Americans about their health insurance coverage. Results show that in Virginia, eight percent of school age children age 6 to 17 do not have health insurance. The number of uninsured rises dramatically for those who fall in the 18-24 age group and are no longer covered by state programs: Thirty-eight percent of men and 24 percent of women age 18 to 24 have no health insurance.

It's always helpful to have new information like this, but it is important to understand how the American Community Survey is structured in order to correctly use the data. The survey is conducted in every county and city in America. In small localities, too few people are contacted to collect publish-

able information every year. In those areas, data is added up over several years before it is released as a "multi-year estimate." Because the health insurance question was first asked in 2009, we only have data for the state as a whole and large localities; we will have to wait to find out about health insurance coverage in medium-sized and small cities and counties.

The American Community Survey now publishes three kinds of estimates;

- 1-year estimates (currently for 2009) for all states and localities with populations of 65,000 or greater;
- 3-year estimates (currently for 2007-2009) for localities with populations of 20,000 or greater;
- 5-year estimates (currently for 2005-2009) for localities with populations under 20,000.

New American Community Survey data are released every year in September. Some time next month, we will have new information for Virginia's cities and counties for the 2006-2010 estimate period — just in time to begin planning for another school year.

Resources:

Find a Powerpoint [Introduction to the American Community Survey](#) and [Guide to Using the ACS Multi-year Estimates](#) on the Demographics & Workforce Group website: www.coopercenter.org/demographics/ (Search for American Community Survey).

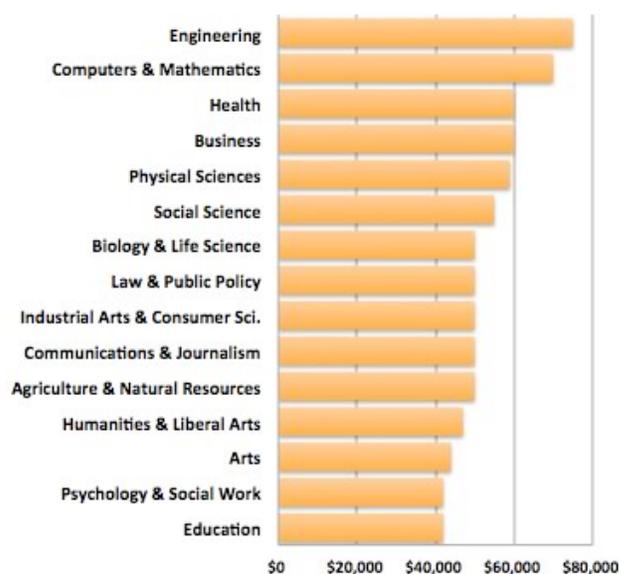
How Much Is A Bachelor's Degree Worth? It Depends On Your Major.

Earning a bachelor's degree boosts your income. In a January article "[Learn More, Earn More](#)," I noted that workers with a bachelor's degree earn more than twice as much as high school dropouts; those with a graduate degree earn more than twice as much as high school graduates.

New data from the Census Bureau's annual [American Community Survey](#) now shows how much students earn with each individual college major. In general, STEM majors earn more than others. Engineering

and Computers & Mathematics majors top the list. Median 2009 earnings for those with a bachelor's degree in engineering were \$75,000 and those with degrees in Computers & Mathematics had median earnings of \$70,000. Arts, Education, and Psychology & Social Work majors have the lowest earnings, a median of under \$44,000.

**Median Earnings by Major Group
(Age 18-64 in full-time jobs)**



A new publication, [What's It Worth? The Economic Value of College Majors](#), from the Georgetown University Center on Education and the Workforce dissects information on earnings and other topics not only for the major groups, but also for 171 detailed majors within those groups. It shows, for example, that median earnings for Engineering majors with a bachelor's degree (but no graduate education) varies from \$120,000 for petroleum engineering to \$55,000 for biological engineering. In Education, median earnings vary from \$46,000 for majors in secondary education to \$36,000 for majors in early childhood education. In almost all fields, there is a big earnings boost with the completion of a graduate degree. Secondary education majors average a 26% earnings boost from obtaining a graduate degree and

early childhood majors average a 41% earnings boost. ([See the sub-report on Education](#))

The report also includes valuable information on much more than income. It shows, for example, the employment and unemployment rates in all of the major fields. It is interesting to see that though they normally have among the highest incomes, Mathematics & Computer Science majors also have among the highest unemployment rates.

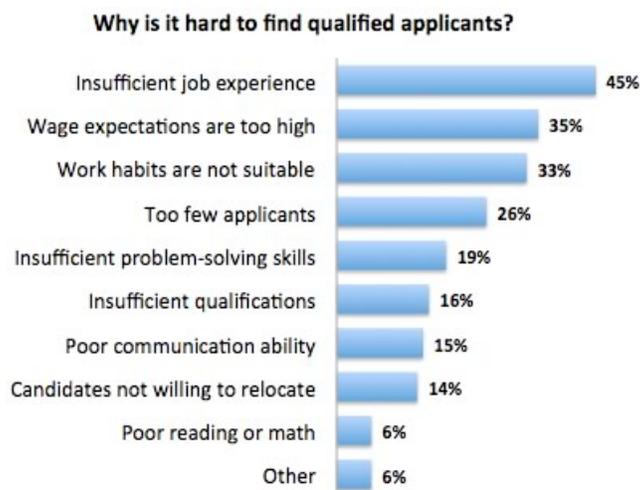
Majors with the Highest Employment Rates	
Geological and Geophysical Engineering	100
Military Technologies	100
Pharmacology	100
School Student Counseling	100
Medical Assisting Services	99
Metallurgical Engineering	99
Treatment Therapy Professions	99
Agricultural Economics	98
Agriculture Production and Management	98
Atmospheric Sciences and Meteorology	98
Majors with the Highest Unemployment Rates	
Social Psychology	16
Nuclear Engineering	11
Educational Administration and Supervision	11
Biomedical Engineering	11
Linguistics and Comparative Language and Literature	10
Mathematics and Computer Science	10
United States History	10
Court Reporting	10
Counseling Psychology	10
Studio Arts	9

The Skills We Need Today

To climb out of its deep economic troubles, America needs to build jobs for seven million people who are still unemployed and to continue to build jobs for our expanding population: "Achieving this will require sustaining demand growth, rising U.S. competitiveness in the global economy, and better matching of U.S. workers to jobs," according to a new report from McKinsey Global Institute, [An Economy that Works: Job Creation and America's Future](#).

The entire report is worth reading, but the comments on building the skills of the American workforce are particularly important to Career and Technical educators. McKinsey surveyed 2,000 employers in a range of industries about their needs and concerns. They found that despite high unemployment, some positions are still hard to fill — and almost all in fields that are core CTE subjects. It is important for our country's economic future that students be made aware of opportunities in these careers and get the education they need to qualify for them.

Skill shortages are not confined to engineers, scientists and computer programmers. Our interviews reveal a broad set of fields that require different levels of education — welders, nursing aides, nutritionists, and nuclear technicians — in which employers cannot find qualified workers. Improving the information available to education institutions and students about the jobs that are growing rapidly and the requirements for those jobs will be critical to addressing the skill gap.



The survey also asked employers why it is hard to find qualified applicants for certain positions and found that insufficient job experience and unsuitable work habits were among the most common barriers. CTE is working to address both of these issues. By emphasizing workplace readiness skills throughout the curriculum, we are attempting to tackle work

habits directly. With long-standing co-op programs and recently increased emphasis on employer partnership to provide internships, mentorships, and other work exposure activities, CTE tries to ensure that students gain as much relevant job experience as possible while they are in school. This makes them better employees and more successful job candidates.

Business Taking A Hand In STEM

American business is becoming increasingly concerned about the skills of the workforce, particularly in STEM, and our ability to compete with Asian and Indian economic powerhouses. As a result, business is taking a stronger interest in education and the way schools are run. This interest not only extends into research and curriculum, but also into school management, an area where business is likely to intervene directly. A new report from the Institute for a Competitive Workforce, an affiliate of the U.S. Chamber of Commerce, reports on this growing concern: *The Case for Being Bold: A New Agenda for Business in Improving STEM Education* begins:

Education spending has steadily increased and rafts of well-intentioned school reforms have come and gone. But student achievement in math and science has remained stagnant, and our K-12 schools have stayed remarkably unchanged—clinging to the routines, culture, and operations of an obsolete 1930s manufacturing plant. (p. 12)

The routines, culture, and operations of business have changed dramatically even in this new century, and the business community is becoming more and more frustrated with the slow pace of change in education. They want to become more directly involved in education and to confront the established cultures.

The American business community can play a crucial role by providing the kind of straight-talking leadership and relevant expertise that transformative STEM reform requires. With their enormous credibility, political heft, and ultimate role as the employer of America's STEM talent, business lead-

ers are perhaps the only major stakeholders that have the freedom, reason, and muscle to challenge a comfortable status quo that universities, school boards, educators, unions, and parents have been reluctant to change. (p. 12-13)

The Case for Being Bold recommends that business intervene in three areas in which they have expertise:

- Creating curricula that are targeted to employer needs and developing standards and assessments
- Helping to ensure that tests are rigorous, officials set high expectations, and school districts and teacher preparation programs are encouraged to retool their training.
- Helping to bring a wider pool of skilled STEM instructors into the classroom.
- Redesigning schools to incorporate more technology and virtual education.

The report concludes

Because the private sector is largely free of the political and membership constraints that make public organizations overly cautious and consensus-driven, it is exceptionally well-suited to support reform ideas that expand our conceptions of "schools," "teachers," and "instructional delivery" far outside their traditional contours. The business community should think of itself not as an anonymous angel investor, providing money so nonprofit experts can experiment with pet projects, but as a proactive partner that not only seeks out and funds the best new ideas and providers in STEM reform but also dedicates some of its philanthropic money to developing its own ideas and programs. (p. 47-48)

The changes being proposed here are radical. But given the increasing interest that business is taking in education, I expect that many of these changes will eventually take place in our educational system. Career and Technical Education should remain as closely connected to the local business community as possible and attempt to understand, anticipate, and prepare for the changes that business is seeking.

Student Financial Woes Hurt Graduation Rates. Dual Enrollment Can Help.

Far too many students who enroll in college fail to graduate. A new report argues that lack of financial and social support is the major barrier to completing college. If this is so, then high school dual enrollment programs can help improve graduation rates by helping students to earn college credits at a low cost while they still have social support from schools and, we hope, from their families.

Eighty-six percent of students who enrolled in one of Virginia's four-year public colleges in 2009 returned in the fall of 2010. Sixty-two percent of the students enrolled in a two-year colleges returned the following year.* Some of these students transfer to other colleges, but too many never return.

Many students who return for a second year still fail to graduate. Sixty-eight percent of students who enroll in Virginia's 4-year public colleges graduate within six years; and just eighteen percent of those in 2-year colleges graduate in three years.* Some of those who do not graduate within six or three years will eventually earn a degree, but too many never do despite having invested thousands of dollars.

Lack of financial and social support is the major reason students leave college without completing a degree, according to [One Degree of Separation: How Young Americans Who Don't Finish College See their Chances for Success](#), a new report from Public Agenda. Researchers interviewed more than 600 young adults who had begun college but did not complete a degree. They report four myths and four realities about college students and dropouts.

MYTH NO. 1: *Most students go to college full-time. If they leave without a degree, it's because they're bored with their classes and don't want to work hard.*

REALITY: *Most students leave college because they are working to support themselves and going to school at the same time. At some point, the stress of work and study just becomes too difficult.*

MYTH NO. 2: *Most college students are supported by their parents and take advantage of a multitude of available loans, scholarships, and savings plans.*

REALITY: *Young people who fail to finish college are often going it alone financially. They're essentially putting themselves through school.*

MYTH NO. 3: *Most students go through a meticulous process of choosing their college from an array of alternatives.*

REALITY: *Among students who don't graduate, the college selection process is far more limited and often seems happenstance and uninformed.*

MYTH NO. 4: *Students who don't graduate understand fully the value of a college degree and the consequences and trade-offs of leaving school without one.*

REALITY: *Students who leave college realize that a diploma is an asset, but they may not fully recognize the impact dropping out of school will have on their future.*

Researchers asked students what could be done to support college completion. The results showed that "Eight in 10 of those who did not complete college supported two proposals that they believe would make college graduation feasible: 1) making it possible for part-time students to be eligible for more financial aid (81 percent said this would help 'a lot'); and 2) offering more courses in the evening and on weekends so that they could continue working while taking classes (78 percent said this would help 'a lot')."

These ideas are surely valuable. But the researchers did not ask about one reform that is also likely to improve graduation rates - helping students earn college credits more quickly and cheaply through dual enrollment programs. Of the Virginia CTE completers who graduated in 2010, over 4,500 had taken dual enrollment courses, giving them a distinct advantage in completing an associate's degree. Dual enrollment is increasing in high schools across the state, and when the CTE completer data are released later this fall, it is expected that this number will rise.

* State Council of Higher Education for Virginia
<http://research.schev.edu/topicpages.asp?t=4>