

2017-
2018

Environmental Scanning Report



Hagerstown
Community
College

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INTRODUCTION

An environmental scan is the process of examining external trends, issues, and events in order to determine their impact upon an institution. Environmental scanning focuses on the identification of emerging issues, situations, and potential pitfalls that may affect the college's future.

Environmental scanning by the Planning and Institutional Effectiveness Division enables the College to look at emerging, up-to-date demographic trends in the service region, state and nation, global trends, economic/business data, social trends, and enrollment potential by student type/populations, course or program potential (credit and noncredit). Information from environmental scanning activities helps establish a link between strategic planning and projected trends, resulting in data-based decisions to improve and update programs and services. When administrators, faculty, and staff are informed of changes, they are better able to prepare for the changes by determining future strategic institutional directions.

This report has been divided into six broad categories: Demographics, Economy, Education, Workforce and Economic Development, Technology, Public Policy and Accountability. These trends, facts, findings, and implications could or will affect Hagerstown Community College. No one can predict the future, but by understanding and examining the trends, issues, and events that impact the life of the community college, we can begin to create a plan that looks to the possibilities for HCC's future and opportunities.

DEMOGRAPHICS

United States - National

According to the US Bureau of the Census, the resident population of the United States, on August 6, 2013 is 316,392,999. At such a fast growth rate, the US population will likely hit 400 million in 2039, four years earlier than previously projected, according to new population projections from the U.S. Census Bureau. (The population estimates are most likely undercounted with the number of illegal immigrants living in the US.)

According to the US Census Bureau, the following components affect our population:

- one birth every 8 seconds
 - one death every 12 seconds
 - one international migrant every 44 seconds
 - net gain of one person every 13 seconds
-
- Today, only 74% of women are active in the U.S. workforce, little changed in the last 25 years, and trailing far behind many other developed countries. As of last year, America ranked 27th out of 37 developed countries for women's labor force participation, according to the Organization of Economic Cooperation and Development.
 - Trulia recently released a survey showing that 44% of jobless 18 to 34 year-olds live with their parents, while nearly a quarter of those *with jobs* have yet to leave the nest.

Sixty-six percent of households in 2012 were family households, down from 81 percent in 1970.

Between 1970 and 2012, the share of households that were married couples with children under 18 halved from 40 percent to 20 percent.

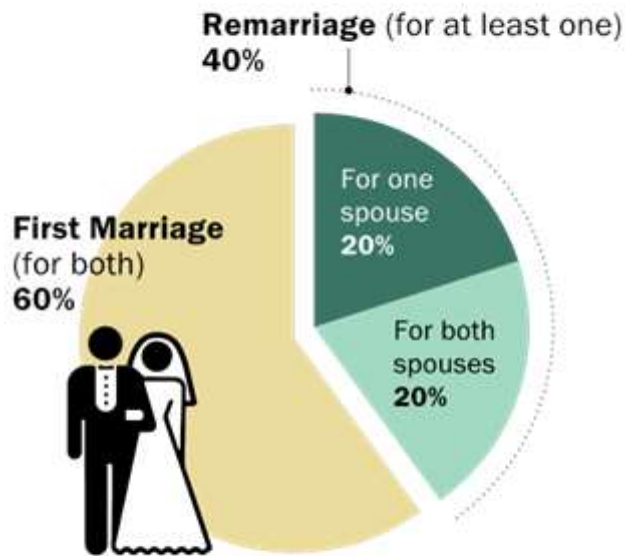
The proportion of one-person households increased by 10 percentage points between 1970 and 2012, from 17 percent to 27 percent.

Between 1970 and 2012, the average number of people per household declined from 3.1 to 2.6.

- In 2013, fully four-in-ten new marriages included at least one partner who had been married before, and two-in-ten new marriages were between people who had both previously stepped down the aisle, according to a Pew Research Center analysis of newly released data from the U.S. Census Bureau.

Four-in-Ten New Marriages Involve Remarriage

% of new marriages in 2013



Note: "New marriages" are marriages that began in the past 12 months. A first marriage is one in which neither spouse has been previously married. A remarriage includes at least one spouse who has been married before. Based on couples, not individuals, where at least one spouse is age 18 or older.

Source: Pew Research Center analysis of 2013 American Community Survey (1% IPUMS)

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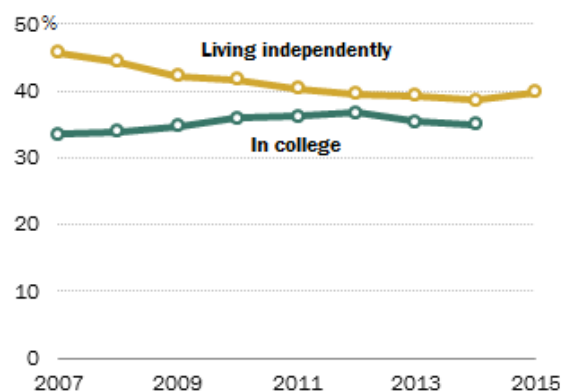
Wealthy Americans are getting married, but low-income and less-educated citizens are giving it a hard pass. That's creating a marriage gap across America because those with college degrees are much more likely to tie the knot than people without a degrees, according to new data from the Pew Research Center. Income also plays into the issue, given that college-educated workers earn about 75 percent more annually on average than people with only a high school degree. The marriage rate has declined about 9 percentage points over the past 25 years, with about half of all U.S. adults now married.

Today's Generations

	Born	Age (in 2012)
GI Generation	1901 – 1924	88 – 111
Silent Generation	1925 – 1946	66 – 87
Baby Boom Generation	1946 – 1964	48 – 65
Generation X	1965 – 1979	33 – 47
Millennial Generation	1980 – 1999	13 – 32
Generation Z	2000 –	12 and under

Independent Living Has Not Increased as College Enrollment Has Declined

18- to 24-year-olds

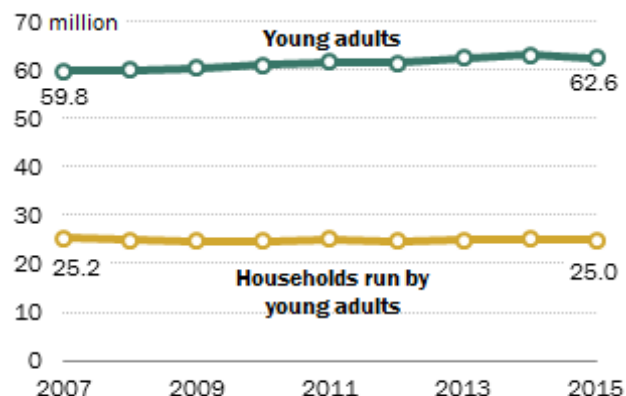


Note: "In college" includes both full- and part-time students. Living independently means heading one's own household or living in a household headed by a spouse, unmarried partner or other non-relative (analysis excludes full-time college students).

Source: Pew Research Center analysis of the Current Population Survey Merged Outgoing Rotation Group data files and 2015 basic monthly CPS files (Jan.-Apr.)

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More Young Adults, but no More Young Adult Households Than Before the Recession



Note: Young adults are 18- to 34-year-olds; excludes 18- to 24-year-old college students enrolled full time.

Source: Pew Research Center analysis of the Current Population Survey Merged Outgoing Rotation Group data files and 2015 basic monthly CPS files (Jan.-Apr.)

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In spite of these positive economic trends and the growth in the 18- to 34-year-old population, there has been no uptick in the number of young adults establishing their own households. In fact, the number of young adults heading their own households is no higher in 2015 (25 million) than it was before the recession began in 2007 (25.2 million). This may have important consequences for the nation's housing market recovery, as the growing young adult population has not fueled demand for housing units and the furnishings, telecom and cable installations and other ancillary purchases that accompany newly formed households.

The 5 Generations on Campuses Today

Here's a look at the five generations now on campuses. While definitions and birth years for certain groups are debated, there is broad agreement about many of the generational distinctions.

Silent Generation (also known as traditionalists; named the "Greatest Generation" by Tom Brokaw): Born about 1925-46. Influences: Great Depression, World War II, the postwar boom, the GI Bill. Traits: job loyalty, share many values, cautious.

Baby Boomers: Born 1946 to 1964. Influences: television, assassination of President John F. Kennedy, rock 'n' roll, first moonwalk, antiwar protests, birth control, sexual revolution. Traits: dedication, face time, team spirit, strongly identify as a special generation.

Generation X (also called "the Slacker Generation" and "latchkey kids"): Born 1965 to about 1980. Influences: parental divorce, feminist movement, MTV, rise of home video games and personal computers, fall of the Soviet Union, birth of the internet. Traits: cynical about authority, self-reliant, value autonomy, do not strongly identify as a generation.

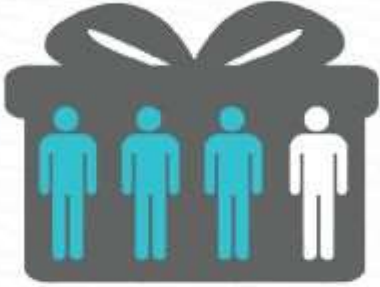
Millennials (also known as Generation Y): Born around 1980 through the late 1990s or later. Influences: internet era, September 11 terrorist attacks, cellphones, Facebook. Traits: value feedback, recognition, work-life balance, and teamwork ("trophies for everybody"); sometimes criticized as "entitled"; grew up with highly structured activities.

Generation Z: Born roughly in the late 1990s through about 2010, making them today's youngest college students. Influences: the recession, terrorism, smartphones, social media, multiculturalism, same-sex marriage, nation's first black president. Traits: multitasking, technology-addicted, sophisticated social-media users.

- One of the silver linings of the Great Recession was that it drove an increasing share of young adults toward higher education. Some enrolled in college to ride out the economic storm, while others went back to school to gain additional skills and make themselves more marketable. By 2012, 37% of 18- to 24-year-olds were enrolled in college, a substantial increase over the 34% enrolled in 2007. And as college enrollment rose, fewer 18- to 24-year-olds lived independently. By 2012, only 39% of 18- to 24-year-olds (not including full-time students) lived independently, down substantially from the 46% share living independently in 2007.

College-going peaked in 2012. By 2014, 35% of 18- to 24-year-olds were pursuing college, down 2 percentage points from the peak. But contrary to expectations, the college enrollment decline has not stimulated an increase in independent living. Today, most younger Millennials do not live independently of family. By the first third of 2015 only 40% of 18- to 24-year-olds were living apart from their families.

KEY FINDINGS



75% SAID THEY GAVE A
FINANCIAL GIFT IN 2011

HOW DO YOU PREFER TO LEARN ABOUT NONPROFITS?

WEBSITE	SOCIAL MEDIA	E-NEWSLETTERS	PRINT	FACE TO FACE
65%	55%	47%	18%	17%

**MY BIGGEST
PET PEEVE**
IS WHEN I DON'T KNOW

HOW MY GIFT WILL MAKE A
DIFFERENCE



77%
SAY THEY HAVE SMARTPHONES

23%
DO NOT.
THEMILLENNIALIMPACT.COM

Why America volunteers



THE GENERATIONS OF GIVING



GENERATION Y
(age 18-32):
60% in this generation give an average of \$481 per year across 3.3 charities



GENERATION X
(age 33-48):
59% in this generation give an average of \$732 per year across 3.9 charities



BABY BOOMERS
(age 49-67):
72% in this generation give an average of \$1,212 per year across 4.5 charities

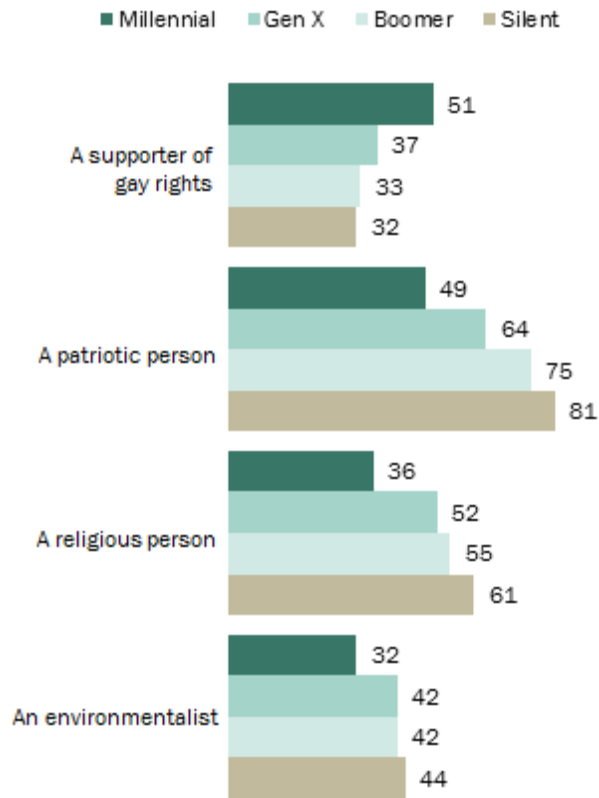


MATURES
(age 68+):
88% in this generation give an average of \$1,367 per year across 6.2 charities

SOURCE: BLACKBAUD'S STUDY "THE NEXT GENERATION OF AMERICAN GIVING: THE CHARITABLE HABITS OF GENERATIONS Y, X, BABY BOOMERS, AND MATURE" PUBLISHED AUGUST 2013

How the Generations See Themselves

% saying ... describes them very well



Note: Percentages reflect those who rated each description 8-10 on a scale of 1-10 where "10" is a perfect description and "1" is totally wrong.

Source: Pew Research survey, Feb. 14-23, 2014

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- Every day 15 million kids nationwide leave school with no place to go, putting them at risk of being unsupervised, unguided and unsafe during these critical after-school hours. Furthermore, during the summer, an alarming 43 million kids in America lack access to expanded learning opportunities, increasing their risk of learning loss and falling behind before the next school year begins.

America's youth are in crisis. Consider these alarming facts about the state of our country: the U.S. ranks 22nd in high school completion among 28 countries; three out of 10 kids are obese or overweight; and one in five youth lives in poverty. The consequences of these staggering statistics are felt not just by our next generation but also across our nation.

- 24/7 Wall St. reviewed the percentage of each state's population receiving disability insurance using data released annually by the Social Security Administration. While the size of the average disability check tends to be roughly the same in every state, the shares of states' populations relying on these benefits varies a great deal.

Nationwide, 4.7% of Americans 18 to 64 years old are on disability. Across states, the percentage ranges from more than 8% in West Virginia, Alabama, and several other Southern states to less than 3% in Alaska and Hawaii.

Approximately 8.9 million of the 10.2 million beneficiaries nationwide are disabled workers. The remaining recipients include 1.6 million minors and children of disabled workers, 1.1 million disabled adults dependent on their parents, 260,000 disabled widows and widowers, and 142,000 spouses.

Local state rankings:

43. Maryland

Residents collecting disability benefits: **3.7%**

Total beneficiaries: **141,098 (25th lowest)**

Total monthly benefits received: **\$172.5 million (8th lowest)**

Labor force participation rate: **68.1% (9th highest)**

June unemployment rate: **4.1% (tied–24th highest)**

32. Virginia

Residents collecting disability benefits: **4.3%**

Total beneficiaries: **229,244 (14th highest)**

Total monthly benefits received: **\$272.5 million (tied–18th lowest)**

Labor force participation rate: **65.5% (17th highest)**

June unemployment rate: **3.7% (tied–16th lowest)**

18. Pennsylvania

Residents collecting disability benefits: **5.6%**

Total beneficiaries: **443,786 (5th highest)**

Total monthly benefits received: **\$524.9 million (tied–17th highest)**

Labor force participation rate: **63.2% (23rd lowest)**

June unemployment rate: **5.0% (tied–6th highest)**

1. West Virginia

Residents collecting disability benefits: **8.9%**

Total beneficiaries: **100,254 (20th lowest)**

Total monthly benefits received: **\$120.0 million (the highest)**

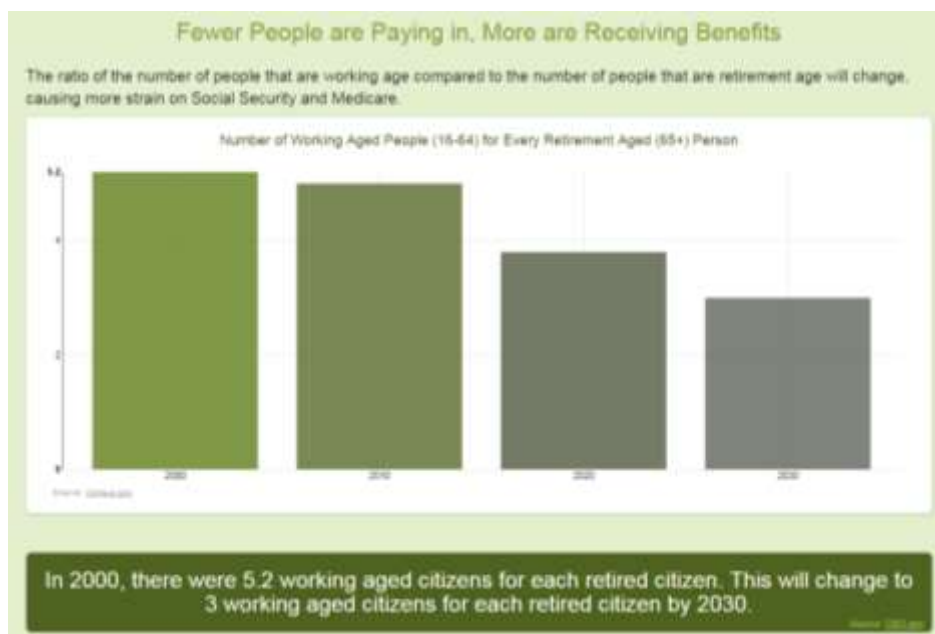
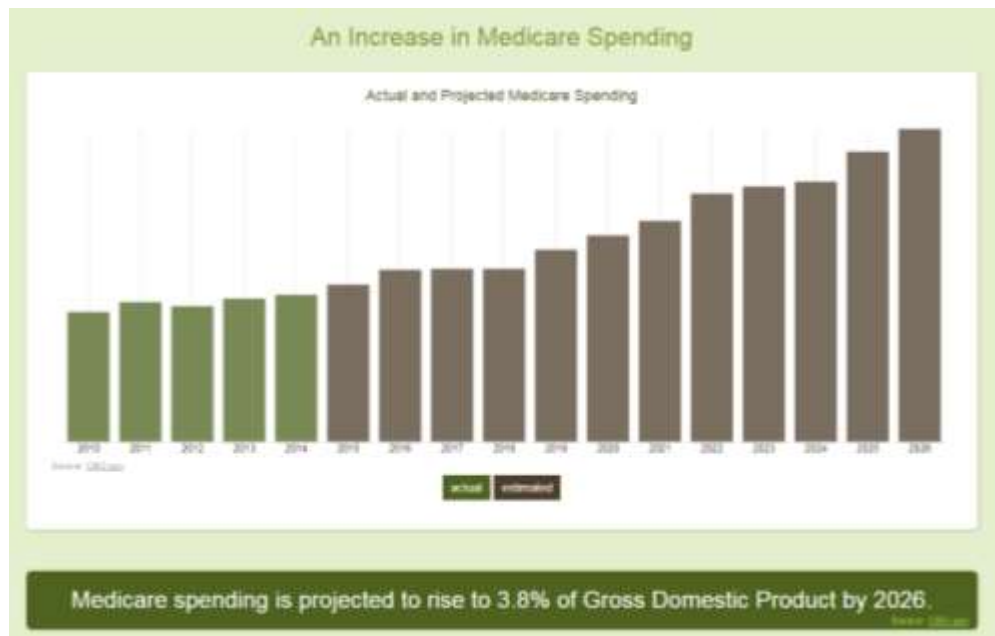
Labor force participation rate: **53.1% (the lowest)**

June unemployment rate: **4.6% (tied–15th highest)**

Age Groups

The U.S. has reached a new milestone - a population of over 50 million seniors for the first time in the history of the USA. A linear interpolation of the monthly population estimates published by the Census Bureau in 2015 estimates that we will see over 50 million people in the U.S. aged 65 and older some time during November 2016. Even older annual estimates published by the Census Bureau in 2005 show us crossing the threshold in the spring of 2017. Regardless of the estimation method, it is clear that this milestone is upon us. Continue reading to explore the causes and the effects of the rise in the senior population in the United States.

As a result of the baby boom that happened post-World War II and the fact that we are experiencing longer life expectancy, the United States is facing a surge in the aging population in every state in the country over the next few decades. This population surge will result in more Medicare beneficiaries and higher Medicare spending, while fewer citizens will be paying into the system. The changing population dynamic presents many challenges that must be addressed.



The nation as a whole grew older as the oldest baby boomers became seniors. The nation's 65-and-older population surged to 44.7 million in 2013, up 3.6 percent from 2012. By comparison, the population younger than 65 grew by only 0.3 percent.

The 85-and-older population grew by about 3 percent between 2012 and 2013 to 6 million. The number of people age 100 and over reached 67,000 in 2013.

The total number of children under age 5 was just under 20 million in 2013 or 6.3 percent of the population. The number of children age 5 to 13 was just over 37 million in 2013 (11.7 percent of the population).

The number of high school-age children (age 14 to 17) was 16.6 million or 5.3 percent of the population in 2013.

In 2013, there were about 198 million working-age adults (age 18 to 64), representing 62.6 percent of the total population.

In 2013, the median age of the minority population -- i.e., all people who were not in the non-Hispanic single-race white group -- was 30.5 years. The non-Hispanic white alone population was older, with a median age of 42.9 years in 2013.

The share of Americans living in multi-generational family households is the highest it has been since the 1950s, having increased significantly in the past five years. Adults ages 25 to 34 are among the most likely to be living in multi-generational households: In 2010, 21.6% lived in this type of household, up from 15.8% in 2000 (the vast majority were living with their parents). The share of 25- to 34-year-olds living in multi-generational households was at its lowest in 1980 (11%) and has risen steadily since then, spiking upward since the recession started in 2007.

In an AARP study, 9 out of 10 adults (ages 50 and over) said they wanted to actively seek out learning opportunities to keep current, grow personally, and enjoy the simple pleasure of mastering something new. Research continues to highlight the importance of lifelong learning as a prescription for a longer, healthier life – keeping minds active and people socially engaged.

Millennials

9 Statistics that Prove Millennials Think Differently About College

84% use a computer in the classroom

78% believe that it's easier to learn in a tradition classroom than online

57% believe internships are most important when developing their business skills

53% believe that online colleges are reputable

50% say they don't need a physical classroom

43% say that online education will provide them with courses of the same or higher quality than traditional colleges

39% view the future of education as being more virtual

19% said that they'll be using social media to engage in the classroom

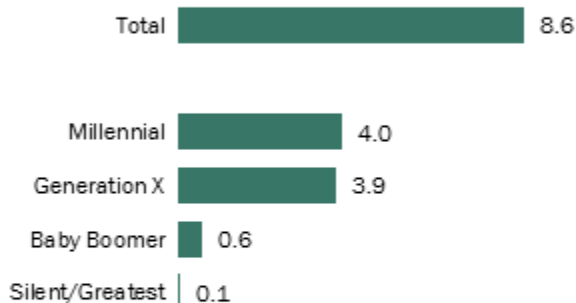
12% believe college courses are most important when developing their business skills

Source - Edtech Magazine

- Projections show 20-something workers will make up 36% of the American workforce by 2014, and 75% of the global workplace by 2025. Half of companies surveyed reported that the average salary for a millennial is between \$30,000 and \$50,000, while 15% of the companies revealed that the average salary for a millennial is at least \$50,000.
- The millennial generation tends to measure job tenure in months, not years, changing employers as often as they change toothbrushes. The high turnover rate is expensive for companies — employers estimate that it costs them \$15,000 to \$25,000 to replace every 20-something who leaves the company.

The largest number of single-mother households are headed by a Millennial

Unmarried female household heads in U.S. who have a child younger than 18, in millions (2016)



Note: Single or unmarried refers to household heads who do not have a spouse present. A child refers to the child of the household head and includes stepchildren and adopted children as well as biological children. There are a relatively small number of households headed by a person younger than 18 that are not shown but are included in the total.

Source: Pew Research Center analysis of 2016 Current Population Survey Annual Social and Economic Supplement (IPUMS).

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- Multiracial Americans are among the nation's youngest racial and ethnic populations, with a median age of only 19 as of 2015. Many of them have yet to form households, but among those who have, Millennials are now the most prevalent. Around 630,000 multiracial Millennials headed a household in 2016, compared with about 540,000 multiracial Gen Xers and a similar number of multiracial Boomers.



THE PROFILE OF THE MILLENNIAL HOMEOWNER



THE INDIVIDUALS

"Many Millennials have endured underemployment and subpar wage growth, and rising rents and repaying student debt have made it very difficult to save for a downpayment."

AVERAGE AGE: **28** YEARS OLD

YOUNGEST: **18**
OLDEST: **32**

FEMALE BORROWERS: 30%

MALE BORROWERS: 70%

MARRIED BORROWERS: 54%

When searching for property, Millennials were most likely to use a real estate agent, mobile or tablet applications, and mobile or tablet search engines.

CAREER & EDUCATION

64% of Millennials cited that student loan debt is the biggest obstacle when purchasing a home.

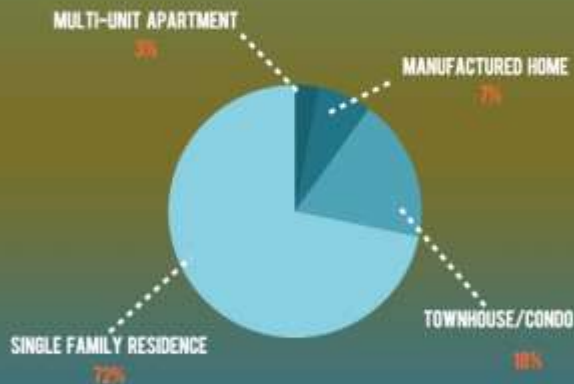
AVERAGE YEARS AT CURRENT JOB: **3**

AVERAGE YEARS IN CAREER FIELD: **4.4**

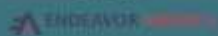
COLLEGE DEGREE BORROWERS: 35.83%

PURCHASED PROPERTY TYPE

Millennials plan to stay in their home for 10 years and were most influenced by the quality of the neighborhood (79%) and convenience to jobs (74%).



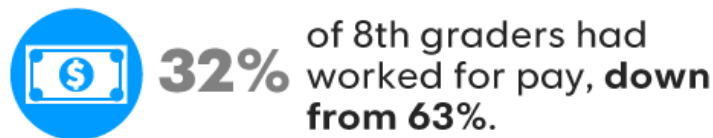
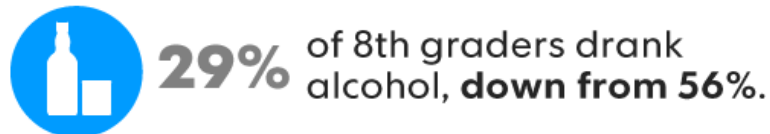
<http://www.nar.org/news-releases/2015/03/millennial-generational-survey-millennials-lead-all-buyers-most-likely-to-use-real-estate-agent>



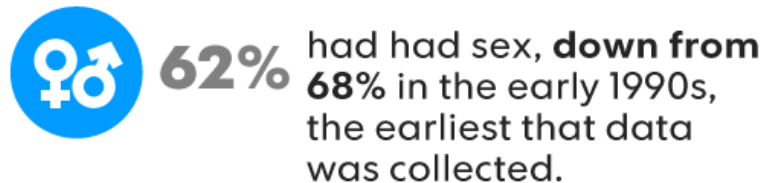
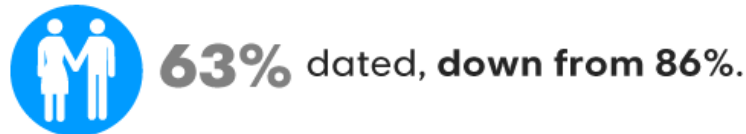
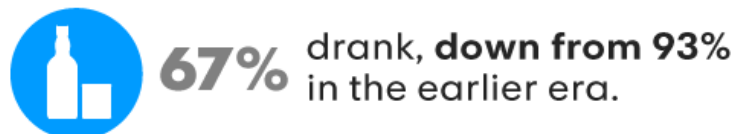
- Since 2011, Millennials have headed more households made up of unmarried partners than any other adult generation. By 2016, Millennials were heads of 4.2 million of an estimated 8.3 million cohabiting-couple households. The greater prevalence of cohabitation among millennial households partly reflects that Millennials are more likely to live with a romantic partner than earlier generations of young adults. For example, in 2012, among women ages 25 to 29 who were living with a spouse or partner, 37% were cohabiting. By comparison, in 1987 – when Boomers were at a comparable age to Millennials – just 10% of 25- to 29-year-old women in a union were cohabiting.

TEENS GROWING UP SLOWER, STUDY SHOWS

Some of the changes recorded among younger teens surveyed in 2010-2016, compared to those surveyed in the early 1990s:



Among 12th graders, data on most behaviors goes back to 1976. In 2010-2016:



SOURCE Jean M. Twenge, San Diego State University; Heejung Park, Bryn Mawr College; Child Development journal

ALEJANDRO GONZALEZ, USA TODAY

Baby Boomers and Retirees

- There are 78 million Baby Boomers in the U.S. born between 1946 and 1964. They are the healthiest, wealthiest, most educated, and prosperous generation. The U.S. changed from a manufacturing economy to a knowledge economy because of the boomer's love of higher education.
- The five states with the largest number of baby boomers:
 - California
 - Texas
 - New York
 - Florida
 - Pennsylvania

The average income of Boomers is \$71,300 with a net worth of \$236,000. The top 20 percent of Boomers have a median net worth of \$766,000. Boomers control 70% of the total net worth in the U.S. Boomers will spend an average of \$7 billion online this year.

- 41% of Boomers will move upon retirement. 1 in 7 Boomers are providing care to a parent or other family member. In 2005 boomers spent \$35 billion on their grandchildren. Adults 55 + account for one-third of all trips in the U.S. In 2015, people 50+ will represent 45% of the United States population.
- 25.8 million baby boomers formally volunteered in 2005.
- By 2030, all “Baby Boomers” will be at least 65 and the elderly will grow faster than any other age group.
- The Census Bureau forecasts that the 65 and over population will rise from 38.7 million in 2008 to 88.5 million by 2050 and that the 85 and over population will swell from 5.4 million to 19 million.
- 2.7 million grandparents are responsible for most of the basic needs of one or more grandchildren who lived with them in 2009. 1.6 million of these grandparents were still in the labor force.
- Three-quarters of U.S. adult workers believe they will continue working past retirement age, with 40% saying they will do so because they want to, and 35% because they will have to
- In Maryland, 58.0 percent of adults aged 25 years and older with at least a high school education report their health is very good or excellent compared to only 27.2 percent with less than a high school education, resulting in a gap of 30.8 percent.

- 43% of online traffic is generated by Boomers. 82% of adults aged 50+ using the internet research health and wellness online. Among internet users 50+ who are members of online communities, 58% log in to their online community daily or several times a day.

Food insecurity percentages by state

Of the 49 million people who are food insecure, 16 million are children under the age of 18.

■ 7-14% ■ 15-19% ■ 20-25% ■ 26-30%

Overall rates (15.9% average)



Child rates (21.6% average)



Source: Feeding America, "Map the Meal Gap 2014"; msnbc data graphics.



As low-income populations have gone to college and food insecurity has risen up to swallow the lower rungs of the middle class, hunger has spread across America's university campuses like never before. In some places, it's practically a pandemic: At Western Oregon University, 59% of the student body is food insecure, according to researchers from Oregon State University (OSU). A 2011 survey [PDF] of the City University of New York (CUNY) found that 39.2% of the university system's quarter of a million undergraduates had experienced food insecurity at some time in the past year.

But it's not just undergraduates: the number of food insecure graduate students is also growing. Between 2007 and 2010, the number of doctorate-holding food stamp recipients *tripled*, according to a 2012 *Chronicle of Higher Education* analysis. The number of food stamp recipients with a master's degree wasn't found to have tripled over the same time frame, but it got remarkably close, going from 101,682 to 293,029. At one large research school, Michigan State University (MSU), the on-campus food pantry reports that more than half of its clients are graduate students.

Minority Population

Non-Hispanic, single-race whites remained the nation's largest group with a population of 197.8 million. The total of all other groups was 118.3 million, or 37.4 percent of the population. Non-Hispanic single-race whites made up 52.4 percent of the population under 18.

Asians were the fastest-growing group from 2012 to 2013, though that distinction has alternated between Asians and Hispanics over the years. The Asian population increased by almost 2.9 percent to 19.4 million, an increase of about 554,000 people. Hispanics remained the second largest group overall, growing by 2.1 percent (or more than 1.1 million) to slightly more than 54 million. Hispanics were 17.1 percent of the total population in 2013, up about 0.2 percentage points from 2012. The primary driver of Asian population growth in 2013 was international migration, accounting for 61 percent of the total Asian population change in the last year. Hispanic population growth, on the other hand, was fueled primarily by natural increase (births minus deaths), which accounted for about 78 percent of the total Hispanic population change.

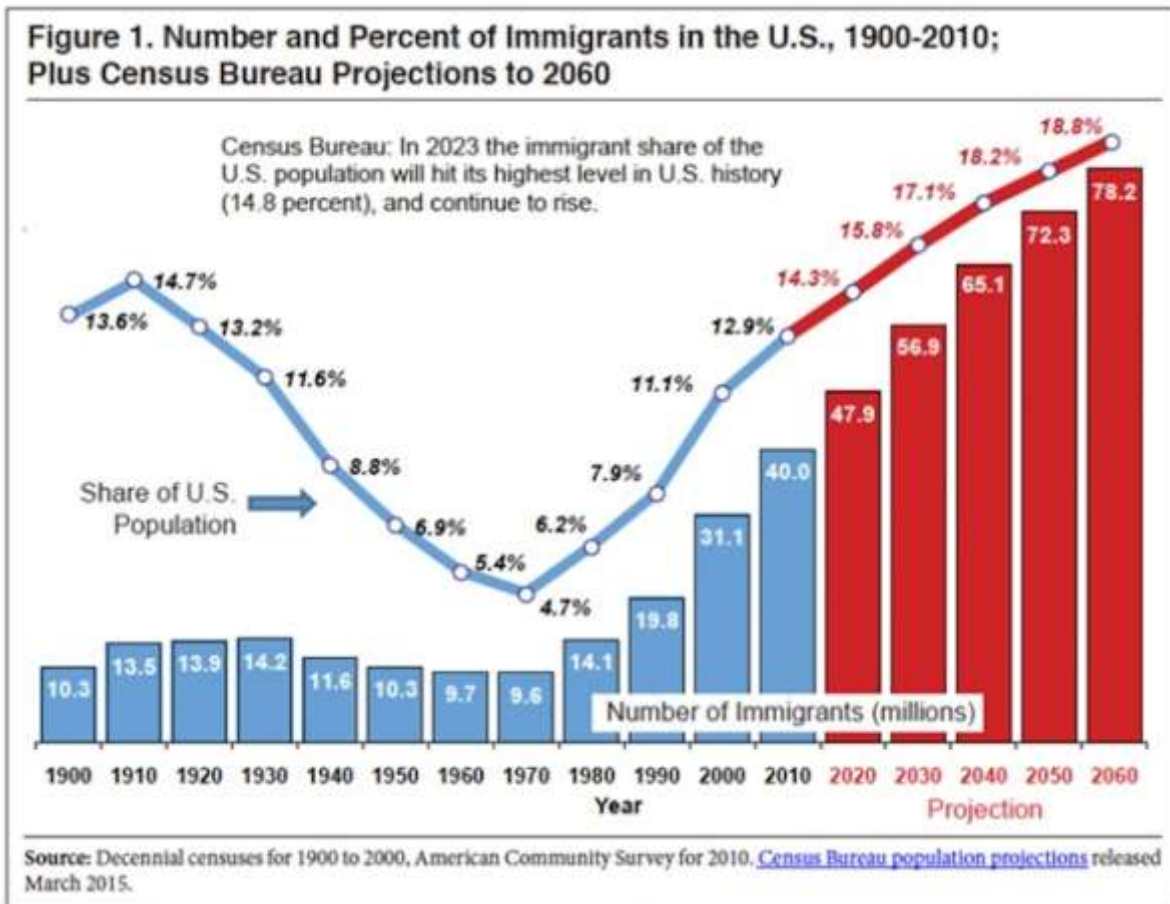
Following Asians in rate of growth were Native Hawaiians and Other Pacific Islanders (increasing 2.3 percent to just over 1.4 million), American Indians and Alaska Natives (increasing 1.5 percent to slightly more than 6.4 million) and blacks or African-Americans (increasing 1.2 percent to 45 million).

The non-Hispanic white alone population was the only group to have natural decrease (more deaths than births) from 2012 to 2013. However, due to migration, its population rose 0.1 percent from 2012 to 2013, reaching 197.8 million. Because of its slow rate of growth relative to other groups, its share of the total population declined from 63.0 percent to 62.6 percent over the period.

The new census estimates, a snapshot of the U.S. population as of July 2012, comes a year after the Census Bureau reported that whites had fallen to a minority among babies. Fueled by immigration and high rates of birth, particularly among Hispanics, racial and ethnic minorities are now growing more rapidly in numbers than whites.

Legal and illegal immigrants will hit a record high of 51 million in just eight years and eventually account for an astounding 82 percent of all population growth in America, according to new U.S. Census figures.

A report from the Center for Immigration Studies that analyzed the statistics said that by 2023, one in seven U.S. residents will be an immigrant, rising to one in five by 2060 when the immigrant population totals 78 million.



The immigrant population will grow four times faster than the native born population, reaching 15.8 percent, or 57 million, of the nation's population in 2030, 17.1 percent, or 65 million, in 2040, and 18.8 percent, or 78 million, in 2060.

Net immigration this year will be 1.24 million; green cards about 1.1 million.

Immigrants and their descendants "will account for the overwhelming share of population growth," said the Center in projecting growth. They will account for 75.5 percent from 2010-2050 and 82 percent from 2010-2060.

Census Bureau projects that in 2023 the nation's immigrant population, legal and illegal, will reach 14.8 percent of the total U.S. population, the highest share ever recorded.

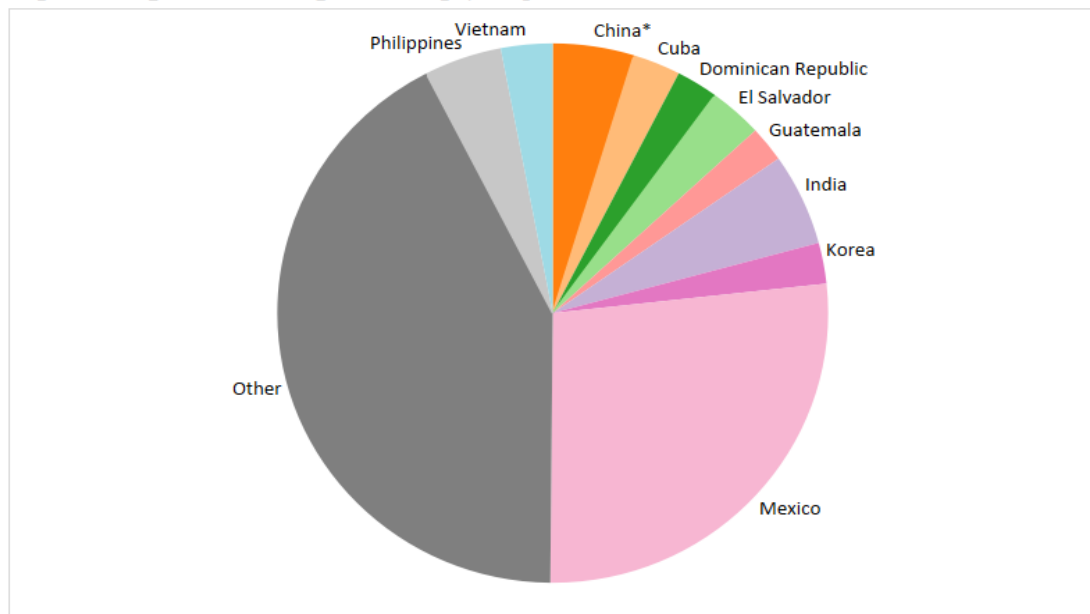
In 2015, Mexicans accounted for approximately 27 percent of immigrants in the United States, making them by far the largest foreign-born group in the country. India was the next largest country of origin, with close to 6 percent of all immigrants, followed by China (including Hong Kong but not Taiwan) and the Philippines, at close to 5 percent each. El Salvador, Vietnam, and Cuba (about 3 percent each), as well as the Dominican Republic, Korea, and Guatemala (2 percent each), rounded out the top ten. Together, immigrants from these ten countries represented 58 percent of the U.S. immigrant population in 2015.

The predominance of Latin American and Asian immigration in the late 20th and early 21st centuries starkly contrasts with the trend in 1960 when immigrants largely originated from Europe. In the 1960s no single country accounted for more than 15 percent of the total immigrant population. Italians were the top immigrant-origin group, making up 13 percent of the foreign-born population in 1960, followed by Germans and Canadians (about 10 percent each).

Largest U.S. Immigrant Groups over Time, 1960-Present

While the U.S. immigrant population is diverse, just a few countries of origin make up a large share of the total. This pie chart series shows which countries had the largest immigrant populations at various time periods between 1960 and 2015 (use the slider to select different years). For countries not in the top ten, the immigrant population is aggregated in the "other countries" category. The growth of this category over time indicates that the immigrant population comes from increasingly diverse national origins.

Top Ten Largest U.S. Immigrant Groups, 2015



Year: 2015

U.S. Immigrant Population by State and County, 2011-2015*

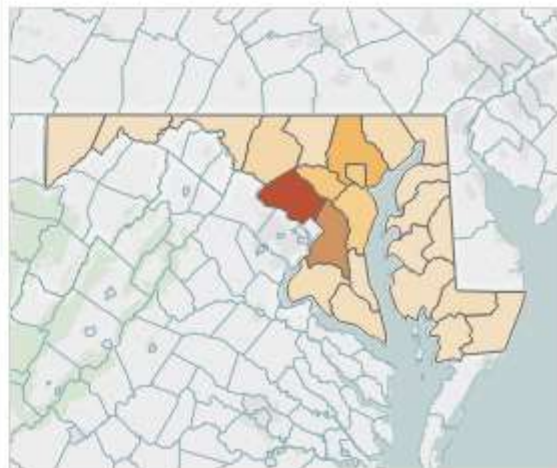
Total Immigrant Population in the United States:

41,717,000



Top counties

Montgomery County	Maryland	331,400
Prince George's Co..	Maryland	189,500
Baltimore County	Maryland	94,800
Howard County	Maryland	58,200
Baltimore city	Maryland	47,900
Anne Arundel Coun..	Maryland	45,000
Frederick County	Maryland	23,400
Harford County	Maryland	13,300
Charles County	Maryland	8,800
Wicomico County	Maryland	8,400
Washington County	Maryland	7,500
Carroll County	Maryland	6,100

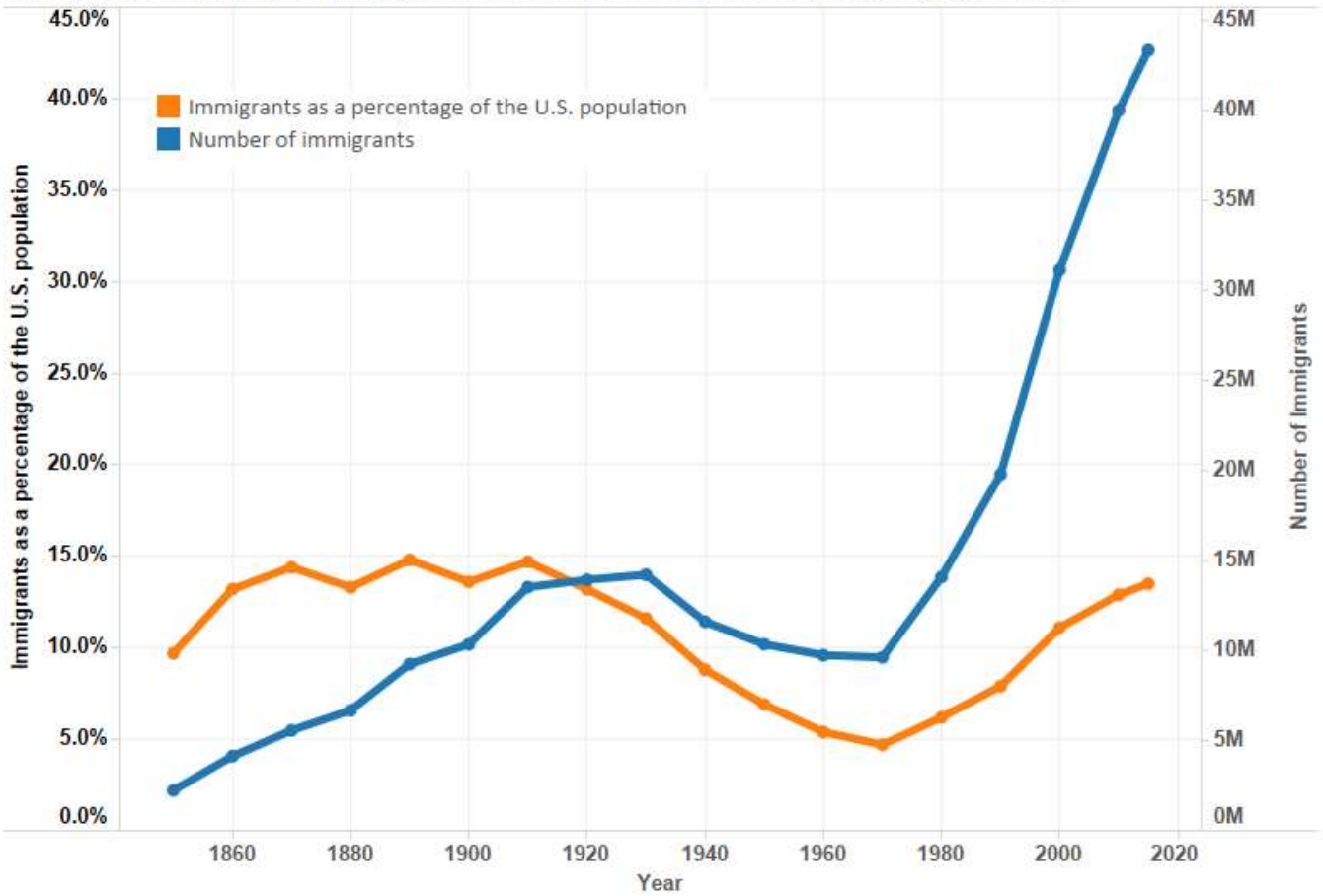


Migration Policy Institute (MPI) Data Hub
<http://migrationpolicy.org/programs/data-hub>

Number of Immigrants
 21,000 10,390,000

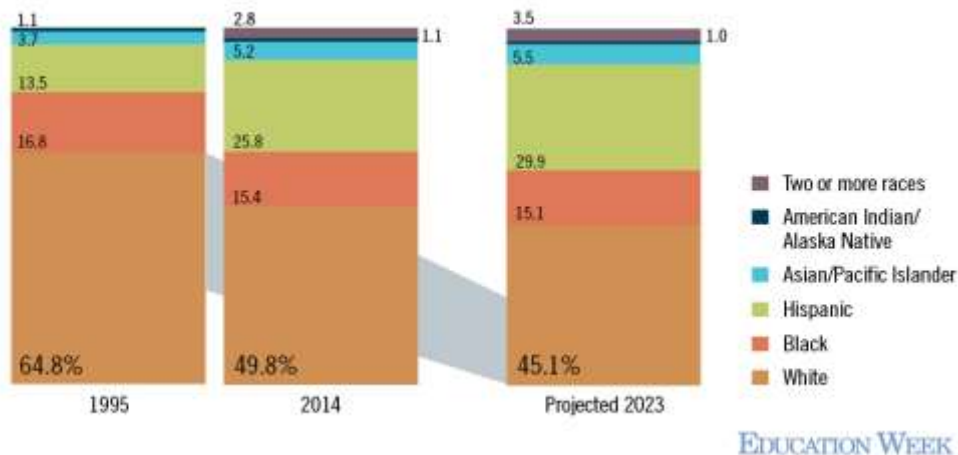
Select Country/Region of Origin (Total)

Number of Immigrants and Their Share of the Total U.S. Population, 1850-2015



Migration Policy Institute (MPI) Data Hub
<http://migrationpolicy.org/programs/data-hub>

The 2014-15 academic year is projected to be the first in which African-American, Asian, Latino, and Native American students together will outnumber non-Hispanic whites in K-12 public schools. Growth in the Hispanic population is expected to propel the trend of a rising share of nonwhite students through the next decade.

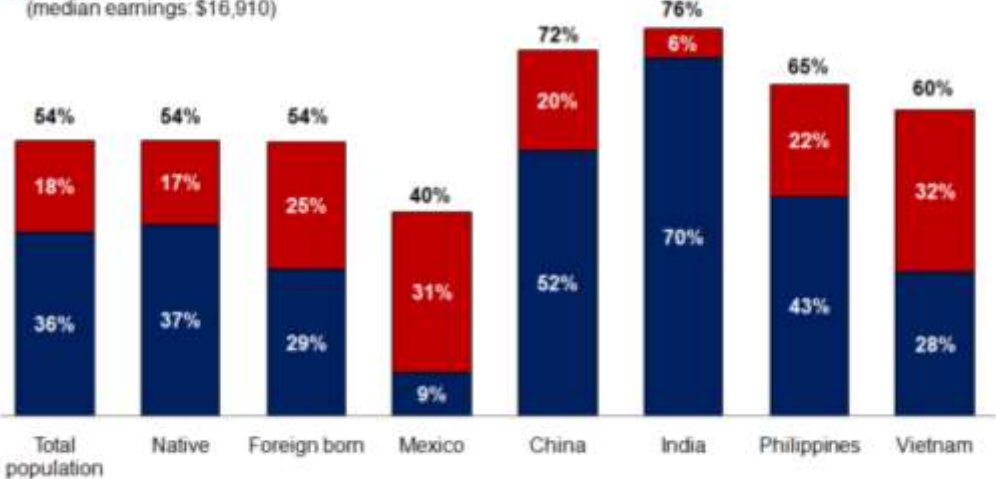


- With a six-year grant from The John Templeton Foundation, UCLA's Higher Education Research Institute conducted a longitudinal study to assess the spirituality of college students during their undergraduate years. The study finds that while attendance at religious services decreased dramatically for most students between their freshman and junior years, the students' overall level of spirituality, as defined by the researchers, increases. On hot-button social issues, such as abortion and gay marriage, the study finds that students become increasingly liberal. Alexander W. Astin, co-principal investigator on the study, spoke with the Pew Forum about the study's conclusions.

Occupation by Nativity Status and Country of Birth: 2010

(Civilian employed population 16 years and over)

- Management, business, science, and arts occupations
(median earnings: \$51,209)
- Service occupations
(median earnings: \$16,910)

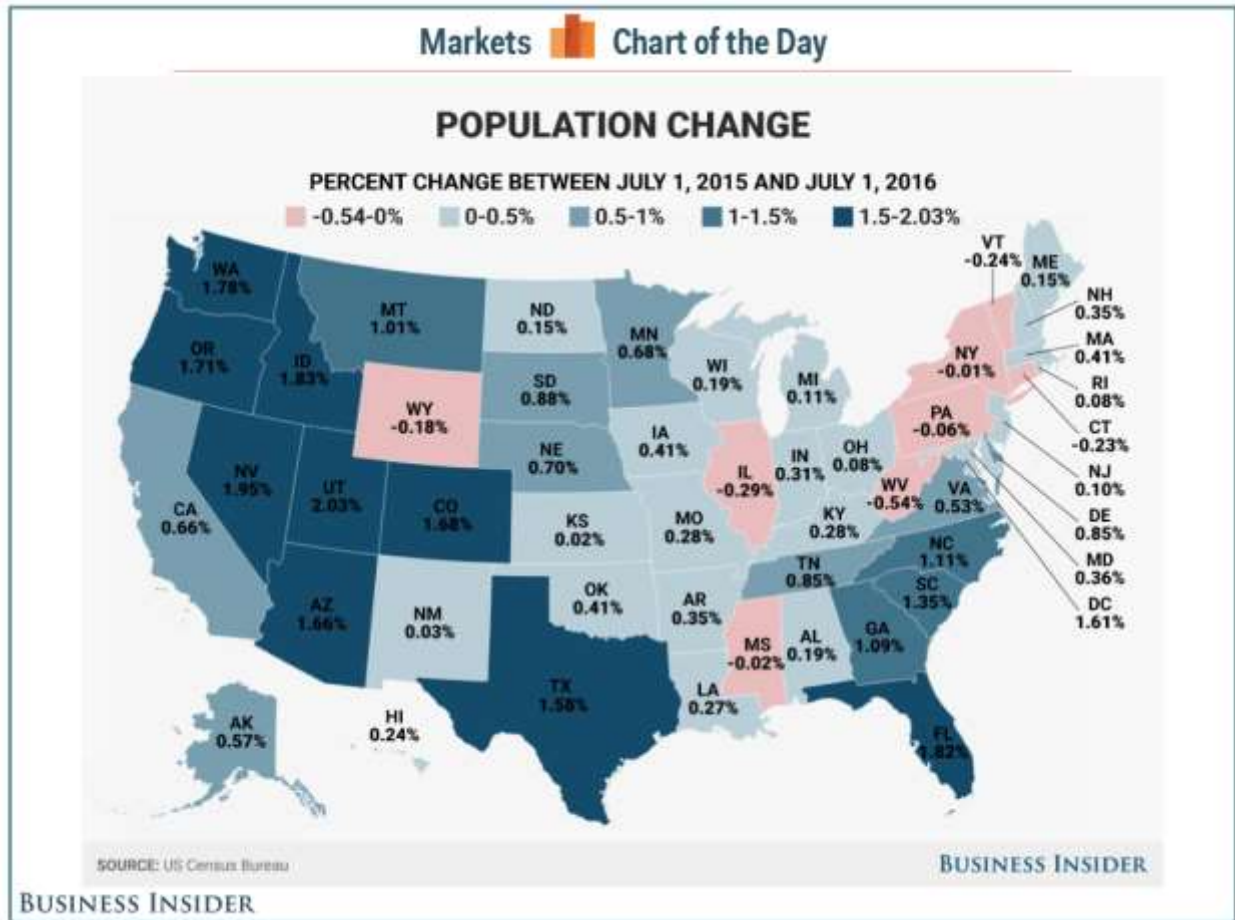


Source: U.S. Census Bureau, American Community Survey, 2010.



-
- The US Census Bureau recently released its population estimates for each of the 50 states and Washington, DC, for 2016 and how populations changed from July 1, 2015, to July 1, 2016.

Most states added population, from some combination of net births minus deaths, international migration, and domestic migration. Eight states — West Virginia, Illinois, Vermont, Connecticut, Wyoming, Pennsylvania, Mississippi, and New York — saw a net loss of population.





Maryland Adult Education Fact Sheet 2017



Need for Adult Education in Maryland According to the U. S. Census Bureau!

- Over **500,000** adults in Maryland lack even a high school diploma.
- **13%** of Marylanders speak a language other than English at home.
- **5%** of the population of Maryland speaks English less than "very well."
- Estimated number of adults in Maryland needing Adult Education and Literacy Services = **750,000 – 810,000**.



What Maryland Adult Education Services Have Accomplished!

- Approximately **1,452** high school diplomas earned in FY 2016 including GED® Test and National External Diploma Program
- **53%** have increased literacy skills on standardized pretest and posttests in FY 2016



Economic Impact of Adult Education

- According to the Bureau of Labor Statistics, median weekly wages increase from **\$493** for a non-high school graduate to **\$678** for a graduate!
- According to the Longitudinal Study of Adult Learning (LSAL) conducted by Dr. Stephen Reder, adults who attended an average of more than 100 hours of instruction averaged **\$10,000** more in annual income. See <https://www.proliteracy.org/Resources/Need-for-Literacy-Research>.



About Maryland Adult Ed Learners!

- **34,862** total adult learners in FY 2016
- Adults waiting for services reached **3,389** in FY 2016
- **85%** minority - African American, Hispanic, American Indian, Native Hawaiian, or Asian
- **29%** aged 16 to 24
- **34%** employed and **21%** unemployed
- **17%** in correctional education programming



Maryland Adult Learners' Skill Levels at Time of Enrollment

- **39%** Adult Basic Education (from preliterate to 8th GLE)
- **10%** Adult Secondary Education (from 9th to 11th GLE)
- **51%** English Language Learners



Maryland Adult Education Professionals

- Approximately **93%** of Teachers are part-time
- Approximately **65%** of Administrative/Principals/Supervisory/Professional Development personnel are part-time
- Over **89** volunteers



Our Funding Sources

- **\$9.0 M** - Federal WIOA Title II (Compared to 17.5 M in PA and 12.5 in VA)
- **\$8.0 M** - State

Programs Across Maryland

26 state grantees, including

- *community colleges*
- *local public school systems*
- *community based organizations*
- *government agencies*



See <https://www.dlr.state.md.us/qedmd/programs.shtml> to find programs throughout Maryland

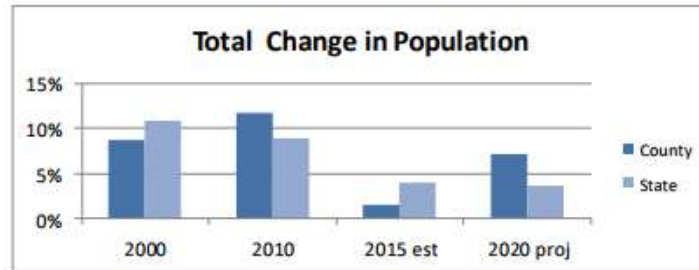
For more information, please visit www.MAAACCEmd.org

Updated March 2017

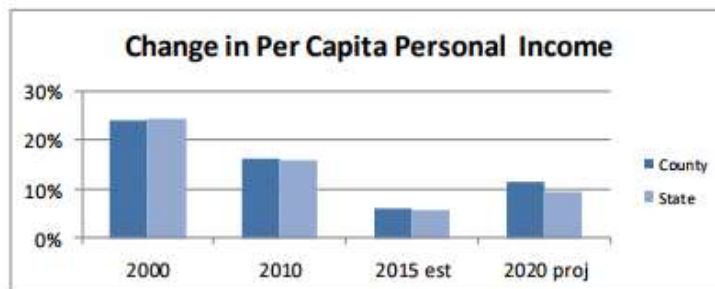
Data represent state grant-funded programs only for FY 2016

Washington County, MD

Washington County is home to an estimated 150,300 residents and currently ranked 11th in population and 13th in population growth in the State of Maryland. Between 2000 and 2015, Washington County grew in total by 13.4% or by an annual average of 0.9% per year compared to the State of Maryland also at 13.4% or an annual average of 0.9% per year.



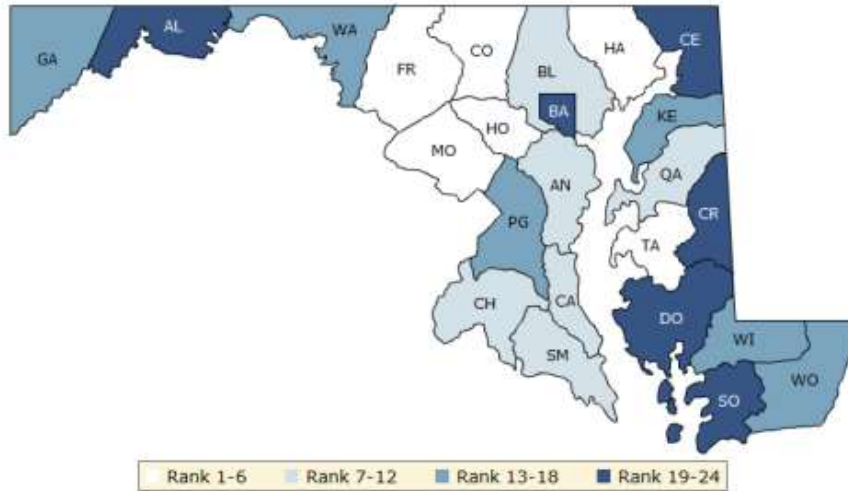
Between 2000 and 2015, Per Capita Personal Income for Washington County residents has increased by 23% or by an annual average of 1.5% per year. The Per Capita Personal Income is projected to increase by 2.06% annually through 2020. The State of Maryland increased 22% from 2000 through 2015 or an annual average of 1.5% per year.



The blue map displays Maryland's summary ranks for **health factors**, based on weighted scores for health behaviors, clinical care, social and economic factors, and the physical environment.

Lighter colors indicate better performance in the respective summary rankings. Detailed information on the underlying measures is available on our web site.

HEALTH FACTORS RANKS



County	Rank	County	Rank	County	Rank	County	Rank
Allegany	19	Carroll	4	Harford	6	Somerset	23
Anne Arundel	8	Cecil	20	Howard	1	St. Mary's	11
Baltimore	12	Charles	10	Kent	13	Talbot	5
Baltimore City	24	Dorchester	22	Montgomery	2	Washington	16
Calvert	7	Frederick	3	Prince George's	14	Wicomico	18
Caroline	21	Garrett	17	Queen Anne's	9	Worcester	15

homefacts.com



- Hagerstown and Washington County, Maryland, offer a rare combination of business advantages:
 - A major crossroads location that is convenient to the entire East Coast
At the intersection of I-81 and I-70
 - A ready workforce of over 400,000
With strengths in manufacturing and technology
 - One of the top-ranked education systems in the nation
4 high schools named by U.S. News & World Report as America's Best
 - An affordable cost of doing business—and living
Close to the Washington, D.C./Baltimore regions, but with much lower costs
 - Plenty of facilities and land slated for development
Over 1.8 million s.f. of available industrial/commercial space

Career opportunities, plentiful shopping, and a state-of-the-art health system with a brand-new hospital attract people from 3 states (Maryland, West Virginia, and Pennsylvania) to Washington County. Our location has become a choice location for manufacturers, financial services, and distribution companies.

Of Over 3,500 Businesses...

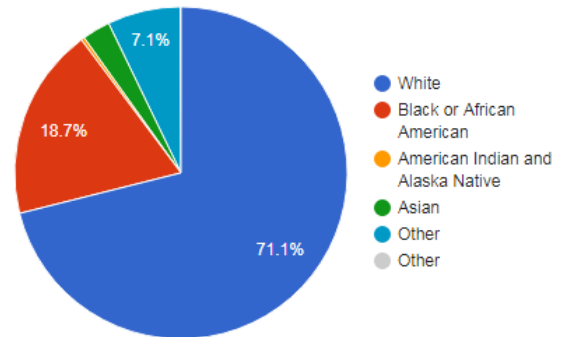
- 25% in trade, transportation and utilities
- 14% in education and health services
- 12% in manufacturing
- 10% in financial activities

Government, business, and community organizations partner to help diversify the local economy. As a result, aero-defense, engineering, and advanced technology sectors are becoming a larger part of our industrial mix.

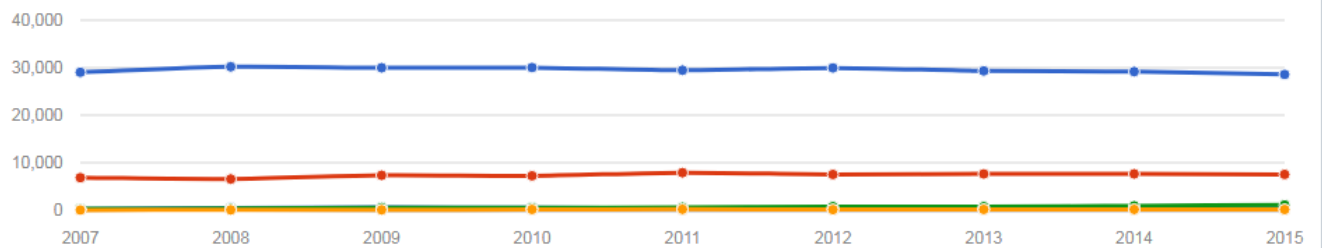
Wash Co Dept of Business Development

Hagerstown, MD Race Breakdown

Race	Number	Percent	National Avg
One Race	37,745	93.9%	96.9
White	28,579	71.1%	73.1
Black or African American	7,524	18.7%	12.7
American Indian and Alaska Native	134	0.3%	0.8
Asian	1,093	2.7%	5.4
Asian Indian	69	0.2%	1.2
Chinese	308	0.8%	1.3
Filipino	225	0.6%	0.9
Japanese	14	0.0%	0.2
Korean	160	0.4%	0.5
Vietnamese	38	0.1%	0.5
Other Asian	279	0.7%	0.8
Native Hawaiian and Other Pacific Islander	25	0.1%	0.2
Native Hawaiian	11	0.0%	0.1
Guamanian or Chamorro	0	0.0%	0.0
Samoan	8	0.0%	0.0
Other Pacific Islander	6	0.0%	0.1
Some Other Race	390	1.0%	4.8
Two or More Races	2,465	6.1%	3.1



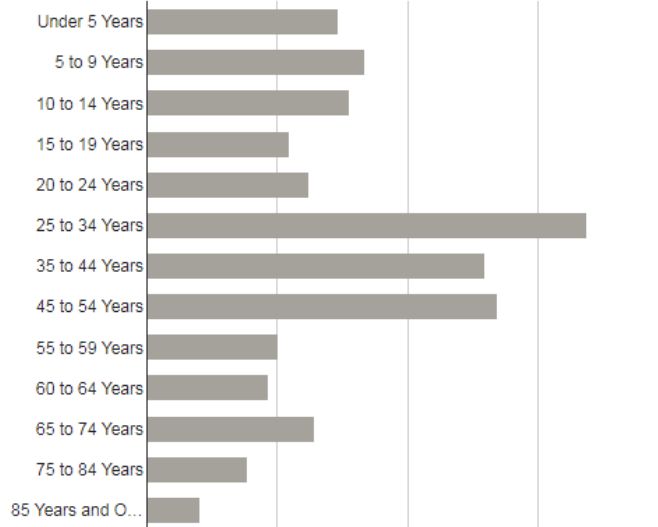
Hispanic Statistics	Number	Percent	National Avg
Hispanic or Latino (of any race)	2,431	6.0%	17.6
Mexican	331	0.8%	11.1
Puerto Rican	556	1.4%	1.7
Cuban	29	0.1%	0.7
Other Hispanic or Latino	1,515	3.8%	4.1
Not Hispanic or Latino	37,779	94.0%	82.4



homefacts.com

Hagerstown, MD Age Breakdown

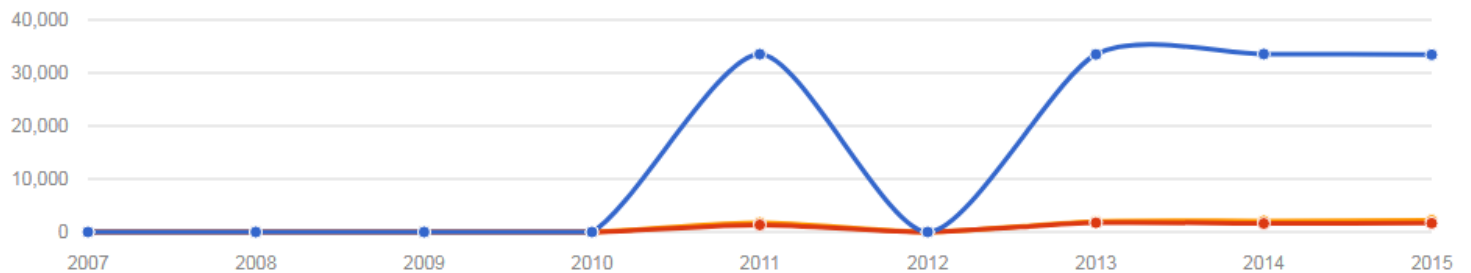
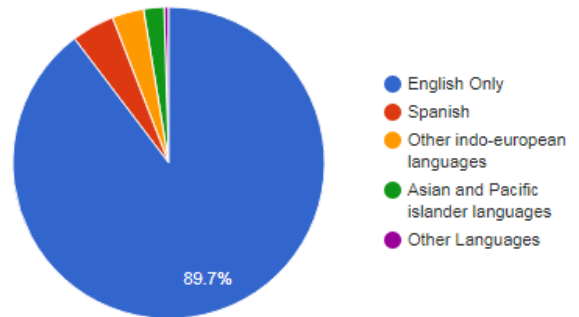
Age Group	Number	Percent	National Avg
Under 5 Years	2,933	7.3%	6.2
5 to 9 Years	3,337	8.3%	6.4
10 to 14 Years	3,116	7.7%	6.4
15 to 19 Years	2,183	5.4%	6.7
20 to 24 Years	2,487	6.2%	7.0
25 to 34 Years	6,765	16.8%	13.7
35 to 44 Years	5,186	12.9%	12.7
45 to 54 Years	5,381	13.4%	13.4
55 to 59 Years	2,008	5.0%	6.7
60 to 64 Years	1,875	4.7%	6.0
65 to 74 Years	2,575	6.4%	8.6
75 to 84 Years	1,554	3.9%	4.4
85 Years and Over	810	2.0%	1.9



Age Statistics	Number	Percent	National Avg
18 Years and over	29,395	73.1%	77.1
Female	15,664	53.3%	51.4
Male	13,731	46.7%	48.6
21 Years and over	27,971	69.6%	72.9
62 Years and over	5,958	14.8%	18.3
65 Years and over	4,939	12.3%	14.9
Female	2,894	58.6%	55.9
Male	2,045	41.4%	44.1
Median Age (years)	34	NR	NR

Hagerstown, MD Language Spoken at Home

Language	Number	Percent	National Avg
English Only	33,428	89.7%	78.5%
Languages other than english	3,849	10.3%	21.5%
Spanish	1,657	4.4%	13.3%
Other indo-european languages	1,224	3.3%	3.7%
Asian and Pacific islander languages	791	2.1%	3.5%
Other Languages	177	0.5%	1.0%



Washington County, Maryland

2016 Population Estimates

150,292

Source: *Vintage 2016 Population Estimates: Population Estimates*

Median Household Income

\$ 56,228

Source: *2011-2015 American Community Survey 5-Year Estimates*

Persons in poverty, percent

12 %

Source: *2015 Small Area Income and Poverty Estimates (SAIPE)*

Educational Attainment: Percent high school graduate or higher

86.7 %

Source: *2011-2015 American Community Survey 5-Year Profiles*

Persons without health insurance, under age 65 years, percent

6.9 %

Source: *2015 Small Area Health Insurance Estimates (SAHIE)*

Median Housing Value

\$ 200,100

Source: *2011-2015 American Community Survey 5-Year Estimates*

Total Housing Units

61,111

Source: *2011-2015 American Community Survey 5-Year Estimates*

Number of Companies

10,639

Source: *2012 Survey of Business Owners: Company Summary*

Veterans

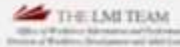
12,058

Source: *2011-2015 American Community Survey 5-Year Profiles*

Commuting Patterns: Western Maryland Workforce Region



Office of Workforce Information and Performance
 Division of Workforce Development and Adult Learning • Department of Labor, Licensing and Regulation



Revised April, 2016

People Living in Western Maryland Region Work



Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap (2014). Note: Based on primary job count

Cities Western Maryland Residents are Employed		
Hagerstown	12,452	12.8%
Cumberland	7,687	7.9%
Frederick	4,273	4.4%
Oakland	2,525	2.6%
Robinwood	2,503	2.6%

Counties Western Maryland Residents are Employed		
Washington	31,652	32.6%
Allegany	17,249	17.8%
Frederick	8,431	8.7%
Garrett	7,631	7.9%
Montgomery	4,862	5.0%

States of Western Maryland Residents are Employed		
Maryland	82,402	85.0%
West Virginia	5,352	5.5%
Pennsylvania	4,880	5.0%
Virginia	2,556	2.6%
District of Columbia	733	0.8%

1100 N. Eutan St., Rm 316 Baltimore, MD 21201 • 410-767-2258 • info@dollar-dllr@maryland.gov • www.dllr.maryland.gov/lmi
 The Office of Workforce Information and Performance provides information.

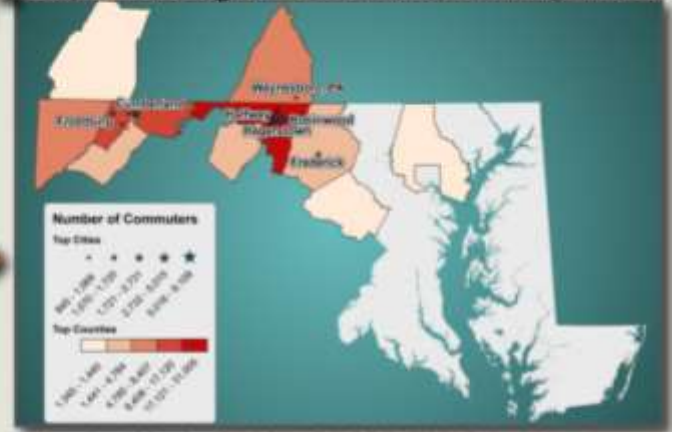
Commuting Patterns: Western Maryland Workforce Region



Office of Workforce Information and Performance
 Division of Workforce Development and Adult Learning • Department of Labor, Licensing and Regulation



People Working in Western Maryland Region Live



Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap (2014). Note: Based on primary job count

Cities Workers in Western Maryland Live		
Hagerstown	8,109	9.3%
Cumberland	5,015	5.1%
Halfway	2,731	2.8%
Frostburg	1,720	1.8%
Robinwood	1,375	1.4%

Counties Workers in Western Maryland Live		
Washington	31,005	31.6%
Allegany	17,120	17.4%
Garrett	8,407	8.6%
Franklin	8,016	8.2%
Berksley	4,784	4.9%

States Workers in Western Maryland Live		
Maryland	78,145	71.4%
Pennsylvania	13,776	14.0%
West Virginia	11,845	12.1%
Virginia	1,453	1.5%
District of Columbia	178	0.2%

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World's Largest Economies

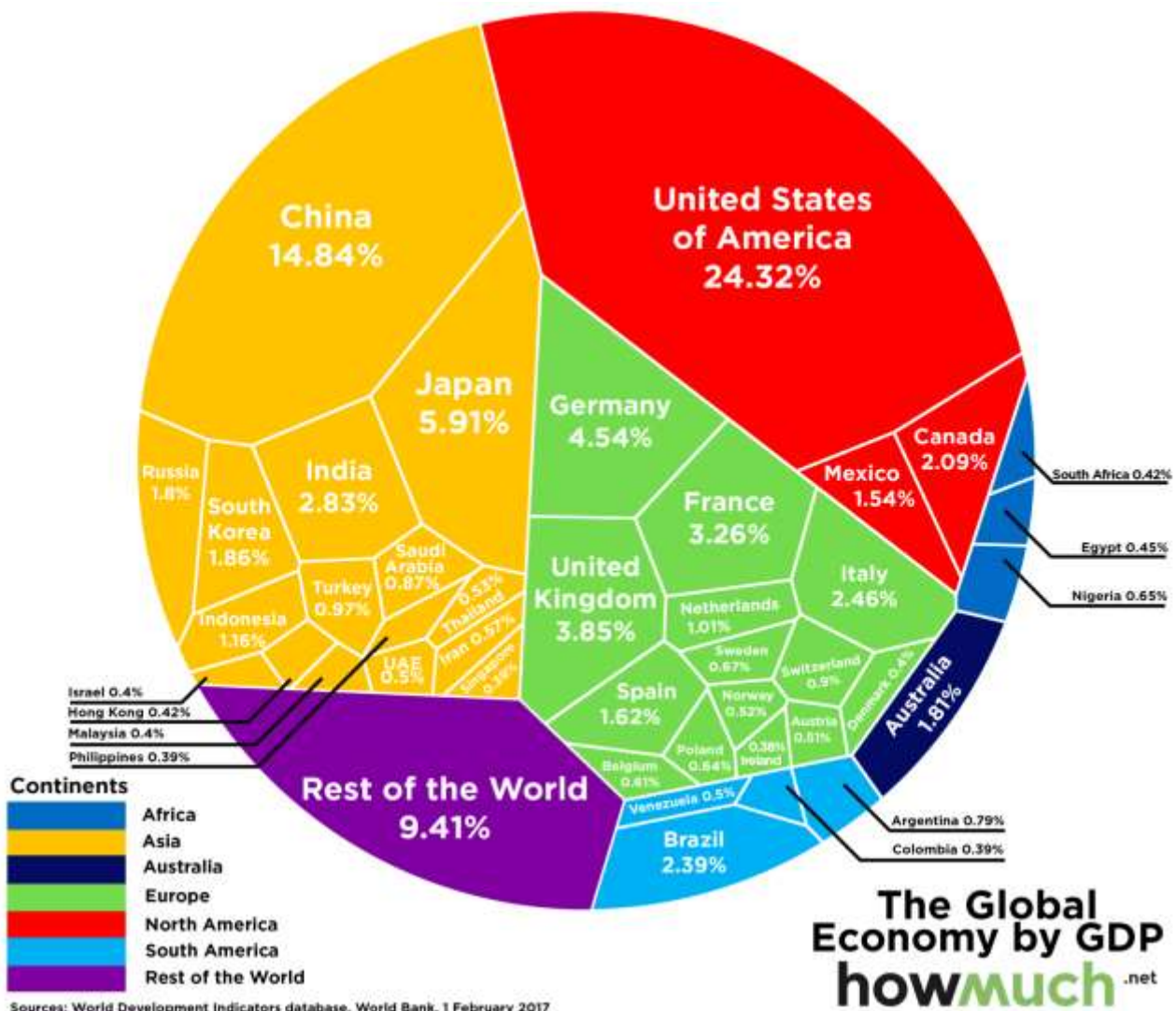
Fastest-growing economy

The US may not dominate for much longer, however.

Although China trails the US by \$7 trillion, it's catching up. China's economy grew by 6.7% in 2016, compared with America's 1.6%, according to the IMF.

China has also [overtaken India as the fastest-growing large economy](#). The IMF's World Economic Outlook estimated China's economy grew at 6.7% in 2016, compared with India's 6.6%.

Brazil's economy has contracted in the last year by 3.5%, the only one in the top 10 to do so.



United States – National

- The percentage of U.S. residents who own their homes is at the lowest point it has been for more than 20 years, according to a report from the U.S. Census Bureau. In the first quarter of 2015, 63.8% of people owned their housing units, down from 64.8% at the start of 2014 (these figures are seasonally adjusted). While the U.S. economy has improved since the Great Recession ended five years ago, part-time and "contract" workers are filling many of the new jobs. Contract workers made up less than half of one percent of all U.S. employment in the 1980s but now account for 2.3%. Economists predict contract workers will play a larger role in the years ahead.
- More than a third of adults say they have not started saving for retirement yet, according to a national poll accompanying Bankrate's monthly Financial Security Index.
- The USDA projects that, in 2015 dollars, a middle class married couple will spend between about \$12,400 and \$14,000 annually, or \$234,000 from birth to age 17. Those calculations don't include pregnancy- or college-related costs. In 2014, the estimate was about \$245,000. According to the report, for middle-class married couples, those costs consist of housing (29 percent), food (18 percent), followed by child care and education (16 percent), transportation (15 percent), health care (9 percent), miscellaneous expenses (7 percent) and clothing (6 percent).
- The average cost for a regular gallon of fuel is expected to spike to \$2.49, up from \$2.13 in 2016, according to data from GasBuddy.com. Those would be the highest gas prices motorists have paid since 2014. The increase of prices at the pump also coincides with some states instituting gas taxes at the start of 2017. In Pennsylvania, taxes at the pump jumped by 7.9 cents per gallon, while in Michigan, drivers will pay 7.3 cents more.

Average student credit card debt by age in 2015

Base: Students who use credit cards



Source: Sallie Mae "Majoring in Money" report 2016

CreditCards.com

- Nearly a third of Americans (30%) believe home health care expenses are under \$417 a month, but according to Genworth's number-crunching, the national median rate is about nine times that: \$3,861 per month for an in-home aide or \$3,813 per month for homemaker care (that's hiring someone to handle household tasks such as cooking, cleaning and running errands). Genworth assumes 44 hours a week of home care in its calculations.

Median Annual Cost of Long-Term Care

Adult Day Care	\$17,680
Assisted Living	\$43,539
Homemaker Services	\$45,760
In-Home Health Aide	\$46,332
Nursing Home (semi-private room)	\$82,125
Nursing Home (private room)	\$92,378

Source: Genworth 2016 Cost of Care Study

Self-Employed Statistics	Data
Total number of people who are self-employed in the U.S.	14,600,000
Number of people who work for someone who is self-employed	29,400,000
Total percent of jobs held by the self-employed and the workers they hire	30 %
Average annual income of someone who is self-employed	\$43,003
Percent of self-employed who are male	63 %
Percent of self-employed between ages 45-54	28 %
Percent of self-employed workers who are 55 or older	31 %
Largest Self-Employed Occupations	Total Number
Child Care	556,523
Carpenters	459,116
Maids & Housekeeping Cleaners	441,551
Farmers and Ranchers	437,999
Construction Laborers	380,226

2017 - Statisticbrain.com

- American workers still need help from the government to make ends meet.

According to a new study from researchers at the University of California-Berkeley, the government spends \$152.8 billion a year to support working families. In a research brief released Monday, Ken Jacobs, Ian Perry, and Jenifer MacGillvary find that 73% of enrollees in public support programs - such as food stamps - are members of working families, which the study defines as families with at least one member working 27 or more weeks per year and 10 hours or more per week.

The researchers blame low wages for this need, writing: "Real hourly wages of the median American worker were just 5% higher in 2013 than they were in 1979, while the wages of the bottom decile of earners were 5% lower in 2013 than in 1979. Trends since the early 2000s are even more pronounced. Inflation-adjusted wage growth from 2003 to 2013 was either flat or negative for the entire bottom 70% of the wage distribution."

- The number of women in computing has taken a nosedive, according to the American Association of University Women. In 1990, 35 percent of people in the field were women. Today, it's 26 percent. Female representation in engineering went from 9 percent to only 12 percent in the same period, although women have made big gains in other STEM areas, like biology and chemistry.
- CareerBuilder split the fastest-growing temp jobs into two divisions, ones that pay \$15/hr or more, and ones that pay less than \$15/hr.

For jobs that pay less than \$15/hr, home health aides have the most predicted growth, from 17,822 temp jobs in 2014 to an expected 20,420 temp jobs in 2019. Home health aides are followed by childcare workers, gaming dealers, restaurant cooks, substitute teachers, demonstrators and product promoters, retail salespersons, and landscape/groundskeeping workers. All are predicted to have 14 percent growth over the next five years.

As for the fastest-growing temp jobs that pay \$15/hr or more, computer system analysts come in first, with 11,802 temp jobs in 2014, and a predicted 14,024 temp jobs in 2019. Computer system analysts make a median hourly earning of \$39.15, almost \$40/hr. They are followed by accountants and auditors, management analysts, computer user support specialists, application software developers, customer service representatives, heavy and tractor-trailer truck drivers, registered nurses, and maintenance/repair workers. All are predicted to experience 14 percent growth over the next five years.

- In 2016, an estimated 5.3 million of the nearly 17 million U.S. households living in poverty were headed by a Millennial, compared with 4.2 million headed by a Gen Xer and 5.0 million headed by a Baby Boomer. The relatively high number of Millennial households in poverty partly reflects the fact that the poverty rate among households headed by a young adult has been rising over the past half century while dramatically declining among households headed by those 65 and

older. In addition, Millennials are more racially and ethnically diverse than the other adult generations, and a greater share of Millennial households are headed by minorities, who tend to have higher poverty rates. Millennial heads of households are also more likely to be unmarried, which is associated with higher poverty.

- Tens of thousands of students from foreign countries are enrolling in U.S. high schools, in most cases as a first step toward applying to U.S. colleges and universities, a study out Tuesday says. Most are from China. Last year, more than 73,000 international students enrolled in U.S. high schools, federal data show. About two thirds, nearly 49,000, received visas enabling them to pursue a U.S. high school diploma. That's more than triple the number since 2004, when just under 16,000 foreign students held such visas, says the study by the Institute of International Education, a non-profit organization. About a third, 25,387, received visas for shorter-term high school exchange programs. That's up 15% over the same period, the report says.
- The Bureau of Labor Statistics estimates that the healthcare sector will add the most new jobs between 2012 and 2022. Even before the Affordable Care Act was passed, the healthcare sector represented nearly 19 percent of all spending in the nation's economy and 13 percent of all jobs. Community colleges are the pipeline for training and certifying more than half of all healthcare workers.

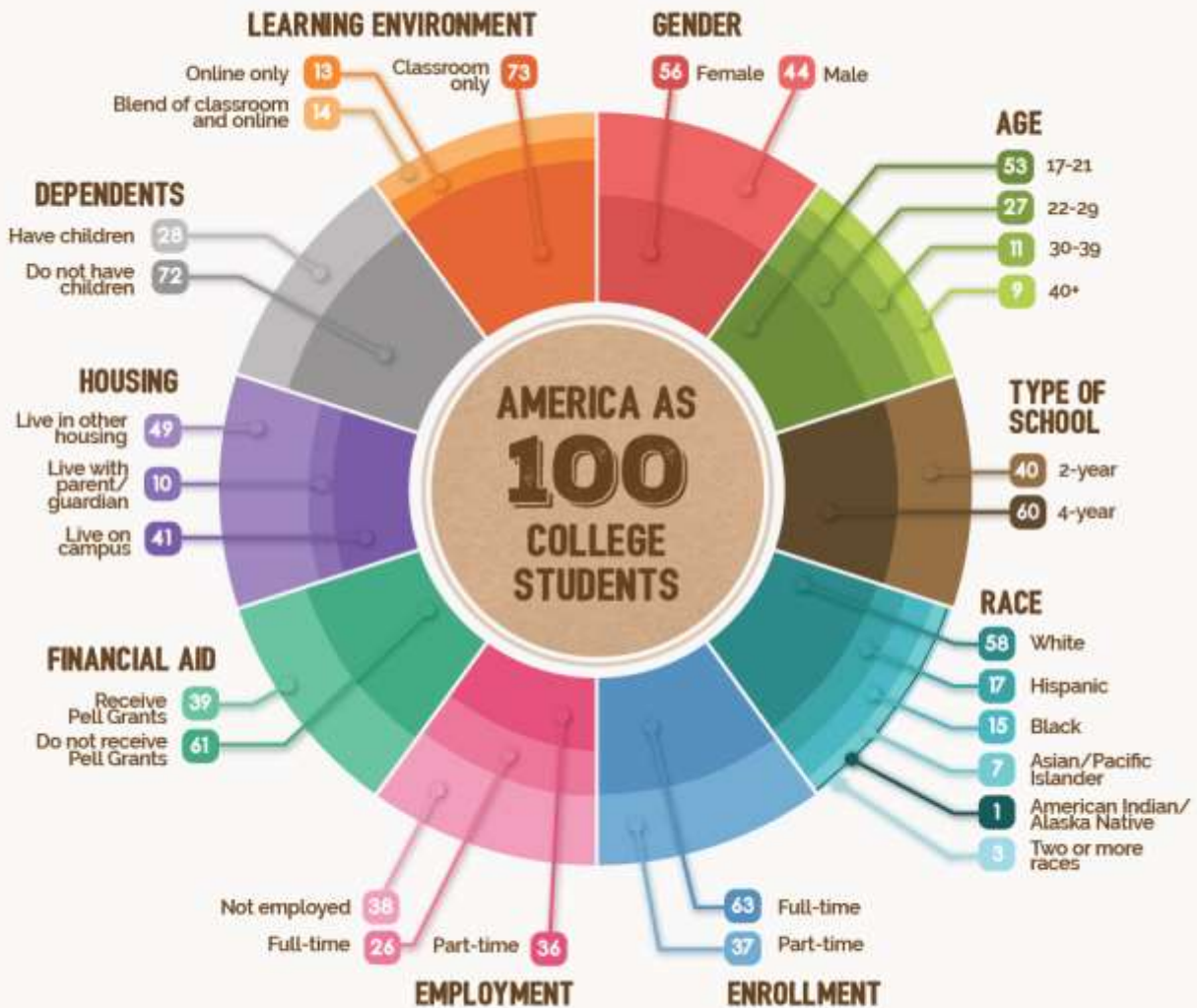
With more Americans getting healthcare coverage through the ACA, and with baby boomers getting older and inevitably experiencing more issues with their health, there is an increased need for RNs, LPNs, medical assistants, dental hygienists, EMTs, paramedics and pharmacy technicians. These jobs require either an associate degree or certification.

In a 2011 report, "Creating Opportunities in Health Care: The Community College Role in Workforce Partnership," the authors point out that community colleges can "provide training and credentialing for incumbent workers in healthcare and ... prepare new workers to succeed and meet the workforce demands for this sector - expanding individual opportunity and economic vitality."

Educating nurses is one of the most important contributions community colleges make to society. But programs that lead to an RN are expensive to run, and finding qualified instructors with a master's degree in nursing is challenging as these nurses can typically earn more money working in direct care. However, it is estimated that there will be 1.2 million job openings for RNs in the U.S. economy by 2020.

America's postsecondary student population is more diverse than ever. Many students attend school while working part- or even full-time. Some are raising children while in school. And, in many cases, they're financially independent. There's no one-size-fits-all path to (or through) college – and we need to plan our education policies accordingly.

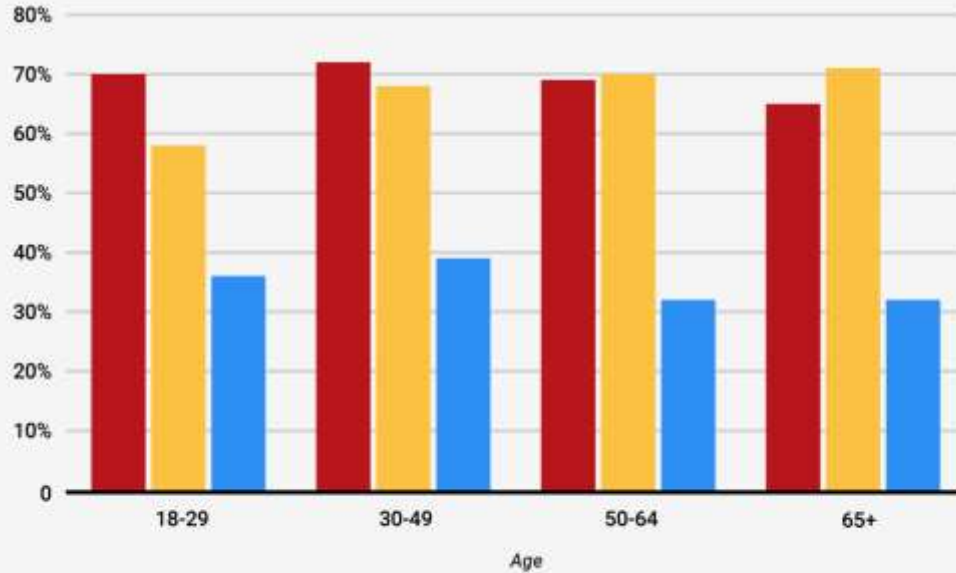
What would America look like as 100 college students?



HOW AMERICANS VIEW COLLEGE QUALITY, BY AGE

■ Four-year colleges and universities
 ■ Community colleges
 ■ Internet-based college programs

Percent viewed as "excellent or good"



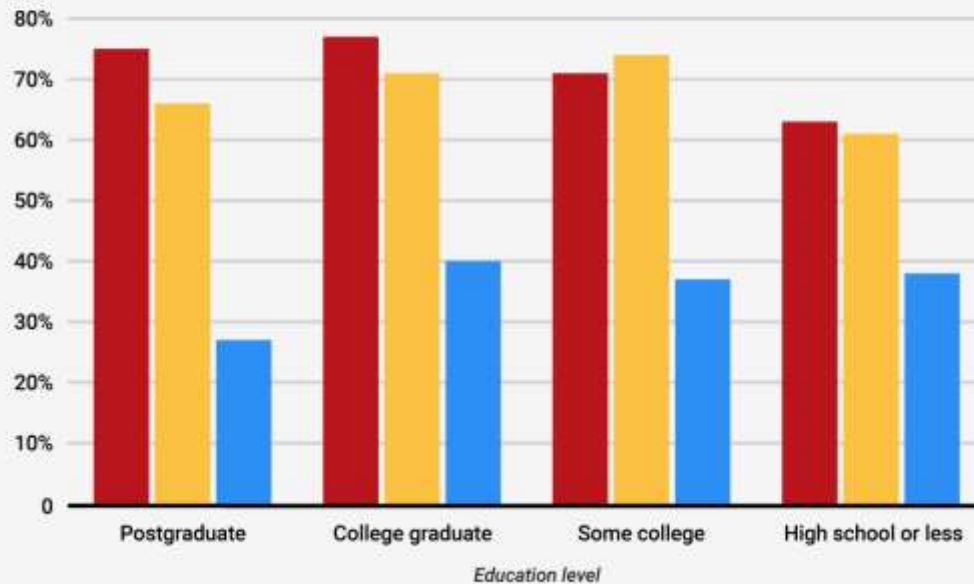
SOURCE: Gallup

BUSINESS INSIDER

HOW AMERICANS VIEW COLLEGE QUALITY, BY EDUCATION LEVEL

■ Four-year colleges and universities
 ■ Community colleges
 ■ Internet-based college programs

Percent viewed as "excellent or good"

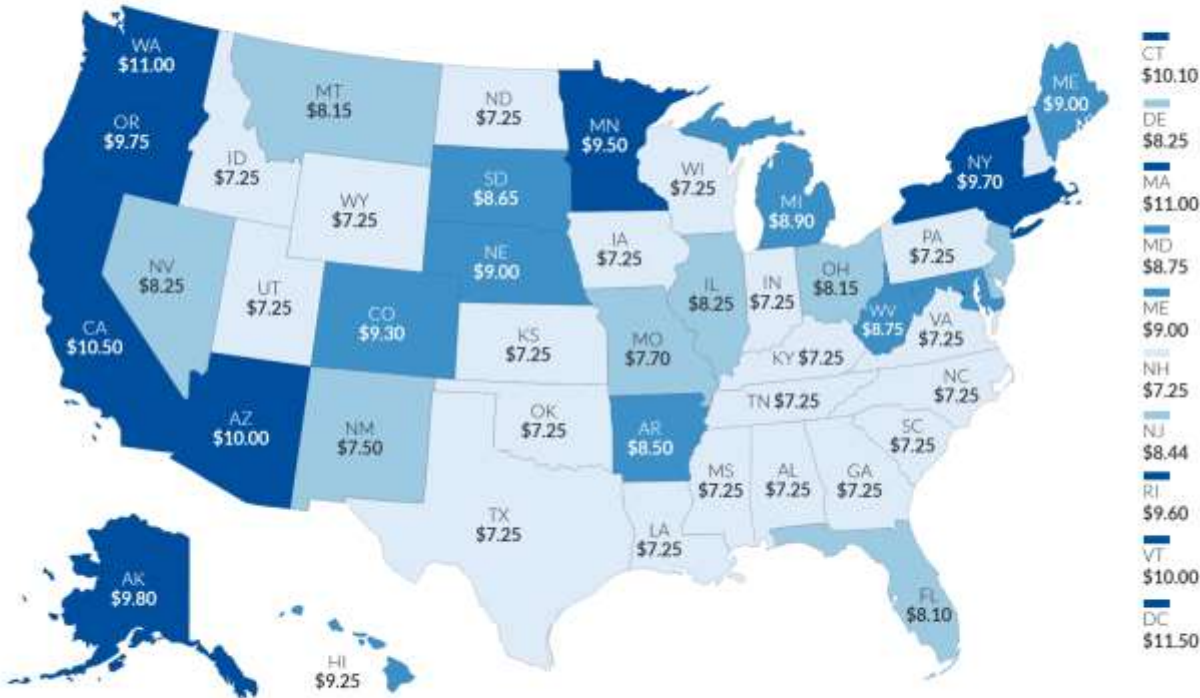


SOURCE: Gallup

BUSINESS INSIDER

2017 MINIMUM WAGE BY STATE

● \$9.50 and above ● \$8.50 - \$9.30 ● \$7.50 - \$8.40 ● \$7.25



Sources: National Conference of State Legislatures and state government websites
<http://www.bankrate.com/finance/jobs-careers/state-minimum-wage.aspx>

Bankrate

By 2024, BLS projects that the labor force will grow to about 164 million people. That number includes about 41 million people who will be ages 55 and older—of whom about 13 million are expected to be ages 65 and older.

And, although they make up a smaller number of workers overall, the 65- to 74-year-old and 75-and-older age

groups are projected to have faster rates of labor force growth annually than any other age groups. (See chart 2.) Over the entire 2014–24 decade, the labor force growth rate of the 65- to 74-year-old age group is expected to be about 55, and the labor force growth rate of the 75-and-older age group is expected to be about 86 percent, compared with a 5-percent increase for the labor force as a whole.

Chart 2. Annual growth rate in labor force by age, projected 2014–24 (percent)

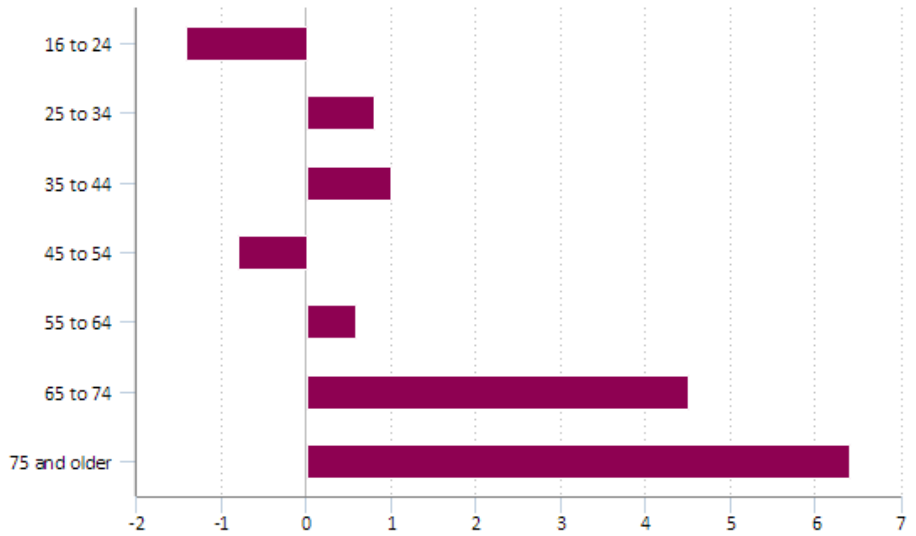
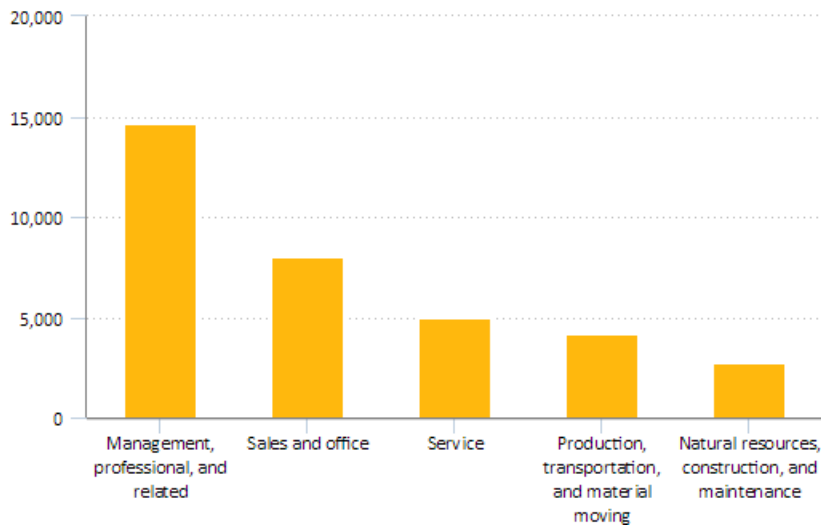
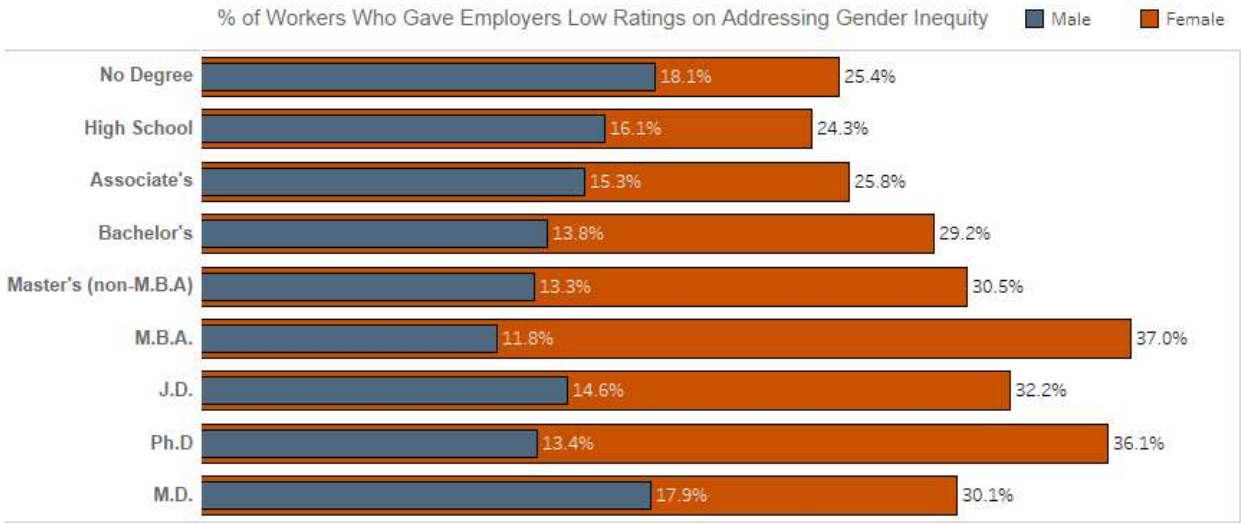


Chart 3. Employment of workers ages 55 and older, by occupation group, 2016 (thousands)



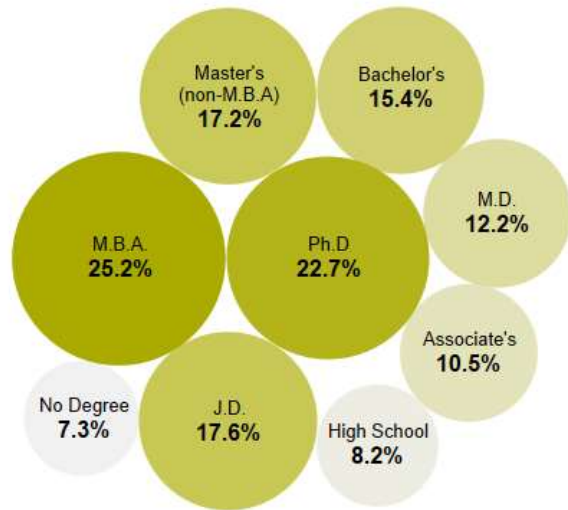
Workers ages 55 and older were employed across many types of occupations in 2016, according to BLS. (See chart 3.) More than 42 percent of these workers were in management, professional, and related occupations, a somewhat higher proportion than that for all workers.

Educated Women More Likely To Rate Employers Low on Addressing Gender Inequity



- Generally, more educated women tend to give their employers lower ratings on addressing workplace gender inequity.
- Female MBA's (37.0%) and Ph.D.s (36.1%) are the most likely to think their current employers are not doing enough to address workplace gender issues.
- The largest discrepancy for low ratings between men and women is among MBAs (25.2%).

% Difference Between Genders



In 2016, Women Are Still Earning Less Than Men

- This year, though they are still present, both the uncontrolled and controlled gender wage gaps have slightly decreased in size from 2015.
- The uncontrolled gender pay gap in 2015 showed women made 74 cents for every dollar earned by men. This year, 2016, our data shows women now make 76 cents for every dollar earned by men.
- The controlled gender pay gap in 2015 showed women made 97 cents for every dollar earned by men. This year, 2016, our data shows women now make 98 cents for every dollar earned by men when controlling for job type, education, etc.

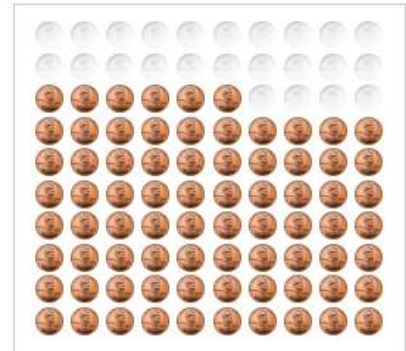
How would you like to compare 2016 salaries?

- Controlled: Similar men and women in similar jobs
- Uncontrolled: All men and women regardless of job type, education, experience, etc.



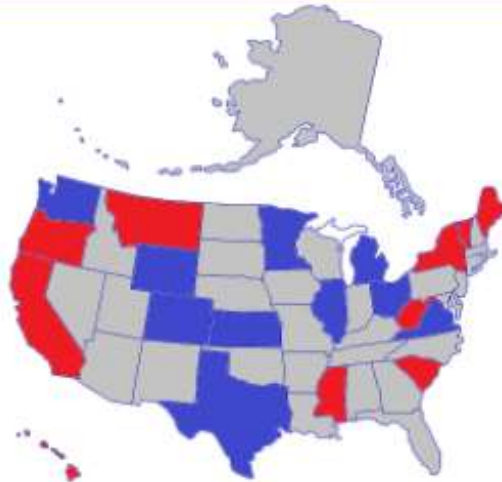
Women earn **23.7%** less than men when we compare all women to all men.

This means that women earn **76** cents for every dollar earned by men.



BEST STATES TO MAKE A LIVING 2017

MoneyRates.com



BEST STATES



1. Washington
2. Minnesota
3. Illinois
4. Texas
5. Colorado
6. Wyoming
7. Virginia
8. Ohio
9. Michigan
10. Kansas

WORST STATES



50. Hawaii
49. California
48. Montana
47. West Virginia
46. Vermont
45. Oregon
44. South Carolina
43. Maine
42. New York
41. Mississippi

Full Ranking of All 50 States

Didn't see your home state in the best or worst lists? Here is the full ranking of 50 states:

Rank	State	Cost of Living Index	Median Income	Tax Rate on Average Income	Unemployment Rate	Incidents/100 Workers
1	Washington	107.0	43,400	0.00%	4.7	6.6
2	Minnesota	99.8	40,100	4.15%	3.8	6.2
3	Illinois	95.2	38,270	3.54%	4.9	6.1
4	Texas	90.8	35,480	0.00%	5	7.1
5	Colorado	101.0	39,710	4.63%	2.6	6.3**
6	Wyoming	91.8	38,710	0.00%	4.5	15.5
7	Virginia	100.1	39,070	4.51%	3.8	5.4
8	Ohio	92.9	35,760	1.91%	5.1	6.8
9	Michigan	93.5	36,030	3.78%	5.1	6.5
10	Kansas	90.3	34,460	3.07%	3.8	7.6
11	Nebraska	91.2	34,890	3.10%	3.1	8.8
12	Indiana	88.8	33,790	3.13%	3.9	7.7
13	Utah	92.6	35,010	4.57%	3.1	6.7
14	Wisconsin	96.8	36,250	3.52%	3.4	7.2
15	Delaware	102.5	37,960	4.04%	4.5	4.6
16	North Dakota	94.0	39,160	0.81%	2.8	15.9**
17	Iowa	91.6	34,790	4.66%	3.1	7.8
18	Tennessee	89.7	32,800	0.00%	5.1	6.9
19	Missouri	90.7	34,230	3.86%	3.9	7.4
20	Massachusetts	127.4	46,690	4.62%	3.6	5.1
21	Arizona	98.6	35,470	2.25%	5	5.5
22	Oklahoma	88.5	33,140	3.32%	4.3	8.9**
23	Georgia	91.5	34,330	4.57%	5.1	7.4
24	Idaho	89.6	32,600	4.29%	3.5	8.2**
25	New Jersey	120.8	41,950	1.84%	4.2	5.3
26	North Carolina	94.0	33,920	4.08%	4.9	6.2
27	Alaska	131.5	47,170	0.00%	6.4	8.1
28	Pennsylvania	102.7	36,680	3.07%	4.8	6.6
29	Kentucky	90.7	33,190	4.81%	5	9.2
30	Connecticut	130.5	45,090	2.89%	4.8	6.1
31	Maryland	124.8	43,010	4.05%	4.3	5.6
32	Alabama	90.2	32,100	4.88%	5.8	6.7
33	Florida	98.3	32,790	0.00%	4.8	6.5**
34	New Hampshire	119.1	38,270	0.00%	2.8	6.1**
35	Nevada	104.4	34,510	0.00%	4.8	7.4
36	Rhode Island	122.0	39,730	2.59%	4.3	4.6**
37	Arkansas	88.4	30,130	3.56%	3.6	8.6
38	New Mexico	95.6	32,900	2.50%	6.7	7.6
39	Louisiana	94.3	32,080	2.66%	5.7	7.9
40	South Dakota	98.2	31,590	0.00%	2.8	8.3**
41	Mississippi	85.9	29,590	3.09%	5	10.2**
42	New York	130.1	42,760	4.45%	4.3	5.7
43	Maine	111.9	35,380	3.23%	3	7.4
44	South Carolina	99.4	32,140	3.19%	4.4	8.5
45	Oregon	115.3	37,990	7.82%	3.8	6.4
46	Vermont	122.3	37,920	2.56%	3	7.5
47	West Virginia	95.6	30,760	3.48%	4.9	8.4
48	Montana	100.7	32,750	3.73%	3.8	11.9
49	California	143.5	40,920	2.19%	4.9	6.0
50	Hawaii	167.1	40,030	5.80%	2.7	6.1

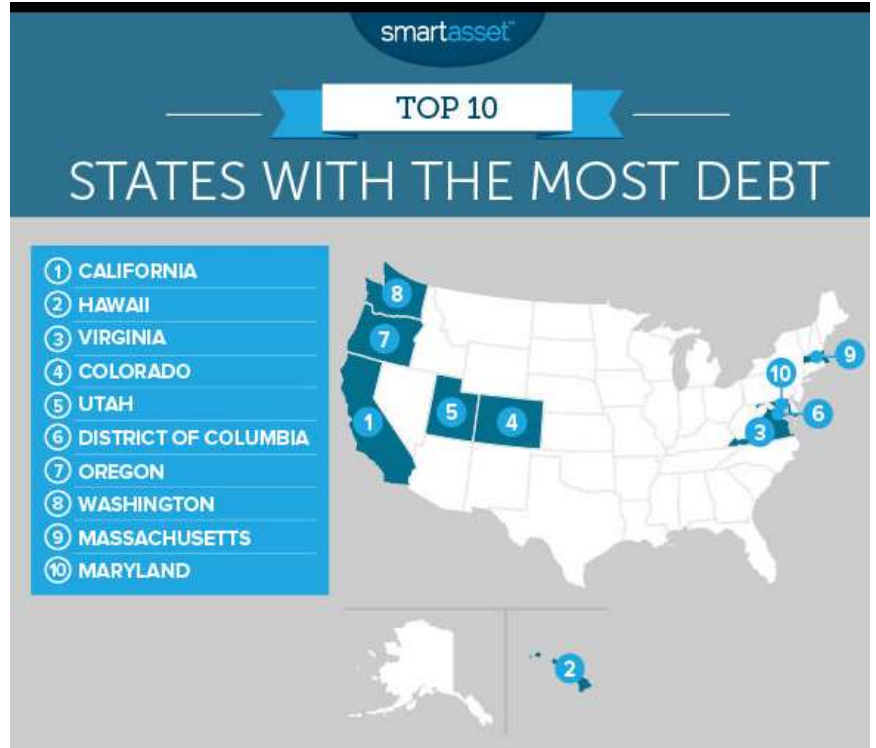
**Data was not available for these states for non-fatal work-related injuries and illnesses, per equivalent of 100 full-time workers as the average of all other states was used.

Richer states take on more debt – There is a fairly strong positive correlation between incomes and debt, even in relative terms. The top 10 states with the most debt (i.e. the highest debt-to-income levels) have an average income of \$31,832. The 10 states with the least debt (i.e. the lowest debt-to-income ratios) have an average income of \$26,754.

The majority of debt in the U.S. is mortgage debt – Residents of states with the highest debt-to-income ratios tend to have the vast majority of their debt in housing. For example, on average the top 10

states with the most debt have about 74% of their debt tied up in housing. The bottom 10 least-in-debt states have around 60% of their income tied up in housing. Homes tend to be appreciating assets compared to vehicles, credit card debt and student loans.

A big divide – The most leveraged state, California, has twice as much debt per capita as West Virginia, the state with the least in debt.



States with the Most Debt				
Rank of US States	State	Median Individual Income	Overall Debt per Capita	Debt-to-Income Ratio
3	Virginia	\$31,557	\$69,520	1.981
6	District of Columbia	\$41,724	\$79,700	1.910
10	Maryland	\$36,316	\$67,020	1.845
34	Pennsylvania	\$27,846	\$39,340	1.413
51	West Virginia	\$22,771	\$27,520	1.209

Aol Finance 2017

- According to the factualfuture.org, Maryland ranked number one for Median Household Income.

Median Household Income for 2017		
Rank of US States	State	Percent
1	Maryland	\$71,122
8	Virginia	\$61,741
23	Pennsylvania	\$51,230
50	West Virginia	\$40,196

The average U.S. household pays more than \$5,700 in federal income taxes, according to the Bureau of Labor Statistics.

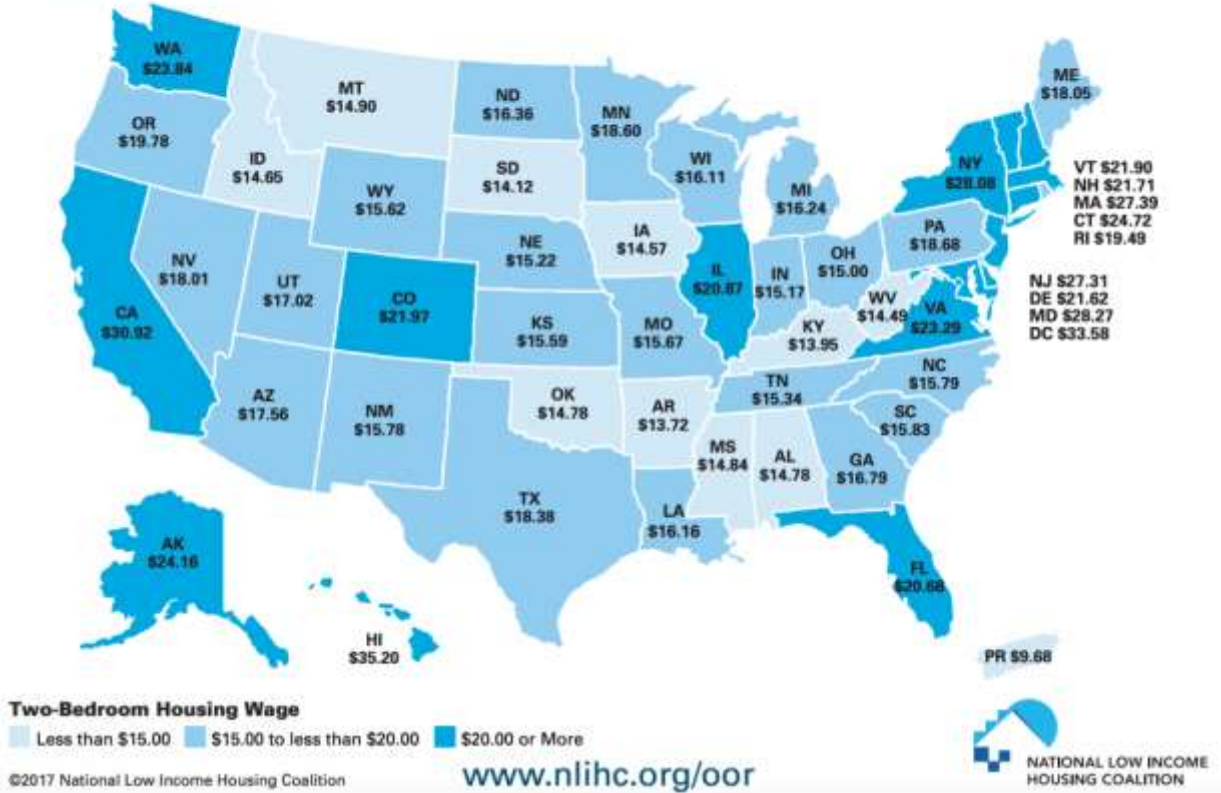
Tax Rates by State		
Rank of US States	State	Percent
36	Maryland	11.92%
27	Virginia	10.89%
41	Pennsylvania	12.33%
22	West Virginia	10.38%

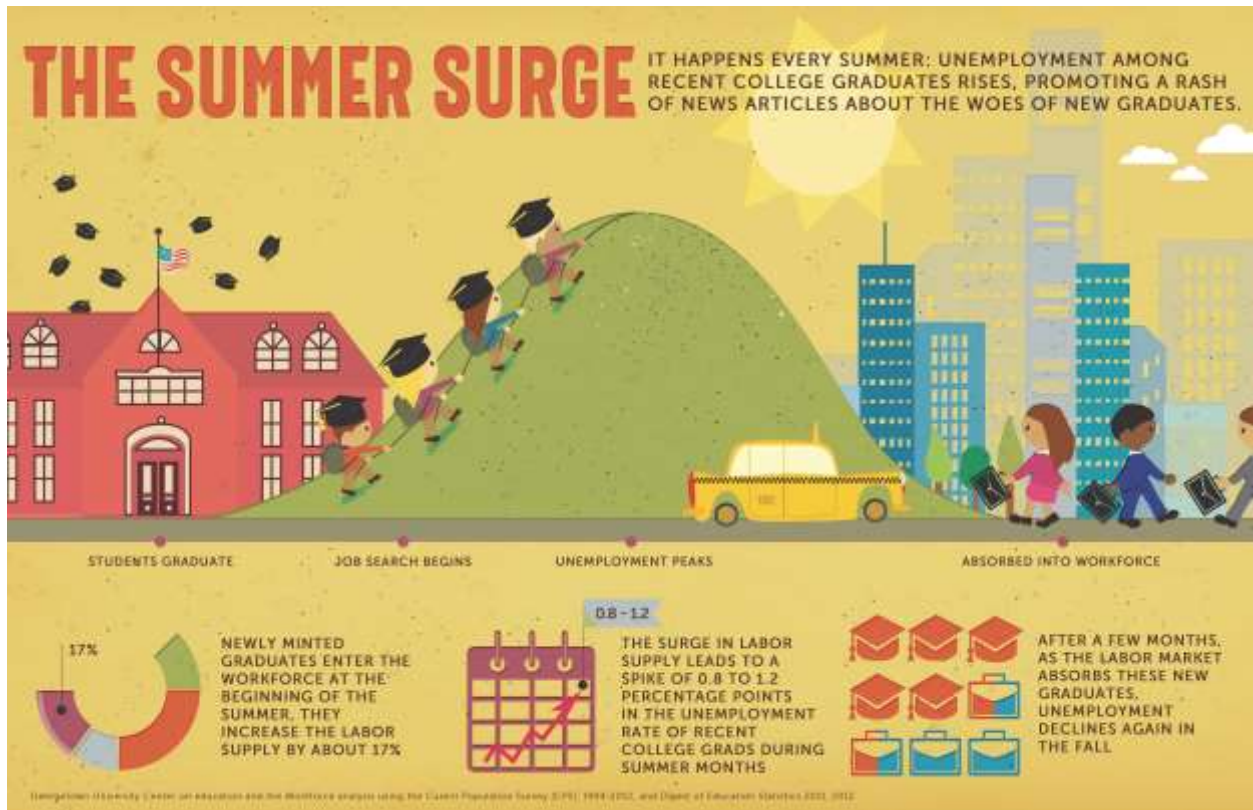
wallethub.com

- Prices of supermarket items declined 1.3% last year, compared to the year before, says the Agriculture Department's Economic Research Service. It was the first annual decline since 1967. Just about every family will feel the impact since weekly household grocery expenses in 2016 were \$107.34, according to the Food Marketing Institute.
- In its first large-scale study of household finances, the U.S. central bank uncovered lingering effects of the sharpest economic downturn since the Great Depression, with 42 percent of respondents saying they had delayed major purchases and 18 percent saying they put off a major life decision, including buying a home or getting married, due to the crisis. Thirty-six percent said they now planned to retire later, according to the online survey.

2017 TWO-BEDROOM RENTAL HOME HOUSING WAGE

Represents the hourly wage that a householder must earn (working 40 hours a week, 52 weeks a year) in order to afford the Fair Market Rent for a **TWO-BEDROOM RENTAL HOME**, without paying more than 30% of their income.





So how long do full-time U.S. employees really work every week?

A Gallup survey last summer found that the average for full-time employees was actually 47 hours -- or 46 if you isolate those workers with just one job. Either way, that's almost the equivalent of an extra business day on top of the usual five-day workweek.

Of the more than 1,200 adults surveyed, 21% said they worked 50 to 59 hours while 18% said they worked 60 or more. Another 11% estimated 41 to 49 hours. Meanwhile, more than half of the 7,500 people who took CNNMoney's work-life balance quiz last week said they feel pressure to work more than eight hours a day and to work some weekends, too.

FIGURE M

Real average hourly wages of young workers, by education, 1989-2015*



Chart Data

* Data reflect 12-month moving averages; data for 2015 represent 12-month average from April 2014 to March 2015.

Note: Data are for college graduates age 21–24 who do not have an advanced degree and are not enrolled in further schooling, and high school graduates age 17–20 who are not enrolled in further schooling. Shaded areas denote recessions.

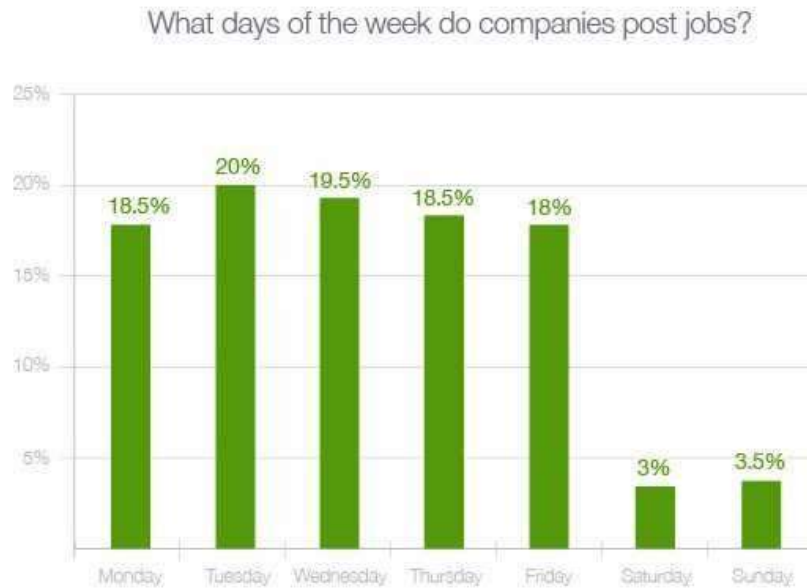
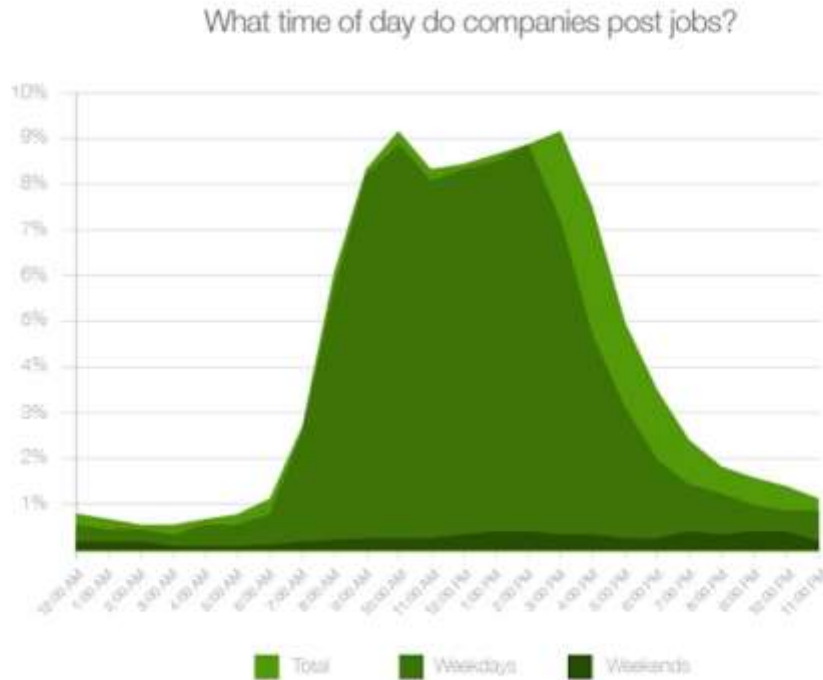
Source: EPI analysis of Current Population Survey Outgoing Rotation Group microdata

The unemployment rate among young college graduates is 7.2% compared to 5.5% in 2007; the underemployment rate, which counts college graduates who are working in jobs that don't require degrees, is nearly 15%, compared to 9.6% in 2007.

Whether the economy is booming or not, they tend to have higher unemployment rates and get paid less than older and more experienced workers. And for these same reasons, younger workers are slower to rebound after financial crises. As for the class of 2015, it could take them 10 to 15 years to catch up to the earnings levels of people who graduated prior to 2007, according to the EPI report.

When adjusted for inflation, young college graduates are earning 2.5% less than their peers in 2000. The picture is often gloomier for women and minorities, who are consistently less likely to be employed and more likely to earn less than white male college graduates. College-educated women earn 15.7% less than men, the report found. And the unemployment rate for Hispanics and black college graduates is still twice that of white college graduates (11% vs. 5.8%).

The graph below shows that the week is front-loaded with job postings, with nearly 58% of all jobs being posted Monday through Wednesday, and Tuesday being the day with the most action.



State of Maryland

- The index is a state-by-state analysis of how state economies are transforming from an industrial economic model based on “smokestack chasing.” In this model, economic development success is measured by the number of large company relocations rather than the creation and retention of high-value added, high-wage jobs. Maryland ranked fifth according to The 2014 State New Economy Index, behind Washington and California. Maryland’s high rankings are primarily due to high concentrations of knowledge workers, many employed with the federal government or related contractors in the suburbs of Washington, D.C. The ranking of Maryland and its neighbors follows.

The 2014 State New Economy Index Overall Rank		
Rank of US States	State	Score
5	Maryland	81.5%
9	Delaware	85.1%
7	Virginia	80.9%
39	Pennsylvania	63.2%
	United States	62.6%
49	West Virginia	39.8%

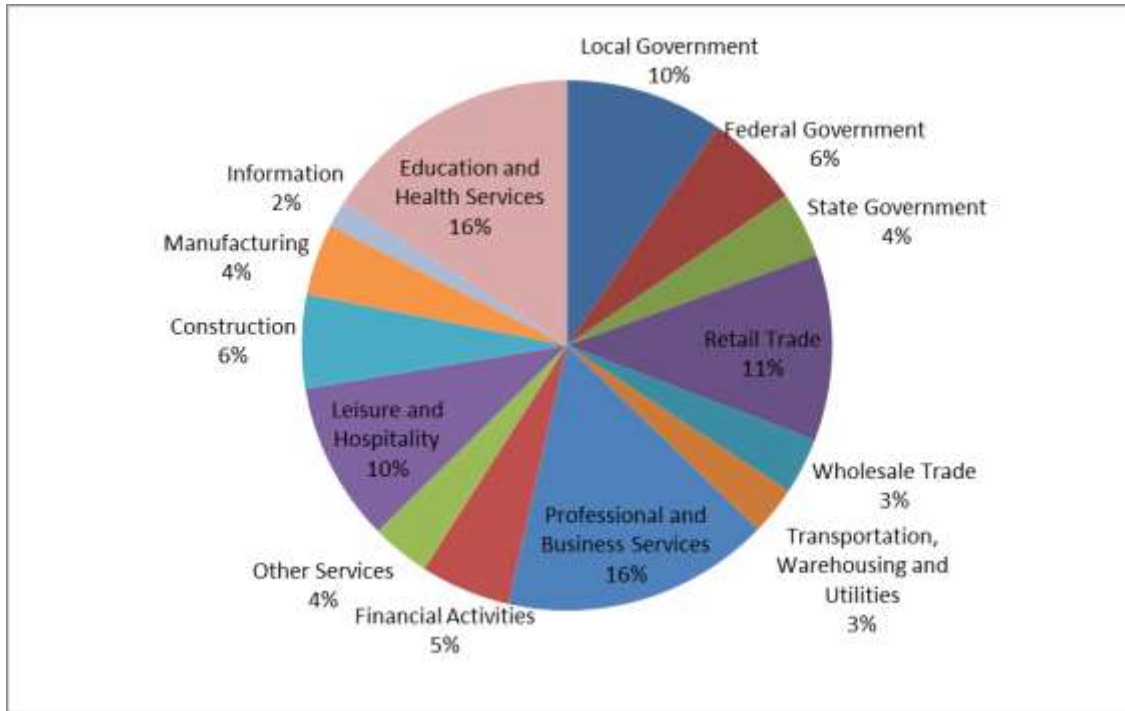
Maryland Economic Snapshot

- Maryland GDP for 2013 reaches \$342 billion (current dollars)
- Maryland's total non-farm employment is up by 22,100 jobs
- Maryland May unemployment rate 5.6%
- 12 MD-based companies made the 2014 Forbes 1000 list
- Maryland ranks 1st for highest concentration of employed doctoral scientists and engineers
- Baltimore ranks 10th for cities creating the most technology jobs
- Baltimore/Washington DC ranks 2nd for highest paying cities for technology jobs.

Nonemployer firms on the rise in Maryland

A recent U.S. Census report shows that the number of nonemployer firms in Maryland are on the rise. Nonemployer firms are defined as firms that don't employ anyone besides the owner but that file tax forms and report business income as individual proprietorships, partnerships, or any type of corporation. In 2012, Maryland had 442,314 nonemployer firms. These businesses generated \$19 billion in total revenue, up 2.5 % from 2011. This translates into an average of \$43,000 per business.

www.emarketingmd.org



As per the latest data by the Census officials, state of Maryland is the richest state in United States of America in 2013. Covering a land area of 9,707 square miles, it is the 42nd largest state in USA in terms of land area and in terms of water area it ranks #18. It is home to Port of Baltimore which is one of the largest in the country. Its Howard County frequently finds a place in the richest counties of US and currently in the list it ranks #6. Poverty rate of Maryland is the lowest among all the states of America. Majority of its employed population is in private sector which accounts for 80% of these employed while the government sector (federal, State, county and municipal governments) employs remaining 20%. High-end occupations and good income and a vibrant income make Maryland the richest state in USA. Health care and educational sector employ significant proportion of population.



Howmuch.net recently collected data to compare the median monthly mortgage payment with the median monthly rent payment in each state. From there, it determined the renting verses buying price gap to help decide where making such a big investment would be worth it.



- Median monthly mortgage payment: \$1,909
- Median monthly rent: \$1,278
- Price difference: \$631

Homeowners in Maryland pay nearly \$2,000 a month on their mortgage. Compare that to a much more reasonable median rental rate, and Maryland becomes the 12th worst state to buy a home in the U.S.

GOBankingRates conducted a study examining each state's total liabilities, total assets and the debt ratio between the two. We also determined each state's total net position --total assets minus total liabilities — to provide the fullest picture possible. A debt ratio of more than 100 percent means a state owes more in liabilities than it has in assets. Click through to find out which states have the least amount of debt and which ones suffer from the most debt.

Maryland ranked 7th

- Total liabilities: \$50.92 billion
- Total assets: \$48.50 billion
- Debt ratio: 105 percent

Maryland suffers from the highest state debt ratio in the South Atlantic Division. It's also one of only eight states to report greater total liabilities than assets for the fiscal year 2016. At 35.3 percent, rising healthcare costs contributed the highest percentage of governmental expenses

- Approximately 81.5% of those working in Maryland are employed by the private sector, while federal, State, county and municipal governments employ 18.5% of the workforce.
- In 2016, the University System of Maryland was the largest private employer in Maryland. The system employs 38,140 faculty and staff. Other leading employers in the State include The Johns Hopkins University; University of Maryland Medical system; Johns Hopkins Hospital and Health System; MedStar health; and Marriott International.
- In 2016, Maryland had more than 167,939 businesses that employed over 2.1 million workers with an annual payroll of over \$119 billion. Financial services is a growing sector in the Maryland economy. Brokerage firms insurers, and other financial companies maintain their home operations in the State.

New agricultural census shows Maryland farm income up

The U.S. Department of Agriculture released its five-year Census of Agriculture showing that the total value of agricultural products sold in Maryland increased 23.8% to nearly \$2.3 billion over the past five years. While the average farm-related income increased by 20.8% (to \$109.9 million), farm expenses increased more, by 25.4% (to \$1.94 million). Frederick County had the largest number of farms (1,308) while Caroline County has the largest value of production (\$258 million). This Census tracked on-farm Renewable Energy Production and found 467 renewable energy practices now in place on Maryland farms (up from 131 in 2007) including 284 solar panel systems; 83 geosystems; 29 using wind turbines and 45 producing biodiesel.

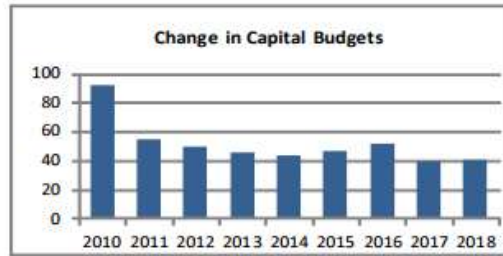
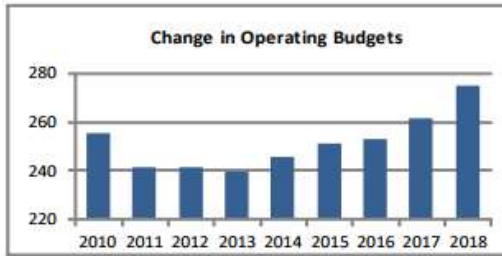
Washington County, MD

- Anirban Basu, one of state's leading economists, that the economy is gathering momentum boosted by a booming stock market. But Maryland's recovery from the recession continues to be soft when compared to some other states, and Washington County's is softer than some other jurisdictions in the state.

Basu pointed out that the United States has seen job growth of 1.7 percent in the last year, while Maryland's was about 1 percent. In the same time period, Washington County lost about 300 jobs, with a decline in about 200 manufacturing jobs.

- Washington County ranks as the 17th most developed retail market (per person) in the nation by the National Research Bureau. Total 2011 retail sales were \$2,724,238 for Washington County and \$3,956.113 for the Hagerstown metropolitan area. Effective buying Income (EBI) for the county totaled \$2,765.723.
- Washington County, MD building permits average per year since 2001 is 676. In 2005, there was a high number of building permits with 1,846 and a low number of building permits in 2009 of 154. 70.80% of the building permits are for Single Family housing units in 2014.

Washington County's history over the past several years for operating and capital budgets are shown in the table below in millions. Operating budgets have increased by 8% or \$19.7 million over 2010. Capital Budgets vary from year-to-year due to the level of major construction activity, mandated funding requirements, and the initiation of new funds or service responsibilities.



Budget Summarization

Total revenues and expenditures for 2018 Washington County budgets are summarized and compared to prior years on the following pages and are discussed throughout this budget message. The 2018 budget was balanced by adhering to sound financial management and policies that have kept Washington County in a solid financial position during the recent economic downturn.

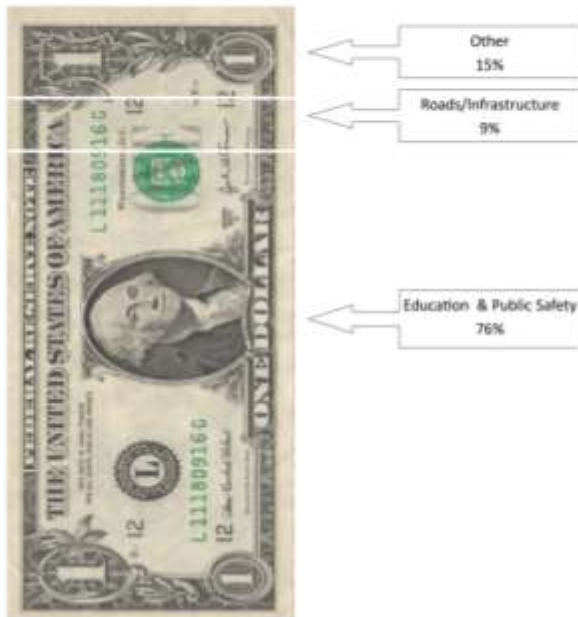
The 2018 Washington County budget totals \$315,540,550 which is \$14,982,010 or 4.98% above the 2017 approved budget. The budget was balanced based on the following changes and objectives:

- 1) Increase in property tax assessable base
- 2) Increases in local income tax revenue
- 3) Educational funding
- 4) Public safety funding
- 5) Infrastructure and personnel

There were several issues which the County faced regarding the 2018 budgets. Main issues involved public safety, education, economic development initiatives, and infrastructure funding. In addition, the County is required to fund increases as a result of Federal and State mandates enacted over local governments. Reductions in Highway User revenue shares have also impacted the County's road maintenance program. Emergency services have been and will continue to be a major issue facing the County in regards to service levels and funding. Even with these difficult and complex issues, the County still presents a budget that provides existing and new service levels with no increase in the property tax or income tax rates which have been held at the same rate for eighteen years.

www2.washco-md.net

How is Your Dollar Spent?



The County is provided with a rating for debt issuance by three New York rating agencies. The County was upgraded in 2014 by Standard and Poor's from AA to a AA+. In addition, Moody's upgraded the County's rating from AA to a AA+ and Fitch from Aa2 to a Aa1 in 2015. These upgrades were based on several factors including financial and economic data. The following indicates each of the agency's rating and its corresponding description according to the agency.

Washington County Bond Ratings		
Rating Agency	Rating	Rating Description
Standard and Poor's	AA+	Rating reflects the County's strong economic profile, diverse tax base, very strong financial performance, and low overall debt burden.
Fitch	AA+	Rating reflects the County's strong financial profile, robust reserves, low overall debt levels, and adequate economic base.
Moody's	Aa1	Rating reflects the County's solid financial position, supported by strong fiscal policies and practices, healthy reserve levels and modest debt burden.

The Ten Year Capital plan for 2018 through 2027 by category is as follows:

Capital Improvement Project Summary										
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Education	6,935,000	12,978,000	11,086,000	10,240,000	13,901,000	12,421,000	12,920,000	13,396,000	11,775,000	11,047,000
Roads	15,664,000	13,813,000	15,101,000	10,473,000	12,582,000	13,612,000	12,501,000	15,230,000	14,129,000	11,207,000
Environmental	2,896,000	2,451,000	10,648,000	12,876,000	4,675,000	6,561,000	2,566,000	8,082,000	4,189,000	3,034,000
Transportation	7,606,000	1,696,000	2,278,000	1,866,000	2,629,000	2,042,000	2,084,000	2,664,000	3,395,000	4,607,000
Other	7,360,000	5,232,000	3,800,000	3,714,000	3,882,000	3,920,000	3,915,000	4,335,000	4,096,000	4,105,000
Total	40,461,000	36,170,000	42,913,000	39,169,000	37,669,000	38,556,000	33,986,000	43,707,000	37,584,000	34,000,000

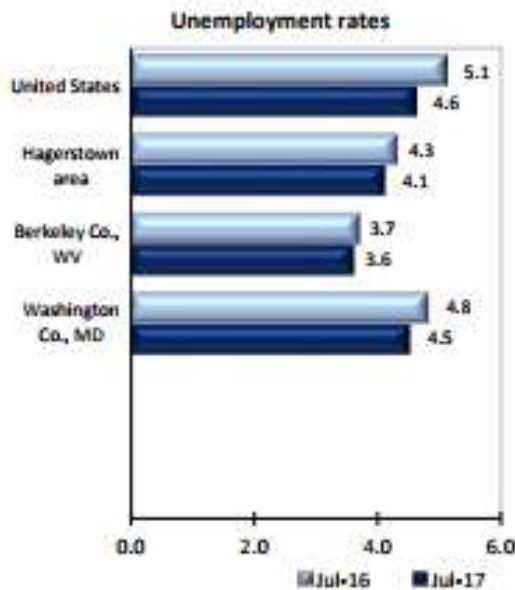
washco-md.net

Hagerstown Area Economic Summary

Updated August 30, 2017

This summary presents a sampling of economic information for the area; supplemental data are provided for regions and the nation. Subjects include unemployment, employment, wages, prices, spending, and benefits. All data are not seasonally adjusted and some may be subject to revision. Area definitions may differ by subject. For more area summaries and geographic definitions, see www.bls.gov/regions/economic-summaries.htm.

Unemployment rates for the Hagerstown area, selected area counties, and the nation



Source: U.S. BLS, Local Area Unemployment Statistics.

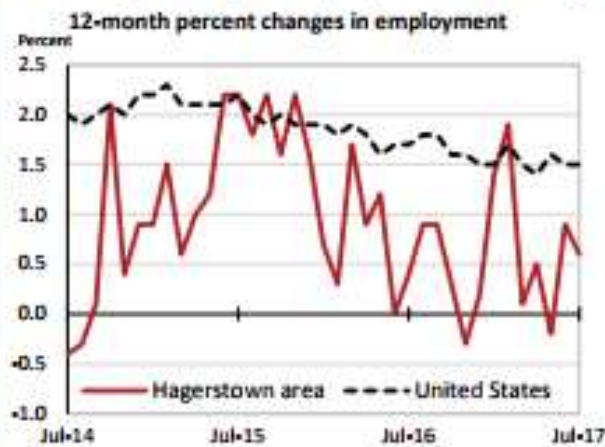
Average weekly wages for all industries by county

Hagerstown area, 4th quarter 2016
(U.S. = \$1,067; Area = \$790)



Source: U.S. BLS, Quarterly Census of Employment and Wages.

Over-the-year changes in employment on nonfarm payrolls and employment by major industry sector



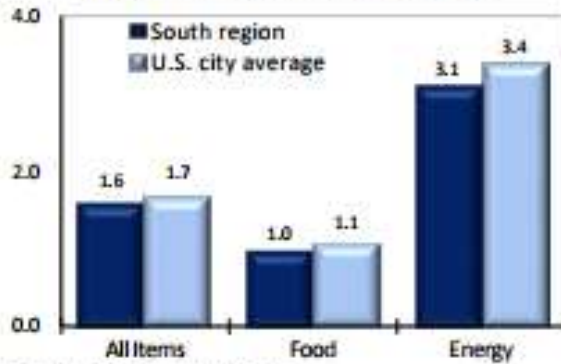
Source: U.S. BLS, Current Employment Statistics.

Hagerstown area employment (numbers in thousands)	Jul. 2017	Change from Jul. 2016 to Jul. 2017	
		Number	Percent
Total nonfarm	106.9	0.6	0.6
Mining, logging, and construction	4.1	-0.1	-2.4
Manufacturing	8.4	0.4	5.0
Trade, transportation, and utilities	26.3	0.8	3.1
Information	2.6	0.2	8.3
Financial activities	7.6	-0.4	-5.0
Professional and business services	9.3	0.0	0.0
Education and health services	16.6	0.2	1.2
Leisure and hospitality	10.1	-0.3	-2.9
Other services	4.5	0.2	4.7
Government	17.4	-0.4	-2.2

Source: U.S. BLS, Current Employment Statistics.

Over-the-year change in the prices paid by urban consumers for selected categories

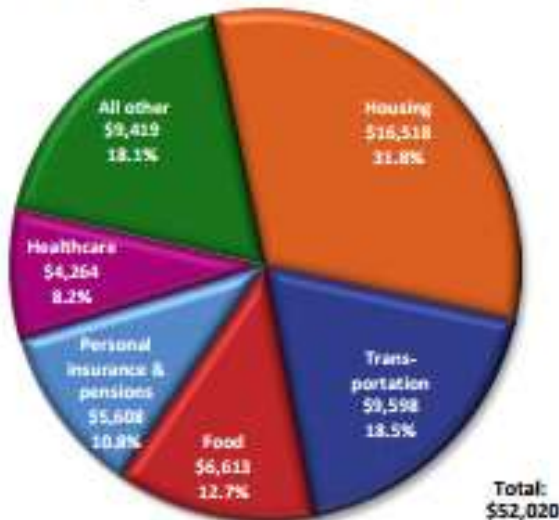
12-month percent change in CPI-U, July 2017



Source: U.S. BLS, Consumer Price Index.

Average annual spending and percent distribution for selected categories

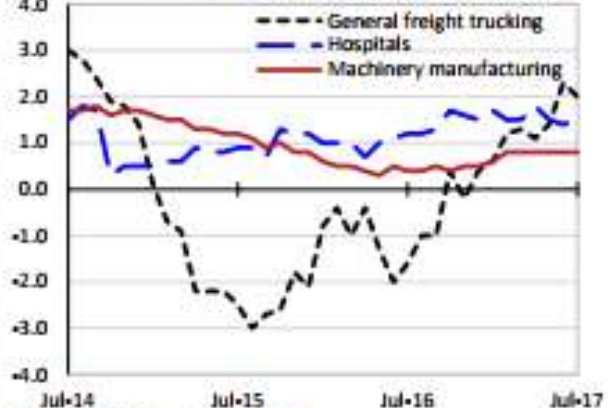
South Region average annual expenditures 2015



Source: U.S. BLS, Consumer Expenditure Survey.

Over-the-year changes in the selling prices received by producers for selected industries nationwide

Percent 12-month percent changes in PPI



Source: U.S. BLS, Producer Price Index.

Average hourly wages for selected occupations

Occupation	Hagerstown area	United States
Total, all occupations	\$21.55	\$23.86
Computer systems analysts	39.47	44.05
Registered nurses	33.12	34.70
Accountants and auditors	31.70	36.89
Paralegals and legal assistants	25.22	25.57
Customer service representatives	14.66	16.91
Construction laborers	14.60	18.22
Office clerks, general	14.37	15.87
Tellers	13.09	13.49
Retail salespersons	12.48	13.07
Childcare workers	10.63	11.02
Cashiers	10.13	10.43
Cooks, fast food	9.44	9.89

Source: U.S. BLS, Occupational Employment Statistics, May 2016.

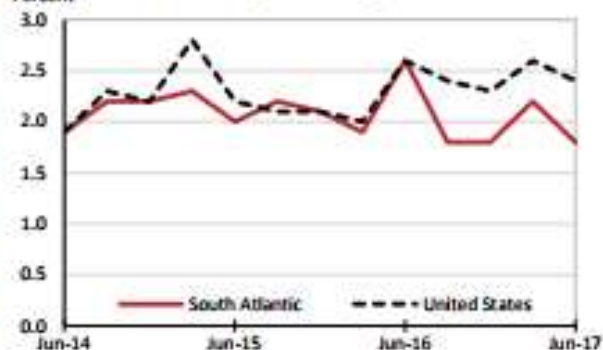
Employer costs per hour worked for wages and selected employee benefits by geographic division

Private industry, March 2017	South Atlantic (1)	United States
Total compensation	\$31.04	\$33.11
Wages and salaries	21.88	23.06
Total benefits	9.16	10.06
Paid leave	2.23	2.30
Vacation	1.14	1.18
Supplemental pay	0.83	1.17
Insurance	2.47	2.65
Retirement and savings	1.29	1.34
Legally required benefits	2.33	2.60

(1) South Atlantic includes DC, DE, FL, GA, MD, NC, SC, VA, and WV.
Source: U.S. BLS, Employer Costs for Employee Compensation.

Over-the-year changes in wages and salaries

Percent 12-month percent changes in ECI



Source: U.S. BLS, Employment Cost Index.

**Washington County - First Quarter 2017 - County Industry Series - Maryland's Quarterly Census of
Employment and Wages (QCEW) - Workforce Information & Performance**

Industry	FIRST QUARTER 2017						
	Number of Reporting Units	Monthly Employment			Quarterly Average Employment	Total Wages	Average Weekly Wage Per Worker
		First	Second	Third			
Washington County							
TOTAL EMPLOYMENT	3,523	66,159	66,032	66,305	66,165	\$689,389,710	\$801
GOVERNMENT SECTOR - TOTAL	110	8,631	8,745	8,850	8,742	97,407,039	857
Federal Government	32	589	580	585	585	7,918,395	1,041
State Government	13	2,114	2,057	2,051	2,074	25,199,530	935
Local Government	65	5,928	6,108	6,214	6,083	64,289,114	813
PRIVATE SECTOR - TOTAL ALL INDUSTRIES	3,413	57,528	57,287	57,455	57,423	591,982,671	793
GOODS-PRODUCING	519	8,962	8,945	8,991	8,966	124,091,002	1,065
Natural Resources and Mining	31	150	148	153	150	2,407,293	1,235
Construction	345	2,561	2,575	2,565	2,567	28,642,709	858
Manufacturing	143	6,251	6,222	6,273	6,249	93,041,000	1,145
SERVICE PROVIDING	2,892	48,566	48,342	48,464	48,457	467,891,669	743
Trade, Transportation, and Utilities	941	17,553	17,205	17,257	17,338	150,091,033	666
Information	40	669	669	675	671	8,127,584	932
Financial Activities	320	5,972	6,054	5,990	6,005	91,557,008	1,173
Professional and Business Services	494	5,691	5,637	5,773	5,700	61,990,278	837
Education and Health Services	442	10,987	10,969	10,897	10,951	119,522,506	840
Leisure and Hospitality	364	6,010	6,104	6,181	6,098	24,339,388	307
Other Services	291	1,684	1,704	1,691	1,693	12,263,872	557

Unemployment Rate by County	Feb 2017	Mar 2017	Apr 2017	May 2017	Jun 2017	Jul 2017
Maryland	4.5	4.3	3.9	3.9	4.2	4.2
Allegany County, MD	7.0	6.6	5.6	5.2	5.8	5.6
Anne Arundel County, MD	3.8	3.6	3.4	3.4	3.8	3.7
Baltimore city, MD	6.4	6.3	6.0	5.7	6.1	6.2
Baltimore County, MD	4.7	4.5	4.1	4.2	4.4	4.4
Calvert County, MD	3.9	3.7	3.3	3.5	3.9	3.9
Caroline County, MD	5.4	4.9	4.1	4.1	4.2	4.2
Carroll County, MD	3.8	3.5	3.0	3.2	3.5	3.6
Cecil County, MD	5.5	5.3	4.5	4.4	4.7	5.0
Charles County, MD	4.2	4.1	4.0	3.8	4.4	4.4
Dorchester County, MD	6.8	6.4	5.6	5.2	5.2	5.2
Frederick County, MD	4.0	3.7	3.2	3.4	3.7	3.7
Garrett County, MD	7.3	6.9	4.9	4.5	4.7	4.5
Harford County, MD	4.3	4.1	3.6	3.7	4.1	4.1
Howard County, MD	3.3	3.2	2.9	3.1	3.3	3.4
Kent County, MD	5.7	4.6	3.7	4.0	4.3	4.3
Montgomery County, MD	3.4	3.2	2.9	3.2	3.4	3.4
Prince George's County, MD	4.5	4.3	3.9	4.0	4.3	4.3
Queen Anne's County, MD	4.3	3.8	3.3	3.4	3.8	3.7
Somerset County, MD	8.4	7.4	6.4	6.0	6.2	6.1
St. Mary's County, MD	4.2	4.0	3.5	3.6	4.3	4.4
Talbot County, MD	4.8	4.3	3.4	3.7	4.0	3.8
Washington County, MD	5.3	5.0	4.2	4.2	4.4	4.5
Wicomico County, MD	7.3	6.5	5.4	4.9	4.9	4.9
Worcester County, MD	12.7	11.0	8.3	6.5	5.7	5.2

Major Employers in Washington County

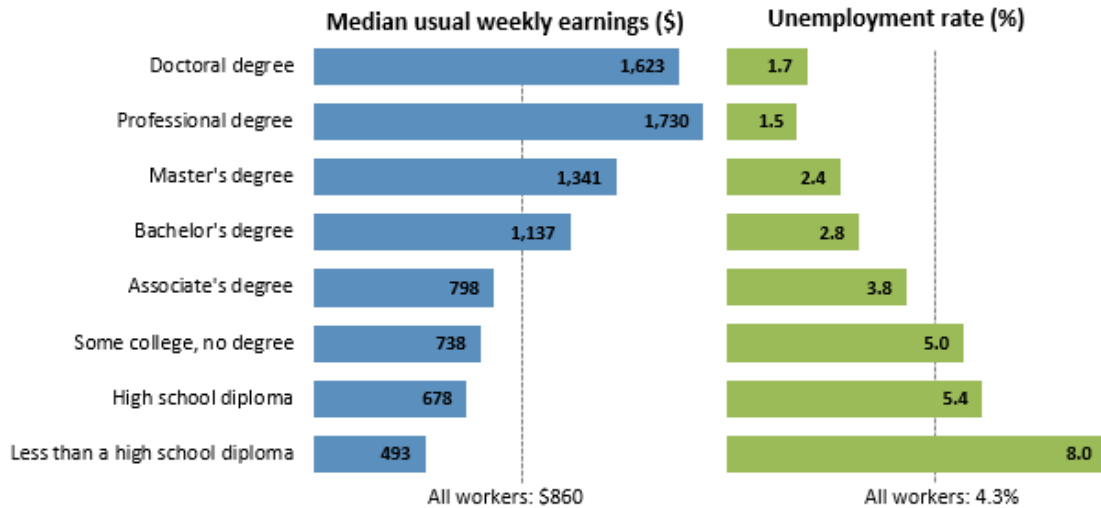
Maryland Department of Commerce 2016

Employer Name	Product/Service	Estimated number of employees
Citi	Credit Card Processing	2,300
Meritus Medical Ctr	Medical Services	2,740
First Data	Credit Card Processing	2,185
Volvo Group	Diesel Engines/Transmissions	1,300
FedEx Ground	Mail and Package Delivery	900
Hagerstown Community College	Higher Education	890
The Bowman Group	Hotels Management/Logistics	745
The Merkle Response Mang. Group	Data Entry and Fulfillment	545
ARC of Wash. Co.	Medical and Social Services	500
Direct Mail Processors	Data Entry and Fulfillment	500
Brook Lane Health	Medical Services	485
Dot Foods	Food Distribution	441
Staples	Office Supplies	390
AC&T	Convenience Stores/Gas	350
Lehigh Phoenix	Printed Book Covers	335
Sierra Nevada	Aircraft Maintenance	335
JLG	Aeirel Work platforms	300
Thompson Gas	Propane Gas Products	275
UPS	Mail and Package Delivery	274
CertainTeed	Roofing Products	255
Tempur Sealy International	Mattresses	223
Home Depot	Home Improvement Products/Dist.	195

EDUCATION

United States – National

Earnings and unemployment rates by educational attainment, 2015



Note: Data are for persons age 25 and over. Earnings are for full-time wage and salary workers.

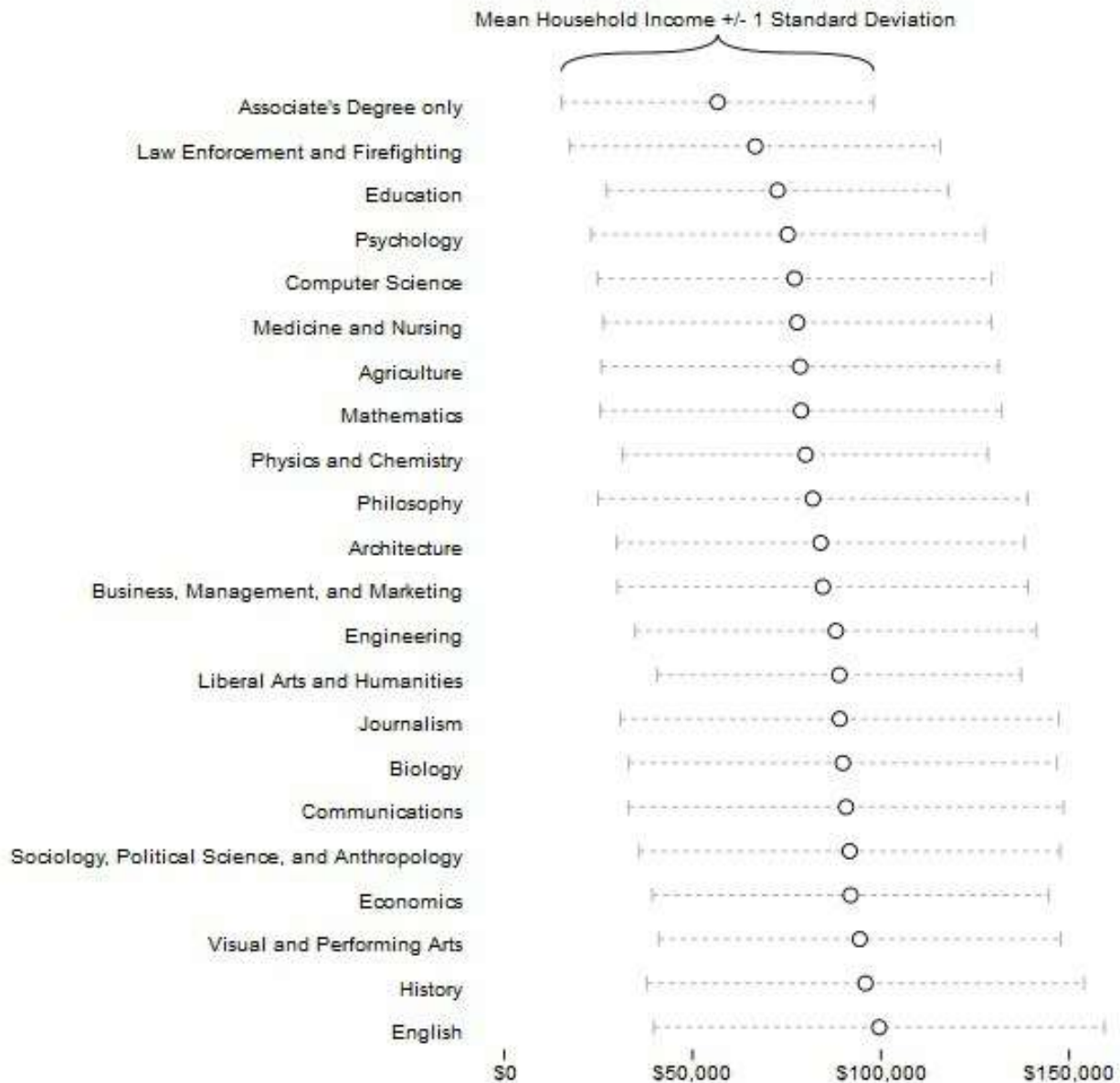
Source: U.S. Bureau of Labor Statistics, Current Population Survey

- The Nation's Report Card says America's high school seniors lack critical math and reading skills for an increasingly competitive global economy.

Only about one-quarter are performing proficiently or better in math and just 4 in 10 in reading. And they're not improving, the report says, reinforcing concerns that large numbers of today's students are unprepared for either college or the workplace.

Scores on the 2013 exam in both subjects were little changed from 2009, when the National Assessment of Educational Progress was last given to 12th-graders. The new results, released Wednesday, come from a representative sample of 92,000 public and private school students.

Students from higher-income families tend to pursue majors in English and history, Kim Weeden, a sociologist from Cornell University found after analyzing data from the National Center for Education Statistics. According to the data, students from lower-income households choose to pursue associate's degrees or major in areas such as law enforcement.



Ben Southgate | Data: Kim Weeden; National Center for Education Statistics

- George Washington University, a private research university in Washington, D.C., announced Monday that it will no longer require most applicants to submit SAT or ACT scores. In doing so, George Washington becomes the latest in a growing number of schools to have dropped its admissions testing requirements in recent years.

Since 2013, more than 40 private and public colleges and universities have instituted test-optional policies. They include highly competitive schools such as Wesleyan University, Brandeis College and Bryn Mawr College, along with well-known public universities like Temple, Monmouth State and Virginia Commonwealth.

National Education For Education Statistics



Video Link

The Program for the International Assessment of Adult Competencies (PIAAC) is a large-scale international study of adult skills and life experiences. Watch our new video to find out how the skills of U.S. adults compare with those of adults in other countries, and how skills vary within three important groups in the U.S. population: the unemployed, young adults, and older adults.

https://www.youtube.com/watch?v=p_iCyWkVGUM

"The test-optional surge recognizes that no test — not the SAT, old or new, nor the ACT — is needed for high-quality admissions," Bob Schaeffer, the director of FairTest Public Education, said in a news release.



Engagement Matters

The connection between student engagement and student success is well documented. Learning, persistence, and attainment in college are consistently associated with students' being actively engaged with college faculty and staff, with other students, and with the subject matter they are studying. Recent research underscores this connection. A study using data from the Community College Survey of Student Engagement (CCSSE) shows that student engagement— in particular, the CCSSE benchmarks of active and collaborative learning and support for learners—is an important predictor of college completion. To view full report, please use the link below:

http://www.ccsse.org/docs/Matter_of_Degrees_2.pdf



- Performance-based funding (PBF) is becoming increasingly popular as an accountability tool to reward higher education institutions for specific outcomes believed to enhance student progress and completion. A recent report indicates that 35 states have either implemented, or are currently developing, PBF policies for higher education.

Despite its popularity, however, there is a substantial body of empirical evidence that shows PBF can have troubling and unintended impacts.

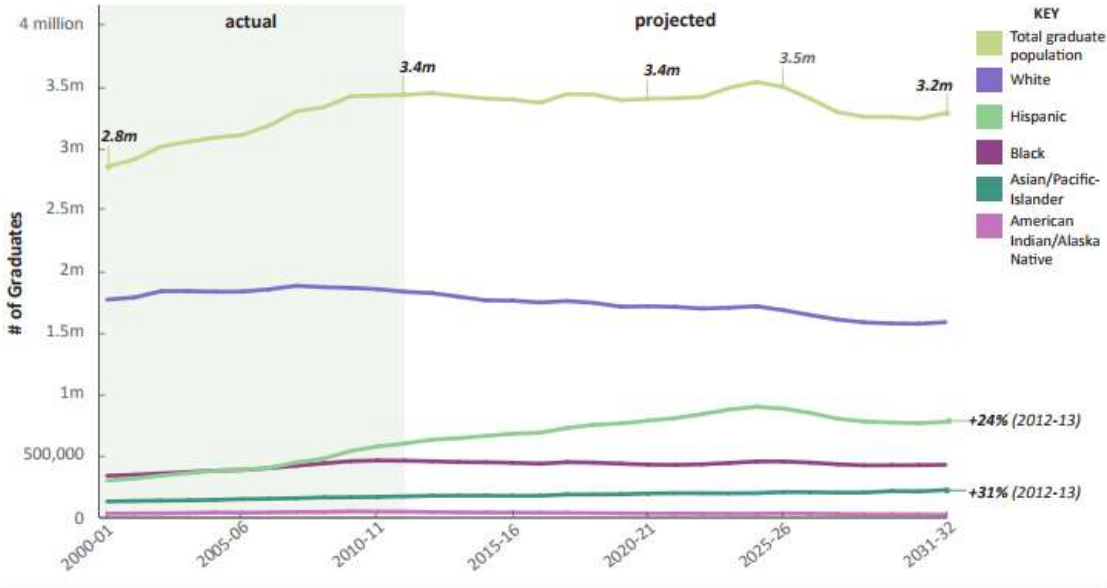
One of the most commonly cited unintended consequences of PBF is that resource-dependent colleges may have an incentive to “cream” admissions by enrolling students who are more likely to graduate, while curtailing admission of disadvantaged groups that are less likely to complete. Moreover, there are concerns that PBF could disproportionately penalize colleges that predominately serve students from disadvantaged backgrounds.

- Technology is everywhere in education: Public schools in the United States now provide at least one computer for every five students. They spend more than \$3 billion per year on digital content. Led by the federal government, the country is in the midst of a massive effort to make affordable high-speed Internet and free online teaching resources available to even the most rural and remote schools. And in 2015-16, for the first time, more state standardized tests for the elementary and middle grades will be administered via technology than by paper and pencil.

High school projections

While the number of high school graduates is expected to remain relatively stable, the percentage of minorities among them is expected to increase, and the rate of white graduates is predicted to drop.

Total U.S. high school graduates (actual and projected) for 2000 to 2032 by race/ethnicity



Source: Western Interstate Commission for Higher Education, "Knocking at the College Door: Projections of High School Graduates," December 2016.



The number of high school graduates in the U.S. has increased steadily from approximately 2.9 million in 2000-01 to about 3.5 million in 2012-13, the highest ever reported. Projections suggest that the number of high school graduates will remain relatively stable for the next 10 years, and then increase again in 2023-24 and on. The most notable trends culled from the data are a consistent decrease in the number of white graduates and increases in the number of Hispanic and Asian Pacific Islander graduates. Hispanic graduates are expected to grow by 24 percent, and Asian Pacific Islanders will increase by 31 percent between 2012-13 and 2031-32. The trend in community college athletics is moving toward more, rather than less, intercollegiate athletics. Placed in its best light, intercollegiate competition that encourages personal development is an integral part of a student's overall educational experience. Sports programs may also attract more students to a community college and enhance pride in the college both on campus and within the community.

- The National Association of Student Financial Aid Administrators is out with recommendations for how to simplify the Free Application for Federal Student Aid, known as the Fafsa. Making the application less cumbersome is a popular cause, supported by the Bill & Melinda Gates Foundation, the College Board, and the chairman of the U.S. Senate’s education committee, Lamar Alexander, among others.

In a report released on Thursday, the student-aid administrators’ group recommended that the Fafsa be made into a three-tiered process that would, in effect, require low-income students to answer fewer questions than wealthier ones. Among other recommendations, the group said that:

The Fafsa should use prior-prior year income data to determine a student’s aid eligibility.

The amount of data retrieved automatically from the Internal Revenue Service for an individual’s application should be expanded.

http://www.nasfaa.org/uploads/documents/fafsa_report_1.pdf

Coming in 2017 – Inside Higher Ed	
Colleges and Universities Should Prepare for 7 Key Trends in New Year	
1.	Sliding Enrollment
2.	Concerns About Cost and Access
3.	Focus on Careers and Job Placement
4.	Declining State Support
5.	Collisions Over Campus Climate
6.	The Defense of Academic Freedom and Free Speech
7.	Questions About Value

The Pell Grant program received an unprecedented funding boost in 2010-11 to expand college access in the wake of the economic downturn that started in 2008. Total program spending, as well as spending at two-year institutions, has gradually declined since then, although levels are still above those of the 2008-09 academic year. The number of Pell recipients over the same period mirrored the levels of program expenditures, peaking at more than 9 million in 2010-11 and 2011-12, and dropping below 8 million in 2015-16. The same trend held for Pell recipients at public two-year institutions, cresting at more than 3.4 million in 2011-12 and dipping to 2.5 million in 2015-16. Two-year institutions' share of total Pell Grant funds in 2015-16 was 29 percent, compared to 31 percent the previous year. Similarly, the percent of Pell recipients enrolled at public two-year colleges fell to 32 percent in 2015-16 from 34 percent in 2013-14. The average grant award, however, was higher in 2015-16 than the previous year across all institutions as well as public two-year institutions.

Trends in Pell Grant spending

Pell Grant expenditures have declined since the peak of the recent recession.

Pell Grant expenditures at public two-year institutions, 2008-09 to 2015-16



Source: U.S. Department of Education, "Federal Pell Grant Program Annual Data Reports," "Federal Pell Grant Program End of Year Reports, Table 19, 2008-2009 through 2015-2016," June 2017.

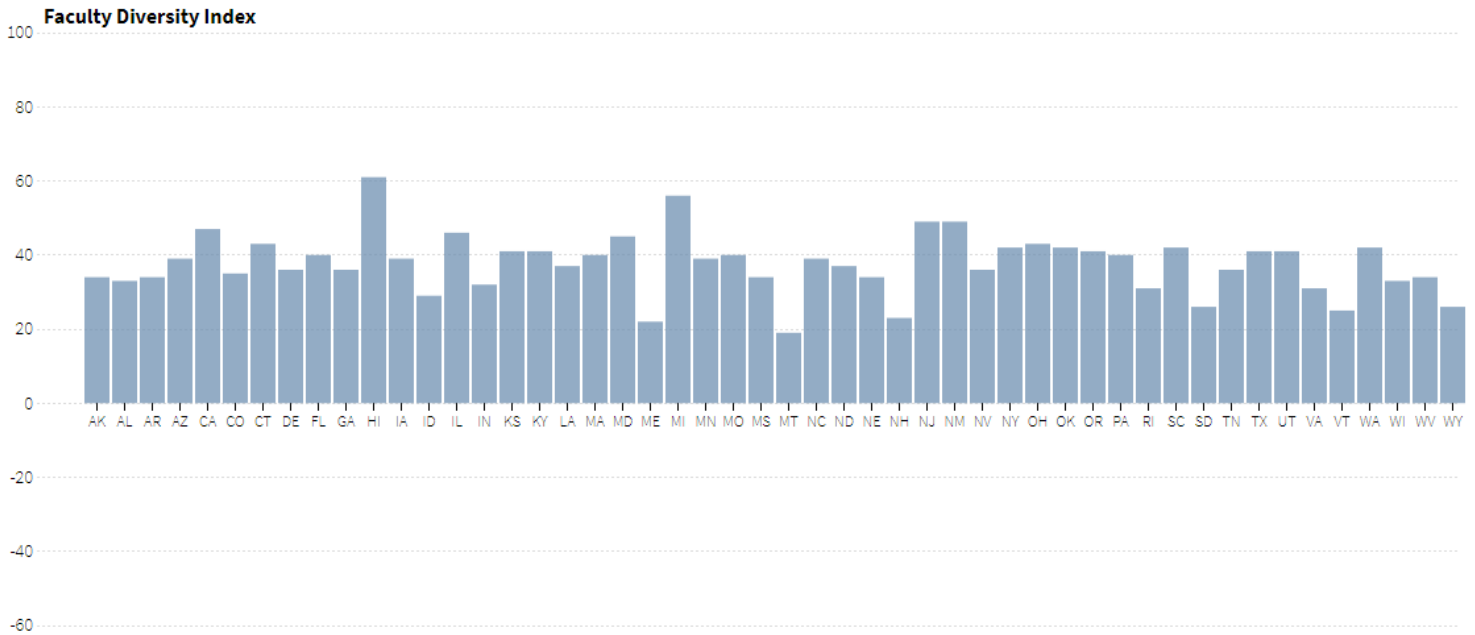


There's a studio-building boom at colleges, as more campuses work to support experiments in online and hybrid teaching. Some of the new campus studios, like Harvard's, rival those at television stations, equipped with green screens, multiple cameras, and microphones. Others are more low-key, housed in a quiet room with a video camera and proper backlighting. Despite different setups, the purposes are the same. In the age of iPads and smartphones, teaching techniques are trying to catch up with the technologies that surround us. On-campus studios provide one way of doing that.



Studios once reserved for film courses or student journalists are now being built to support experiments in online and hybrid teaching across the curriculum. Some of the new campus facilities, like Harvard's Hauser Digital Teaching and Learning Studio, rival those at television stations.

- From 2009-10 to 2013-14, women further increased their representation among full-time faculty and administrators at U.S. public colleges and universities, reaching all-time highs. At public four-year colleges and universities in the SREB region in 2013-14, women accounted for 42 percent of full-time faculty (up from 40 percent in 2009-10) and 51 percent of full-time administrators (up from 48 percent). Women were even more highly represented at public two-year colleges, accounting for 57 percent of faculty (up from 56 percent) and 59 percent of full-time administrators (up from 54 percent). The 2013-14 proportion of women faculty in SREB states was higher than the West and Midwestern averages at four-year institutions but below the level found in the Northeast. At public two-year colleges, the proportion of women faculty in the SREB region topped those in the other regions.

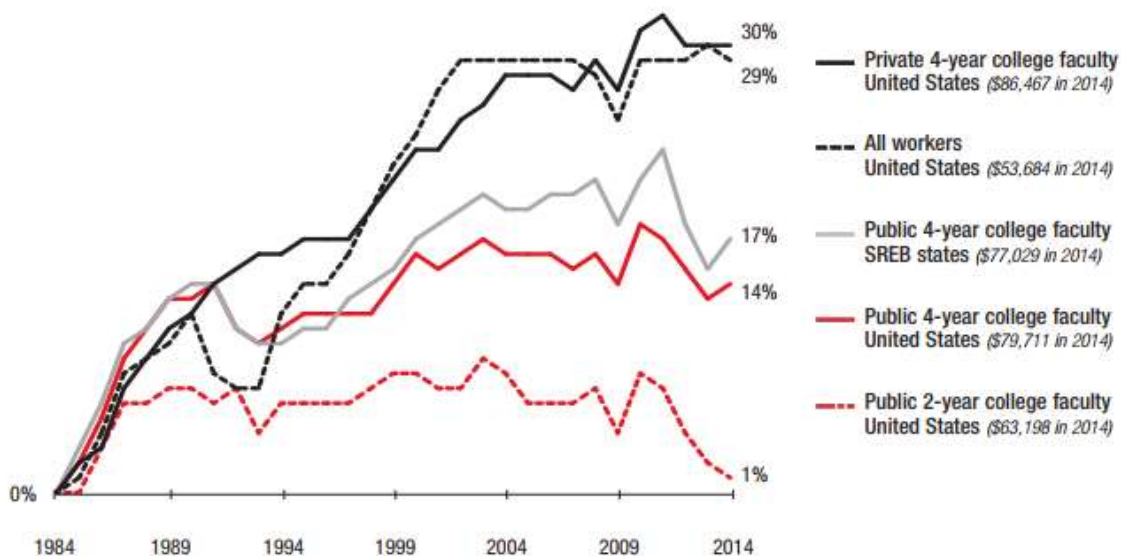


<http://www.chronicle.com>

- Since student bodies turn over every few years, while faculty tend to keep their jobs for decades, it's not surprising that progress on making faculty more diverse has been slow. Nevertheless, targeted efforts have shown what can happen when diversifying faculty becomes a priority. And with nonwhite Americans expected to become a majority within 30 years, pressure to remake faculty more like the nation will only increase.
- Faculty employment to become a high-growth area Two forces drive the demand for new faculty: enrollment growth and faculty attrition. According to projections by the National Center for Education Statistics, four-year colleges and universities are expected to experience an 11 percent enrollment growth, and two-year institutions a 15 percent increase, from 2013 to 2024. And they will need to replace a large proportion of “baby boomer” faculty members who will reach retirement age during this period. As a result, the U.S. Bureau of Labor Statistics forecasts that the nation will need 17 percent more college faculty (both full- and part-time) by 2022 than in 2012. That’s one of the highest U.S. job growth rates — and it means the nation will need 58,000 more faculty on average per year, when growth and replacement needs are factored in. The overall U.S. job growth rate is projected to be 11 percent over the period.

- College faculty members have higher levels of education and higher pay than the average American worker, but the inflation-adjusted growth in regional and national average college faculty salaries has not kept pace with the rate of increase for all U.S. workers. The inflation-adjusted average salary for all U.S. workers nationwide rose 29 percent (rising by \$11,968) from 1984 to 2014. In contrast, inflation-adjusted faculty salaries at public four-year colleges and universities in the SREB region went up about 17 percent (increasing by \$11,181). The average increase at these institutions nationwide was 14 percent over the period. The average public four-year faculty salary in the SREB region remained below the national average. The average salary of full-time faculty at the nation's public two-year colleges, when adjusted for inflation, rose 1 percent (a \$728 increase).

Changes in Annual Pay, 1984 to 2014



Note: Adjusted for inflation. Faculty salaries are 9-month or 9-month-equivalent.

Sources: SREB-State Data Exchange and SREB analysis of National Center for Education Statistics and U.S. Census Bureau data.

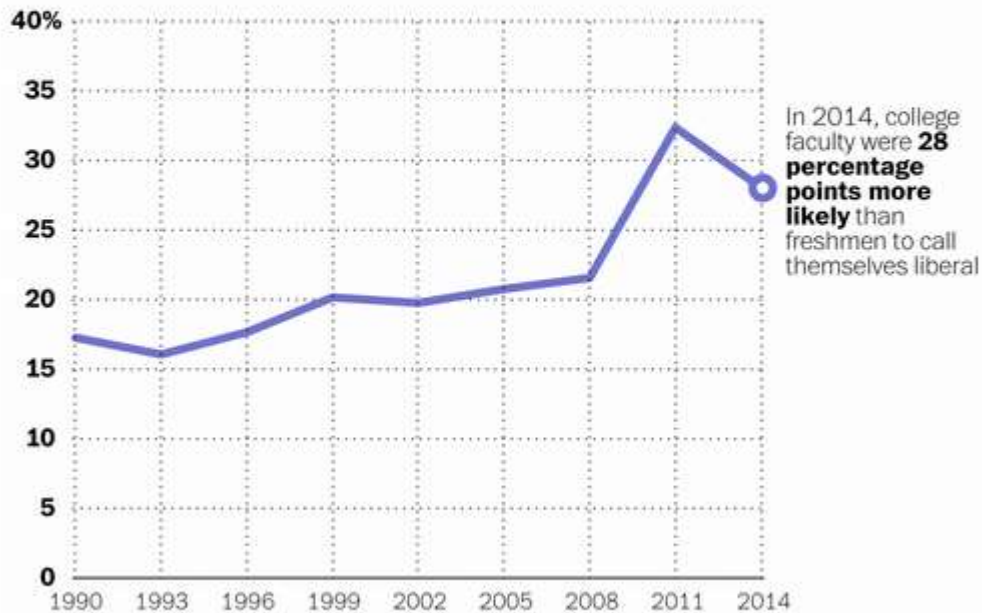
Professors in higher education have become notably more liberal during the past 25 years, according to a recent study, and academics predict that the trend isn't likely to slow any time soon.

During the past quarter-century, academia has seen a nearly 20-percent jump in the number of professors who identify as liberal. That increase has created a lopsided ideological spread in higher education, with liberal professors now outpacing their conservative counterparts by a ratio of roughly 5 to 1.

And while the study by the Higher Education Research Institute reported that liberal students outpace conservative students by nearly 10 percent, roughly half identify as moderate. This has created a wide ideological gap between professors and students.

Growing ideological gap between students and professors

Percentage point difference in college freshmen and professors who identify as "far left" or "liberal," 1990 - 2014

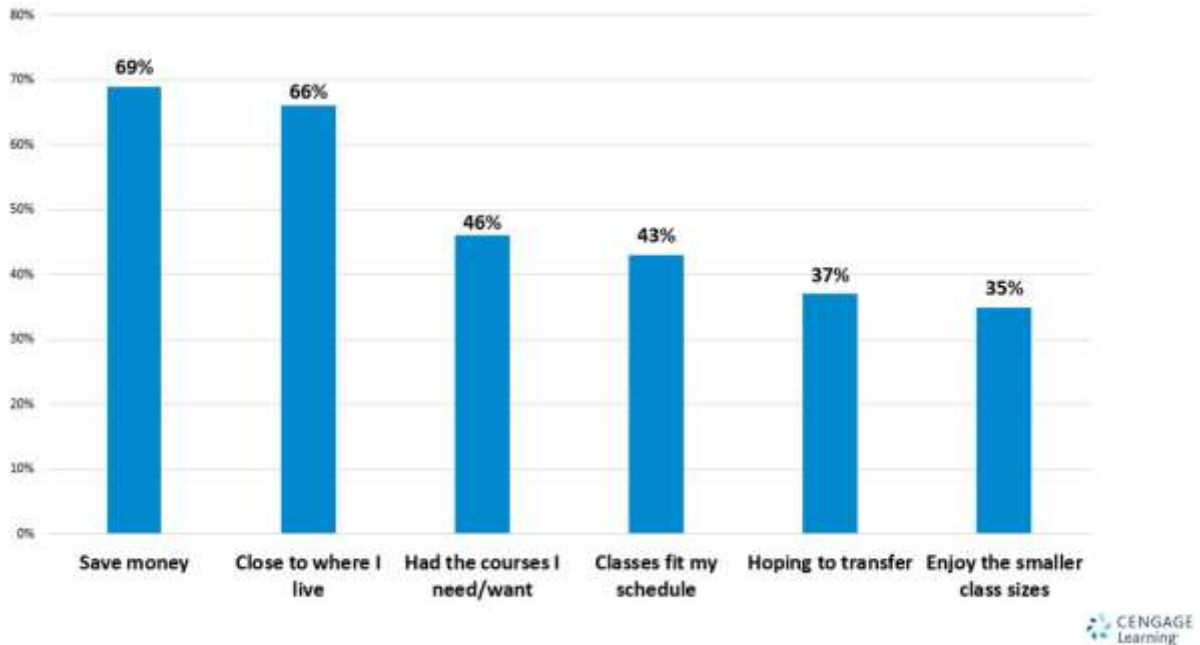


WAPO.ST/WONKBLOG

Source: Higher Education Research Institute

Nearly 2,700 students who are currently attending community college, or who have already transferred, responded to the question: *Why did you opt to attend a community college?* Below, we take a look at what they had to say, and summarize some of the trends we observed.

Top Reasons Students Choose to Attend Community College



10 Reasons to Attend a Community College

Two-year colleges offer many benefits to students, including affordability and convenience.

- Money
- Academic Flexibility
- Financial Aid
- School Life Balance
- STEM Education Opportunities
- Transfer Agreements
- Elements of Traditional Colleges
- Personalized Attention
- Professional Certificates
- Online Class Options

- Professional development is more important than ever for adjunct professors at community colleges, according to speakers here at the annual meeting of the League for Innovation in the Community College.

Part-time instructors teach more than half of all classes and students at community colleges but often feel only a flimsy connection to their institutions, where they're often hired at the last minute and offered little or no job security beyond that semester.

Connecting with students is particularly hard for adjuncts who are on the campus only one night or two days a week. One strategy the college might use to help them is to set up a separate Facebook page or blog to encourage communication.

Steps that can help adjuncts feel more engaged include making sure they're represented in faculty governance, textbook, and hiring committees.

- It's difficult to keep students engaged — and awake — when assigning them readings from long and often dull textbooks. Two researchers wanted to change that.

Their creation is zyBooks, a web-based platform that mixes learning activities such as question sets and animations with some written content, largely as a replacement for text. The idea is that professors can use zyBooks instead of traditional textbooks in order to help students engage with the material and perform better.

zyBooks was founded in 2012 by Frank Vahid, a computer-science professor at the University of California at Riverside, and Smita Bakshi, a former assistant professor at the University of California at Davis who is the company's chief executive. They say the platform is being used by professors at around 250 universities, primarily in courses in science, technology, engineering, and mathematics.

- A research institute called RTI International said on Monday that its newly revamped web tool could provide answers. The tool, known as [The Completion Arch](#), is an effort to provide a data-driven look at the experiences of the nation's approximately 10 million community-college students.



- The Completion Arch brings together 500 measures drawn from federal and state data about colleges across the country, such as students' transfer rates to four-year institutions, how many students are placed in remedial courses, and the average time it takes them to earn a degree.

The tool aims to track students' success at five stages: when they enroll, when they receive developmental-education placement, when their "intermediate progress" can be evaluated, when they transfer or complete a degree, and when they enter the work force.

But while the data assembled by RTI researchers are extensive, much of the state-level information available on the project's website is missing or incomplete. At an event on Monday to discuss the new tool and how colleges can use it, RTI officials said that was deliberate.

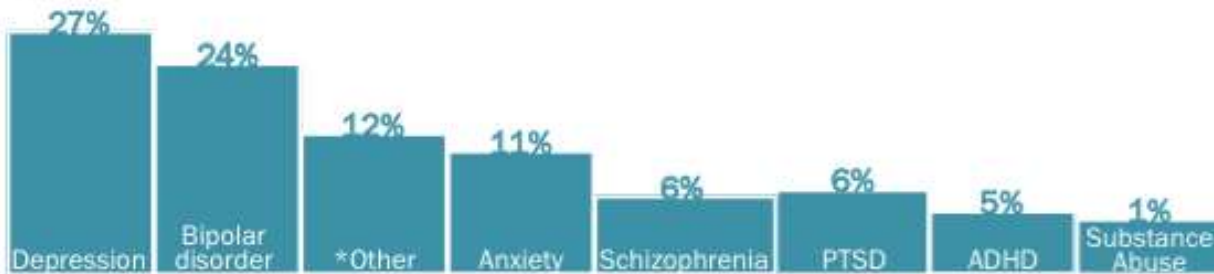
<http://completionarch.org/>

- The National Alliance of Mental Illness surveyed college students diagnosed with a mental health condition within the last five years, with 19% of the surveyed individuals being community colleges. Depression and bipolar disorder constituted more than 50% of the respondents' diagnoses. The results across the spectrum were:

Information About Survey Respondents

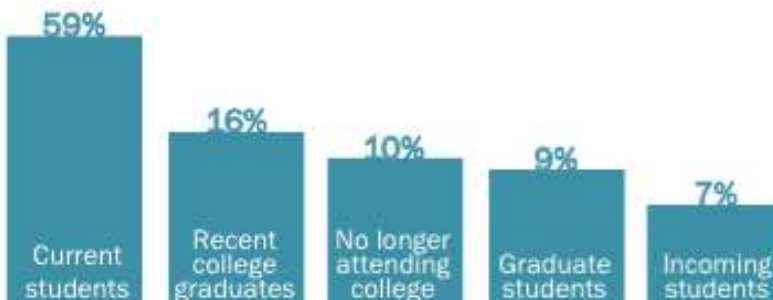
Survey respondents shared information about their primary diagnoses, their status as students, the type of college they attend, their living arrangements while attending college and their years in college.

Type of illness



*Other diagnoses include borderline personality disorder, dysthymia, eating disorders, obsessive-compulsive disorder, schizoaffective disorder and autism spectrum disorder.

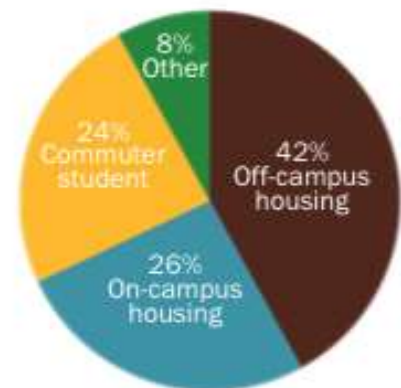
Student status



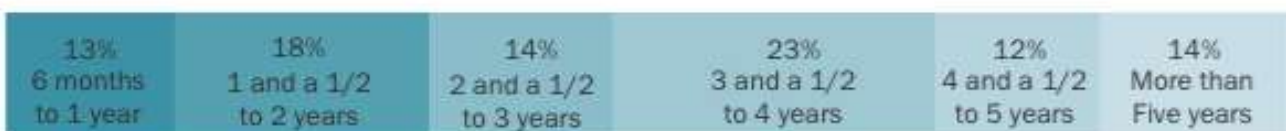
Type of college



Living Arrangements



Years in school



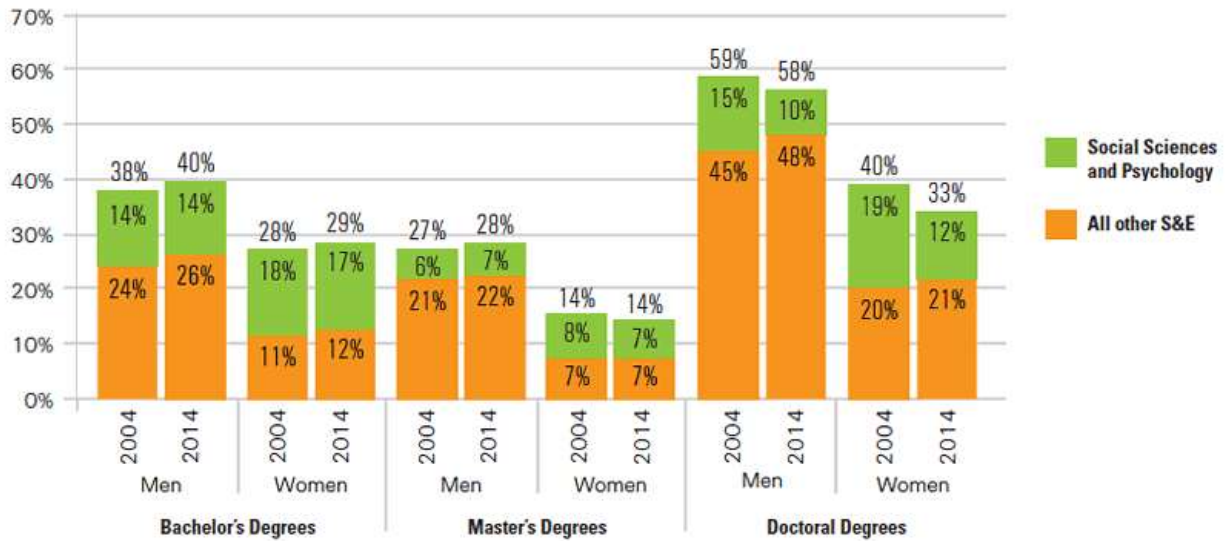
10 Ways to Make the Most of Academic Advising Appointments

1. Understand their role
2. Advisors will expect you to initiate contact, and it is best do so early
3. Take responsibility for your course schedule
4. Be honest
5. Explore your career Options
6. Do your research and be prepared
7. Become familiar with your degree audit report
8. Create a plan of study with your advisor
9. Follow through
10. Stay in touch

5 Student Resources Students should use more often

1. Organizations
2. Academic Advising and Career Resource Center
3. Intramural Sports
4. The Student Union
5. Other Students and Professors

Science and Engineering Degrees as Percentage of All Degrees (2004, 2014)



Note: Analysis is based on Clearinghouse degree records with field of study reported, which represent approximately 87 percent of all degrees reported to IPEDS. Percentages may not sum to 100 percent because of rounding. Professional degrees excluded. Detailed data tables for all 11 years can be downloaded from the NSC Research Center website at http://nscresearchcenter.org/wp-content/uploads/Snapshot_15_S-E_Degrees_Data_Tables_2013-14.xlsx.

The percentage of bachelor's degrees accounted for by S&E disciplines increased two percentage points for men, and one percentage point for women. The percentage of master's degrees accounted for by S&E disciplines increased one percentage point for men, and remained nearly flat for women. At the doctoral level, social sciences and psychology decreased in prevalence, while the other S&E disciplines increased. S&E "hard sciences" now account for 48 percent of all doctoral degrees earned by men, up from 45 percent in 2004.

CAREERS THAT QUALIFY YOU FOR FEDERAL LOAN FORGIVENESS

After you graduate from college or grad school, you're eligible for PSLF if you take a full-time job at a federal, state or local government agency; at a 501(c)3 tax-exempt nonprofit; in the military; or in an AmeriCorps or Peace Corps position. Workers who qualify include military personnel, teachers, social workers, emergency medical technicians, police officers, firefighters, librarians and nurses. A campaign by the National Young Farmers Coalition is also underway to add farming to the list of PSLF-eligible jobs.

The key to PSLF is that it doesn't matter what you do at a nonprofit or in government, as long as you work for an entity focused on public service. So you can be an administrative assistant at a public school, not necessarily a teacher, and still qualify. You can also work for a private organization that's not a 501(c)3 as long as your job falls into the buckets of public safety, public health, public education or library services. Jobs at religious or political organizations or labor unions aren't eligible.

The American Association of Community Colleges (AACC) released a report, "Where Value Meets Values: The Economic Impact of Community Colleges," showing that community colleges are a boon to the American economy at large and to the individual student.

In 2012 alone, the net total impact of community colleges on the U.S. economy was \$809 billion in added income, equal to 5.4 percent of GDP. Over time, the U.S. economy will see even greater economic benefits, including \$285.7 billion dollars in increased tax revenue as students earn higher wages and \$19.2 billion in taxpayer savings as students require fewer safety net services, experience better health, and lower rates of crime.

Students also see a significant economic benefit. For every one dollar a student spends on his or her community college education, he or she sees an ROI of \$3.80.

Despite their willingness to hire new grads, employers admit to a belief that a college education doesn't fully prepare people for some real-world challenges. Asked to name which skills they think recent college graduates lack, employers most often cite interpersonal or problem-solving skills. In short, today's graduates have an enviable comfort with modern technology, but may lack the attributes known as "soft skills." Most often mentioned were interpersonal skills, problem-solving skills and oral communications ability.

Here are the skills most often found lacking in new graduates, and the percentage of hiring managers who cited them:

- Interpersonal or people skills, 52 percent
- Problem-solving skills, 46 percent
- Oral communication, 41 percent
- Leadership ability, 40 percent
- Written communication, 38 percent
- Teamwork, 37 percent
- Creative thinking, 36 percent
- Project management, 26 percent
- Research and analysis, 16 percent
- Math, 15 percent
- Computer and Technical, 13 percent



"One in five employers feel colleges do not adequately prepare students with crucial workplace competencies, including soft skills and real-world experience that might be gained through things like internships," said Rosemary Haefner, chief human resources officer for CareerBuilder. "Job seekers with a good mix of both technical and soft skills will have the best prospects right out of college."

Source: National Center for Education Statistics, Digest of Education Statistics

- Maryland Senate Bill 210, which went into effect Monday, June 1, 2015, makes it illegal for colleges and universities in Maryland to demand or require access to students' social media accounts. It also protects colleges from legal liability over students' online speech and grants students legal grounds to sue a college or university for violation of any mandates, according to the Student Press Law Center.

- Community colleges are learning that getting the authorization to offer four-year degrees doesn't mean the struggle is over.

Twenty-two states allow community colleges to award bachelor's degrees, and many administrators believe that number will grow. During the 2015 American Association of Community Colleges annual meeting here, many of those administrators said they are working to convince the public and their counterparts in the four-year community of the benefits of offering a four-year program -- and that they continue to face limits and opposition.

- From 1987 to 2013, the average annual growth rate for liberal arts or liberal studies degrees at community colleges was 4.3 percent, according to data being released today as part of the Humanities Indicator Project of the American Academy of Arts & Sciences. The total number of degrees awarded a year in these fields grew over that time period from 113,587 to 338,688. The highest rate of increase came in 2010-12, when average annual growth hit 8.5 percent. Those were years when many community colleges reported increased enrollments from students planning to transfer later to four-year institutions.

More part-time community college students are coming to class prepared, working with instructors and participating with other students.

Those findings are part of a broader trend in which part-time students at community colleges are becoming more engaged in their learning, based on a report released today by the Center for Community College Student Engagement at the University of Texas at Austin. Some of the highlights from the report include:

- Part-time students who reported making a class presentation during the spring semester increased from 60 percent to 67 percent from 2004 to 2014.
- The share of part-time students who discussed career plans with an instructor or adviser increased from 61 percent to 70 percent over the same time period.
- Part-time students who reported working with classmates outside of class increased from 52 percent to 57 percent.

- College students around the country promote interfaith to combat religious intolerance that may emerge as religious populations grow, through movements such as the Better Together campaign.

According to projections by the Pew Research Center, the Muslim population will not only equal but also surpass the population of Christians by 2070. Islam will increase faster than the population of the world from 2010 to 2050 with a 35 percent growth, researchers said.

- Transfer rates among U.S. college students are at a high, with a recent report showing that more than one third of students choose to transfer universities at least once during their academic careers.

A July 6, 2015 study published by nonprofit Center shows that of the 3.6 million college students surveyed nationwide — all of who started their undergraduate careers in 2008 — 37.2% transferred between universities. In addition, of the students who chose to transfer, 45% decided to change schools more than once.

These statistics show only a minor rise from the center's 2012 report, which demonstrated a transfer rate of up to 34.4%.

- At the start of this upcoming school year, the U.S. government will roll out its own ranking of national colleges and universities. The framework for this new college rankings system was presented at the end of 2014 at the direction of the Obama administration as a way to confront the growing problems within higher education in America — most notably, the epidemic of student debt.

The ratings system is not supposed to be like those made by U.S. News and World Report or similar publications, but is instead described by the department website as “a ratings system that is clear, fair and focused on a few key critical measures of institutional performance, while accounting for the diversity and complexity of the nation's rich system of higher education.”

With outcomes being a key component of the Department of Education's new rankings framework and states beginning to allot funding based on performance, graduation rates are becoming more important than ever.



Cengage Learning Student Research —

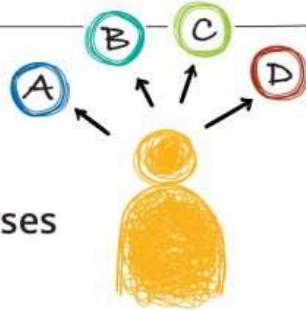


98% agree:

community colleges are an important part of the U.S. educational system.

Cengage Learning Student Research —

Why did you opt to attend a **community college?**

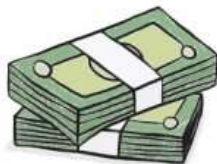


46% Had the courses I need/want



35% Enjoy the smaller class sizes

26% Improve grades/study skills before attending a four-year institution



69% Save money

From "Today's Student" survey —

45%

of two-year college students feel their classes are relevant for an eventual job.



45%

of **two-year** college students feel their classes are relevant for an eventual job.



31%

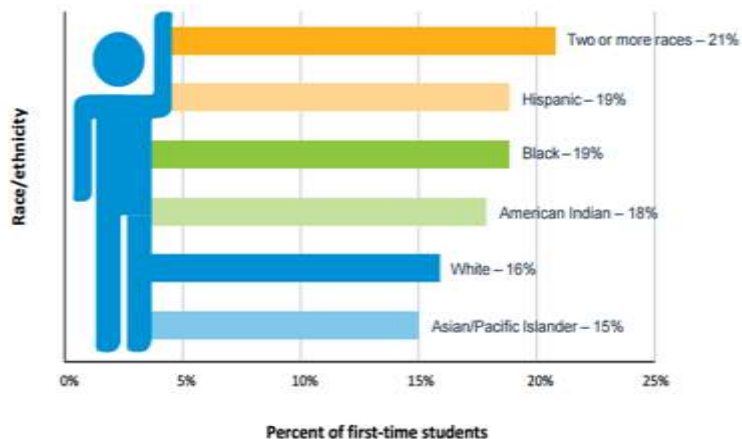
of **four-year** college students feel their classes are relevant for an eventual job.

More than 4,250 participated in the spring 2015 Student Engagement Insights survey, which yielded data for the infographic section titled "Cengage Learning Student Research." Of those students, 64 percent have attended or currently attend a community college.

Changing face of students

Minorities comprise a majority of first-time community college students.

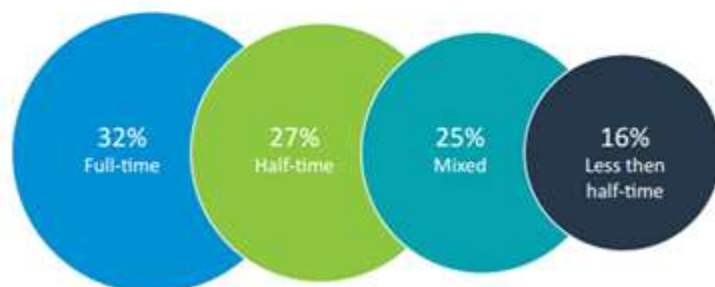
Community college students new to higher education



Attendance trends

Fewer than one-third of students at community colleges attend exclusively full time.

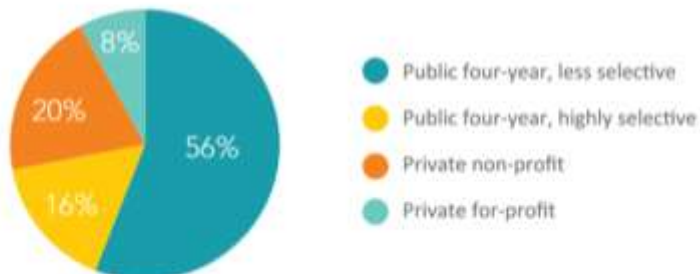
Attendance patterns, 2011-12



Transfer students

The majority of community college students transfer to public institutions.

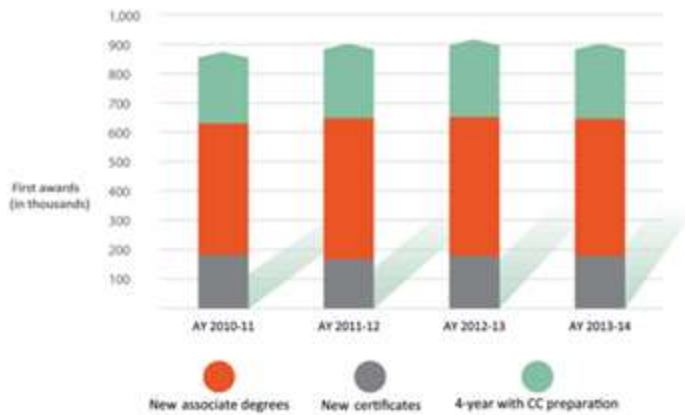
Community college transfer students



Completion progress

Community colleges contributed one million new postsecondary credentials in the 2013-14 academic year.

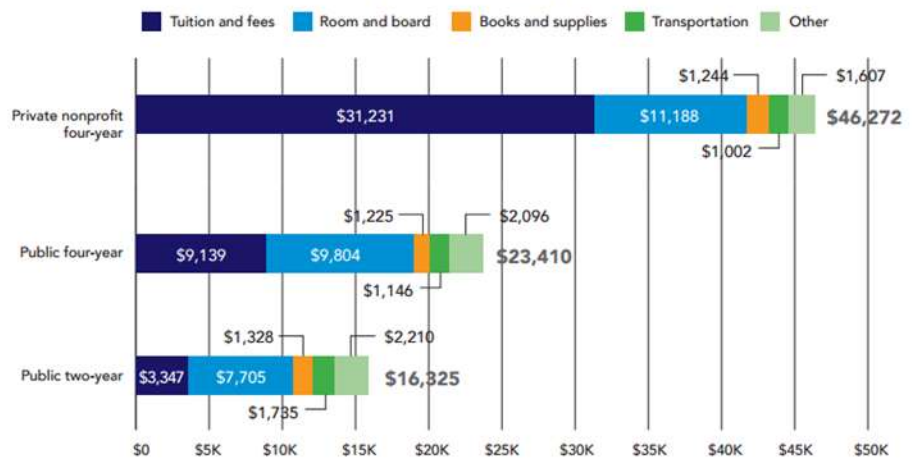
New postsecondary credentials at community colleges: 2010-11 to 2013-14



Student expenses

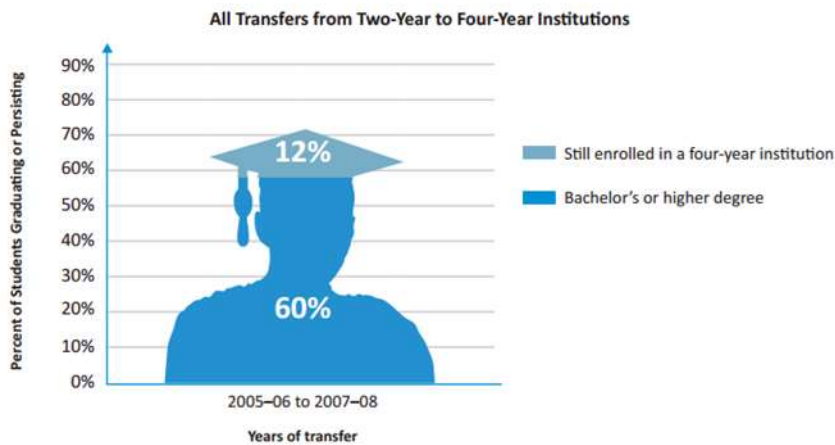
The average public two-year tuition and fees comprise 21 percent of a student's budget.

Average student expenses for 2014-15



Community College Transfer Outcomes

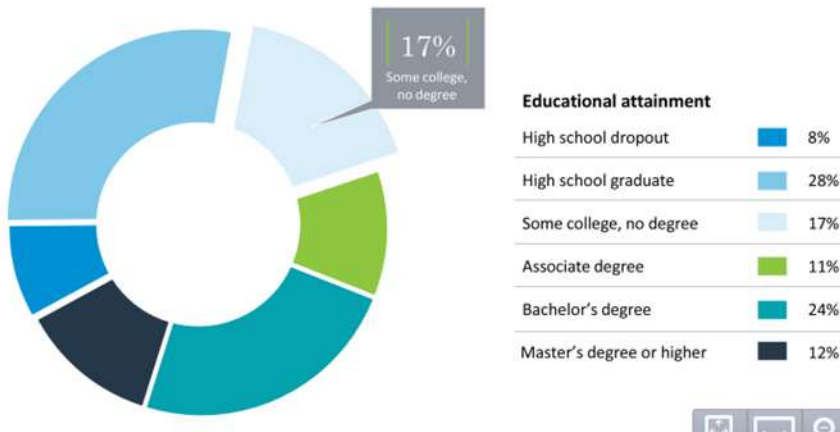
About 72 percent of students who transferred to four-year institutions either graduated or persisted.



Some college but no degree

Seventeen percent of the U.S. population has some college but no degree.

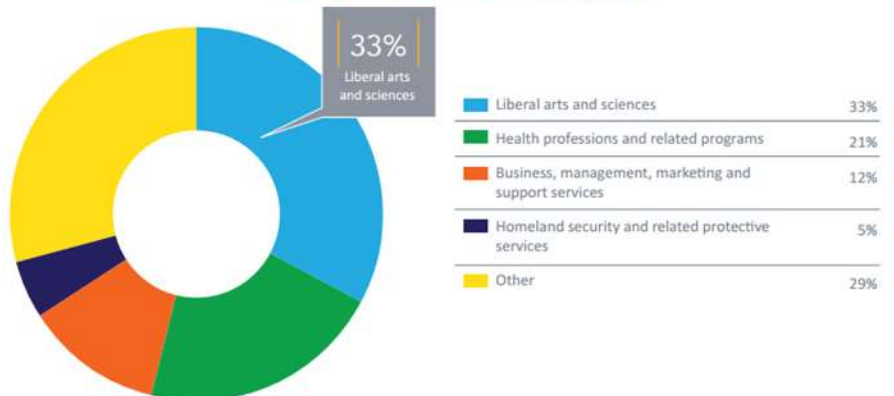
Highest educational attainment of individuals 25 and older



What are students majoring in?

Liberal arts and health professions are among the disciplines popular at community colleges.

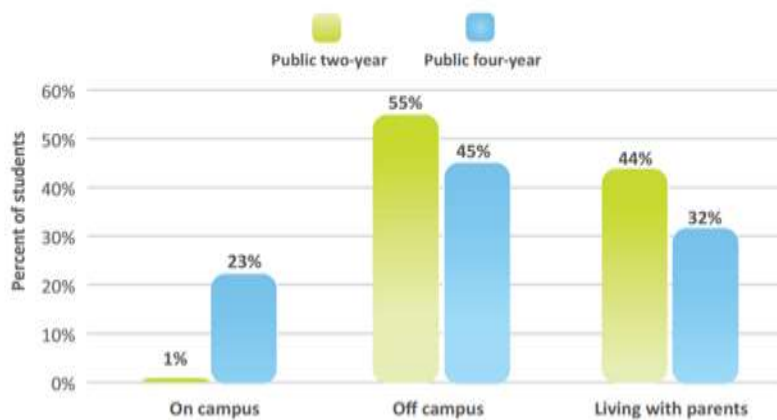
Field of study at community colleges



On-campus housing

Only one percent of community college students live on campus.

Where college students lived in 2011–12



TAPPING INTO THE BRAINS OF PROSPECTIVE STUDENTS

01. Overwhelmed by the application process



35% of students feel overwhelmed by the application process

Only 55% of students attend their first choice



02. Worried about financing

77% have financial support from parents



03. Early decision becoming a bigger factor



2.5x more students use early decision since it debuted in 1999



04. Less experience socializing face-to-face



44% of students rank social activities as an important factor in their decision process



05. Undergrad is the first step in long process

Bachelor's degree is the new high school diploma



86% of students go to college to get a better job



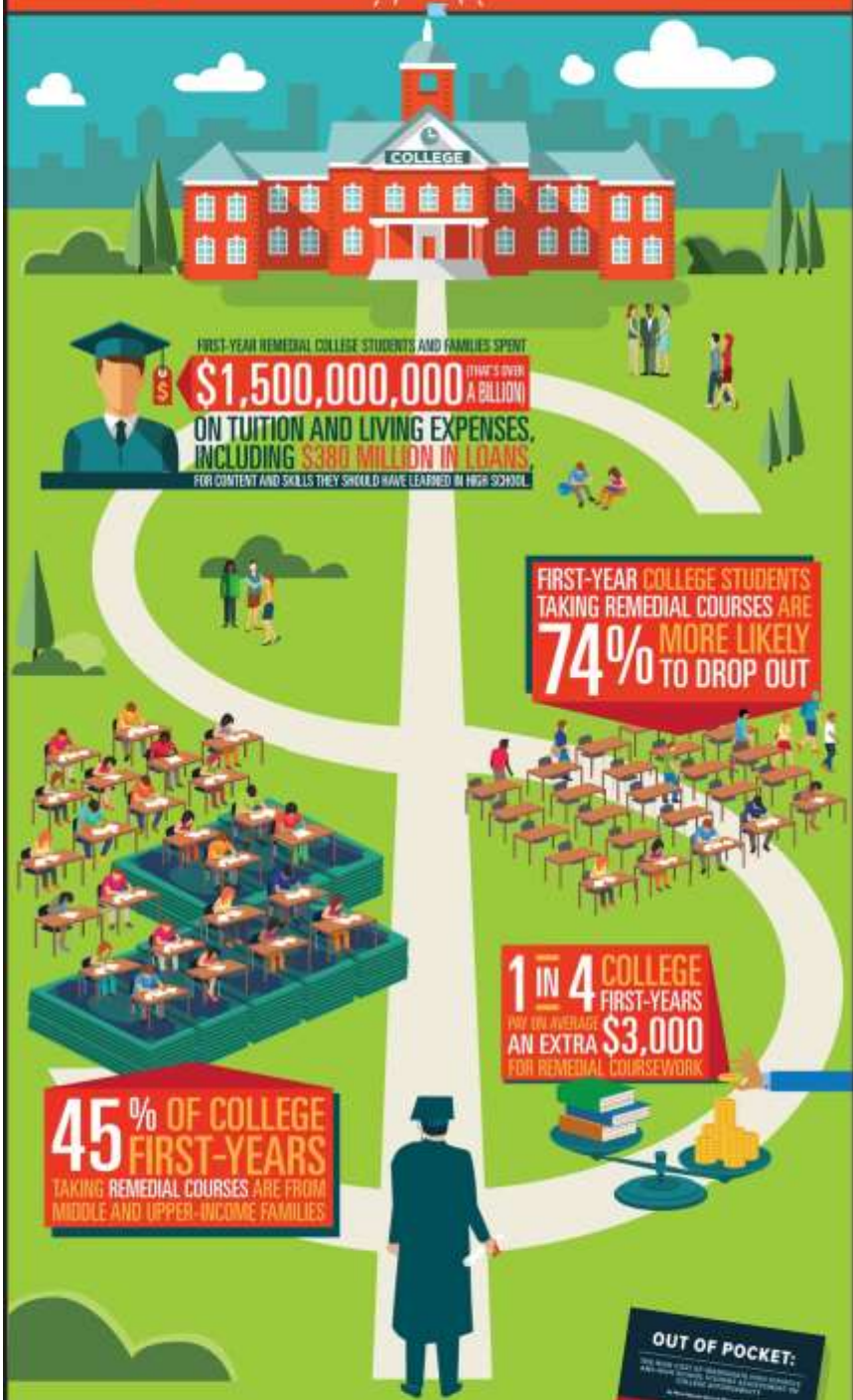
Sources:
Higher Education Research Institute © UCLA

@ohointeractive

NOT READY FOR COLLEGE

THE LACK OF RIGOR IN OUR HIGH SCHOOLS IS MAKING COLLEGE EVEN MORE EXPENSIVE.

AND IT'S NOT JUST A LOW-INCOME OR COMMUNITY COLLEGE PROBLEM.



FIRST-YEAR REMEDIAL COLLEGE STUDENTS AND FAMILIES SPENT **\$1,500,000,000** (THAT'S OVER A BILLION) ON TUITION AND LIVING EXPENSES, INCLUDING **\$380 MILLION** IN LOANS, FOR CONTENT AND SKILLS THEY SHOULD HAVE LEARNED IN HIGH SCHOOL.

FIRST-YEAR COLLEGE STUDENTS TAKING REMEDIAL COURSES ARE **74% MORE LIKELY TO DROP OUT**

1 IN 4 COLLEGE FIRST-YEAR STUDENTS PAY AN AVERAGE OF AN EXTRA **\$3,000** FOR REMEDIAL COURSEWORK.

45% OF COLLEGE FIRST-YEAR STUDENTS TAKING REMEDIAL COURSES ARE FROM MIDDLE AND UPPER-INCOME FAMILIES.

TO READ MORE OR TO DOWNLOAD THE COMPLETE RESEARCH REPORT FROM EDUCATION REFORM NOW AND EDUCATION POST VISIT EDUCATIONPOST.ORG.



educationpost
better conversation. better education.

Number of U.S. Colleges and Universities	Number	Enrollment
Public 4-year institutions	629	6,837,605
Private 4-year institutions	1,845	4,161,815
Public 2-year institutions	1,070	6,184,229
Private 2-year institutions	596	303,826
Total	4,140	17,487,475
Undergraduate		14,473,884
Graduate		2,097,511
Professional		329,076
Degrees Awarded Annually:		Number
Associate		696,660
Bachelor's		1,439,264
Master's		574,618
Doctorate		52,631
Professional		87,289
Enrollment Demographics:		
Women		57.4%
Full-time		61.7%
Minority		30.9%
Foreign		3.3%

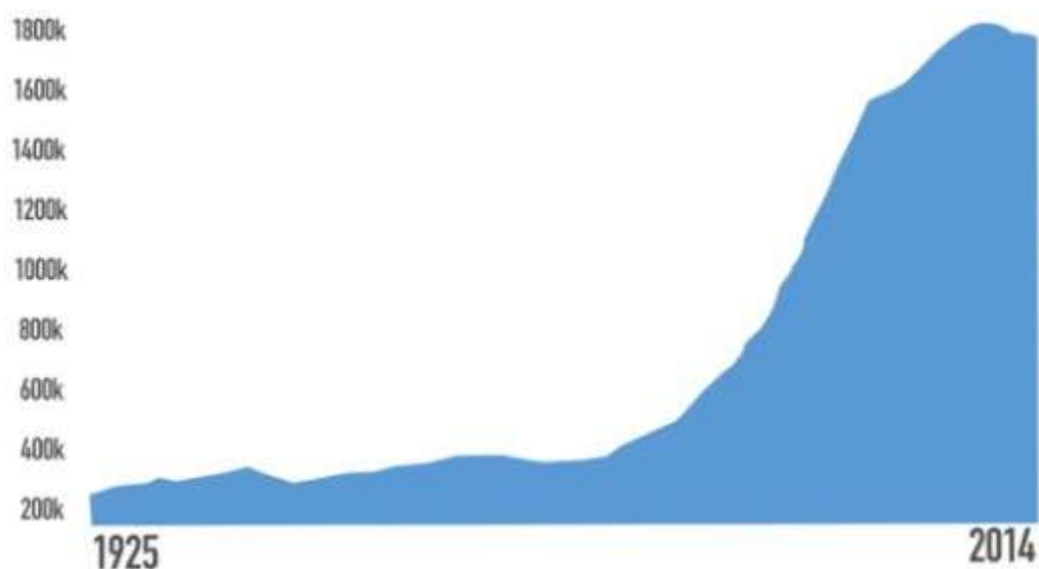
In the United States, the illiteracy rate has not changed in the past 10 years. According to the US Department of Education and the National Institute of Literacy, the following statistics outline the state of literacy in the United States.

- ◆ 32 million adults cannot read in the United States equal to 14% of the population.
- ◆ 21% of US adults read below the 5th grade level.
- ◆ 19% of high school graduates cannot read.
- ◆ 85% of juveniles who interact with the juvenile court system are considered functionally illiterate.

70% of inmates in America's prisons cannot read above the fourth grade level.

- Over the past 30 years, incarceration rates in the U.S. (especially for African American men) have increased to unprecedented levels, with about 2.25 million Americans behind bars as of 2014. Once prisoners are released, their employment prospects can be dim. Many employers are reluctant, or in some cases forbidden, to employ people who have been incarcerated.

U.S. PRISON POPULATION



- As the Obama administration stands ready to announce plans to open up Pell Grant eligibility to inmates, one group in particular is working to funnel more former inmates and gang members into college. “There’s this lost group of young people—6.7 million in this country right now—that are not engaged in college, not working” and generally not productively contributing to society but who are creating problems for the local communities in which they live, said Mark Culliton, CEO of College Bound Dorchester, an organization that works with high school dropouts and former gang members to get them into community college.

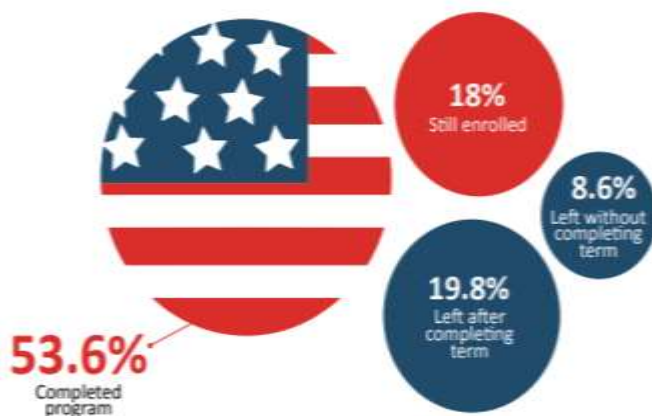
- Americans are increasingly uncomfortable with the current federal role in public education, according to a poll. Just 15 percent of respondents in a Gallup poll said the federal government – as opposed to state governments or local school boards – should have the greatest role in deciding what is taught in public schools. After a survey found support for Common Core shrinking, a second poll found an outright majority opposes the standards. Only 33 percent of U.S. adults who have heard of Common Core favor its use in the nation’s classrooms, compared to 59 percent who are opposed, the Gallup poll found.
- Proficiency on the keyboard, according to the Common Core, adopted in most states, is more important than teaching legible handwriting, reports Maria Kinnikova for *The New York Times*. Psychologists and neuroscientists are not so sure. There is evidence of a connection between handwriting and a wide range of educational development processes. One example is that reading is learned more quickly when young students begin to write by hand, and they are better at generating ideas and information retention at this point.
- In August 2013, President Obama announced the “8 Keys to Veterans’ Success on Campus,” eight concrete steps institutions of higher learning can take to help student veterans succeed on campus. At that time, 250 schools had committed to implementing the 8 Keys. Since then, the number of community colleges and universities pledging their support has more than doubled with partners all across the country including the University of Michigan, Solano Community College in California, the University of Florida, eighteen members of the City University of New York (CUNY) and Texas A&M University.

In August 2009, student veterans started using Post 9/11 GI benefits toward their postsecondary education. To gauge how well these students do, data from the U.S. Department of Veterans Affairs was matched to National Student Clearinghouse enrollment and completion data. The results show that about seven out of 10 student veterans using the benefits (71.6 percent) completed or were progressing in their programs between August 2009 and December 2013. More than half (53.6 percent) finished their program, while 18 percent were still enrolled. Of the veterans still enrolled, more than one-third attended public two-year institutions; slightly more than a quarter were in for-profit institutions.

Veterans benefits help students succeed

Of veterans still enrolled in college, more than one-third are at public two-year institutions.

Academic outcomes of student veterans using Post 9/11 GI Bill benefits



Source: Student Veterans of America, "National Veteran Education Success Tracker: A Report on the Academic Success of Student Veterans Using the Post 9/11 GI Bill," 2017.



- ◆ Developed by more than 100 education experts in collaboration with the Administration and the Departments of Education and Veterans Affairs, the 8 Keys to Veterans' Success on Campus are specific actions that institutions of higher education can take to help veterans and service members transition into the classroom and thrive once they are there. Schools across the country are stepping up to ensure that the women and men who fought for our nation in uniform can succeed on campus, complete their college programs and obtain career-ready skills.

- More students from China are studying in the United States than are students from all non-Asian countries combined. China accounts for 29 percent of foreign students in the country. India ranks second, at 11 percent.
- Whether or not a student makes it through college is a huge factor in the student debt crisis. In 2014, the New York Times reported that the bigger problem than student debt alone is “the hundreds of thousands of people who emerge from college with a modest amount of debt, yet no degree” and cited college accountability as the main solution the problem.
- Community college students are more likely to take remedial courses than their four-year counterparts. One estimate suggests that more than two-thirds of community college students take at least one remedial course, compared with 40 percent of four-year college students.
- Grants are now available for community colleges that would like to expand their offerings to include the Plus-50 Encore Completion program started by the American Association of Community Colleges. This program helps adults over the age of 50 find a new start in the workplace by training them up for in-demand industries today. The program is part of a larger initiative to increase the number of college graduates in the United States through 2020.
- Veterans struggling to find full-time employment now have another service at their disposal. The Veterans Retraining Assistance Program (VRAP) is a part of the 2011 VOW to Hire Heroes Act, and it offers vets the necessary training in a myriad of high-demand industries through local trade schools and community colleges. The veterans funding program will fill in gaps left by other services geared to veterans, ensuring every person who serves the country in the armed forces will have the opportunity to get training and gainful employment after their years of service.
- College enrollment numbers tend to be cyclical. A poor economy forces many adult learners into the classroom to retrain or hone their skills, but when it improves, enrollments decrease as they return to the workforce. That's the current state of affairs for community colleges and for-profit institutions across the country according to new data released by the National Student Clearinghouse Research Center. The report reveals that 2015 totals are down 1.9 percent -- to fewer than 18.6 million students -- compared to spring 2014. Most of that decline is due to students who are 24 and older. That group declined by 3.6 percent, to about 7 million. The majority of that decline occurred at two-



year public colleges -- which were down 3.9 percent -- and at four-year for-profit institutions, which had a drop of 4.9 percent compared to last spring.

Nationally the unemployment rate is down to 5.4 percent, according to the U.S. Bureau of Labor Statistics. "The trend of declining enrollment for community colleges is not surprising," said Walter Bumphus, president of the American Association of Community Colleges, in an email. "Remembering that the majority of our students are working, it makes sense that robust job market would have an impact on enrollment." But two-year colleges still enroll nearly 50 percent of American students, he said.

- Computers and technology equipment would become qualified expenses in 529 college savings plans under a bill passed by the U.S. House of Representatives on Feb. 25.

H.R. 529 also designates computer software and internet access as qualified expenses while students are enrolled in school.

- Even when African-American students complete the recommended "core or more" college readiness courses in high school, they still don't meet the "college readiness" benchmarks on the ACT at the same rate as other students, according to a new report released jointly Monday by ACT and UNCF.

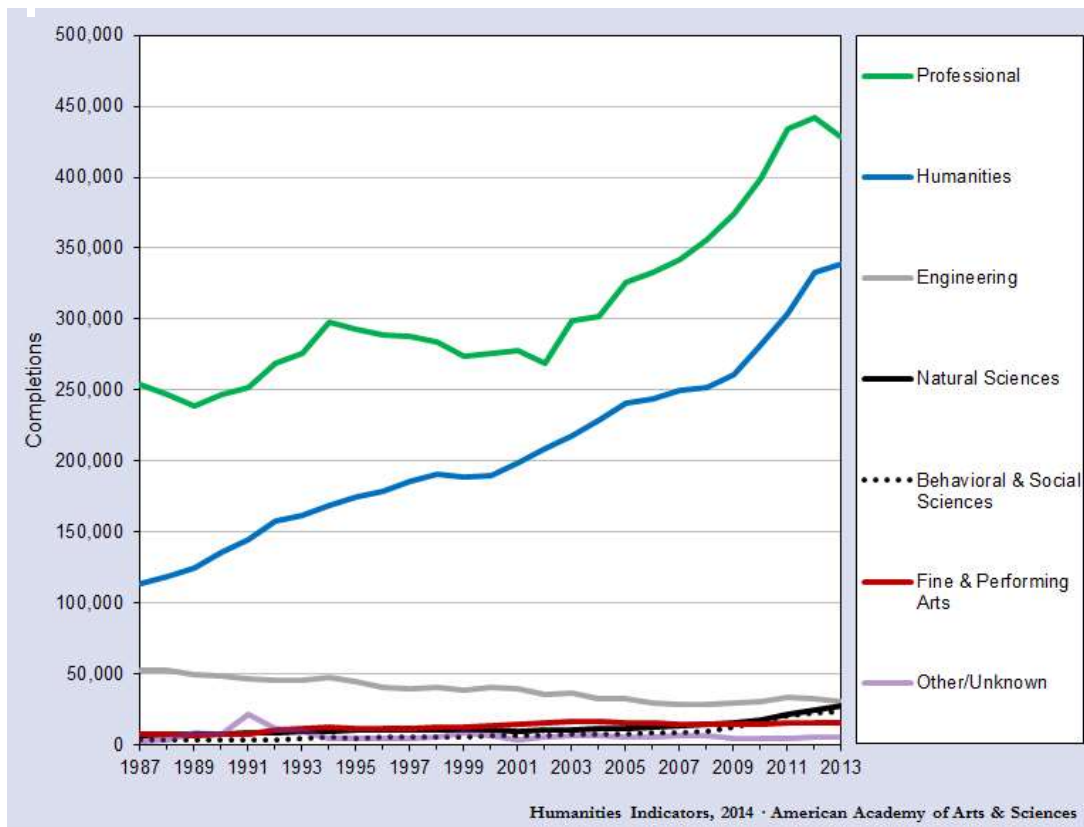
Officials at ACT say the statistics—based on national ACT data and a new report titled "The Condition of College & Career Readiness 2014: African American Students"—suggest that African-American students are being subjected to less rigorous instruction than that of their peers who perform better on the ACT.

- The National Endowment for the Humanities (NEH) is making efforts to ensure that the more than 7 million students enrolled in two-year institutions have access to high-quality humanities resources through the creation of a new NEH grant program for community colleges.

The new Humanities Initiatives at Community Colleges is a grant program intended to strengthen the teaching and study of the humanities in subjects such as history, philosophy, and literature within two-year institutions.

- While recent years have seen a decline in the number of graduates earning humanities degrees at four-year colleges and universities, at the community-college level, the share of associate's degrees earned in a humanities discipline or requiring a substantial amount of humanities coursework—a degree in liberal or general studies, for example—increased in 2012 and 2013 (the most current years for which data are available). In these years, the humanities' share of all associate's degrees was almost four times as large as the field's share of all

bachelor's degrees, evidence that two-year institutions are a key element of the humanities higher education ecosystem.



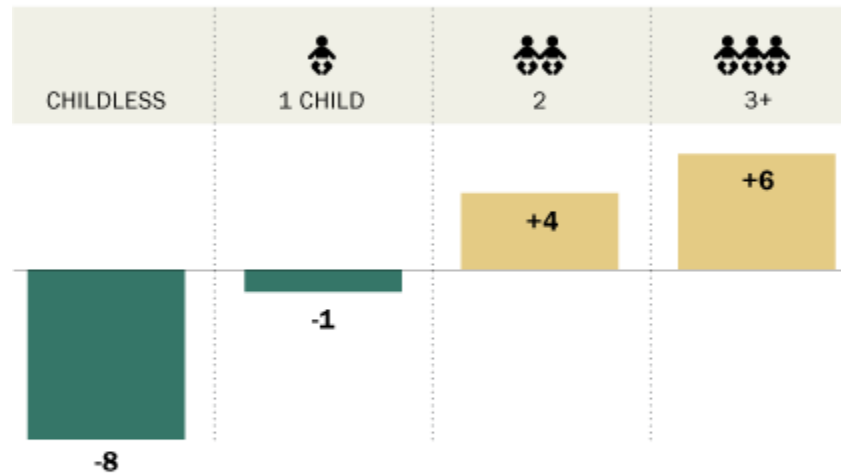
http://www.humanitiesindicators.org/binaries/pdf/HI_HigherEd2015.pdf

- Most Americans feel that their college education was beneficial, but they vary with respect to how well they felt their postsecondary education prepared them for work. The majority (about 62 percent) believe their college degree contributed toward their intellectual growth. Slightly more than half (53 percent) thought it was a stepping stone for job opportunities, and 49 percent reported it gave them specific job-related knowledge and experience. When asked how their education has prepared them for the workforce, professional and technical certificate earners were most likely to respond positively — 26 percent said very well and another 52 percent somewhat well. In comparison, about 12 percent of associate-degree earners felt their education prepared them very well and another 46 percent somewhat well. Sixteen percent of baccalaureate completers indicated their education prepared them very well for the workforce and 51 said somewhat well.

Among women in the United States, postgraduate education and motherhood are increasingly going hand-in-hand. The share of highly educated women who are remaining childless into their mid-40s has fallen significantly over the past two decades.

Among the Highly Educated, Declines in Childlessness and Increases in Big Families

Percentage point change in children ever born, among women ages 40 to 44 with a postgraduate degree, 1994-2014



Note: The "1994" timepoint is based upon combined data from 1992, 1994, and 1995. The "2014" timepoint is based upon combined data from 2012 and 2014. A new working paper suggests that Current Population Survey estimates of childlessness may have been somewhat too large until 2012, when the Census Bureau implemented new editing rules. See "About the Data" for more details.

Source: Pew Research Center analysis of Current Population Survey June Supplements

PEW RESEARCH CENTER

Appendix A. Share of Public Two- and Four-Year Institutions with Campus Child Care in 2015 by State

State	Public 2-Year Institutions		Public 4-Year Institutions		All Public 2- & 4-Year Institutions		Rank
	Total #	% with Campus Care	Total #	% with Campus Care	Total #	% with Campus Care	
Alaska	1	0%	3	33%	4	25%	43
Alabama	25	12%	14	36%	39	21%	46
Arkansas	22	18%	11	27%	33	21%	46
Arizona	20	30%	10	20%	30	27%	41
California	116	81%	34	91%	150	83%	2
Colorado	14	29%	14	71%	28	50%	22
Connecticut	12	75%	9	33%	21	57%	15
District of Columbia	0	0%	2	50%	2	50%	22
Delaware	1	100%	2	0%	3	33%	38
Florida	4	25%	38	55%	42	52%	21
Georgia	24	25%	29	17%	53	21%	46
Hawaii	6	83%	4	50%	10	70%	9
Iowa	16	44%	3	100%	19	53%	17
Idaho	4	50%	4	100%	8	75%	5
Illinois	48	75%	12	83%	60	77%	4
Indiana	1	0%	15	67%	16	63%	11
Kansas	25	28%	8	75%	33	39%	32
Kentucky	16	31%	8	50%	24	38%	34
Louisiana	16	13%	17	24%	33	18%	50
Massachusetts	16	63%	14	43%	30	53%	17
Maryland	16	81%	13	46%	29	66%	10
Maine	7	43%	8	38%	15	40%	31
Michigan	27	22%	19	79%	46	46%	26
Minnesota	31	35%	12	67%	43	44%	28
Missouri	14	43%	13	46%	27	44%	28
Mississippi	15	40%	8	50%	23	43%	30
Montana	11	45%	6	67%	17	53%	17
North Carolina	59	24%	16	38%	75	27%	41
North Dakota	5	60%	9	44%	14	50%	22
Nebraska	8	38%	7	86%	15	60%	13
New Hampshire	7	43%	6	33%	13	38%	34
New Jersey	19	42%	13	62%	32	50%	22
New Mexico	19	42%	9	56%	28	46%	26
Nevada	1	100%	6	67%	7	71%	8
New York	36	83%	43	77%	79	80%	3
Ohio	25	60%	35	49%	60	53%	17
Oklahoma	13	23%	17	35%	30	30%	40
Oregon	17	47%	9	67%	26	54%	16
Pennsylvania	17	47%	45	31%	62	35%	37
Rhode Island	1	100%	2	100%	3	100%	1
South Carolina	20	15%	13	31%	33	21%	46
South Dakota	5	40%	7	29%	12	33%	38
Tennessee	13	15%	10	70%	23	39%	32
Texas	60	35%	45	42%	105	38%	34
Utah	1	100%	7	71%	8	75%	5
Virginia	24	17%	16	31%	40	23%	44
Vermont	1	0%	5	20%	6	17%	51
Washington	17	88%	26	65%	43	74%	7
Wisconsin	17	35%	14	86%	31	58%	14
West Virginia	9	0%	13	38%	22	23%	44
Wyoming	7	57%	1	100%	8	63%	11

Note: Community College defined as degree-granting public affiliation postsecondary institutions offering associate's degrees. Four-year public institutions defined as degree-granting public affiliation postsecondary institutions offering bachelor's degrees and above. Institutions in outlying areas/territories excluded.

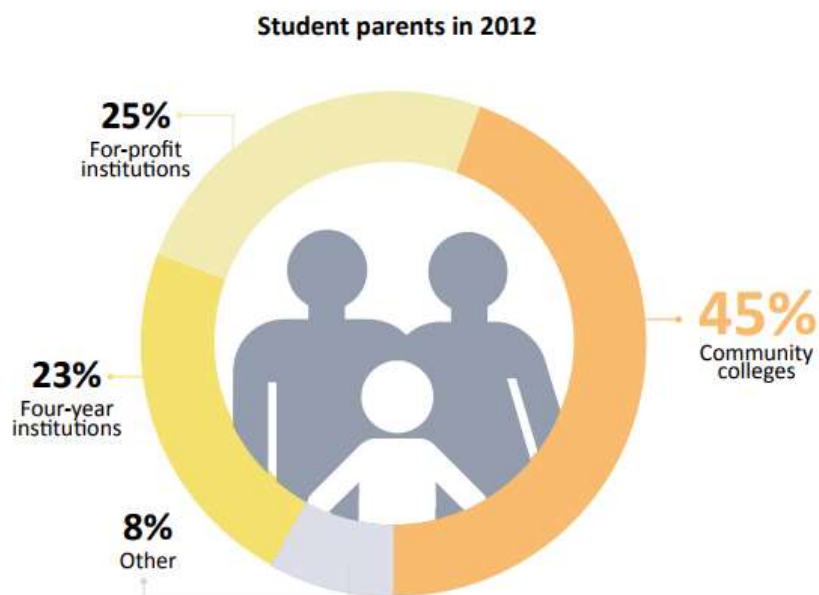
Source: IWPR analysis of data from the U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data Systems (IPEDS), 2015 Institutional Characteristics Component (2015 Preliminary Release).

7

States can play a large role in improving access to child care for student parents. Variation in the availability of campus child care, the restrictiveness of subsidy rules for parents in education and training programs, and the length of child care subsidy waiting lists, means some states support student parent success more than others. Relaxing eligibility requirements for child care subsidies, including the elimination of burdensome work requirements, would allow student parents more flexibility to pursue postsecondary education credentials in a way that fits with their busy schedules and accounts for their multiple responsibilities.⁴ Greater federal, state, and institutional investment in campus child care is also needed so that campuses can become better equipped to support growing numbers of college students with children. As the country strives to increase rates of degree attainment among students from diverse backgrounds, making quality child care more accessible represents a critical step toward improving college completion among the 4.8 million undergraduate students who are also parents.

More student parents

Community colleges enroll the most student parents of all higher education sectors.



Sources: Institute for Women's Policy Research, "College Students with Children: National and Regional Profiles," January 2017. AACC analysis of Integrated Postsecondary Education Data System (IPEDS), fall 2012 enrollment data file, U.S. Department of Education, National Center for Education Statistics.



Rural Vs. Urban

Rural areas have higher attainment in associate degrees than do urban areas but lag behind in bachelor's and advanced degrees.

	Rural	Urban
Some College	23%	22%
Associate Degree	9%	8%
Bachelor's Degree Or Higher	19%	32%

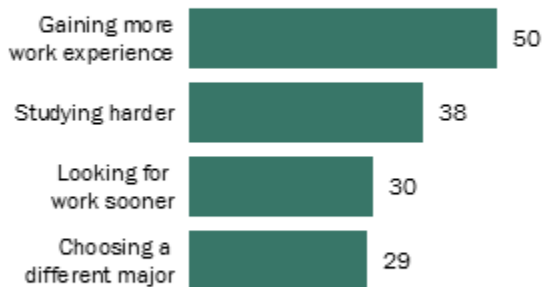
Sources of Revenue

Community colleges are increasingly reliant on tuition to cover expenses as government reduces support for higher education. Here is a look at where colleges get their money.

	Percent (%)	Revenue (in billions)
Tuition	28.9	\$16.6
State	28.5	\$16.3
Federal	15.1	\$8.7
Local	17.8	\$10.2
Other	9.39	\$5.6
Total	100	\$457.5

College Days, Reconsidered

% who say doing each of the following while they were undergraduates would have better prepared them to get the job they wanted

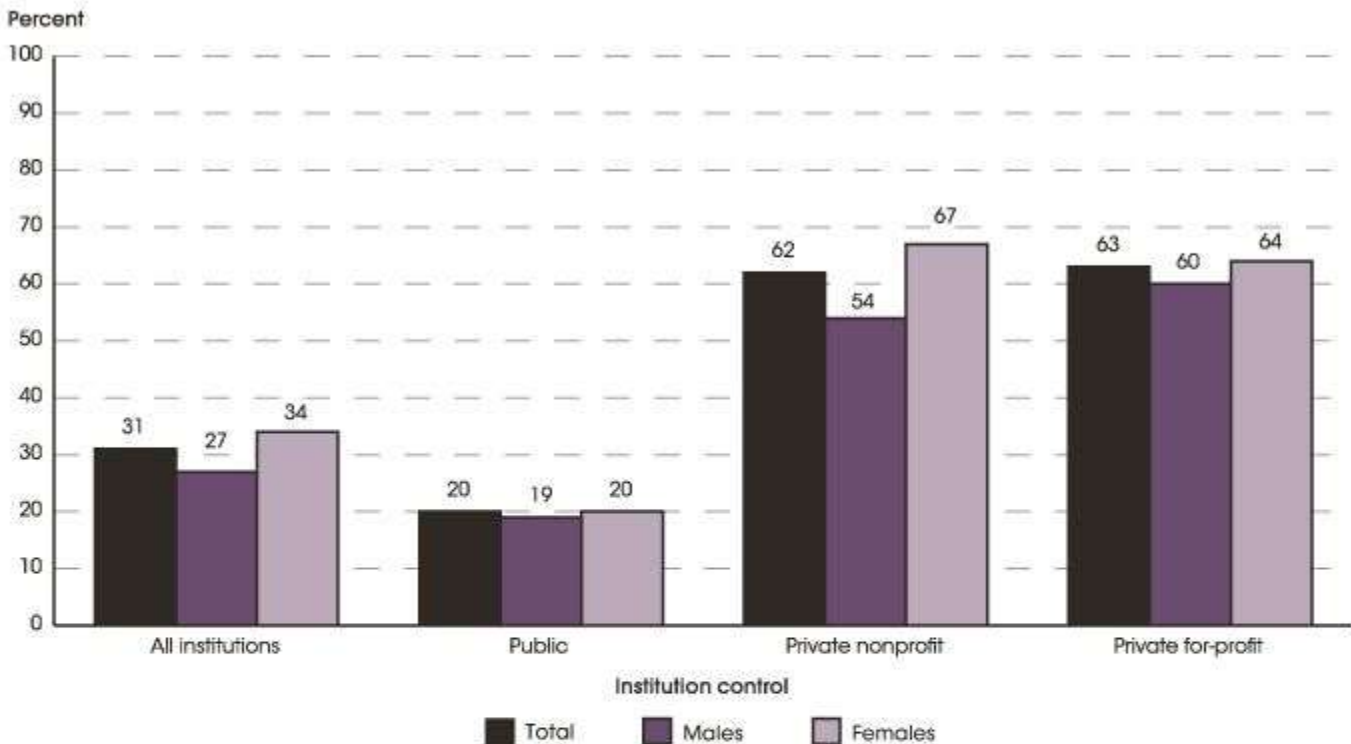


Note: Based on those with at least a bachelor's degree (n=790). Voluntary responses of "Maybe" not included.

PEW RESEARCH CENTER

Q22a-d

Figure 4. Percentage of students seeking a certificate or degree at 2-year degree-granting institutions who completed a credential within 150 percent of the normal time required to do so, by control of institution and sex: Starting cohort year 2009



NOTE: Data are for 2-year degree-granting postsecondary institutions participating in Title IV federal financial aid programs. Graduation rates refer to first-time, full-time students receiving associate's degrees or certificates from their initial institution of attendance only. An example of completing a credential within 150 percent of the normal time required to do so is taking 3 years for a 2-year degree. Students who transferred to another institution and graduated are not counted as completers at their initial institution.

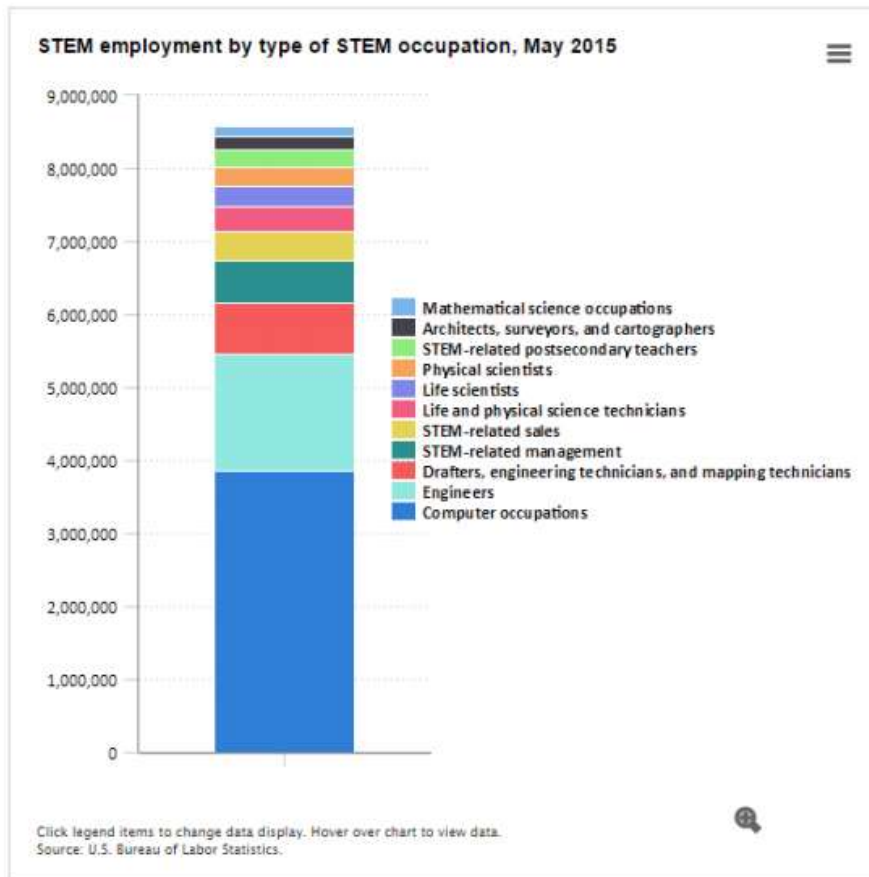
SOURCE: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2013, Graduation Rates component. See *Digest of Education Statistics 2013*, [table 326.20](#).

At 2-year degree-granting institutions, 31 percent of first-time, full-time undergraduate students who began their pursuit of a certificate or associate's degree in fall 2009 attained it within 150 percent of the normal time required to do so. An example of completing a credential within 150 percent of the normal time required to do so is taking 3 years for a 2-year degree. This graduation rate was 20 percent at public 2-year institutions, 62 percent at private nonprofit 2-year institutions, and 63 percent at private for-profit 2-year institutions. At 2-year institutions overall, as well as at each type of 2-year institution, the completion rate was higher for females than for males. At private nonprofit 2-year institutions, for example, 67 percent of females versus 54 percent of males completed a certificate or associate's degree within 150 percent of the normal time required.

- So, what's the No. 1 field of interest for graduating seniors? RIDGID's survey results show 25 percent of students hope to work in a career with computers or the Internet. The next most popular fields of interest include business (16 percent); engineering (15 percent); healthcare, defined as doctors, nurses, assistants and technicians (15 percent); and the entertainment/arts field, defined as actor, musician, TV anchor, reporter and producer (15 percent).

Nearly 8.6 million STEM jobs in 2015

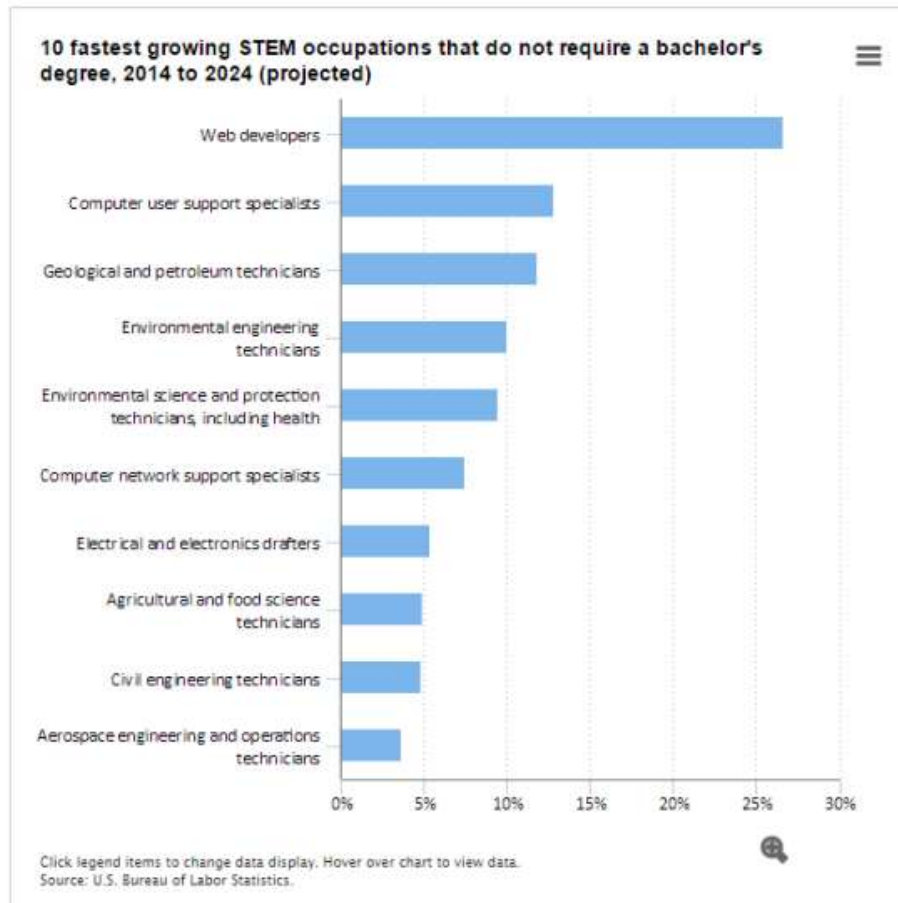
There were nearly 8.6 million STEM jobs in May 2015, representing 6.2 percent of U.S. employment. Computer occupations made up nearly 45 percent of STEM employment, and engineers made up an additional 19 percent. Mathematical science occupations and architects, surveyors, and cartographers combined made up less than 4 percent of STEM employment.



- Employment in STEM occupations grew by 10.5 percent, or 817,260 jobs, between May 2009 and May 2015, compared with 5.2 percent net growth in non-STEM occupations. Computer occupations and engineers were among the types of STEM occupations with the highest job gains. Employment in computer occupations was nearly 3.2 million in May 2009 and nearly 3.9 million in May 2015. Employment of engineers was nearly 1.5 million in May 2009, compared with over 1.6 million in May 2015. Some STEM occupations lost jobs. In 2009, there were nearly 478,000 jobs in STEM-related sales occupations, compared with approximately 406,000 in 2015.
- Employment in computer occupations is projected to increase by 12.5 percent from 2014 to 2024, and due to its large employment size, this growth is expected to result in nearly half a million new jobs, far more than any other STEM group. The group projected to add the second largest number of new jobs from 2014 to 2024 is engineering occupations, with 65,000 new jobs.

10 fastest growing STEM occupations that do not require a bachelor's degree

Of those STEM occupations that typically require less than a bachelor's degree for entry, the two fastest growing are web developers (26.6 percent) and computer user support specialists (12.8 percent). Four of the fastest growing occupations shown here are drafters or engineering technicians: electrical and electronics drafters, civil engineering technicians, environmental engineering technicians, and aerospace engineering and operations technicians. Nine of the ten occupations shown here typically require an associate's degree for entry. Computer user support specialists typically require some college.

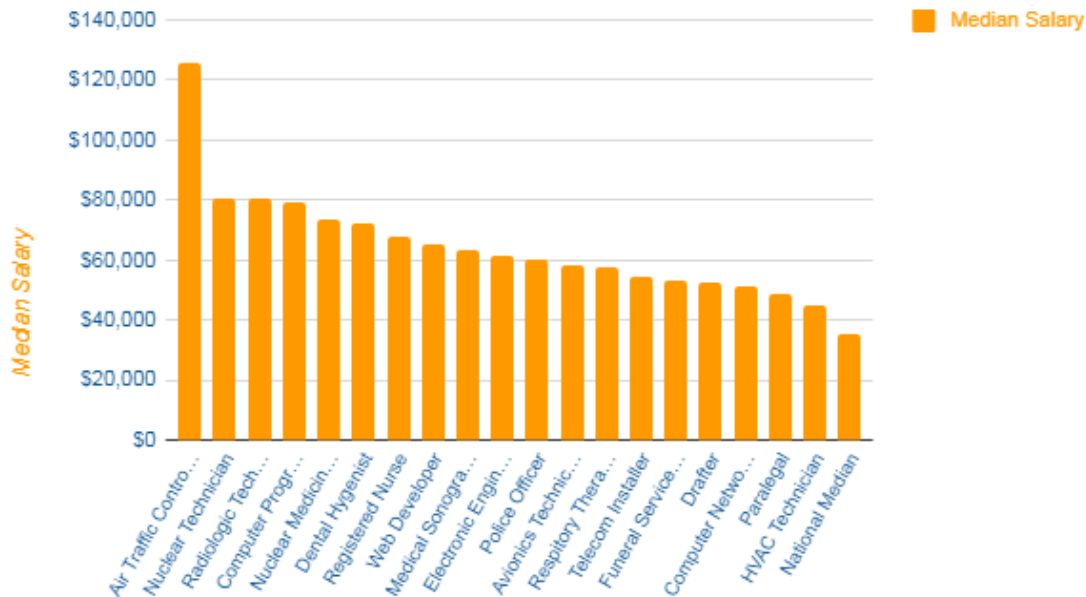


- Between May 2009 and May 2015, over 800,000 net STEM jobs were added to the U.S. economy. The computer systems design and related services industry increased its STEM employment by over 300,000 jobs. Employment services, an industry that helps job seekers to find temporary or permanent employment, added over 86,000 STEM jobs. The data processing, hosting, and related services industry added almost 31,000 STEM jobs, and colleges, universities, and professional schools added over 29,000 STEM jobs. STEM employment in general medical and surgical hospitals increased by slightly more than 23,000 jobs.

- As a share of total employment, STEM employment varied from 3.3 percent in Nevada and Mississippi to over 9 percent in Maryland, Washington, and the District of Columbia. In general, higher shares of STEM employment were associated with higher wages. For example, the District of Columbia had both the highest overall average wage (\$80,150) and one of the highest shares of STEM occupations. However, STEM employment wasn't the only factor affecting wage differences. In addition to high concentrations of STEM occupations like statisticians, physicists, and environmental scientists, the District of Columbia also had above-average shares of other high-wage occupations like lawyers and management analysts, which contributed to its high wage level. New York was one of the highest paying states, but had a below-average share of STEM occupations.
- Some of the fastest growing STEM occupations are in computer systems design and related services. The rapid growth projected for these occupations is due in large part to the projected growth for the industry of 23 percent. Computer programmers are projected to decline in this industry from 2014 to 2024 due to the ongoing trend of outsourcing the work to firms located overseas to cut costs.
- The STEM group that is projected to grow fastest from 2014 to 2024 is the mathematical science occupations group at 28.2 percent, compared with the average projected growth for all occupations of 6.5 percent. This group includes occupations such as statisticians and mathematicians. Since this group has the lowest employment among the STEM groups in 2014, this growth will result in only about 42,900 new jobs over the period. The only STEM group that is projected to show little or no change is drafters, engineering technicians, and mapping technicians, with a slight projected decline of 1.4 percent, a decline of about 9,600 jobs.
- Wages for STEM occupations varied vastly. The national average wage for all STEM occupations was \$87,570, nearly double the national average wage for non-STEM occupations (\$45,700). Ninety-three out of 100 STEM occupations had wages significantly above the national average wage for all occupations of \$48,320. Petroleum engineers was the highest paid STEM occupation, with an annual mean wage of \$149,590, over \$100,000 higher than the national average across all occupations. Physicists (\$118,500) was also among the highest paid STEM occupations. Seven STEM occupations had annual mean wages near or below the national average. Environmental science and protection technicians, including health, and biological technicians had mean wages of \$46,540 and \$45,230, respectively. Agricultural and food science technicians and forest and conservation technicians each earned below \$40,000 per year on average.



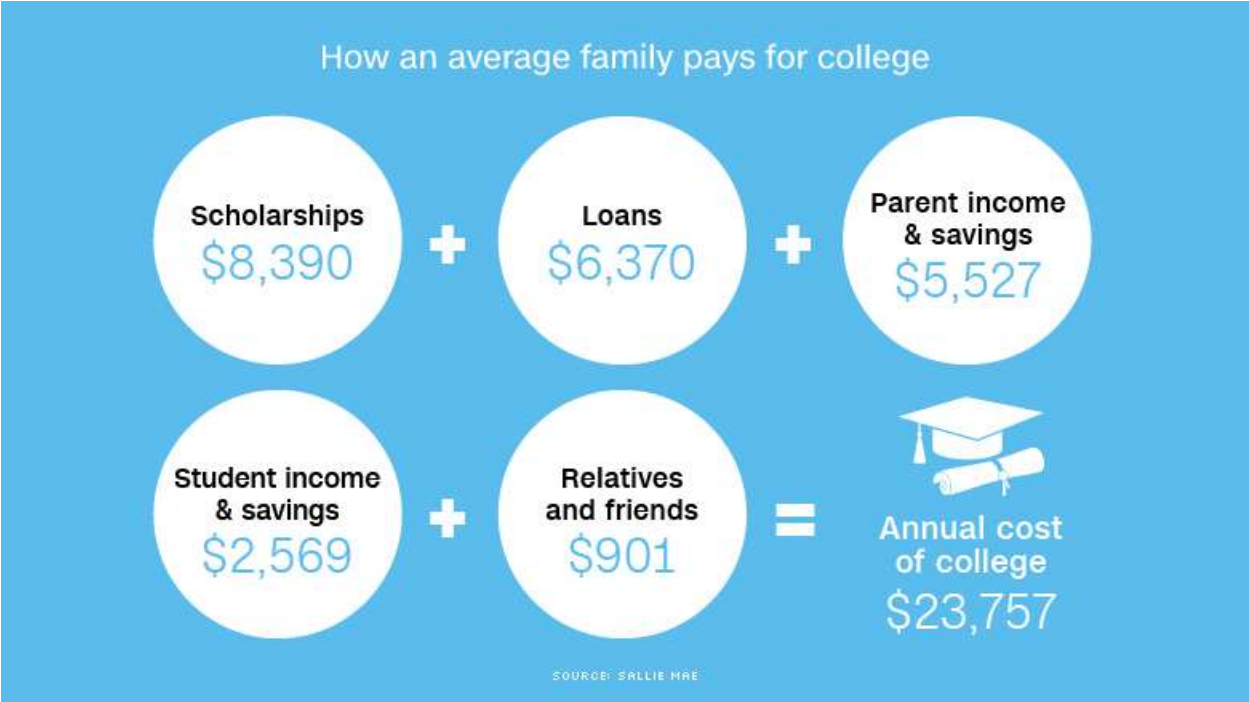
Highest Paying Jobs with an Associate's Degree



19 Highest paying AA Degree Jobs

1. Air Traffic Controller	\$125,950
2. Nuclear Technician	\$80,260
3. Radiologic Technician	\$80,220
4. Computer Programmer	\$79,530
5. Nuclear Medicine Technician	\$73,360
6. Dental Hygienist	\$72,330
7. Registered Nurse	\$67,490
8. Web Developer	\$64,970
9. Medical Sonographer	\$63,630
10. Electronic Engineering Tech	\$61,130
11. Police Officer	\$60,270
12. Avionics Technician	\$58,390
13. Respiratory Therapist	\$57,790
14. Telecom Installer	\$54,570
15. Funeral Service Worker	\$53,390
16. Drafter	\$52,720
17. Computer Specialist	\$51,470
18. Paralegal	\$48,810
19. HVAC Tech	\$45,110

www.geteducated.com



money.cnn.com

- The typical student debt load for millennials in the U.S. is \$41,200, surpassing their median annual income of \$38,800. One impact of that burden: first-time home purchases are being delayed by seven years.

That's according to survey results released Monday by the National Association of Realtors and the nonprofit group American Student Assistance. Only a fifth of millennial respondents own a home, with 83 percent of non-owners citing student debt as the reason they aren't buying. Among those who do own, 28 percent said they'd sell their current home and purchase a better one, if not for student loans.

Average ACT scores are down this year. ACT officials attribute the drop to the increasing percentage of high school seniors who have taken the test. The average composite score for those who graduated from high school this year was 20.8, down 0.2 points from last year and representing a five-year low. (The highest possible score on each part of the ACT is 36, and the composite is an average of the four scores.) ACT data show that 64 percent of high school seniors in the Class of 2016 took the ACT this year, up from 59 percent last year and 52 percent in 2012. Generally, when a larger share of students take a test -- in some cases encouraged by state requirements more than the students necessarily being college ready -- scores go down. Score drops were the largest in states that have just started to require all students to take the ACT.

Average ACT Scores and Number Tested, 2012-2016

Year	Number	English	Math	Reading	Science	Composite
2012	1,666,017	20.5	21.1	21.3	20.9	21.1
2013	1,799,243	20.2	20.9	21.1	20.7	20.9
2014	1,845,787	20.3	20.9	21.3	20.8	21.0
2015	1,924,436	20.4	20.8	21.4	20.9	21.0
2016	2,090,342	20.1	20.6	21.3	20.8	20.8

www.insidehighered.com

- A new survey from GradStaff, a Minneapolis-based leader in outsourced college recruiting services for companies from 50 to 2,000 employees, reveals that college graduates aren't necessarily prepared to navigate the complex world of job hunting, with 64 percent surveyed revealing they are often unsure which job opportunities are a fit for their newly acquired skillset.
- Research shows many college students who take developmental education classes, usually required when they score low on placement exams, fail to graduate. Only 28% of two-year college students who took at least one developmental course earned a degree or certificate within 8.5 years, compared to 43% of non-remedial students, according to one study. The study concluded the gap in graduation rates reflected differences in learning skills carried over from high school, rather than the impact of remedial classes themselves.
- Over the next two years, AARP Foundation will invest more than \$2 million to expand the program and reach thousands more older workers. To date, Back to Work 50+ has provided more than 5,000 unemployed workers with information and resources to help them find meaningful jobs.

There are more than 3 million workers age 50-plus looking for full-time employment, according to AARP Foundation.

- A growing number of startups want to play the matchmaker role between community colleges and employers. One of them, WorkAmerica, makes an unusual offer as part of their pitch: students get a legally binding job offer before they enroll at one of the company's partner colleges.

WorkAmerica has begun placing students in trucking programs at community colleges. Gutman said more deals are in the works, and that the company plans to branch into other fields with a high churn of workers, such as employers of welders, medical assistants, and IT and HVAC technicians.

- As community colleges become even more important, so do their career centers. The typical career center is under-resourced, under-staffed and underutilized. Listed are 5 ways to make the career center the place to be on campus.
 1. Improve website and make it mobile friendly
 2. Empower your community to engage in online and in-person advising
 3. Communicate with students their way
 4. Connect students with employers and alumni
 5. Be where your students are

The Department of Education will make sure students don't take on more debt than they can handle by holding schools accountable for the return on investment of their degree programs. In many cases, especially with for-profit colleges, institutions have over-promised earning potential and students have taken on mountains of debt that they can't repay.

The new set of rules, called the gainful employment regulations, require colleges to track their graduates' debt and employment to prove that their programs don't fall short of federal guidelines. Institutions now have to provide information on program costs, how much students earn after they graduate and how much debt they could accumulate. This will let the Department see which programs are saddling students with debt and leaving them with low earning prospects, and which offer affordable training that leads to well-paying jobs.



Schools will have to show that a typical graduate's estimated annual loan payment does not exceed 20% of his or her discretionary income, or 8% of his or her total earnings. Programs that go over these levels risk losing federal funding, which makes up 90% of revenue at for-profit institutions, according to the DOE. The effects of the new rules could topple the for-profit industry, since roughly 1,400 programs serving 840,000 students would not pass the accountability standards today, according to the Department. About 99% of those students are at for-profit colleges.

KNOW THIS!

51.7%

of those entering
a 2-year college
**ENROLL IN
REMEDICATION**



22.3%

of those students
**COMPLETE
REMEDICATION and
associated college-level
courses in two years**

9.5%

**GRADUATE
within 3 years**



Nearly 52 percent of community college students in the United States begin their freshman year in at least one remedial class. These courses, which help students acquire knowledge and skills they should have acquired in high school, do not count toward their degree requirements. As a result, students are taking longer than ever to obtain their degree, if they obtain one at all.

- No other nation has as diverse a selection of higher education opportunities. There are nearly 8,300 degree and non-degree granting institutions in the nation, from two-year public community colleges to private four-year universities to private vocation-specific graduate schools.
- Only South Korea has a larger percentage of its citizenry enrolled in higher education.
- Recent community college graduates are finding jobs with starting salaries well above \$40,000 per year, which outpaces the national average.
- Unemployment for individuals with a college degree has remained at about 5 percent, even through the Great Recession.

WHERE WE STAND

The National Picture

Most college students don't graduate on time.

1-YEAR CERTIFICATE



15.9%
ON TIME

2-YEAR ASSOCIATE



5%
ON TIME

4-YEAR BACHELOR'S
(NON-FLAGSHIP)



19%
ON TIME

4-YEAR BACHELOR'S
(FLAGSHIP)



36%
ON TIME

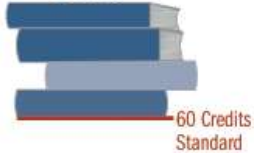
Many graduates earn excess credits.

64.9



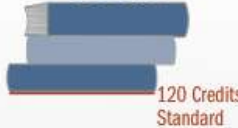
30 Credits Standard

80.9



60 Credits Standard

133.5



120 Credits Standard

134.6



120 Credits Standard

And graduates take far too long to finish, costing missed opportunities and money.

YEARS 1 2 3 4 5 6



1 Year Standard



2 Years Standard



4 Years Standard



4 Years Standard

Cost of each additional year:
extra \$38,264
in tuition, fees, and lost wages for each student

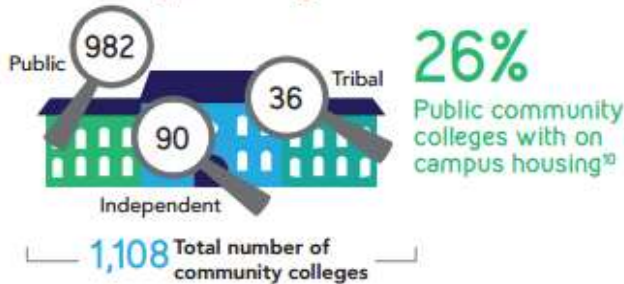
extra \$63,718
in tuition, fees, and lost wages for each student

extra \$63,718
in tuition, fees, and lost wages for each student

KNOW THIS: Excess credits alone cost taxpayers and students **\$19.2 BILLION EACH YEAR.***

Data for students who began college going full-time.
*Includes associate and bachelor's degrees only.

Number and Type of Colleges¹



Headcount Enrollment (Fall 2014)²

Program Type	#	%	Attendance	#	%
Credit	7.3M	60%	Part-time	4.5M	62%
Noncredit ³	5.0M	40%	Full-time	2.8M	38%
TOTAL	12.3M	100%	TOTAL	7.3M	100%

Estimated change from Fall 2014–Fall 2015: -2.4%.⁴

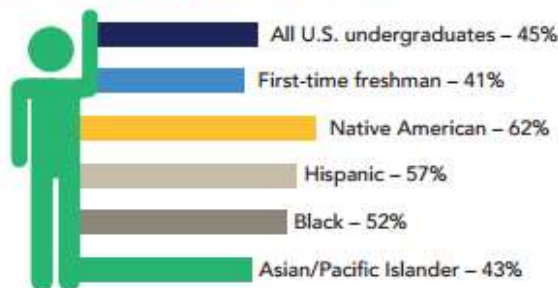
Demographics of Students Enrolled for Credit

Ethnicity ²	%	Age ⁵	%	Gender ²
White	49%	Average	28	57% Women
Hispanic	22%	Median	24	
Black	14%	≤21	37%	43% Men
Asian/Pacific Islander	6%	22-39	49%	
Native American	1%	40+	14%	
Two or more races	3%			
Other/Unknown	4%			
Nonresident Alien	1%			

Other Student Demographics⁵

- First generation to attend college – 36%
- Single parents – 17%
- Non-U.S. citizens – 7%
- Veterans – 4%
- Students with disabilities – 12%

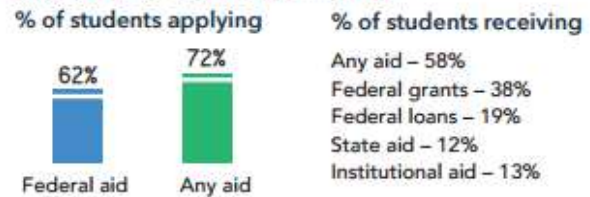
Representation of Community College Students Among Undergraduates (Fall 2014)²



Employment Status (2011–2012)⁵

- Full-time students employed full time – 22%
- Full-time students employed part time – 40%
- Part-time students employed full time – 41%
- Part-time students employed part time – 32%

Student Financial Aid (2011–2012)⁵



% of Federal Aid Received by Community Colleges (2013–2014)⁶

- Pell Grants – 36%
- Federal Work Study – 18%
- Federal Supplemental Educational Opportunity Grants – 23%

Average Annual Tuition and Fees (2015–2016)⁷

- Community Colleges (public, in district) – \$3,430
- 4-year colleges (public, in state) – \$9,410

Degrees and Certificates Awarded (2013–2014)⁸



Bachelor's degrees awarded by 88 public and 58 independent colleges.^{1,8}

Community College Revenues by Source (2013–14)⁹

Sources	Revenue	%
Tuition	\$17,242,025,437	29.5%
Federal	\$8,264,032,954	14.1%
State	\$17,442,989,183	29.8%
Local	\$10,568,296,830	18.1%
Other	\$4,929,830,599	8.4%
TOTAL	\$58,447,175,003	100.0%

Source

- AACC membership database, January 2016.
- NCES. (2015). IPEDS Fall 2014 Enrollment Survey [AACC analysis].
- AACC membership database, 2016 [AACC analysis].
- National Student Clearinghouse. (2015). Term Enrollment Estimates Fall 2015.
- NCES. (2015). 2011–12 National Postsecondary Student Aid Study (NPSAS:12) [AACC analysis].
- College Board. (2015). Trends in Student Aid: 2015.
- College Board. (2015). Trends in College Pricing: 2015.
- NCES. (2015). IPEDS 2013–2014 Completion Survey [AACC analysis].
- NCES (2015). IPEDS 2013–14 Finance Survey Files [AACC analysis].
- NCES. (2015). IPEDS 2014 Institutional Characteristics Survey File [AACC analysis].

Despite college prices rising, there is some good news about the increases in college tuition: The rate at which tuition is increasing is actually slowing down.

According to a report done by the College Board, private universities are starting to increase their tuition and fee prices at a slower rate. Here's the percentage increases — beyond the rate of inflation — since the mid-'80s:

- From 1986-87 to 1996-97, the price of tuition and fees increased on average by 3.1%.
- In the next decade, tuition and fees increased by 2.9%.
- From 2006-07 to 2016-2017, tuition and fees increased by only 2.4% at private institutions.

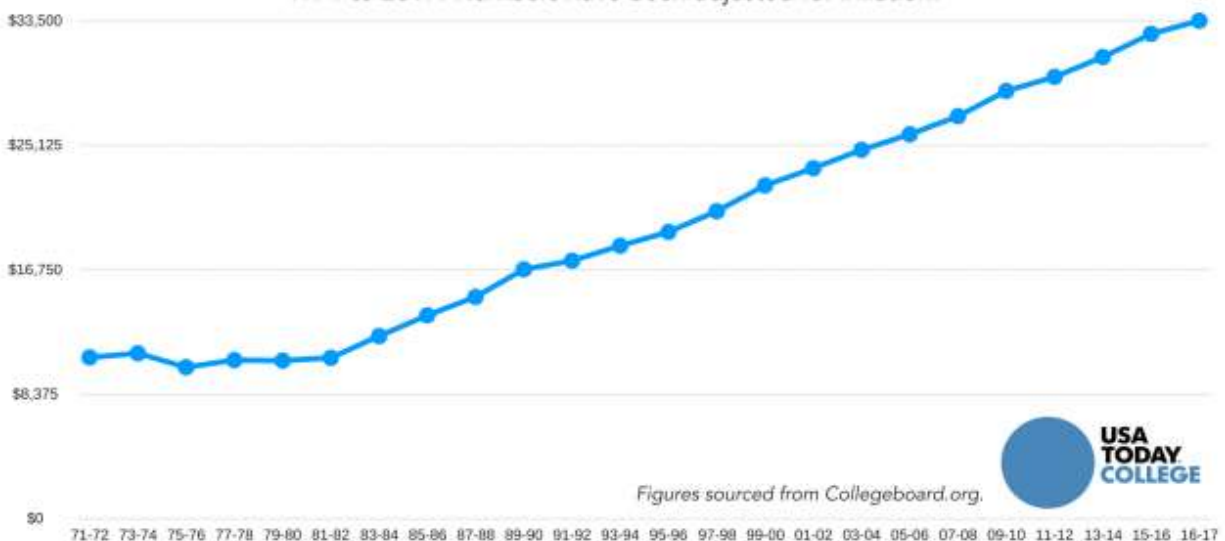
Still, college still remains expensive, and students are struggling to pay the high rates of tuition to earn their college degrees. As of Dec. 31, 2016, outstanding student loan balances for U.S. students stood at a hefty \$1.3 trillion, according to the Federal Reserve Bank of New York.

And while colleges are raising tuition, it's getting harder to pay for it.

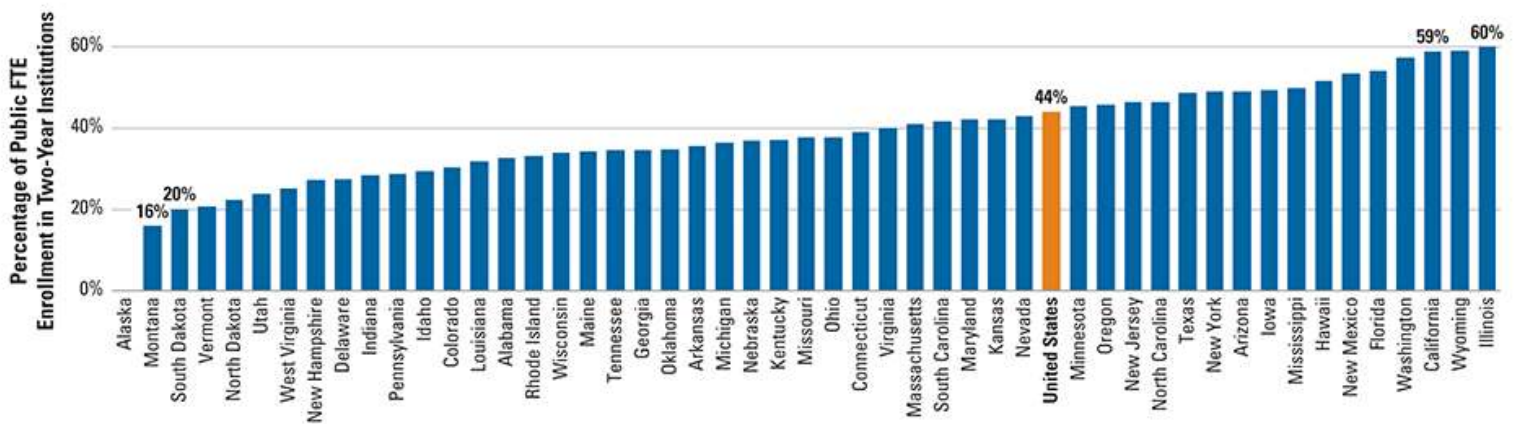
The White House plans to decrease financial aid funding to thousands of students — making college even more costly to families. In the proposed budget for the 2018 fiscal year, President Trump proposed a cut in financial aid for students. The largest cut proposed is to the Pell Grant program by \$3.9 billion. The Pell Grant program is the largest federal grant program — which means many would-be-recipients will need to find another way to subsidize their college costs.

Average Cost of Tuition and Fees

This graph shows the average cost of tuition and fees at private universities from 1971 to 2017. Numbers have been adjusted for inflation.



Public two-year colleges, some of which offer a limited number of bachelor's degrees, accounted for 50% or more of undergraduate enrollment in the public sector in eight states in 2014, but in seven states, they were 25% of the total or less.



trends.collegeboard.org

- Historically, four-year colleges and universities awarded bachelor's degrees and advanced degrees (and not associate's degrees) and community colleges awarded associate's degrees (and not bachelor's degrees). Now, however, an increasing number of community colleges also offer baccalaureate degrees. The practice began as a response to the acute teacher shortage. States allowed community colleges to award baccalaureate degrees to prospective teachers in areas of particular need, such as math and science. Community college baccalaureate programs have also been established in areas that are not adequately served by four-year institutions because they are too costly or geographically too far away. Proponents of community college baccalaureate degrees claim that the practice serves the wider goal of making a college education more accessible. The subject is controversial, however. Some fear that the community college teaching programs may not be as rigorous as those of four-year institutions or worry about competition with the four-year programs.

Student loan debt statistics show 44 million Americans owe over \$1.4 trillion in student loan debt. The total debt is also more than double the \$620 billion Americans owe on credit card debt.

Class of 2016 graduate has roughly \$37,172 in student loan debt. This is a six percent increase from last year.

According to Make Lemonade, there are more than 44 million borrowers with \$1.4 trillion in student loan debt in the U.S. alone. The average student in the Class of 2016 has \$37,172 in student loan debt.

Retirees are bringing unprecedented levels of student loan debt into their later years, according to a new report that shows Baby Boomers may be woefully unprepared for retirement.

The result of helping their kids or grandkids pay for college, those ages 65-74 have nearly six times the amount of education debt now than they did two and a half decades ago, when they had almost none, according to an analysis of government data by LIMRA Secure Retirement Institute.



Student Loan Balance	Number of Borrowers
Less Than \$5,000	8,960,200
\$5,000 - \$10,000	7,740,700
\$10,000 - \$25,000	12,434,400
\$25,000 - \$50,000	8,319,600
\$50,000 - \$75,000	3,341,100
\$75,000 - \$100,000	1,350,800
\$100,000 - \$150,000	1,116,500
\$150,000 - \$200,000	500,400
\$200,000+	415,400

As of 2015, more than 42 million student loan borrowers have student loan debt of \$100,000 or less. More than 2 million student loan borrowers have student loan debt greater than \$100,000, with 415,000 of that total holding student loan debt greater than \$200,000. The largest concentration of student loan debt is \$10,000 – \$25,000, which accounts for 12.4 million student loan borrowers.

The Department of Education is going to make it easier for students to get a college loan, even if they or their parents have less than great credit histories, according to Andrew Taylor of *Associated Press*.

These changes will make getting a loan from the government's Direct Loan program less restrictive. Up until now, students with "adverse debt" were denied automatically, unless they had extenuating circumstances. Sometimes students in this situation are required to have loan counseling.

The new regulations allow up to \$2,085 debt or written-off debt and would shorten the debt securitization from five years to two. Under these standards about 370,000 students could now qualify for direct loans.

Students who attend community college are defaulting on their loans more often than those who attend a four-year school.

With 70% of students borrowing less than \$6,000, this may come as a surprise. However, low graduation rates may explain why so many cannot repay these small amounts.

Only 7% of young-adult families hold \$50,000 or more in debt related to education. In contrast, 58% of the same households have less than \$10,000 in this type of debt. These are the graduates who have a difficult time finding a job and paying back their loans.

College Loan Payment Responsibility

While a majority of families who borrowed to pay for college view paying college costs as a joint effort between parent and student, there is a notable difference between overall responsibility and repayment of any loans accrued.

In families where the student borrowed a federal or private education loan, fewer than one-third say parents will contribute to loan payments; a strong majority (71%) say the student will be solely responsible for repaying the loans. In families where the parent borrowed a federal or private education loan, the student is again expected to take responsibility. Only 12 percent say the parent will be solely responsible for the payments. The vast majority expect students to make some payments on parent loans with 24 percent saying the student will be fully responsible for those payments.

SallieMae.com

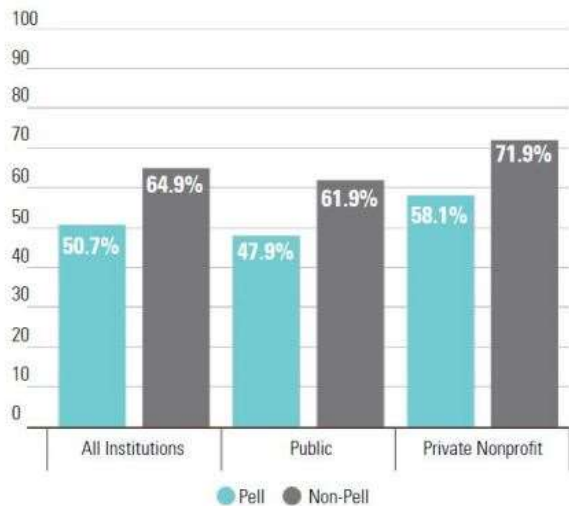
- A total of \$28.2 billion in Pell Grants were awarded to 7.6 million college students in the 2015-2016 academic year. Those numbers are down from the record 9.3 million students who received \$39.1 billion in Pell Grants in 2010-2011, but they still represent the highest participation rate and award amount of any college grant.
- **According to Nerdwallet.com, in 2014, a total of 1,445,732 high school graduates didn't fill out a FAFSA application, our analysis shows.** Of those, we believe 747,579 of them would have been Pell eligible: Submitting the FAFSA could have earned them federal Pell Grant money. This figure includes all high school graduates, although some will choose not to attend college immediately or at all. Our calculations included the grads who don't go on to college to show the scope of students who would be eligible for federal aid if they did apply.
- **The average amount of money left on the table per eligible high school graduate who didn't apply was \$1,861.** The two places with the most unclaimed funds were Mississippi at \$2,639 per grad and Washington, D.C., at \$2,513. High school graduates also left on the table an average of \$2,000 or more in Pell Grant money per grad in Alabama, Arizona, Arkansas, California, Florida, Idaho, Kentucky, New Mexico, New York, North Carolina, Tennessee and Texas.
- **New Hampshire had the lowest amount of Pell Grant money left on the table per eligible high school graduate with an average of \$890.** In the 12 other states with the highest FAFSA completion rates, high school grads left, on average, less than \$1,500 on the table — Alaska, Colorado, Connecticut, Iowa, Maryland, Massachusetts, Minnesota, North Dakota, South Dakota, Vermont, Wisconsin and Wyoming.

Pell Grant money left on the table: Full breakdown

State	Percentage of High School Students Not Completing the FAFSA	Graduates Who Didn't Complete the FAFSA	Pell Grant Graduates that Didn't Complete the FAFSA	Average Pell Grant in 2014-15	Total Pell Grant Money Left On the Table
West Virginia	42%	7,302	3,760	\$3,882	\$14,592,635
Virginia	44%	36,268	15,532	\$3,504	\$54,430,335
Pennsylvania	45%	62,342	26,517	\$3,633	\$96,330,594
Maryland	45%	28,163	12,003	\$3,712	\$39,887,566

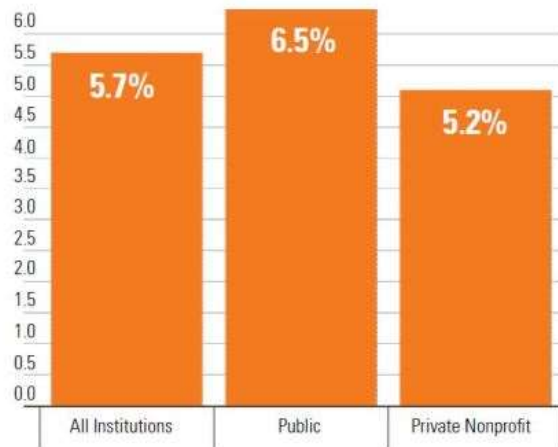
www.nerdwallet.com

Figure 1: 2013 Six-Year Bachelor's Degree Completion Rates



Notes: Analysis includes 1,149 institutions (505 public and 644 private nonprofit).
Source: The Education Trust's Pell Grant Graduation Rate Database

Figure 2: Average Institutional Completion Gap Between Pell and Non-Pell Students



Notes: Analysis includes 1,104 institutions (498 public and 606 private nonprofit).
Only institutions with 30 Pell and non-Pell students were included in this analysis.
Source: The Education Trust's Pell Grant Graduation Rate Database

COURTESY OF THE EDUCATION TRUST

The most expensive education is one that doesn't lead to a degree

While graduating with high levels of debt is holding too many borrowers back from reaching their full potential, the even more damaging outcome is for students who take on debt but never complete their degree. In fact, students' ability to repay their loans depends more strongly on whether they graduate than how much total debt they take on.

- Students who take out college loans but don't graduate are three times more likely to default than borrowers who complete.
- The median debt of borrowers who default is under \$8,900, which is barely half of the median debt load for all students, and the average debt for students in default is \$14,500, which is half the average debt of those who graduate.
- States with the highest default rates for their four-year colleges tend to be near the bottom on completion rate too; and states with the lowest default rates tend to rank higher in four-year completion rates.
- More than 40 percent of first-time full-time students who enroll in a bachelor's degree program don't graduate within 6 years.
- Low-income students, first-generation college students, and minority students, in particular, are being underserved by the current system. Just 9 percent of students from the lowest income quartile graduate with a bachelor's degree by age 24, compared to 77 percent for the top income quartile.
- Students from low-income families are also less likely to enroll in and complete college than their peers, even when academic ability is taken into consideration.

State	In-State Tuition	Out-of-State Tuition	Book & Supplies	On-Campus Living Costs	Off-Campus Living Costs
Maryland	\$7,599	\$20,134	\$1,262	\$13,275	\$12,967
Pennsylvania	\$11,886	\$24,423	\$1,408	\$13,936	\$12,773
West Virginia	\$5,733	\$14,131	\$1,273	\$11,621	\$11,251
Average	\$8,406	\$19,739	\$1,314	\$12,944	\$12,330

collegetuitioncompare.com

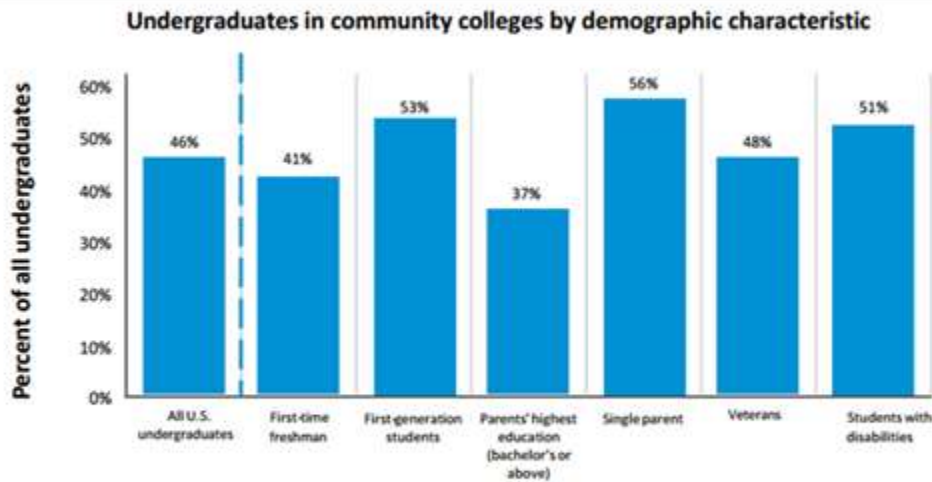
Seven Trends in Community Colleges

1. Increased Distance Learning
2. Greater Number of Baccalaureate Degrees Awarded
3. Increased Partnerships Between Community Colleges and Four Year Institutions
4. Greater Recruiting of Baby Boomers
5. Increased Enrollment Across Different Student Groups (high school students, reverse transfer students & veterans)
6. Increased Partnership with Business
7. Increased Response to Globalization

That's not all. The Bureau of Labor Statistics reports, as of September 2014, college grads age 25-plus had a 2.9 percent unemployment rate. For high school-only grads, it was 5.3 percent (and 8.4 percent for those who never received a diploma or GED). Additionally, Pew says those with Bachelor's degrees have higher job satisfaction, clearer career paths, and substantially lower rates of poverty. The statistics on that last point are particularly persuasive: In 2012, 6 percent of college grads ages 25-32 lived in poverty. For those with no college, it was a staggering 22 percent.

Who attends community college?

Community college students come from a broad range of backgrounds.



Source: AACC's analysis of Integrated Postsecondary Education Data System (IPEDS) fall 2013 enrollment data and 2011-2012 National Postsecondary Student Aid Study (NPSAS: 12) data computed using PowerStats data tools, U.S. Department of Education, National Center for Education Statistics.



Prospective online students are skewing younger, tend to enroll in local institutions and put a program's cost and reputation at the top of their priority list, according to a recent survey. Those and other findings are outlined in "Online College Students," a July report by Aslanian Market Research and the Learning House, a company that helps colleges and universities improve their online degree programs. Among the most surprising findings in the report, authors say, is the shifting age of online students. While distance education students are often assumed to be older, the report found the popularity of online undergraduate programs is growing among those under 25. Thirty-four percent of undergraduate online students were under the age of 25 this spring, up from 25 percent in 2012, according to the report.

- Online courses offer flexibility, a self-paced schedule and the added bonus of not requiring a physical classroom.
- But a UC Davis study – authored by Cassandra M. D. Hart, Elizabeth Friedmann and Michael Hill — presented in April at the American Educational Research Association found online courses at community colleges have been less successful than courses taught face-to-face.
- Online students have, on average, higher first-term GPAs than face-to-face students, according to the study. But the grades and completion rates of face-to-face courses within the study still trumped those of online courses.
- The study found only 79% of students completed their online course, while 85% of students completed their face-to-face course. Meanwhile, 56% of students passed their online course, whereas 63% of students passed their face-to-face course. Overall, the study found that if a student were to take a course in person and then take the same course online, the student would be 11% less likely to finish and pass online.

Month	Number of MOOCs
October 2011	3
June 2012	34
December 2012	108
June 2013	446
December 2013	859
June 2014	1,524
December 2014	2,090
June 2015	2,940
December 2015	4,007
June 2016	5,397
December 2016	6,563
June 2017	7,465

The number of massive open online courses, or MOOCs, offered worldwide grew by more than 2,000 in the past academic year. The nature of MOOCs is changing, with more courses being self-paced, instead of starting and ending on specific dates, and more sitting at least partly behind a paywall. Courses may require payment for completion certificates, credits, grading of assignments, and test taking.

www.chronicle.com

- Between 1993 and 2009, the student body—as defined by the distribution, not the number, of students—on community college campuses shifted. For instance, students under the age of 18 are increasingly enrolling in community colleges. While the student body is becoming increasingly younger, the characteristics of younger students are not homogenous across all sectors of higher education. Community college students have a greater proportion of students with various risk factors when compared to all of higher education.

These colleges also provide access to nearly half of all minority undergraduate students and more than 40% of undergraduate students living in poverty.

- According to the annual report published by the College Board, fewer than half the members of the 2013 high school class who took the SATs had the academic skills necessary to succeed in college. More troubling still, this percentage has not varied much over the past five years, breaking the trend of small but notable gains in the decade before.

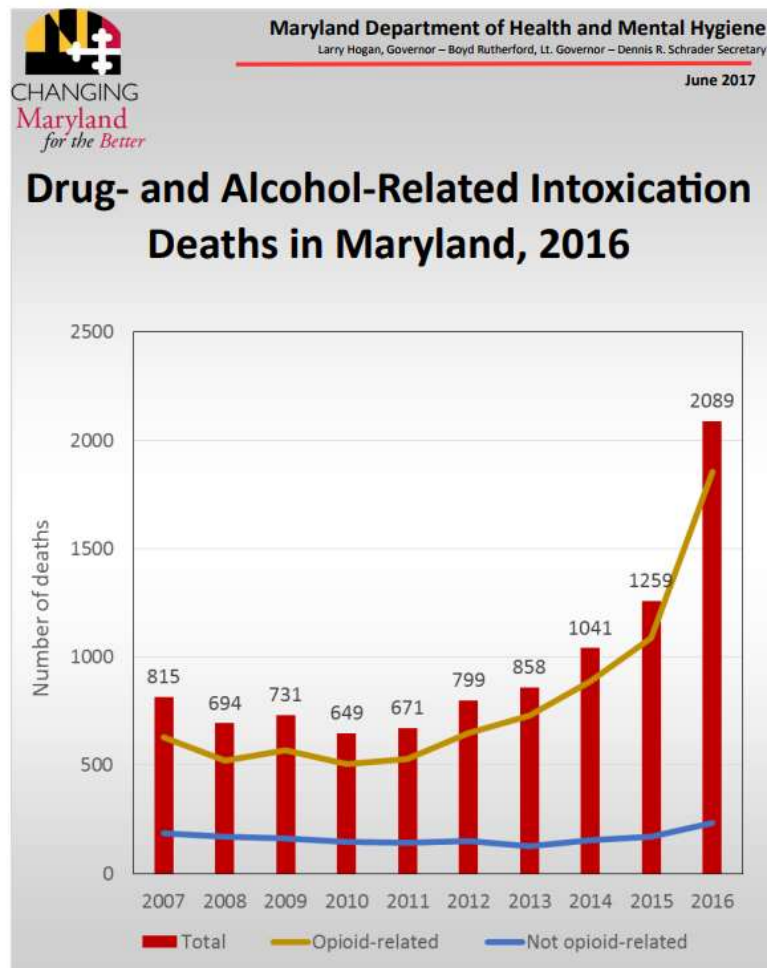
Opioid Education, Now a College Requirement

More than 2,000 people died of drug and alcohol overdoses in Maryland last year -- a record number that is part of the nation's opioid-abuse crisis.

As part of their response, Maryland legislators have passed a law requiring that students be educated four times -- twice in elementary school, once in high school and once at the college level for incoming full-time students -- on the dangers of opioids, including heroin. The law applies to all higher education institutions that accept state money -- and so includes private colleges as well -- and requires naloxone (which can be used in cases of overdoses) to be stocked by campus police and public safety officers.

Preventative education for new students is nothing new for higher ed, as colleges often offer or require student participation in programs aimed to prevent drug and alcohol abuse, or sexual assault.

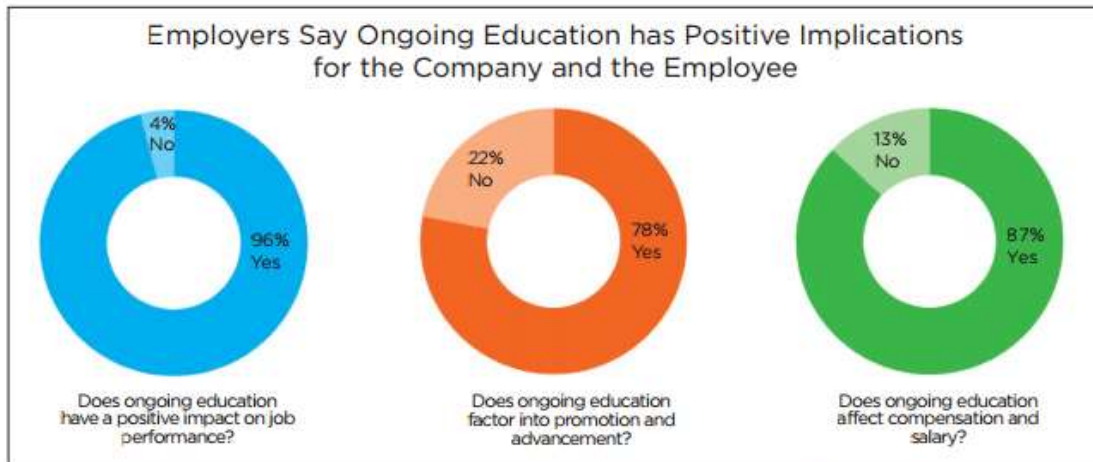
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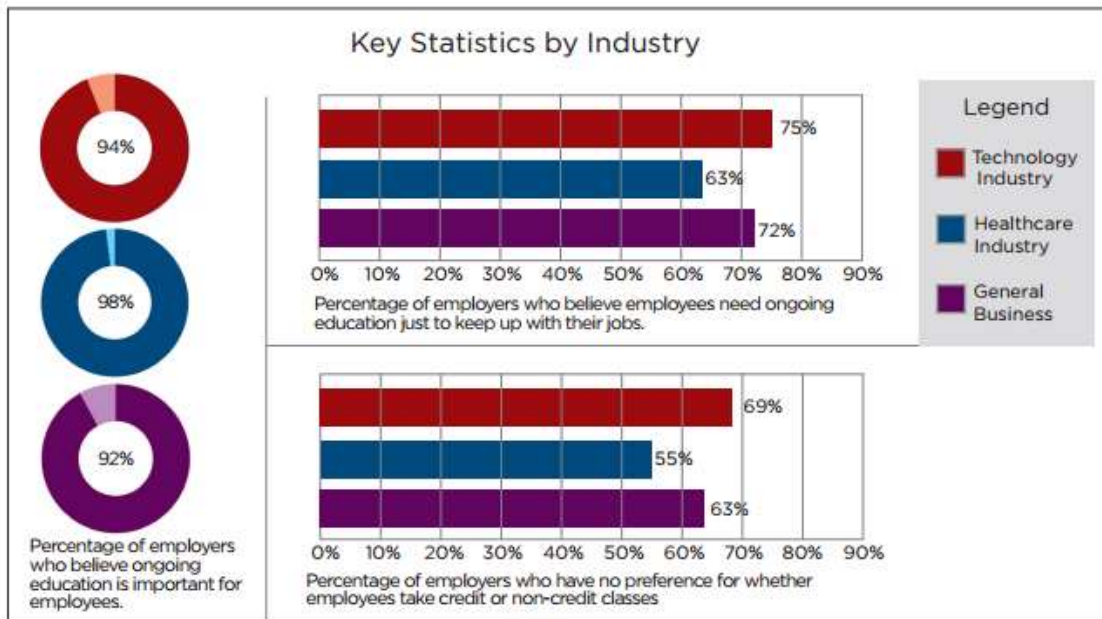
Drug and Alcohol use in College-Age Adults in 2015

- Daily marijuana use has steadily increased among college students in the past two decades with 3.7 percent smoking marijuana daily in 1995, 4.0 percent in 2005, and 4.6 percent in 2015.
- Binge drinking (five or more drinks in a row): 31.9 percent of college students and 23.7 percent of non-college peers in the past 2 weeks. Intoxication (having been drunk): 38.4 percent of college students and 24.9 percent of non-college peers in the past month.
- Hookah (past-year use): Past-year hookah use is similar in college students and non-college peers but trending down in college students: 23.4 percent of college students and 24.5 percent of non-college peers used a hookah in 2015; among college students, past-year hookah use was 27.9 percent in 2011 and fell to 23.4 percent in 2015.
- After falling steadily for 6 years, past-year cocaine use jumped above 4 percent in 2014 and remained high in 2015; past-year use was 5.1 percent in 2006, 5.4 percent in 2007, 4.4 percent in 2008, 4.2 percent in 2009, 3.5 percent in 2010, 3.3 percent in 2011, 3.1 percent in 2012, 2.7 percent in 2013, 4.4 percent in 2014, and 4.3 percent in 2015.
- Past-year use of synthetic marijuana fell 80 percent between 2011 and 2015.
- Past-year use of salvia fell 90 percent between 2009 and 2015.
- Cigarettes (past-month use): 11.3 percent of college students and 23.4 percent of non-college peers; note that this is a record low for past-month cigarette use among college students. E-cigarettes (past-month use): 8.8 percent of college students and 12.9 percent of non-college peers.

Workplace roles and requirements are changing at an unprecedented rate. Of the employers surveyed, 70% believe that employees need continuous education just to keep pace with the demands of their current jobs. While on-the-job training or other informal methods of learning can be somewhat useful, formal education is considered to be much more effective. A recent global study of 12,500 managers strongly concluded that formal education was the most effective way to develop necessary workplace skills, outscoring all other training methods.



Employers recognize the impact of ongoing education and reward their employees accordingly.



Each sector has slightly different uses and levels of reliance on education. For example, the technology sector relies on education for employees to keep up with the rapid pace of change, whereas the healthcare field relies on certifications to keep employees on par with tight regulations.

LIFELONG LEARNING

NEVER TOO YOUNG, NEVER TOO OLD TO LEARN



Only **54%** of children have the **chance** to attend **pre-primary education**



126 MILLION illiterate youth

Only **1 in 4** countries addresses the need for **second chance programmes** for youth



About **23%** of upper-secondary school pupils are enrolled in **technical and vocational education**



781 MILLION illiterate adults

Typically, **less than 3%** of the national education budget is allocated to **literacy and adult education programmes**

THERE ARE MANY LEARNING PATHS

Over **150** countries are reforming qualification systems enabling recognition of learning outcomes irrespective of when, where and how the learning has taken place



Over **95** countries have adopted a policy on lifelong learning.

ICTs have become a viable mean for expanding learning opportunities

LEARNING BENEFITS



THE INDIVIDUAL
healthy life and decent work



SOCIETY
contributes to peace, responsible citizenship and sustainable development



THE ECONOMY
contributes to inclusive and sustainable economic growth

Homeschooling

In 2012, there were an estimated 1.8 million homeschooled students in the United States, which is an increase from 850,000 in 1999, when estimates were first reported. In addition, the estimated percentage of the school-age population that was homeschooled increased from 1.7 percent in 1999 to 3.4 percent in 2012.

Parents give various reasons for the decision to educate their children at home.

Parents' Reasons for Homeschooling Their Children (in percentages), by reasons parents gave as important and most important	
Reason	2011-2012
A desire to provide religious instruction	64
A desire to provide moral instruction	77
A concern about environment of other schools	91
A dissatisfaction with academic instruction at other schools	74
A desire to provide a nontraditional approach to child's education	44
Child has other special needs	16
Child has a physical or mental health problem	15
Other reasons	

Homeschooling in the United States: 2012. From the National Household Education Surveys (NHES) Program of 2012

- Homeschooled students are making a smooth transition to higher education, thanks to a marked increase of available resources and a friendlier public perception. Data shows that more homeschooled students than ever are going into college life with better skills and preparation, and in many cases better than their non-home-schooled peers

Private Schools

Private School Universe Survey 2013-14

In the fall of 2013, there were an estimated:

- **33,619** private elementary and secondary schools with,
- **4,576,410** students, and
- **441,496** full-time equivalent (FTE) teachers.

- For-profit educational institutions continue to increase in size and number competing with established public community colleges. Colleges like Phoenix University offer flexibility for the working student. For-profit technical schools like ITT, guarantee job placement. Community colleges must quickly distinguish themselves so that their offerings or mode of delivery are unique in the marketplace. The community college as a low cost option for higher education does not have the same attraction for students that it did even five years ago.

States That Drew the Most Out-of-State Freshmen, 2012

Pennsylvania drew more freshmen from New Jersey alone (almost 9,000) than most single states drew from all others combined. While many states drew the highest number of students from neighboring states, California contributed many students to distant states like New York and Illinois.

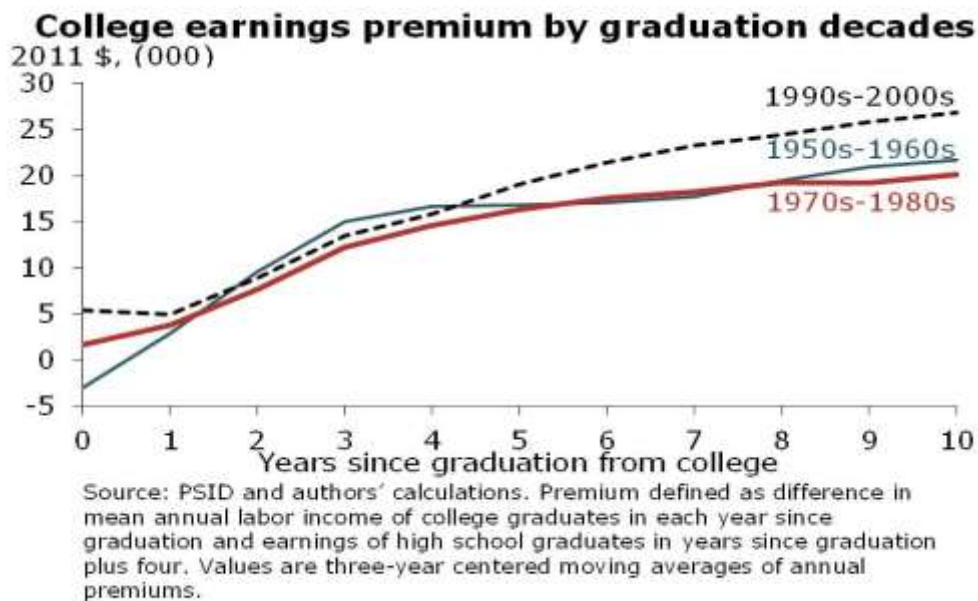
	State	Number of out-of-state freshmen	Top 3 sending states
1.	Pennsylvania	27,936	New Jersey, New York, Maryland
2.	New York	27,830	New Jersey, California, Massachusetts
3.	Massachusetts	20,914	New York, Connecticut, New Jersey
4.	Virginia	14,804	Maryland, New Jersey, Pennsylvania
5.	Ohio	14,476	Pennsylvania, Illinois, Michigan
6.	North Carolina	11,976	Virginia, Maryland, New Jersey
7.	Indiana	11,648	Illinois, Ohio, Michigan
8.	California	10,601	Washington, Texas, Oregon
9.	Illinois	9,676	California, Michigan, Missouri
10.	Wisconsin	9,597	Illinois, Minnesota, Michigan

Note: The data cover only domestic enrollments from the 50 states and the District of Columbia. The colleges represented are those designated doctorate-granting, master's, or baccalaureate institutions by the Carnegie Foundation for the Advancement of Teaching in 2010. Private for-profit institutions are not included, as many rely on distance learning, which skews migration data. Figures are from the most-recent year when institutions were required to report residency data to the Education Department.

Source: *Chronicle* analysis of U.S. Department of Education data

- The National Student Clearinghouse Research Center put out a Snapshot Report on persistence and retention, which shows what's happening to first-time college students after their first year. While persistence (students who return to the same college for their second year) has dropped a bit, retention (students who return anywhere for their second year) has stayed steady. About one in nine students who start in the fall transfer.
- The average college graduate banks \$800,000 more over the course of his or her lifetime than the average high school degree-holder (this figure accounts for the cost).
- For the last four years, enrollment declined across most sectors of higher education, though there was a slight increase among public four-year institutions, according to National Student Clearinghouse Research Center data. These data indicate that in 2013 public two-year institutions enrolled approximately 6.3 million students. By fall 2016, enrollment at public two-year colleges dropped to around 5.7 million students — a 2.6 percent decrease from the previous year and at 9.6 percent decrease since 2013. The declining enrollment will affect community college efforts to meet their completion agenda, which aims to increase the number of awarded college credentials by 2020. Community colleges must innovate to supply the enrollment pipeline with students from various backgrounds in order to progress toward the completion goal, and re-double efforts to keep students enrolled on their path to credentials. Community colleges will also face challenges maintaining revenues as enrollment rates decline.

This chart tracks the earnings premium of having a college degree, illustrating that “there is little evidence that the value of a college degree has declined over time, and it has even risen somewhat for graduates five to ten years out of school.”



CareerBuilder.com lists the following emerging careers that are making a mark and poised for growth in the coming years

Home Stager

Health Informatics Technician

Simulation Developer

Green Jobs

Emergency Management

Career Counselor

Patient Advocate

According to degreedriven.com, the six fastest-growing degree programs in response to the world's newest challenges are:

Health Informatics

Homeland security

Information Assurance and Cyber Security

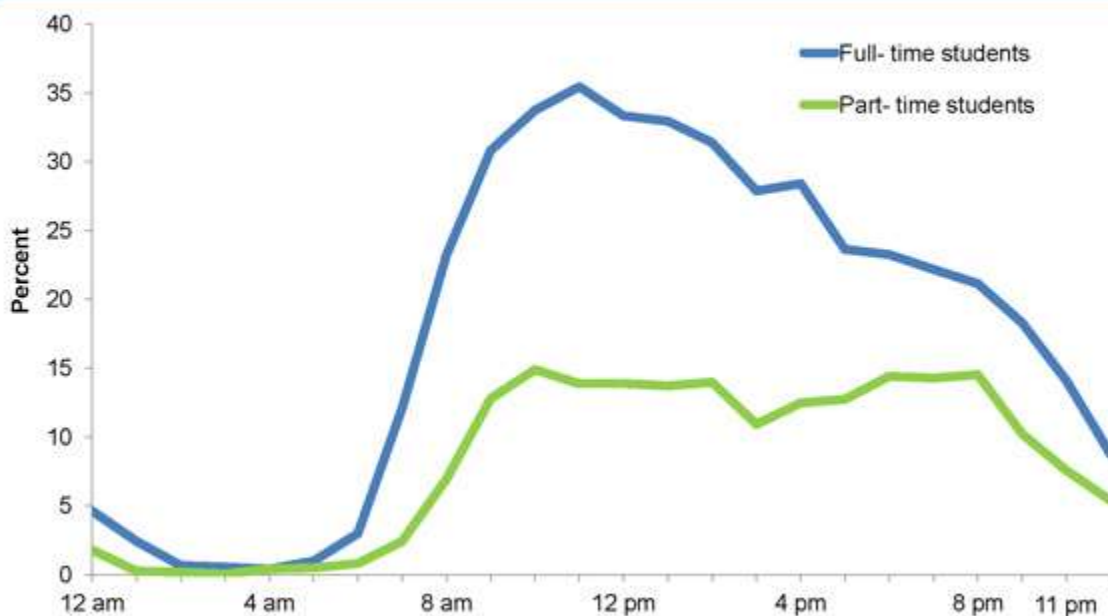
Nanotechnology

Public Health

Environment Studies and Environmental Science

Patient Advocate

Percent of university and college students who did educational activities, by hour of day on weekdays



NOTE: Data include individuals, ages 15 to 49, who were enrolled at a university or college. Data include non-holiday weekdays and are averages for 2008-12.

SOURCE: Bureau of Labor Statistics, American Time Use Survey

- The Department of Labor (DOL), in partnership with the Department of Commerce, will establish a new Center for Workforce and Industry Partnerships, which will champion regional partnerships. DOL will also be creating a business engagement metric for all WIOA-funded programs, and adult education programs will need to address how they will teach “employability skills.” The document also notes that WIOA-funded job training programs will be required to display outcomes in a standard “scorecard” format, and that DOL does not plan to offer waivers to WIOA’s requirements in this area, as it had often done in the past. The scorecard requirements are embedded in WIOA itself.
- A number of pilot programs were announced, including Department of Education experimental sites to explore student aid eligibility for competency-based and shorter term training programs, and prior learning assessment, which were originally put forward last year as part of the president’s college affordability proposals. The administration’s ongoing focus on getting the long-term unemployed back to work and expanding apprenticeship programs will also be addressed in today’s release.

- According to the U.S. Department of Agriculture, during the next five years, U.S. college graduates will find good employment opportunities if they have expertise in food, agriculture, renewable natural resources or the environment. Between 2015 and 2020, the nation expects to see 57,900 average annual openings for graduates with bachelor's or higher degrees in those areas.
- Tennessee students now have an opportunity to attend community college for free through the Tennessee Promise program. The Tennessee Promise — which is a combination of a scholarship and mentoring program — will allot \$34 million to eligible students and cover the remaining tuition and fees not covered by federal and state grants. Per the program website: “Students may use the scholarship at any of the state’s 13 community colleges, 27 colleges of applied technology or other eligible institution offering an associate’s degree program.”

Here’s the catch — in order to be eligible for the program, students must complete eight hours of community service by Aug. 1, 2015.

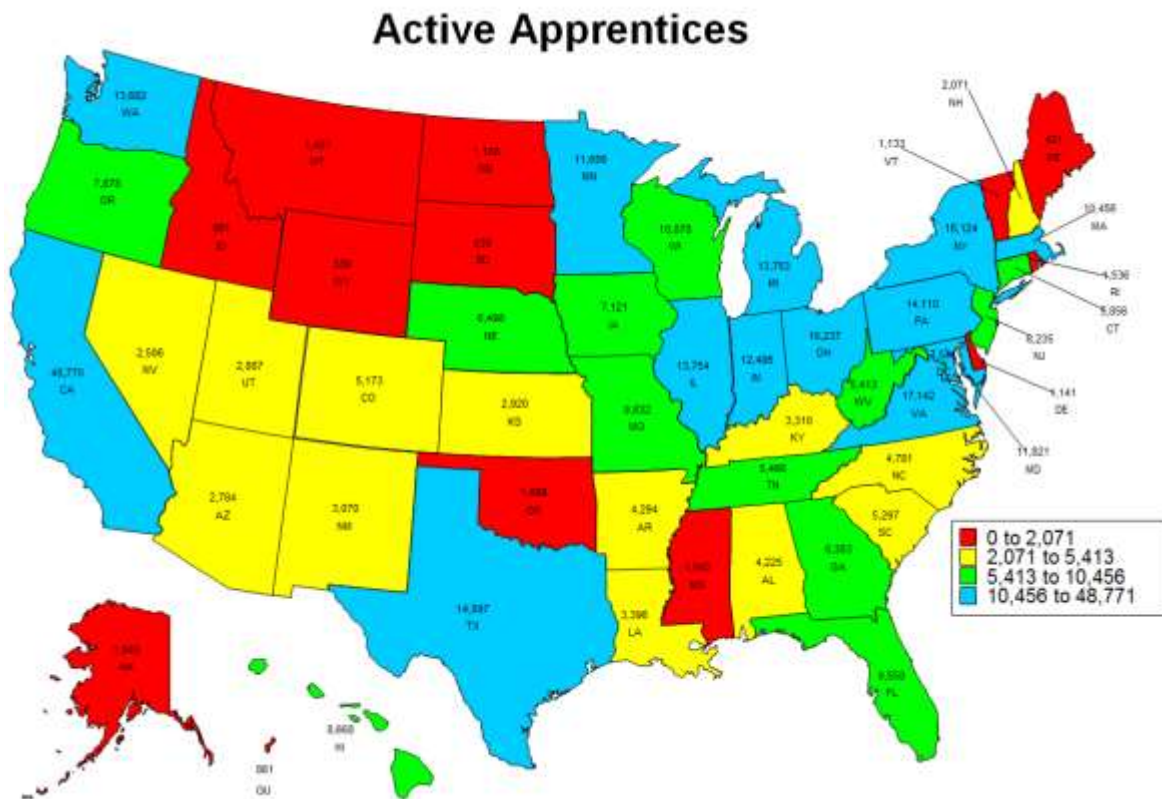
- Homelessness and hunger among college students is prevalent in all regions of the country and is not isolated to urban or high-poverty areas, according to the report. Students with children were more likely to experience food and housing insecurity than those without. Nearly a third of students going without food or shelter held jobs and received financial aid, and many work long hours at low-wage, low-quality jobs and get little sleep, the study showed.
- A new study by the Wisconsin HOPE Lab has revealed that about half of community college students in the United States, which make up 46 percent college students in the country, do not have consistent housing and that 13 percent are homeless. In absolute terms, this means at least one million people trying to receive postsecondary education do not have a roof over their heads.

Apprentices and Participation Trends

- In FY 2016, more than 206,000 individuals nationwide entered the apprenticeship system.
- Nationwide, there are over 505,000 apprentices currently obtaining the skills they need to succeed while earning the wages they need to build financial security.
- 49,000 participants graduated from the apprenticeship system in FY 2016.

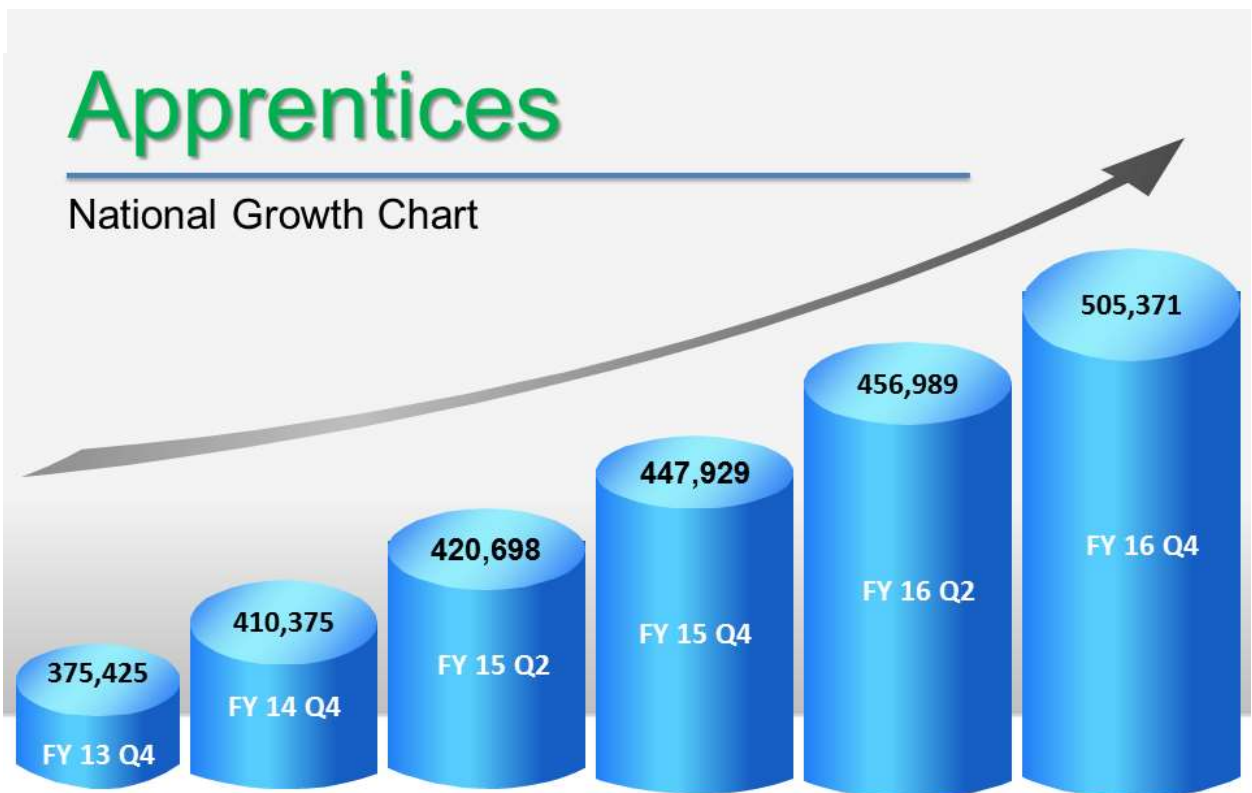
Apprenticeship Sponsors and Trends

- There are more than 21,000 registered apprenticeship programs across the nation.
- 1,700 new apprenticeship programs were established nationwide in FY 2016.



- The U.S. Chamber of Commerce Foundation has been exploring approaches to quality control that are employer driven and could serve as alternatives or a complement to the current accrediting system. These ideas likely will play a role in the Trump administration's take on federally registered apprenticeships, several experts said. The White House plans to create a committee to help devise its strategy.

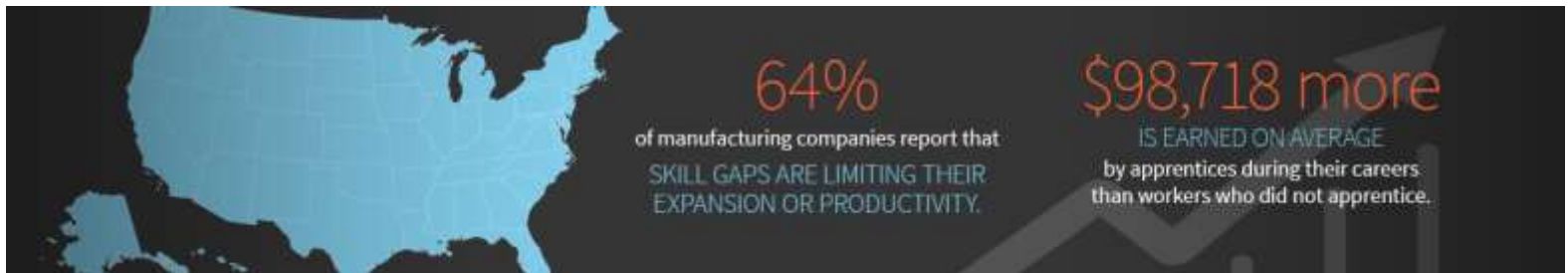
- The Trump administration has signaled that it would like to remove barriers to employers creating apprenticeship opportunities.
- As part of his efforts to encourage our ongoing economic recovery, President Obama set a goal of doubling the number of apprentices over the next five years. The president has also called on Congress to create a \$2 billion training fund to be used to reach his ambitious apprenticeship goals
- The insurance industry has embraced apprenticeships as a way to solve a persistent problem: attracting younger employees. Close to half of the industry's workers will retire in the next decade, according to some studies. One company, Zurich North America, formed a partnership in 2015 with Harper College, a two-year college about three miles away from the corporate headquarters, just outside of Chicago, to offer an associate degree in business, with a focus on insurance, for 24 apprentices who started work at the company in January 2016. (Zurich has since hired another 12.) Harper got a \$2.5-million grant from the Obama administration to start apprenticeship programs like the one in insurance, which was the first of its kind.



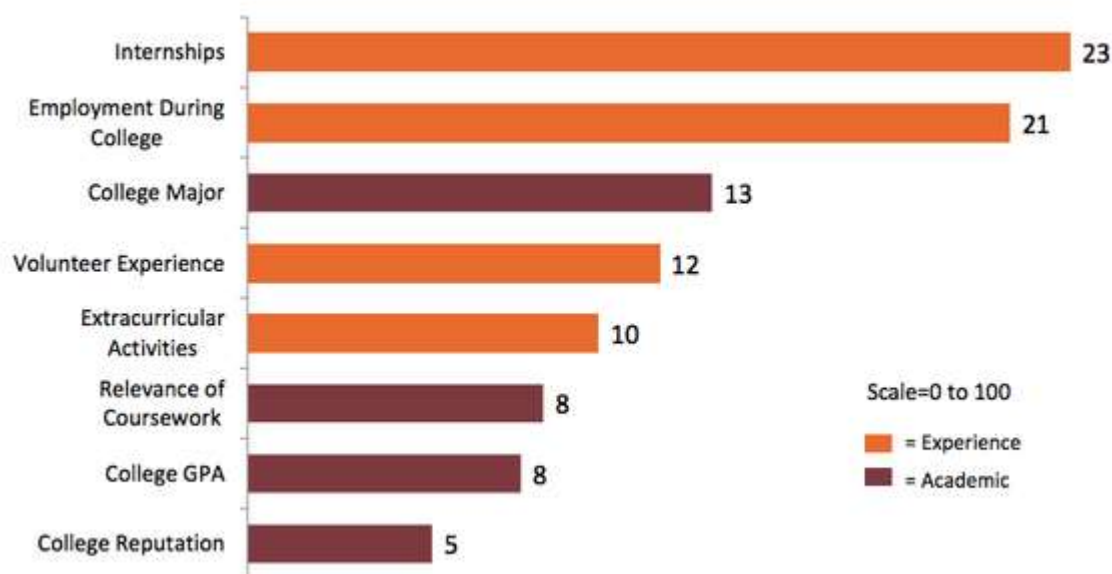
The Registered Apprenticeship-College Consortium is composed of employers, labor management groups and associations that have Registered Apprenticeship programs (known as sponsors) and two- and four- year postsecondary institutions. Membership also includes state, regional and national organizations that represent sponsors and colleges. RACC members agree to accept the college credit value of the Registered Apprenticeship completion certificate as recommended by a recognized third party evaluator for purposes of facilitating the transfer of credit between Consortium member colleges.

Fiscal Year 2016 State Totals

State Name	Active Apprentices	New Apprentices	Completers	Active Programs	New Program
Maryland	11,821	1,070	1,118	428	1
Pennsylvania	14,110	4,654	1,190	745	37
Virginia	17,142	7,030	734	2,141	288
West Virginia	5,413	1,187	522	300	15



Relative Importance of Attributes in Evaluating Graduates for Hire



- Employers are projecting to hire 3.4 percent more interns and 6.3 percent more co-ops in 2017 than they did in 2016, marking the first year since 2013 that employers have reported positive hiring projections for interns, co-ops, and full-time, entry-level hires, according to NACE's *2017 Internship & Co-op Survey*.

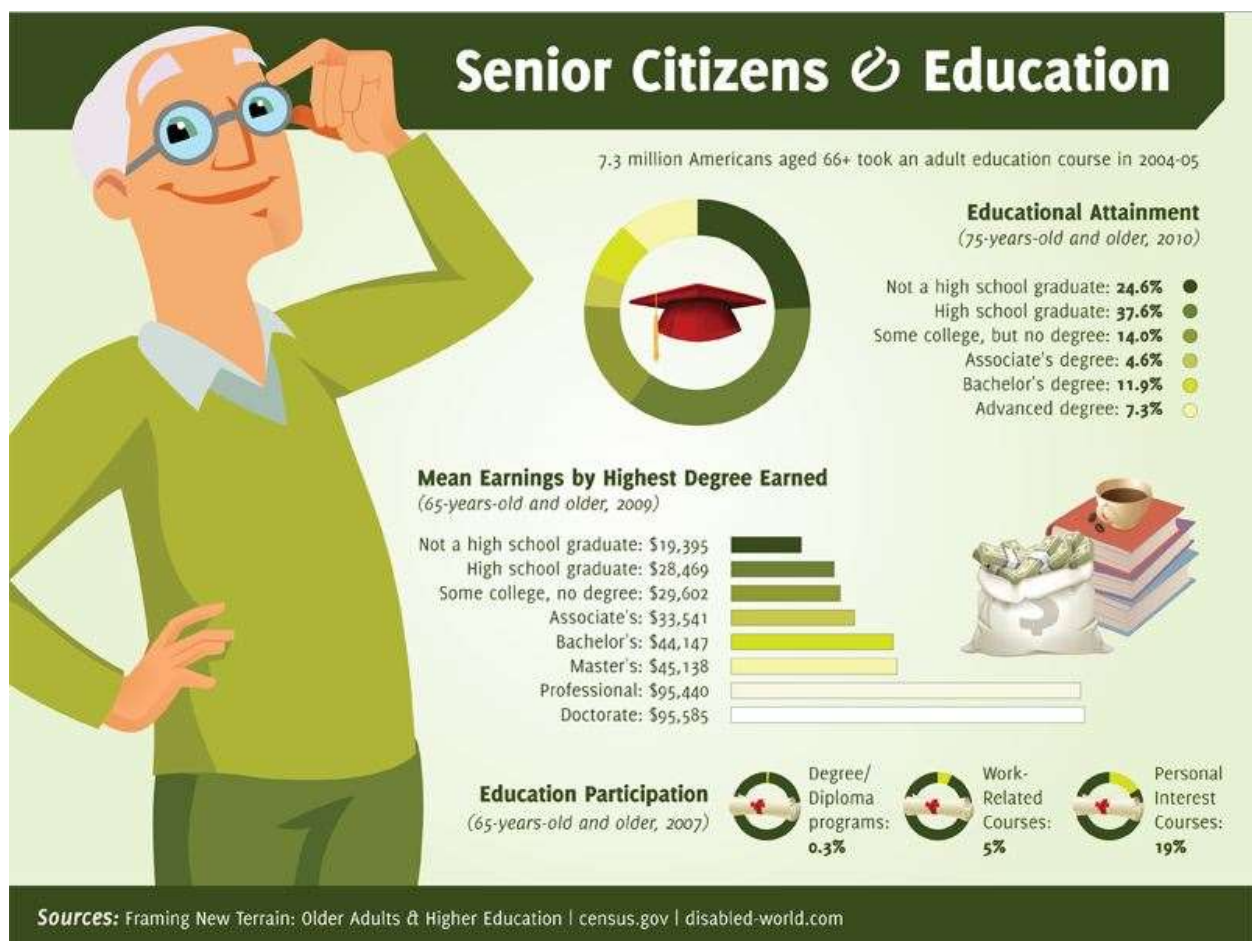
- The immediate college enrollment rate of high school completers at 2-year colleges increased from 20 percent in 1990 to 29 percent in 2012. The rate fluctuated between 20 and 25 percent in the 1990s and then increased from 21 percent in 2000 to 29 percent in 2012. The immediate college enrollment rate at 4-year colleges in 2012 (37 percent) did not differ significantly from the corresponding rate in 1990 (40 percent), but the rate in 2012 (37 percent) was lower than the rates in 2011 and 2000 (42 percent each). In each year between 1990 and 2012, the immediate college enrollment rate at 4-year colleges was higher than that at 2-year colleges. For example, in 2012 the immediate college enrollment rate at 4-year colleges was 37 percent, compared with 29 percent at 2-year colleges.
- On June 25, the House Ways and Means Committee approved the Student and Family Tax Simplification Act (H.R. 3393), a bill that would consolidate several existing higher education tax credits and deductions into an improved American Opportunity Tax Credit. AACC was strongly supportive of the bill as introduced, as it better aims the benefits of higher education tax credits to low-income students attending lower-cost institutions.
- According to a report on Google News, the Associated Press and Stanford University conducted a poll to find out what Americans' attitudes were toward community college. The poll found that the vast majority of Americans (71%) believe it is advantageous for some students to attend a community college, rather than a four-year institution. Nearly the same number polled agreed that an education received from a community college is "excellent" or "good."

The poll also asked whether community colleges do a good job of preparing students for a professional job after graduation. Out of the individuals polled, 62% said community colleges adequately prepare students for the work force, while 68% said that four-year universities succeed in this goal. These numbers indicate that the majority of Americans today are pleased with the education received at a two-year college, improving the image of community colleges in the world of higher education overall.

The only groups that did not find community colleges on par with other institutions were Blacks and Hispanics. According to the poll, 43% of minorities believed it was better to get into a four-year university, as opposed to just 17% of whites. Because minorities are also more likely to enroll in a two-year college than whites, the numbers show a difference between where these students want to go to college and where they actually enroll.

- \$8.6 billion - The estimated amount of money spent at family clothing stores in August 2013. Sales at bookstores in August 2013 were estimated at \$1.6 billion, For back-to-school shopping, choices of retail establishments abound: In 2012, there were 25,421 family clothing stores, 6,945 children and infants clothing stores, 25,455 shoe stores 7,443 office supply and stationery stores, 20,893 sporting goods stores, 7,244 book stores and 8,196 department stores.

Source: U.S. Census Bureau Monthly Retail Trade and Food Services.



A survey by the National Association of College Stores released today found that college students spent an average of \$563 on course materials during the 2014-2015 academic year, a drop from the average of \$638 the year before.

According to Elizabeth Riddle, the director of the National Association of College Stores' research team, more than 9,000 undergraduates from 23 campuses nationwide participated in the survey. A mixture of private and public schools as well as two-year and four-year campuses were selected for the survey, says Riddle. The chosen institutions represented different geographic locations and with varying enrollment numbers.



Source: OnCampus Research Spring 2015 Student Watch Report

The decrease is due in part to the rise of textbook-rental programs, which cost less, association officials note. But of those students who did not buy textbooks, the report noted, a greater percentage than in the past said it was because "they believed them to be unnecessary."

Another recent survey of college students, by the Book Industry Study Group, found a similar change in attitude, says Nadine Vassallo, a project manager for the group. "Students say, We see the materials as recommendations rather than requirements," she explains.

A separate survey of professors on the same campuses, meanwhile, found that they almost never see the course materials as optional. "What we think is happening is students are waiting to see how much the material is used before they buy them," Ms. Vassallo says.

- Nearly 30 percent of graduates of community colleges make more money than their counterparts with bachelor's degrees, other research by the Georgetown Center on Education and the Workforce shows. And while that advantage narrows by mid-career, it's also true that the community college graduates who benefit from it pay much less on average for their educations — \$3,264 per year for tuition and fees, according to the College Board, compared to \$8,893 per year at public and \$30,094 per year at private four-year colleges and universities.

Their bachelor's degrees, many students have discovered, "didn't focus on them getting the job they need," said Michael McCall, president of the Kentucky Community and Technical College System. "Whereas they can get an allied health degree from us and go out and make \$60,000 or \$70,000 a year."

Annual Personal Income, by College Graduation Type

Among graduates who completed college between 1990 and 2014

	Traditional (graduated between ages of 18 and 24)	Nontraditional (graduated at age 25 or older)
	%	%
Less than \$24,000	23	22
\$24,000 to less than \$90,000	49	50
\$90,000 to less than \$180,000	13	13
\$180,000 or more	9	10

Gallup-Purdue Index, Feb. 4-March 7, 2014

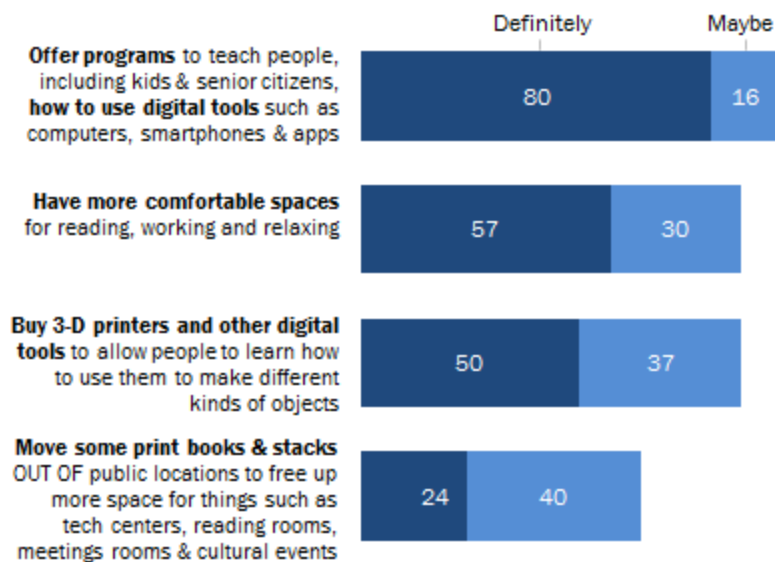
GALLUP

- A Pew Research Center telephone survey of 1,601 Americans ages 16 and older conducted from March 7 to April 4, 2016, finds that Americans continue to express largely positive views about the current state of their local public libraries. For instance, around three-quarters (77%) say that public libraries provide them with the resources they need. And 66% say the closing of their local public library would have a major impact on their community although notably, just 33% say this would have a major impact on them personally or on their family.
- There is also a growing sense that libraries can help people decide what information they can trust: 37% of Americans feel that public libraries contribute “a lot” in this regard, a 13-point increase from a survey conducted at a similar point in 2015.
- A majority of Americans feel libraries are doing a good job of providing a safe place for people to hang out or spend time (69% feel libraries contribute “a lot” to their communities in this regard) as well as opening up educational opportunities for people of all ages (58%). And roughly half think their libraries contribute “a lot” to their communities in terms of helping spark creativity among young people (49%) and providing a trusted place for people to learn about new technologies (47%).
- Young adults are more likely to have visited a library in the past 12 months than those ages 65 and older: 53% of those ages 18 to 29 visited a library or bookmobile in person in the past year, compared with 40% of those 65 and older.
- 19% of American adults say they have never visited a public library, including 11% of those who have college or graduate degrees. This report profiles those who say they have never in their lives been to public libraries.
- The act of borrowing printed books is still by far the most popular activity at libraries, even compared with using computers: 64% of library users ages 16 and older checked out a book in the last 12 months, compared with 29% who used a computer at the library in the same time frame.

- An emerging library “service” is its Wi-Fi connection, which can be used separately from the hours library buildings are open: 7% of those 16 and older say they have connected to a library’s Wi-Fi system when the library building itself was closed.
- 44% of those 16 and older say their public libraries loan out e-books, while 10% say this is not true of their communities’ libraries. Researchers at the University of Maryland report that 90% of libraries have e-book lending programs. So, many of Americans are not aware of this core service available at most local libraries.
- The idea that libraries serve communities at times of crisis is now pretty well established. Some 55% of those ages 16 and older say libraries contribute a lot (19%) or somewhat (37%) when a natural disaster or major problem strikes the community. There have been dramatic examples of libraries becoming refuges and outposts, for instance after Hurricane Sandy in the Northeast in 2013.

Large majority says that libraries should have programs to teach digital skills; many hope they provide comfortable reading and working spaces

% of U.S. adults ages 16 and older who say libraries should definitely or maybe ...



Source: Survey conducted March 7-April 4, 2016.
“Libraries 2016”

PEW RESEARCH CENTER

Gallup collaborated with Purdue University and Lumina Foundation to conduct a nationally representative study of U.S. college graduates with Internet access. Based on interviews with more than 30,000 graduates in early 2014, the Gallup-Purdue Index measures the degree to which graduates have "great jobs," through their engagement at work and if they are leading "great lives" by thriving in their overall well-being.

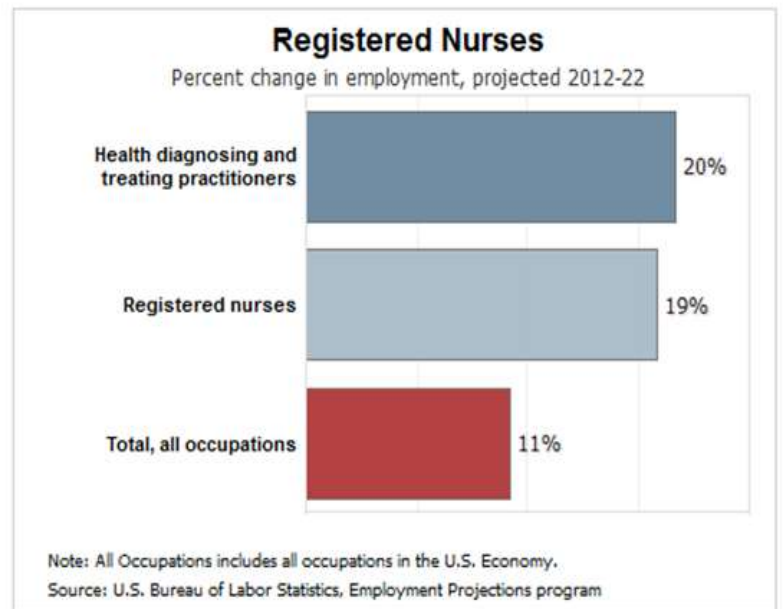
1. College rankings not linked to graduates' well-being and engagement at work: As many graduates from the Top 100 *U.S. News & World Report* schools are engaged in their work and are thriving in all elements of well-being as graduates from other institutions.
2. Key outcomes do not differ for private vs. public college graduates: Graduates of public versus not-for-profit private colleges do not differ in terms of employee engagement or well-being, but there are substantial differences between graduates of for-profit institutions and the rest. Graduates of for-profit institutions experience lower levels of employee engagement and well-being.
3. Student debt linked to worse health and less wealth: An analysis of Americans who graduated college since 1990 shows that graduates who took on \$50,000 or more in student loan debt, are less likely than their fellow graduates who did not borrow for college to be thriving in four of five elements of well-being: purpose, financial, community and physical.
4. Useful internships improve grads' chances of full-time work: Work and internship opportunities in college that allow students to apply what they learn improve the chances that college graduates will land work after college. Seventy-one percent of the most recent graduates who strongly agreed they had these types of jobs or internship opportunities as undergrads are working full time now for an employer, compared with 56% of those who strongly disagreed.
5. Black college grads more likely to graduate with debt: Half of 2000-2014 black college graduates in the U.S. report graduating with more than \$25,000 in undergraduate student loan debt. By comparison, 34% of recent white graduates report similar levels of debt, revealing a large borrowing gap between the races.
6. Graduating college later in life doesn't hamper income: Despite delaying their college education, nontraditional college graduates -- defined as those who earn their degree at age 25 or older -- have personal incomes later in life that are similar to those of traditional graduates, or those who earn their degree before age 25.
7. Fraternity and sorority membership linked to higher well-being for college grads: The 16% of college graduates who were members of sorority or fraternities are more likely to be "thriving" in their well-being and engaged at work than college graduates who were not members of these organizations.

8. U.S. business majors least likely to get support in college: With about half (51%) of business majors saying they had a college professor who made them excited about learning, business students are the least likely of all college majors to report having a motivating professor. Seven in 10 arts and humanities majors say they had such a professor, and strong majorities of social sciences/education graduates (66%) and sciences/engineering graduates (58%) say they had this important experience.
9. Emotionally attached alumni have higher well-being: Twenty-nine percent of graduates who are attached to their alma mater are thriving in well-being, versus 4% who are actively unattached to their colleges.
10. SEC alumni feel stronger school ties than other grads: Nearly three in 10 graduates of Southeastern Conference universities still feel a strong emotional connection to their alma maters. In fact, alumni attachment among graduates of the 14 universities currently in the SEC is nearly twice as high as that of graduates of other four-year colleges and universities nationwide (18%).

Nursing and Health Care

Employment of registered nurses is projected to grow 19 percent from 2012 to 2022, faster than the average for all occupations. Growth will occur for a number of reasons.

Demand for healthcare services will increase because of the aging population, since older people typically have more medical problems than younger people. Nurses also will be needed to educate and to care for patients with various chronic conditions, such as arthritis, dementia, diabetes, and obesity. In addition, the number of individuals who have access to healthcare services will increase, as a result of federal health insurance reform. More nurses will be needed to care for these patients.



- Nursing students comprise more than half of all health professions students.
- Generally, licensed graduates of any of the three types of education programs (bachelor's, associate's, or diploma) qualify for entry-level positions as a staff nurse. However, some employers may require a bachelor's degree.

Many registered nurses with an ADN or diploma choose to go back to school to earn a bachelor's degree through an RN-to-BSN program. There are also master's degree programs in nursing, combined bachelor's and master's programs, and programs for those who wish to enter the nursing profession but hold a bachelor's degree in another field. Some employers offer tuition reimbursement.

Certified nurse specialists (CNSs) must earn a master's degree in nursing. CNSs who conduct research typically need a doctoral degree.

- The primary pathway to professional nursing, as compared to technical-level practice, is the four-year Bachelor of Science degree in nursing (BSN). Registered nurses are prepared either through a four-year baccalaureate program; a three-year associate degree in nursing program; or a three-year hospital diploma program. Graduates of all three programs take the same state licensing exam, the NCLEX-RN. (The number of diploma programs has declined steadily -- to less than 10 percent of all basic RN education programs -- as nursing education has shifted from hospital-operated instruction into the college and university system.)

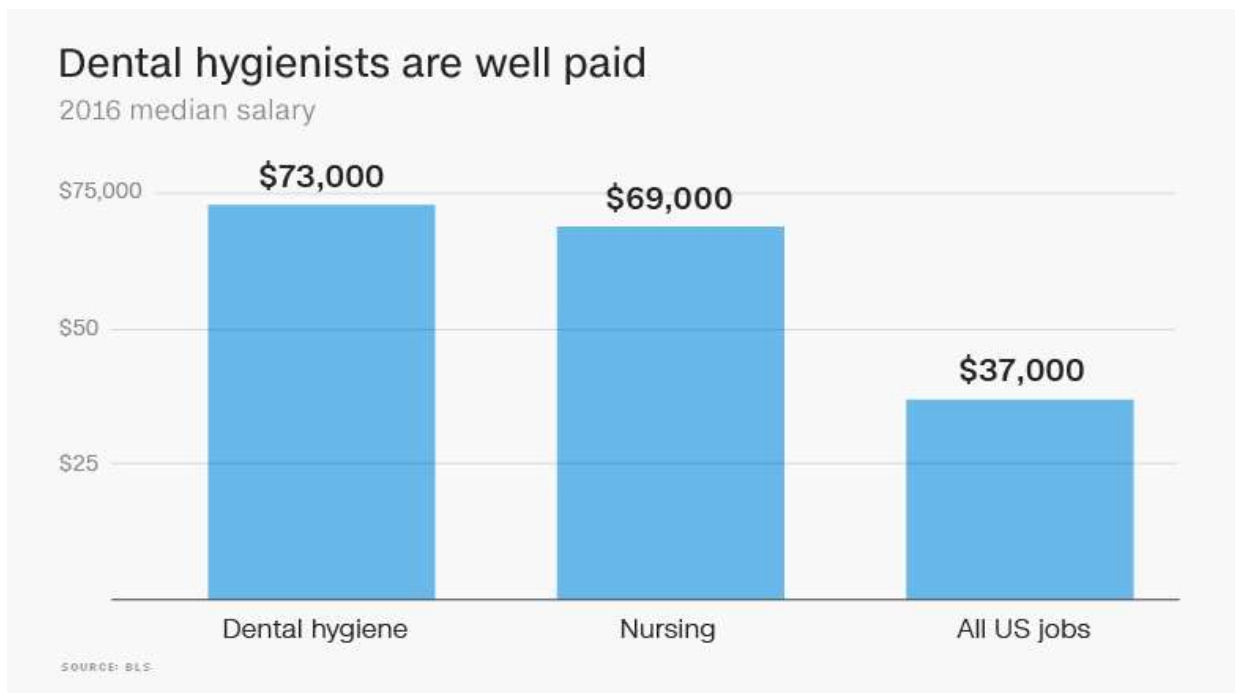
In order to identify the metropolitan areas that pay registered nurses the highest and lowest salaries, 24/7 Wall St. reviewed data from the Bureau of Labor Statistics' Occupational Employment Statistics program for May 2016. The largest hospital for each area is based on the number of employees.

Winchester, VA ranked 16 out of the top 25 areas in the Best Paying Cities for Nurses report.



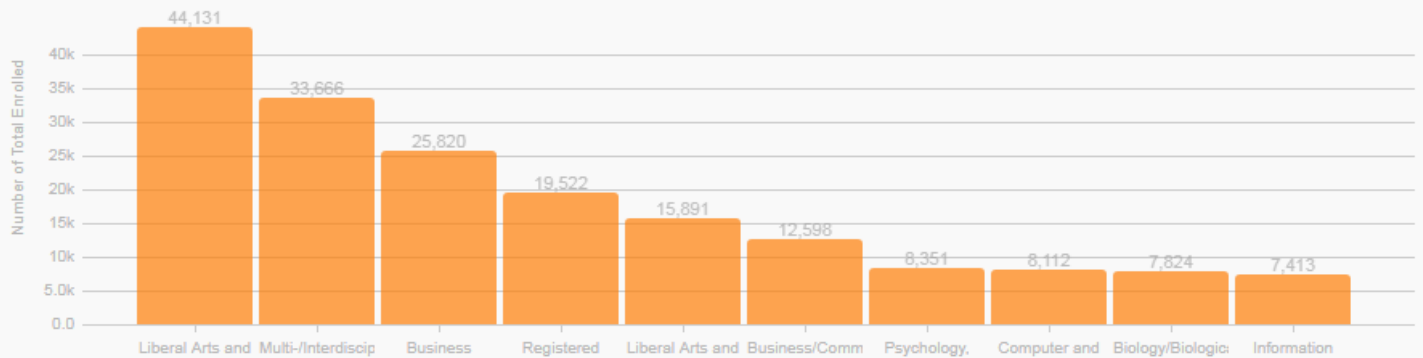
16. Winchester, VA-WV
Median annual salary: **\$52,820**
Total no. of registered nurses: **1,330**
Median annual salary, all jobs: **\$35,110**
Largest hospital: **Frederick Memorial Hospital**

Employment of dental hygienists is projected to grow 19 percent from 2014 to 2024, much faster than the average for all occupations. Ongoing research linking oral health to general health will continue to spur demand for preventive dental services, which are provided by dental hygienists.



State of Maryland and Washington County

Top Programs By Enrollment (All Programs, All Degrees, Maryland)



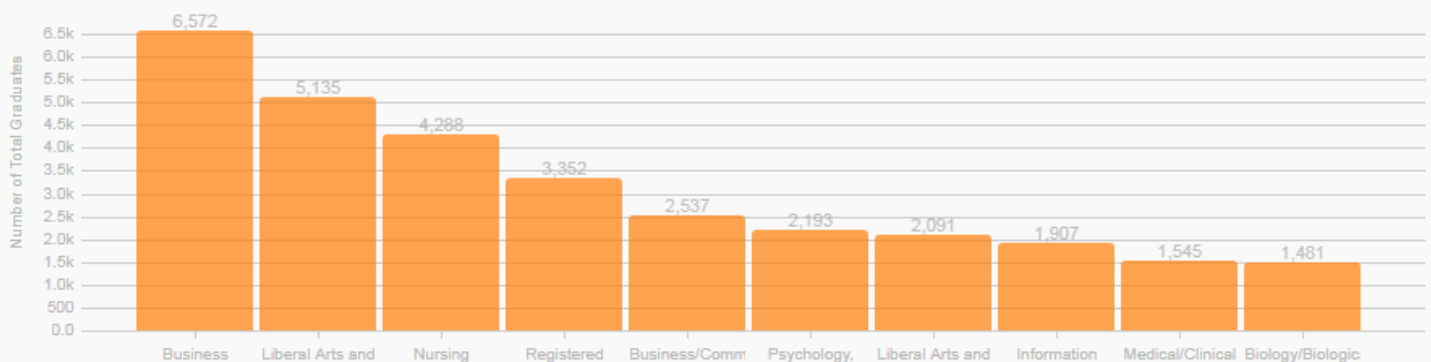
Source: Maryland Higher Education Commission, 2012

Education Statistics (All Programs, Maryland)

Degree Type	Enrollment	Graduates
All Degrees	388,615	88,759
Graduate Degree	66,854	22,439
Bachelor Degree	144,430	30,385
Associate Degree	118,403	14,470
None-Degree	18,655	0
Higher Ed. Certificate	11,289	6,037
Occupational Training	28,984	15,428

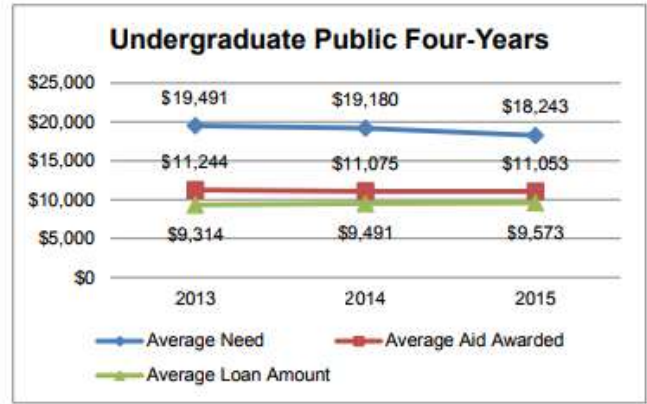
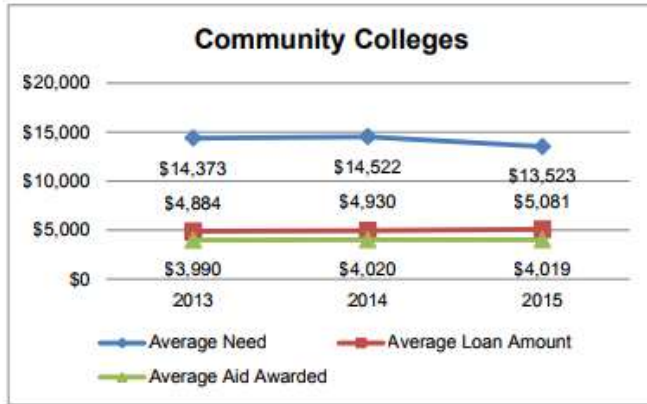
Source: Maryland Higher Education Commission, 2012

Top Programs By Graduates (All Programs, All Degrees, Maryland)



Source: Maryland Higher Education Commission, 2012

Financial Aid (FY2013 – FY2015)



Source: Maryland Higher Education Commission, 2016 Data Book

Degrees Awarded by Maryland Colleges and Universities

Major Program	Bachelor's	Master's	Doctorates
Agriculture and Natural Resources	349	48	20
Architecture and Environment	130	83	3
Biological Science	2,322	762	259
Business and Management	5,998	5,082	59
Computer Science	3,177	2,182	91
Engineering	1,840	1,183	243
Health Professions	2,997	1,818	965
Mathematics	521	140	49
Physical Sciences	452	157	132
All Others	16,845	7,112	980
Total	34,631	18,567	2,801

24/7 Wall St reviewed state higher education investments per full time student in the 2015 academic year. How states allocate money to public colleges and universities varies, but the majority of money goes to general operations of the institutions with the rest going to various forms of student aid. These figures come from “State Higher Education Finance (SHEF): FY 2015,” a report by the State Higher Education Executive Officers Association (SHEEO). Net tuition, defined as out-of-pocket tuition payments excluding financial aid, room and board, and other fees, also came from SHEEO. Median household income and educational attainment rates came from the U.S. Census Bureau’s 2015 American Community Survey

Maryland ranked 11th:

Maryland

Annual higher ed. spending per student: \$8,024

5-yr. chg.: 0%

Total public college enrollment: 231,570 (16th highest)

Tuition cost per student: \$7,819 (14th highest)

Unlike most states with relatively high public higher education per pupil spending, out of pocket tuition expenses are relatively high in Maryland. After receiving state and other financial aid, waivers, discounts, and excluding room and board, the average public university student in Maryland pays \$7,819 annually. By contrast, the national net average tuition is just over \$6,000.

Source: *Maryland Higher Education Commission. Date of data: 2016.*



- Maryland ranks 4th in R&D expenditures at universities and colleges, totaling \$3.74 billion in FY 2015. Further, Maryland ranks 3rd in federal government R&D spending at universities and colleges with \$2.94 billion.

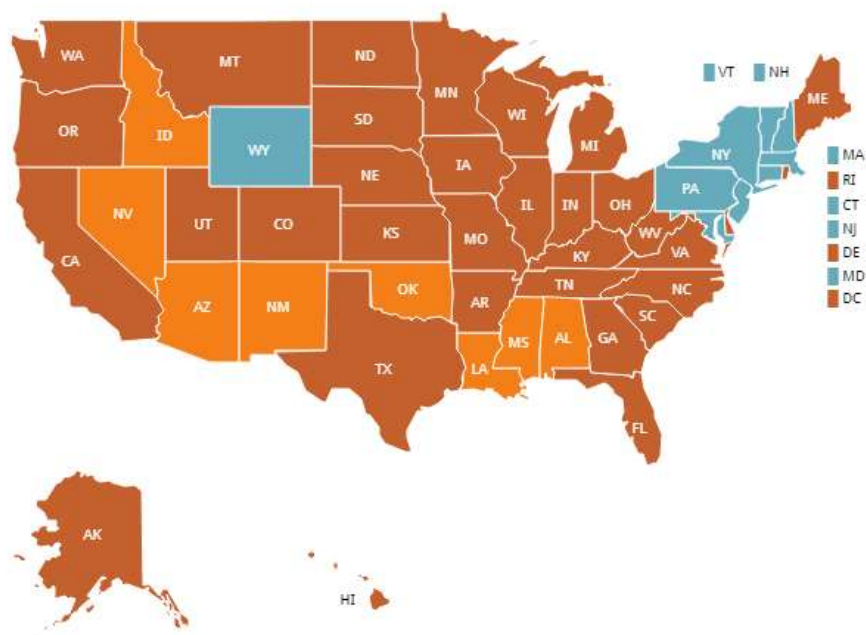
The 21st annual edition of *Quality Counts—Under Construction: Building on ESSA’s K-12 Foundation*—continues *Education Week’s* long-standing tradition of grading the states on their performance. A state’s overall grade is the average of its scores on the three separate indices tracked by the report. This year, Maryland finishes fifth among the 50 states and the District of Columbia, with an overall score of 82.8 out of 100 points and a grade of B. The nation as a whole posts a grade of C.

Diving into the findings for the three graded indices, Maryland earns a B in the Chance-for-Success category and ranks eighth. The average state earns a C-plus. In School Finance, Maryland receives a B-plus and ranks fifth. For the K-12 Achievement Index, last updated in the 2016 report, it finishes fifth with a grade of C-plus. The average state earns grades of C and C-minus in School Finance and K-12 Achievement, respectively.

Overall Grades & Scores (2017)



U.S. Score = C (74.2)



www.edweek.org

Maryland State Colleges Tuition Trends (2013 - 2017)

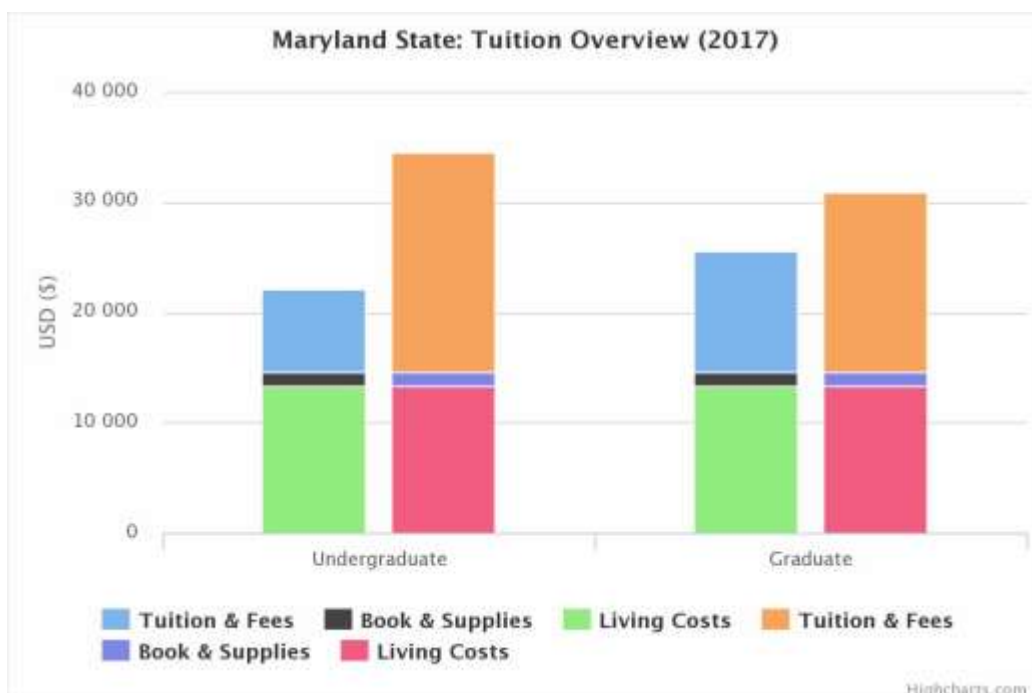
In Maryland State, there are **102** colleges and universities: 32 public, 23 private (not-for-profit), and 47 private (for-profit) schools. By school level, there are 46 4-year, 24 4-year, and 32 less than 2 year schools.

For schools in Maryland State, In-state tuition & fees is risen by 12.52% from \$6,753 (2013) to \$7,599 (2017) and out-of-state tuition & fees grew by 11.71% last 5 years, from \$18,023 (2013) to \$20,134 (2017). Living costs, including room & board and other expenses, is increased by 15.04% from \$11,540 (2013) to \$13,275 (2017) when students live on campus and 7.39% from \$12,075 (2013) to \$12,967 (2017) when living off campus without family.

Maryland State Colleges Total Costs Trends

Year	Living On Campus		Living Off Campus	
	In-State	Out-of-State	In-State	Out-of-State
2012-13	\$19,535	\$30,805	\$20,071	\$31,341
2013-14	\$20,105	\$31,346	\$20,852	\$32,093
2014-15	\$20,696	\$32,253	\$21,281	\$32,839
2015-16	\$21,181	\$33,046	\$21,584	\$33,449
2016-17	\$22,137	\$34,672	\$21,829	\$34,364

collegetuitioncompare.com



SCHOOLS AND COLLEGES^{3,8}

Educational Attainment - age 25 & over (2011-2015)

High school graduate or higher	86.7%
Bachelor's degree or higher	19.9%

Public Schools

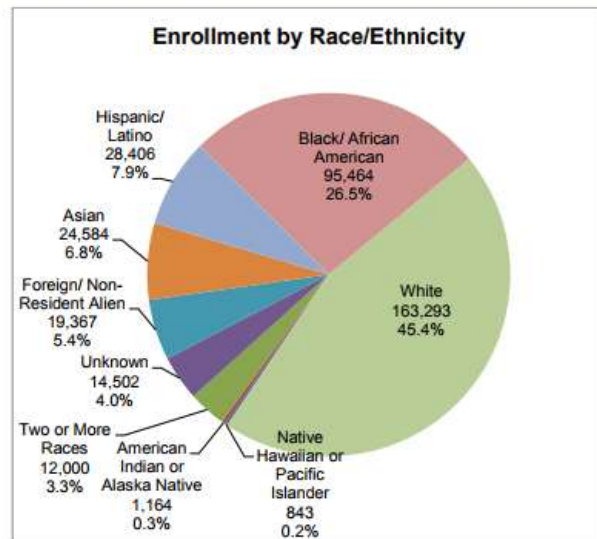
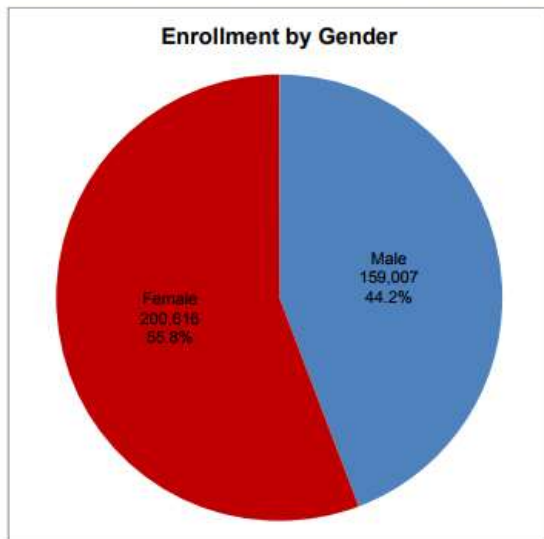
Number: 28 elementary; 8 middle/combined; 8 high
 Enrollment: 22,545 (Sept. 2016)
 Cost per pupil: \$12,720 (2014-2015)
 Students per teacher: 15.6 (Oct. 2016)
 High school career / tech enrollment: 2,514 (2016)
 High school graduates: 1,528 (July 2016)

Nonpublic Schools

Number: 37 (Sept. 2016)

Higher Education (2016)	Enrollment	Degrees
2-year institution		
Hagerstown Community College	4,063	661

Enrollment By Gender and Race in Fall 2015 (Undergraduate & Graduate)





college graduate National Career Outcomes Report

IPEDS 2015-2016 Academic Year

from Graduation to Twelve Months Out*

38.6% responded
107,605 graduates surveyed



82% of employed undergraduates reported employment in a position related to their career goals

80% of employed undergraduates reported employment in a position related to their major area of study

79% of employed undergraduates reported satisfaction (satisfied or very satisfied) with their current occupation



110 Institutions
33 States

Primary Status by Degree Level

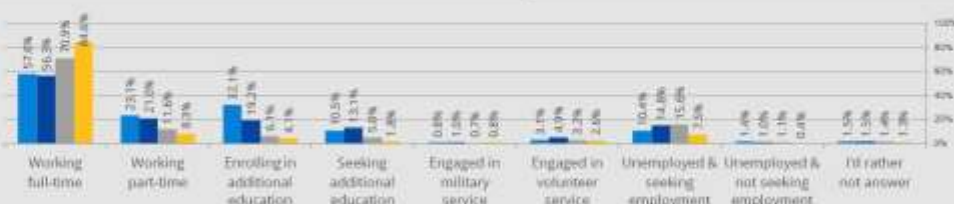


- Working full-time
- Working part-time
- Enrolling in additional education
- Seeking additional education
- Engaged in military service
- Engaged in volunteer service
- Unemployed and seeking employment
- Unemployed and not seeking employment
- Id rather not answer

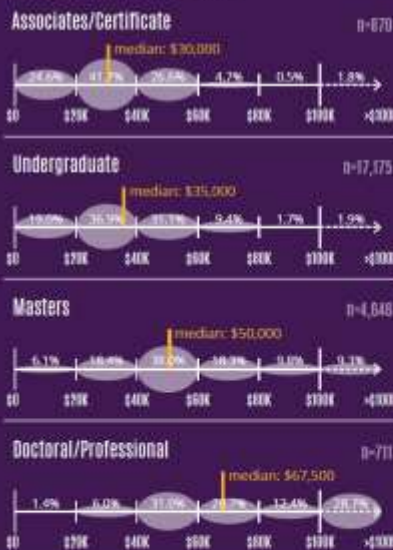


Multiple Status by Degree Level

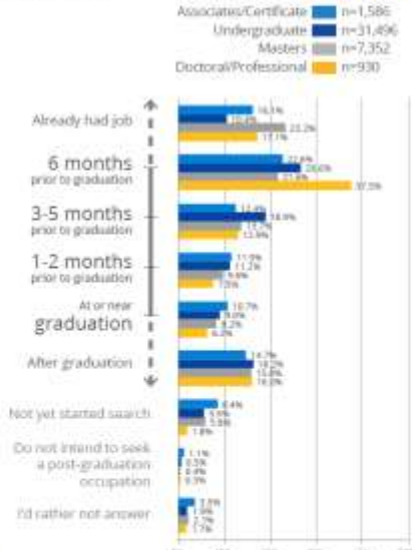
- Associates/Certificate n=1,586
- Undergraduate n=31,496
- Masters n=7,352
- Doctoral/Professional n=930



Average Income by Degree Level*



Occupation Search Start Date



Employment Search Geography



*The information contained in this infographic is intended as a demonstration of the data collected by The Outcomes Survey (TOS). This infographic includes data from TOS respondents in the IPEDS 2015-2016 Academic Year cohort collected during the period starting one month prior to graduation up to the period ending twelve months post-graduation. This infographic only includes data from those institutions following the data collection standards prescribed by TOS. To protect respondent confidentiality, median incomes have been rounded to the nearest \$500 interval. For more information on TOS standard research methodology and data collection approach, please visit TheOutcomesSurvey.com/DataStandards.



Washington County Public Schools

Dropout Rate: 4-Year Adjusted Cohort | All Students Sorted by Class

The 4-Year Adjusted Dropout Rate is calculated by dividing total Dropouts by the 4-Year Adjusted Cohort. Students who dropout of high school remain in the adjusted cohort—that is, the denominator of the dropout rate calculation.

All Students

Class of 2015 1 st time freshmen, Fall '11	1 st Year ('11-'12)	2 nd Year ('12-'13)	3 rd Year ('13-'14)	4 th Year ('14-'15)	4-Year Totals
Dropout Rate (%)					5.64
Dropouts	*	*	*	*	99
4-Yr Adjusted Cohort					1754
Class of 2014 1 st time freshmen, Fall '10	1 st Year ('10-'11)	2 nd Year ('11-'12)	3 rd Year ('12-'13)	4 th Year ('13-'14)	4-Year Totals
Dropout Rate (%)					6.54
Dropouts	*	*	*	*	114
4-Yr Adjusted Cohort					1743
Class of 2013 1 st time freshmen, Fall '09	1 st Year ('09-'10)	2 nd Year ('10-'11)	3 rd Year ('11-'12)	4 th Year ('12-'13)	4-Year Totals
Dropout Rate (%)					5.99
Dropouts	*	*	*	*	98
4-Yr Adjusted Cohort					1637
Class of 2012 1 st time freshmen, Fall '08	1 st Year ('08-'09)	2 nd Year ('09-'10)	3 rd Year ('10-'11)	4 th Year ('11-'12)	4-Year Totals
Dropout Rate (%)					7.39
Dropouts	*	*	*	52	124
4-Yr Adjusted Cohort					1679
Class of 2011 1 st time freshmen, Fall '07	1 st Year ('07-'08)	2 nd Year ('08-'09)	3 rd Year ('09-'10)	4 th Year ('10-'11)	4-Year Totals
Dropout Rate (%)					6.46
Dropouts	*	*	*	*	107
4-Yr Adjusted Cohort					1657
Class of 2010 1 st time freshmen, Fall '06	1 st Year ('06-'07)	2 nd Year ('07-'08)	3 rd Year ('08-'09)	4 th Year ('09-'10)	4-Year Totals
Dropout Rate (%)					6.60
Dropouts	*	*	*	*	108
4-Yr Adjusted Cohort					1636

[View this cohort's Graduation Rate](#)

'*' indicates no students or fewer than 10 students in category, or '*' indicates the percentage for the category is either ≤ 3 or ≥ 95 and the corresponding counts have been suppressed.

Dropout Adjusted Cohort Data Last Updated 1/13/2016

- Maryland ranks second nationally in the percentage of high school seniors who scored at the mastery level on Advanced Placement (AP) exams, with 30.4% earning a score of 3 or higher in 2016. Maryland also ranks second among the states in the percentage of graduates taking AP tests during high school at 49.3%, up from 32.7% in 2006.
- Maryland is first in the nation with 16 higher education institutions designated by the National Security Agency and Department of Homeland Security as National Centers of Academic Excellence in Cyber Defense education and research.
- According to Quality Counts, Education Week's annual assessment of key indicators of student success, Maryland's K-12 public school system ranks fifth overall based on three graded categories that include chance for success, K-12 achievement and school finance.



SAT College Bound Seniors Mean Score Trends by Year
Washington County

Year	Critical Reading Mean	Math Mean	Writing Mean	Composite Mean	Test Takers
2008	499	515	493	1507	724
2009	490	510	480	1480	770
2010	501	518	487	1507	712
2011	495	504	489	1488	815
2012	494	511	484	1489	886
2013	493	511	484	1487	869
2014	492	507	477	1476	864
2015	499	518	481	1498	862
2016	497	511	478	1485	786



ACT Graduating Class Mean Score Trends by Year
Prince George's County

Year	English Mean	Math Mean	Reading Mean	Science Mean	Composite Mean	Student Count
2008	16	17	17	17	17	871
2009	17	17	18	17	17	1010
2010	17	18	18	18	18	1039
2011	17	18	18	18	18	1076
2012	17	18	18	18	18	1101
2013	17	18	19	18	18	933
2014	17	18	19	18	18	1029
2015	18	18	19	19	18	1196
2016	18	19	19	19	19	1183

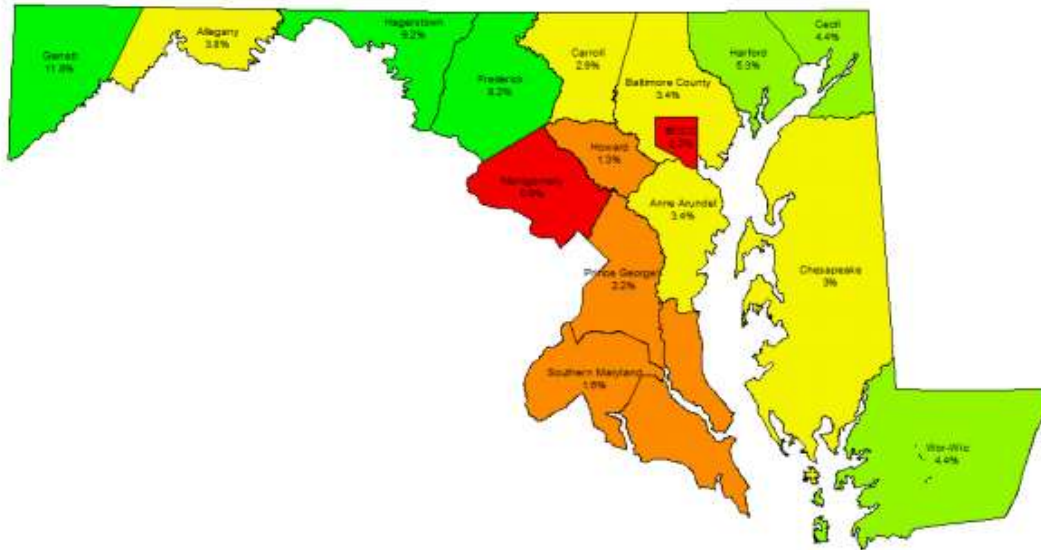
- Maryland was the first state in the nation to set specific STEM education standards telling teachers not just what STEM is, but how to teach the subjects. The O'Malley-Brown Administration set a goal of increasing STEM college graduates by 40 percent by 2015. Through 2013, we are nearly there with a 37.1 percent increase so far.
- Maryland is home to many schools ranked in 2017 among the U.S. News Best High Schools, including 12 with gold medals, 44 with silver medals and eight with bronze medals.
- In 2016, Maryland finishes fifth among the 50 states and the District of Columbia, with an overall score of 82.8 out of 100 points and a grade of B. The nation as a whole posts a grade of C.
- Washington County Public Schools will implement a shared safety program, working closely with students, parents and staff to help better educate students and parents about online safety. WCPS will also consult with both groups about how school leaders can improve the school climate in light of issues regularly surfacing in social media conversations.

In addition, WCPS has contracted with Social Sentinel, Inc., an education safety and security company that will assist the district in monitoring publicly available social media streams for threats of harm against students, staff or school sites in general.

- In fall 2016, some 304,922 students (undergraduate, graduate, and professional) enrolled at Maryland public universities and colleges. Women accounted for 54.8 of all students.
- For undergraduates in fall 2015, Maryland residents constituted 92.5% of enrollees at community colleges, 71.0% at public four-year institutions, and 42.9% at independent universities and colleges.
- Maryland participates in the Academic Common Market, an education consortium of fifteen southern states. Reduced tuition is offered to students who attend schools out of state because their program is not available at a public in-state college or university. States who participate with Maryland in this program are: Alabama; Arkansas; Delaware, Florida (graduate programs), Georgia, Kentucky, Louisiana, Mississippi, Oklahoma, South Carolina, Tennessee, Texas (graduate programs), Virginia, and West Virginia.



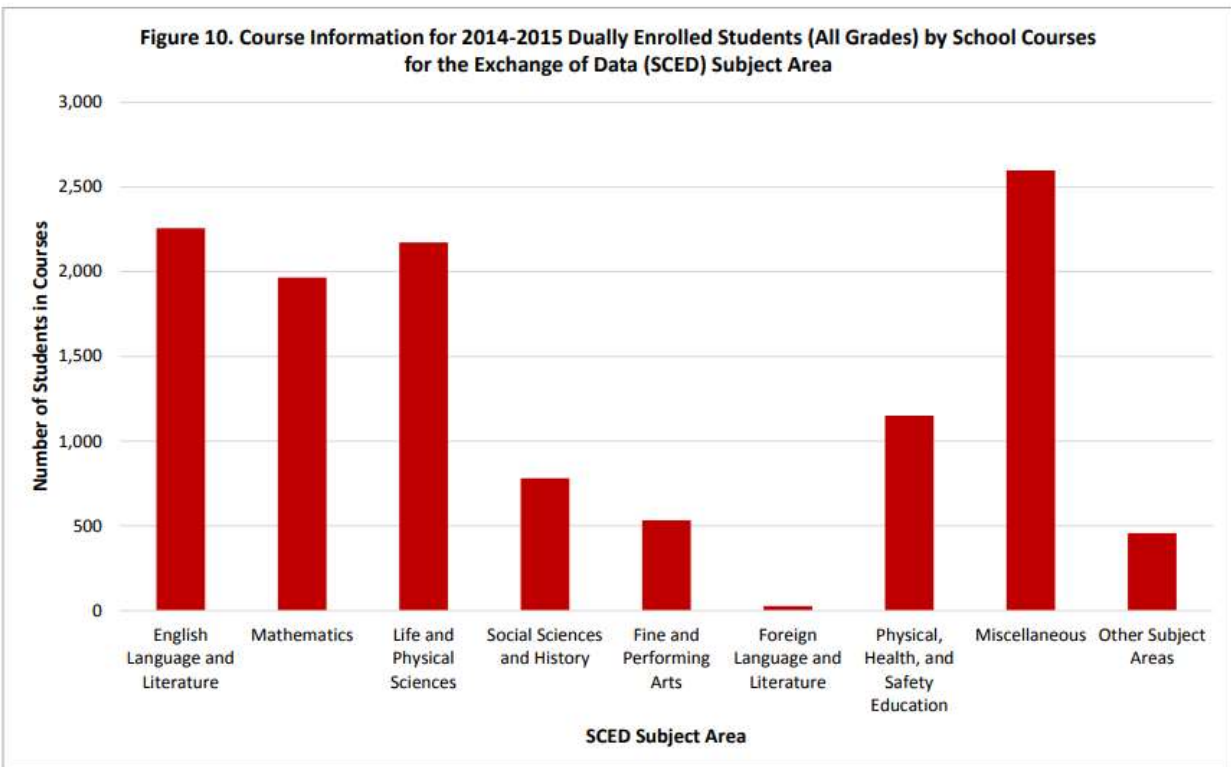
HIGH SCHOOL DUAL ENROLLMENT PARTICIPATION RATE BY COMMUNITY COLLEGE SERVICE AREA



Colleges	Fall 2014	Spring 2015	Fall 2015	Spring 2016	Fall 2016
Allegany College of Maryland	125	134	113	121	98
Anne Arundel Community College	586	425	643	523	788
Baltimore City Community College	1	33	28	54	38
Carroll Community College	108	143	202	229	244
Cecil College	133	160	207	176	206
Chesapeake College	268	217	202	212	215
College of Southern Maryland	202	607	305	850	293
Community College of Baltimore County	742	654	912	745	1061
Frederick Community College	854	535	844	790	1026
Garrett College	33	28	63	106	130
Hagerstown Community College	618	588	601	573	615
Harford Community College	319	289	446	450	609
Howard Community College	99	90	177	354	221
Montgomery College	475	442	394	401	426
Prince George's Community College	674	699	741	802	800
Wor-Wic Community College	183	190	200	220	272
Total	5,420	5,234	6,078	6,606	7,042

In the 2014- 2015 academic year, female students were over-represented in the 12th grade dually enrolled population (59%) when compared to the total 12th grade population (50%). Students eligible for FARMs were underrepresented in the 12th grade dually enrolled population (21%) when compared to the total 12th grade population (34%). White students were over-represented in the 12th grade dually enrolled population (65%) when compared to the total 12th grade population (49%). Hispanic students were under-represented in the 12th grade dually enrolled population (7%) when compared to the total 12th grade population (11%).

Maryland Longitudinal Data System Center



Nationally, 10% of School revenue came from the federal government, and roughly the same came from state sources and local sources. In the nation's highest spending states, local sources were more likely to account for high portions of expenditures, with little coming from the federal government.

Educational attainment rates among adults were also higher in the states that spent more per student. Students in these states were much more likely to complete high school and go on to complete college. More than 30% of adults in the majority of the top spending states had at least a bachelor's degree, compared to the U.S rate of 29.1%.

Maryland ranks second nationally in the percentage of high school seniors who scored at the mastery level on Advanced Placement (AP) exams, with 30.4% earning a score of 3 or higher in 2016. Maryland also ranks second among the states in the percentage of graduates taking AP tests during high school at 49.3%, up from 32.7% in 2006.

Maryland is first in the nation with 16 higher education institutions designated by the National Security Agency and Department of Homeland Security as National Centers of Academic Excellence in Cyber Defense education and research.

According to Quality Counts, Education Week's annual assessment of key indicators of student success, Maryland's K-12 public school system ranks fifth overall based on three graded.

According to a U.S. News and World Report ranking of U.S. public high schools, for the third year in a row Maryland places first in the percentage of schools awarded a gold or silver medal for how well schools prepare students for college-level work, based on performance on state and national proficiency tests and graduation rates.

- The public education system, which includes Washington County Public Schools, Hagerstown Community College, and the University System of Maryland at Hagerstown, are positioned to work in partnership with each other and other community interests to serve bioscience development within the county. Issues for education include: participating in a community education campaign; finding ways to increase the math and science interests and skills of local students; working to provide financial assistance to for higher education; and developing clear pathways among educational levels.

- HCC's closest competition, in terms of location, is Kaplan University - Hagerstown. As shown on the chart below, HCC is a better buy! Kaplan offers several of the same programs: Business Administration, Medical Receptionist/Transcriptionist, Medical Secretary/Assistant, Accounting, Phlebotomist, Criminal Justice, and Information Technology.

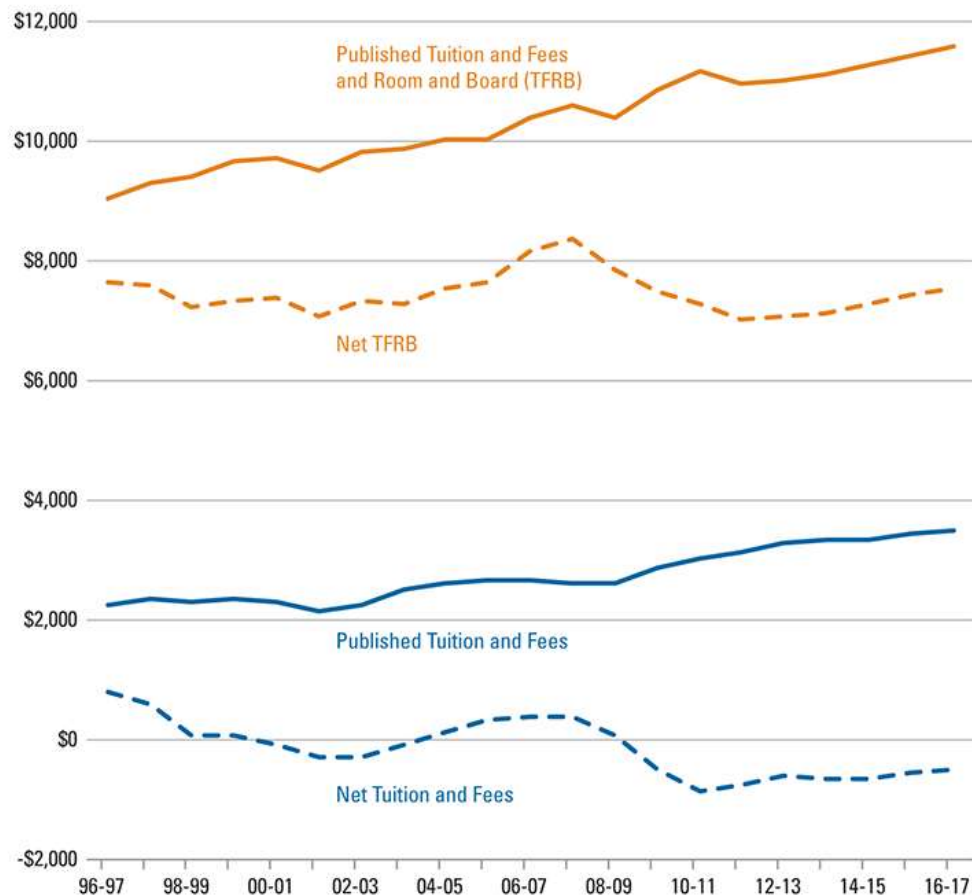
Hagerstown Community College		Kaplan University (Hagerstown Campus)				
Degrees Offered						
Associates and Certificates		Bachelors, Associates and Certificates				
Enrollment						
Total enrollment:		4,061	Total enrollment: 638			
Percent of Enrollment	By gender		by gender			
	Men	39%	Men: 20%			
	Women	61%	Women: 80%			
	By race/ethnicity		by race/ethnicity			
	Black non-Hispanic	10%	Black non-Hispanic: 15%			
	American Indian or Alaskan Native:	0%	American Indian or Alaskan Native: 0%			
	Asian or Pacific Islander:	2%	Asian or Pacific Islander: 0%			
	Hispanic:	6%	Hispanic: 4%			
	White non-Hispanic:	75%	White non-Hispanic: 66%			
	Race-ethnicity unknown:	2%	Race-ethnicity unknown: 12%			
(Enrollment data Fall 2013)		(Enrollment data Fall 2013)				
Academic year prices for full-time, first-time undergraduate students						
Financial		2015-2016	2016-2017		2015-2016	2016-2017
	Tuition & fees			Tuition & fees	\$14,296	\$14,325
	In-district	\$3,564	\$3,564			
	In-state	\$5,280	\$5,280			
	Out-of-state	\$6,788	\$6,788			
	Books and supplies	\$2,030	\$1,874	Books and supplies	Not available	Not available
	Off-campus			Off-campus		
	Room and board	\$10,206	\$111,061	Room and board	\$5,601	\$4,920
	Other expenses	\$2,436	\$2,435	Other expenses	\$4,770	\$2,190
	Off-campus with family			Off-campus with family		
Other expenses	\$2,436	\$2,435	Other expenses	\$3,354	\$2,190	
Source: College Navigator						

College Tuition Comparison 2016-2017

School Name	Tuition & Fees		Books & Supplies	Living Costs	
	In-State	Out-of-State		On Campus	Off Campus
Hagerstown Community College	\$5,280	\$6,788	\$1,874		\$13,174
Allegany College of MD	\$6,990	\$8,340	\$1,512	\$14,236	\$14,236
Frederick Community College	\$6,810	\$9,018	\$1,200		\$10,900
Frostburg State University	\$8,702	\$21,226	\$1,400	\$11,118	\$9,706
Kaplan University	\$14,325	\$14,325			\$7,110
Hood College	\$36,540	\$36,540	\$1,200	\$15,300	\$14,340
Salisbury University	\$9,364	\$17,779	\$1,300	\$14,050	\$14,052
Towson University	\$9,408	\$21,076	\$630	\$14,848	\$14,848
University of MD – College Park	\$10,181	\$32,045	\$12,00	\$14,682	\$14,682
Shepherd University	\$7,170	\$17,482	\$1,000	\$12,557	\$12,557
Shippensburg University	\$11,452	\$19,542	\$1,200	\$14,582	\$14,582
Penn State – Mont Alto	\$13,678	\$20,558	\$1,840	\$16,018	\$16,018
Blue Ridge Community and Technical College	\$3,864	\$6,984	\$1,364	\$10,250	\$10,250
Wilson College	\$24,430	\$24,430	\$1,100	\$12,890	\$12,890

collegetuitioncompare.com

- In 2016-17, full-time students at public two-year colleges receive an average of about \$4,020 in grant aid and federal education tax credits and deductions — \$500 more than required to cover tuition and fees. They can use these funds for books and supplies or living expenses.
- Between 2006-07 and 2016-17, the average published tuition and fees at public two-year colleges increased by \$840 (31%) after adjusting for inflation. Average combined grant aid and tax benefits increased by \$1,760 over the decade.
- In 2016-17, on average after grant aid, full-time students at public two-year colleges must cover about \$7,560 in books and supplies and living expenses.



trends.collegeboard.org

Following then are the top 10 trends in the CE industry today according to the Learning Resources Network (LERN), the largest continuing education association in the world.

1. Mobile Technology is changing the way CE programs communicate and market to its customers, including the ability to produce QR codes and place on brochures and catalogs. Courses on mobile marketing are being offered by many programs, online courses are starting to be formatted so students can take them on mobile devices, and printed materials are being turned into e-books.
2. The focus from the Baby Boom generation to Generation Y (along with Gen X) is becoming more critical for CE programs going forward. CE programs that fail to incorporate Gen Y into their staffing and moving them more into positions of leadership risk falling into irrelevance going forward.
3. Despite our tough economy, absence of understanding and support from intuitional leaders, government and society, and lack of overall business investment, many CE programs are not only surviving, but thriving today.
4. CE programs are offering new courses on topics such as mobile marketing, social media and photoshop to improve the skills of information and knowledge workers.
5. The need for CE programs to have the right data to help make the right decisions, and having someone on staff to analyze the data, is being recognized as vital to future success of the program.
6. Online certificate programs are set to take off and promise to be one of the biggest new growth areas in CE.
7. The shift in focus towards gaining more customer share vs. market share, and improving customer retention is helping CE programs to become more efficient and profitable.
8. Grow or die: The CE programs that are thriving today are embracing the changes in the marketplace, tapping into areas of growth, and developing programs that are comprehensive, intensive and high dollar.
9. With the need for learning at an all-time high in society, support for CE should also be at an all-time high. However, institutional support of CE remains fragile, meaning it is vital for CE programs to continue to strengthen their relationships with central administration at their institutions, local businesses, government and society at large.
10. Good management will continue to be key to day-to-day execution of CE programs, but vision and leadership will become even more important as the CE industry moves from outdated practices to practices that respond to the needs of the new economy.

WORKFORCE AND ECONOMIC DEVELOPMENT

United States – National

- Colleges should develop closer partnerships with business partners and employers to be more market and workforce driven.
- An executive summary prepared for Georgetown University's Center on Education and the Workforce notes that women represent 23% of the workers in science, technology, engineering and mathematics (STEM) professions. But women make up 48% of workers in all occupations across the board.
- The head of the National Association of Manufacturers testified to Congress about the deep need for change to manufacturing jobs. Jay Timmons estimates that as many as 600,000 skilled labor positions are unfilled around the nation.
- *U.S. News & World Report* writes that a study completed by HSBC and the Cicero Group found that more than a third of working Americans would like to semi-retire before retiring completely.

Of those who responded to the survey, 19 percent between 55 and 64 said they consider themselves to be semi-retired, while another 32 percent hope to transition into semi-retirement before completely retiring. It's a trend that is growing among the younger generations, too. In fact, 43 percent of 25- to 34-year-olds and 41 percent of people between 35 and 44 hope to one day semi-retire. Interestingly enough, workers between 45 and 54 aren't as inclined to consider semi-retirement, with only 27 percent planning to, according to *U.S. News & World Report*.

- Crowdsourcing can be a great opportunity for baby boomers looking to continue working in the disciplines they've worked in for the last several decades (for instance, finance, tech support, sales) but part-time, from home and maintaining work-life balance. These types of opportunities allow baby boomers to be entrepreneurs, solopreneurs or independent contractors.
- Checking emails at home is just part of the job for most Americans, who would also prefer to receive money rather than more paid vacation or sick days, according to a poll. More than half of adults questioned in a 60 Minutes/Vanity Fair survey said monitoring emails outside office hours was routine, compared to 38 percent who said it was unnecessary. But younger Americans were more willing to keep in touch on work issues at home. Nearly 70 percent of employees under 30 years old said it wasn't a problem but the number dropped to 52 percent for workers 30 and older.

- Nearly three-quarters of office workers in North America would quit their job to move to an organization that allows them to work remotely more frequently, even if they don't get a pay hike, according to a recent report from Softchoice.

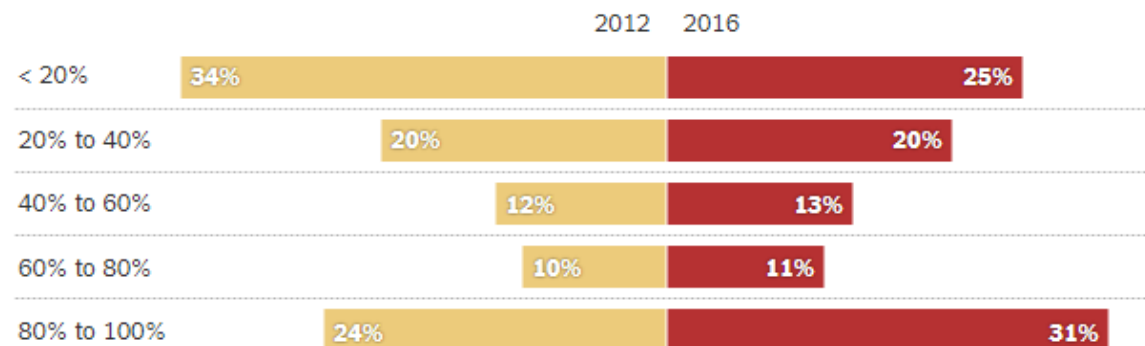
The company surveyed about 1,000 full-time workers and found that 74% of them were willing to make this move.

Proportion of users willing to take a lower salary in return for flexible working privileges:



The Time Employees Spend Working Remotely

Americans who work remotely are doing so for longer periods of time.



Source: Gallup

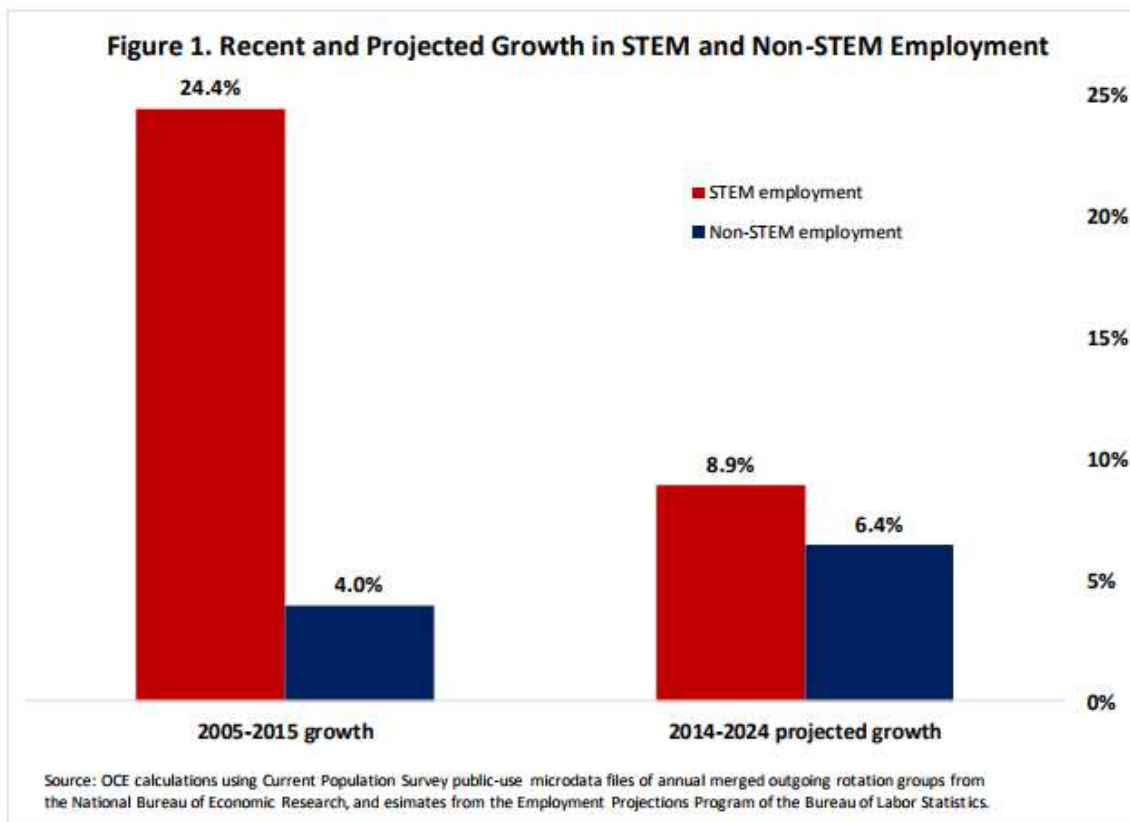
- A 2013 study by the software company Intuit estimates that 40 percent of the U.S. workforce (more than 60 million people) will be employed as contractors or temporary workers by the year 2020. Many people, especially those in creative or technology occupations, will work as contractors by choice. They value the flexibility and the higher pay they can command compared to work as full-time employees.
- In 2013, 7.2 million employees in the public sector belonged to a union, compared with 7.3 million workers in the private sector. The union membership rate for public-sector workers (35.3 percent) was substantially higher than the rate for private-sector workers (6.7 percent). Within the public sector, the union membership rate was highest for local government (40.8 percent), which includes employees in heavily unionized occupations, such as teachers, police officers, and firefighters. In the private sector, industries with high unionization rates included utilities (25.6 percent), transportation and warehousing (19.6 percent), telecommunications (14.4 percent), and construction (14.1 percent). Low unionization rates occurred in agriculture and related industries (1.0 percent), finance (1.0 percent), and in food services and drinking places (1.3 percent). Among occupational groups, the highest unionization rates in 2013 were in education, training, and library occupations and protective service occupations (35.3 percent each). Farming, fishing, and forestry occupations (2.1 percent) and sales and related occupations (2.9 percent) had the lowest unionization rates.
- The job market for blue collar professionals is experiencing a decline due to outsourcing and a movement towards service-based economy. However, several of these professions maintain a strong presences in today's workforce. The pay for these jobs is comparable to many white collar jobs. According to the 2006-2007 Bureau of Labor Statistics' Occupational Outlook Handbook, the following jobs are still very much in demand and pay more than \$43,318 annually:
 - Construction and Building Inspectors
 - Plumbers, Pipefitters and Steamfitters
 - Structural iron and Steel Workers
 - Electricians
 - Elevator Installers
 - Police Officers
 - Subway/Streetcar Operators
 - Commercial and Industrial Equipment Repairers
 - Aircraft and Avionics mechanics
 - Plastic Machine Setters

STEM Employment and Worker Earnings In 2015, 9.0 million people, or 1 in 16 workers, held STEM jobs. Although STEM employment currently makes up only a small fraction of total U.S. employment, it has been growing and continues to grow rapidly. In our previous report, we found that STEM employment grew 7.9 percent from 2000 to 2010, or 0.8 percent per year. In contrast, employment in non-STEM jobs grew just 2.6 percent over this period, for an annual growth rate of 0.3 percent per year. Since then, employment growth in STEM has accelerated to 1.7 percent per year over the past five years, a two-fold increase from the pre-recession period. Much of this growth is likely due to the economic recovery, as non-STEM occupations have grown by 0.6 percent annually over the same time period, also double their pre-recession rate (see Figure 1).

24.4% 8.9% 4.0% 6.4% 0% 5% 10% 15% 20% 25% 2005-2015 growth 2014-2024 projected growth

Figure 1. Recent and Projected Growth in STEM and Non-STEM Employment

Source: OCE calculations using Current Population Survey public-use microdata files of annual merged outgoing rotation groups from the National Bureau of Economic Research, and estimates from the Employment Projections Program of the Bureau of Labor Statistics.



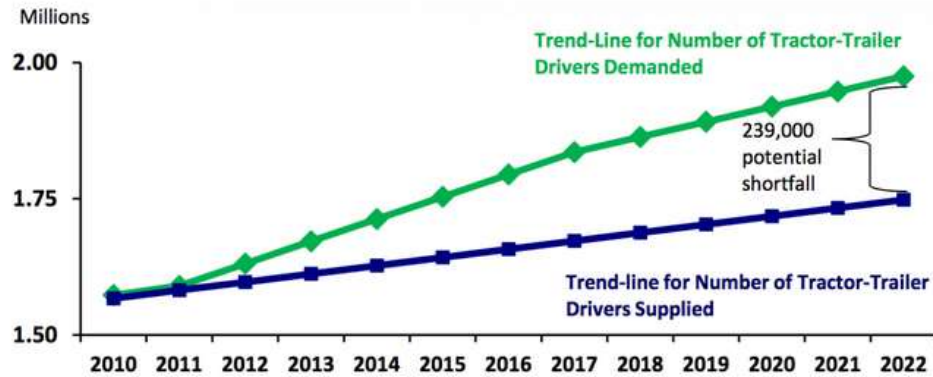
According to new statistics from the 2012 American Community Survey, engineering and computer, math and statistics majors had the largest share of graduates going into a STEM field with about half employed in a STEM occupation. Science majors had fewer of their graduates employed in STEM. About 26 percent of physical science majors; 15 percent of biological, environmental and agricultural sciences majors; 10 percent of psychology majors; and 7 percent of social science majors were employed in STEM.

Approximately 14 percent of engineers were women, where they were most underrepresented of all the STEM fields. Representation of women was higher among mathematicians and statisticians (45 percent), life scientists (47 percent) and social scientists (63 percent). The rates of mathematicians and statisticians, and life scientists are not statistically different from each other.

- At 9.1 million, the college major with the most graduates was business, while multidisciplinary studies was the major with the smallest number of graduates at 275,000.
- Engineering was the major with the highest earnings (\$92,900), while the major with the lowest earnings was visual and performing arts (\$50,700).
- In 2012, 3.6 percent of all college graduates between the ages of 25 and 64 were unemployed. A larger percentage of men than women were unemployed: 3.7 percent and 3.5 percent, respectively.
- Non-STEM management occupations employed the most male college graduates (3.8 million), while education occupations employed the most female college graduates (4.3 million).
- States with the largest percentage of STEM workers: Maryland (18.8 percent), Washington (18.3 percent) and Virginia (16.5 percent). The rates of workers in Maryland and Washington are not statistically different from each other.

America is facing a shortage of truck drivers, and that problem is expected to get worse. The current shortage is estimated to be at 30,000, and a new regulation will help drive that higher. A mandate requiring commercial vehicles to have an electronic logging device is likely go into effect in early 2015. This will make it harder for drivers to fudge the numbers and work more than the legally mandated limit on hours. Right now 75% of the industry does not have these logging devices. Analysts expect 100% compliance within a year or two of the rule going into effect.

The American Trucking Associations expects the estimated U.S. shortage of 30,000 to surge to 239,000 by 2022.



The main three reasons why there is a truck driver shortage are:

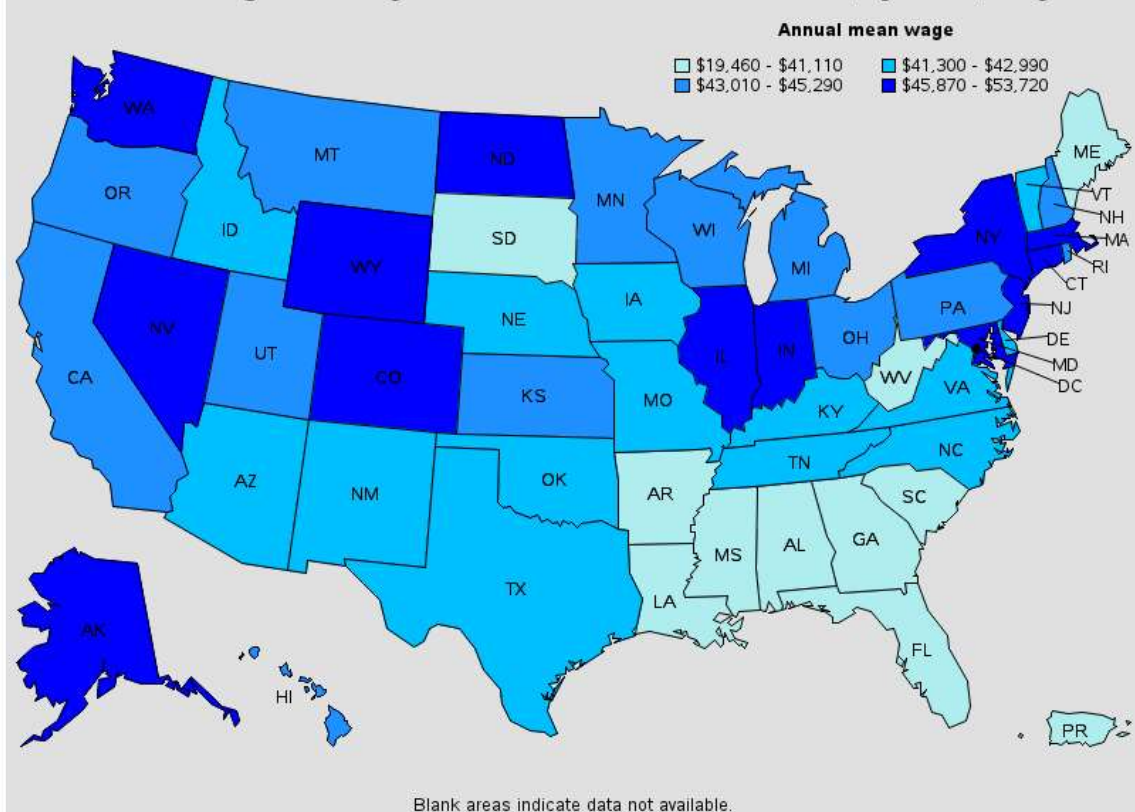
1. The new rules and regulations have caused a lot of drivers to go out of the trucking industry;
2. The second reason why there is a truck driver shortage is that most of the drivers are approaching retirement;
3. The third reason is that there were new regulations about the hours of service. According to these rules it is requested from the drivers to deliver the same amount of goods in fewer hours, which adds a lot of pressure to drivers.



In order to meet the continued demands of the recovering economy, experts within the trucking industry expect the number of truckloads moved by carriers around the country to increase in 2016. According to the American Trucking Associations (ATA), 81 percent of the total revenue seen in the shipping sector was the result of activity by trucking companies. Steady increases are expected with revenues swelling by 66 percent by 2022.

- There are approximately 400,000 commercial trucking companies in the United States alone, and with truck drivers in such high demand, a qualified trucker might be able to obtain his or her dream career virtually anywhere in the U.S.
- Approximately 1 out of every 14 American jobs are in the trucking industry. That's equals out to about 9 million workers.

Annual mean wage of heavy and tractor-trailer truck drivers, by state, May 2016



Top paying States for this occupation:

A new analysis from CareerBuilder and EMSI indicates that, when it comes to post-recession job recovery, baby boomers are leading the charge against millennials.

While the number of jobs held by baby boomers (individuals aged 55-64) grew 9 percent from 2007 to 2013, jobs held by millennials (individuals aged 25-34) have increased a mere .3 percent. In terms of numbers, that translates to a gain of 1.9 million jobs versus 110,000 jobs, respectively. Baby boomers now also hold a larger percentage of jobs in STEM and other occupations than before the recession, outpacing millennials.

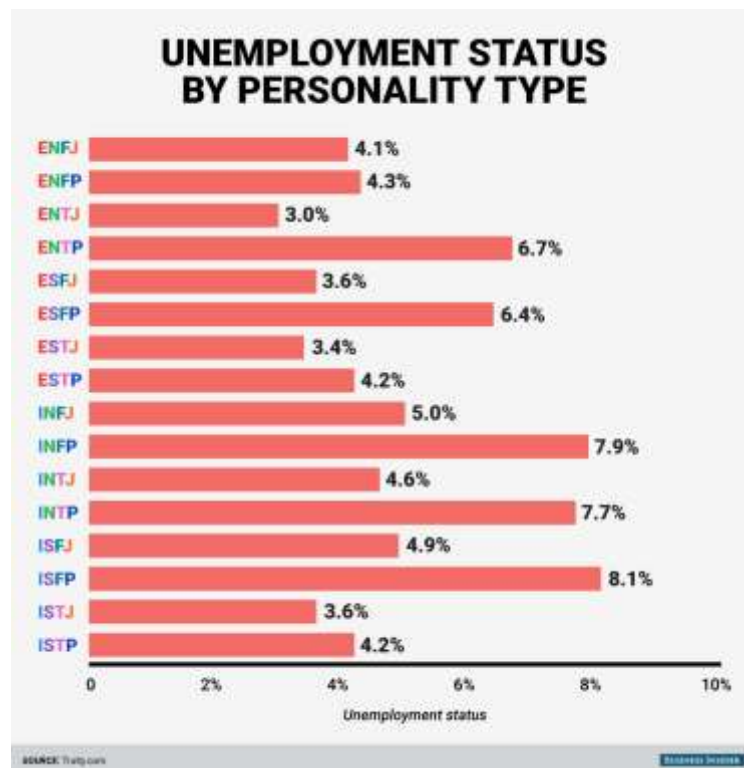
- As millions of boomers are driven by both the desire to remain productive and the need to make ends meet over longer life spans, this is good news for a society facing significant labor shortages in critical areas. Although, there are many obstacles: the cost of additional education and certification in a new field, securing and affording new health insurance, and the trepidation of many employers hiring older Americans. Policymakers must eradicate the barriers and disincentives that penalize individuals for continuing to contribute. This means changes in Social Security, pension rules, and health coverage.
- The U.S. Office of Technology Assessment defines bioscience as "any modern technology that uses living organisms (or parts of organisms) to produce or modify products, to improve plants or animals, or to develop microorganisms for specific uses." The bioscience field, one of the most rapidly changing areas of science, offers a wide variety of high skill, high wage employment options, including laboratory technicians, research associates, manufacturing and production technicians, as well as senior scientists. Positions can relate to medical and pharmaceutical research, microbiology, forensics, and product development, and are typically better paid than jobs in manufacturing. For example, former textile workers now working as research technicians in North Carolina have increased their earning capacity after community college biotechnology training.
- CareerBuilder's midyear survey finds that employers will continue to place an

According to the U.S. Bureau of Labor Statistics, by 2014 the U.S. will need 29 percent more HVACR and 21 percent more plumbing technicians, a total of more than 100,000 skilled workers in the job pool. Among the 500,000 plumbers in the United States alone, the demand is expected to grow 10 percent by 2016, however, due to an aging generation of skilled professionals, more than a third of all plumbers – or approximately 167,000 workers – will be exiting the workforce.

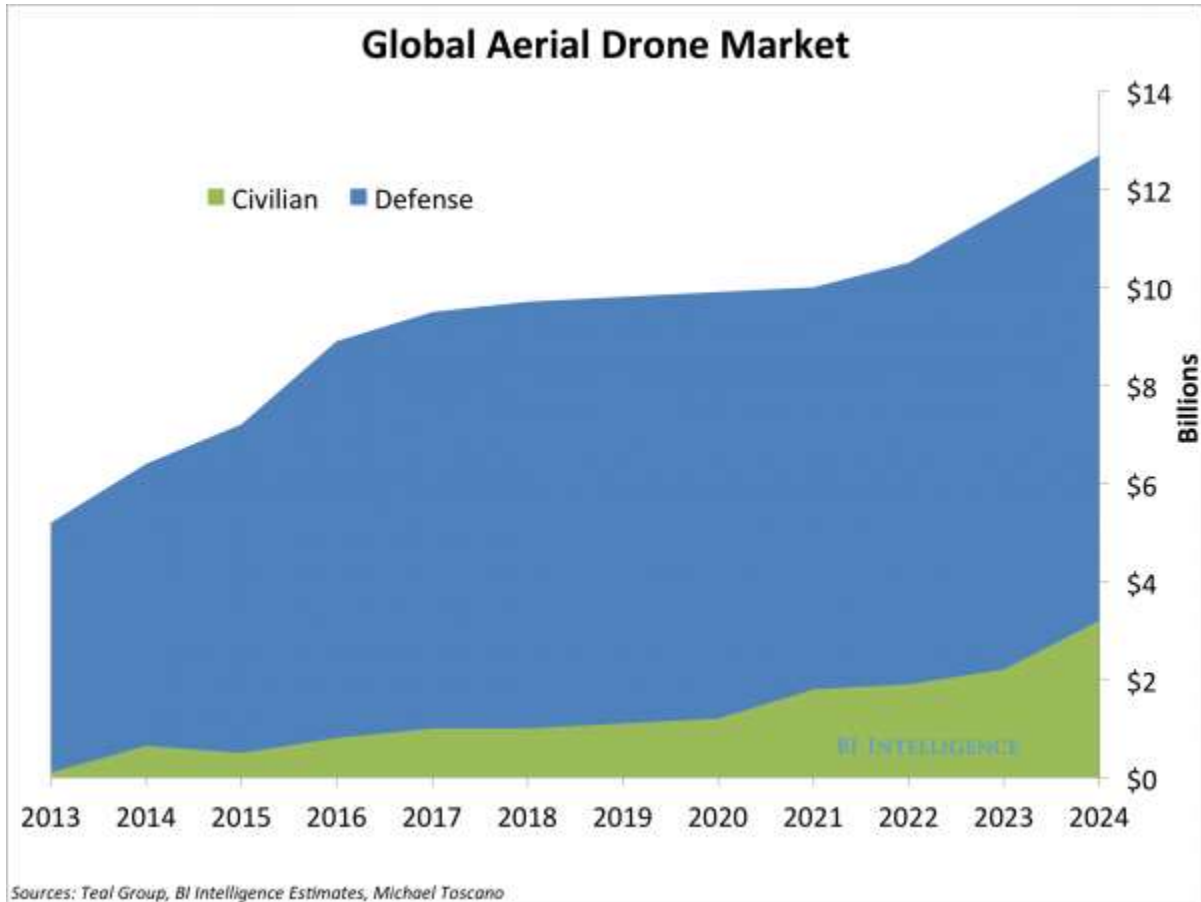
There is another side to the U.S. unemployment problem: Believe it or not, there are *three million* jobs going unfilled. Employers can't seem to find the right match for more than 200,000 manufacturing jobs alone. The transportation, utilities and trades sectors have almost half a million jobs open, waiting for the right applicant. These positions are for vocational or skilled workers, who are in short supply.

emphasis on roles that involve new technologies. Over the next six months, 16 percent of employers plan to hire for jobs tied to mobile technology, as consumers rely more heavily on their devices for both professional and personal use. Another 15 percent of employers plan to recruit for cloud technology-related jobs, as more companies adopt cloud computing as a way to replace computer products with Web-based services, streamlining the way they do business. Also, technology is being used to help businesses manage and interpret big data, and so 12 percent of employers plan to hire for jobs tied to this area.

- In a recent news, Richard Branson has welcomed the unlimited vacation policy for all of his Virgin Staffers. He says he was inspired by Netflix to introduce this policy to his staff. Netflix introduced the unlimited vacation policy back in 2004, followed by BestBuy, Tumblr, Foursquare and Evernote. Many new age companies have turned their focus to the efficiency with which the work is done than the number of hours clocked. As a reward to that kind of behavior, unlimited vacation policy is a huge hit with the 1% of small organizations that have implemented it. The employees will only take off “when they feel one hundred percent comfortable that they and their team are up to date on every project and that their absence will not in any way damage the business — or, for that matter, their careers”, notes Branson.



A growing ecosystem of drone software and hardware vendors is already catering to a long list of clients in agriculture, land management, energy, and construction. Many of the vendors are smallish private companies and startups — although large defense-focused companies and industrial conglomerates are beginning to invest in drone technology, too.





A SHORT HISTORY OF DRONES

FAA estimates that as many as 7,500 small commercial drones could be operational within five years in U.S. airspace.



Prime Air delivery drone. Credit: Amazon

2011: FAA fines Raphael Piker \$10,000 for operating a drone for commercial purposes without a license.



IMAX agriculture drone. Credit: Yamaha

Dec. 1, 2013: Amazon announces its intention to explore package delivery via drones.

March 6, 2014: Judge rules in favor of Piker and dismisses the FAA's fine.

March 7, 2014: FAA appeals decision in the *Hearta v. Piker* civil penalty case.

April 21, 2014: FAA announces first drone test site is operational in North Dakota.

SOURCES: FAA, NPR, FORTUNE, CNBC, flying mag.com, roadtothefuture.com, The Tech Group, <http://blogs.fox.com/the-top-business-of-consumer-drones-infographic/>

- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016

2007: FAA issues a policy statement prohibiting the use of drones for commercial purposes.



Image credits: Parrot, FAA

2012: Congress passes the FAA Modernization and Reform Act, which funds the FAA through 2015, and also encourages the integration of drones in U.S. airspace.

November 2013: The FAA releases its integration road map, a 72-page plan outlining how the agency will safely integrate unmanned aircraft into the airspace.



ETI-Drone FOUR. Credit: iRobotics, Inc.

2015/2016: FAA is expected to issue its rules and regulations for drones that weigh less than 55 pounds.

- Commercial drones, which are expected to be approved for use in the U.S. in 2015, will create 100,000 jobs in 10 years, adding \$13.7 billion to the American economy, according to a new study.

The study was published by the Association for Unmanned Vehicle Systems International, a trade association with an interest in promoting the benefits of unmanned aircraft -- the industry does not like the word "drone" -- but its assumptions offer an interesting assessment of the sector's opportunities.

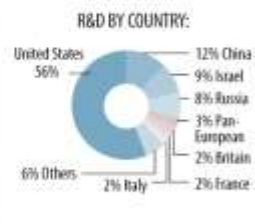
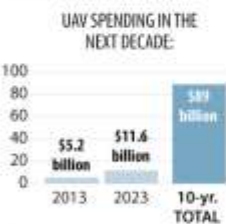
- Over the last decade, it's gotten much tougher to get a job as an airline pilot. Many pilots started out at smaller regional airlines, but pay there is poor, and airlines are shifting away from smaller planes. Meanwhile, growth has been minimal at major U.S. airlines, cutting the number of new jobs for pilots, and bankruptcies have reduced pay.

Compare that to the outlook for drones. The Federal Aviation Administration projects some 7,500 commercial drones could be aloft within five years of getting widespread access to American airspace.

An industry commissioned study last spring predicted more than 70,000 jobs would develop in the first three years after Congress loosens restrictions on U.S. skies. The same study projects an average salary range for a drone pilot between \$85,000 and \$115,000.

R&D FUNDING AND UAV SPENDING

There are 4,000 different unmanned aerial vehicles in circulation on the global market, most built by the United States.



WHERE THE DRONES ARE

Drone test sites selected by the FAA:



- While hiring is increasing across industries, certain sectors are playing a larger role in economic growth. One such area is technology. According to IT analyst firm Foote Partners, IT employment in the first half of 2013 is averaging 13,500 new jobs per month. Another area that employers predict they'll staff up for in the back half of the year is cybersecurity, with 9 percent planning to hire for this role. As cyber attacks grow in number and attackers become more sophisticated, demand for cybersecurity-trained professionals will continue to increase.
- As the latest jobs report from the Bureau of Labor Statistics signaled, there continue to be signs of sustained economic recovery. The U.S. added 195,000 jobs in June, higher than economists' expectations, and April and May numbers were revised upward by 70,000 jobs. The rise in consumer confidence -- which reached a five-year high in June -- along with a stronger housing market and increased auto sales, have also helped build up the economy in recent months.

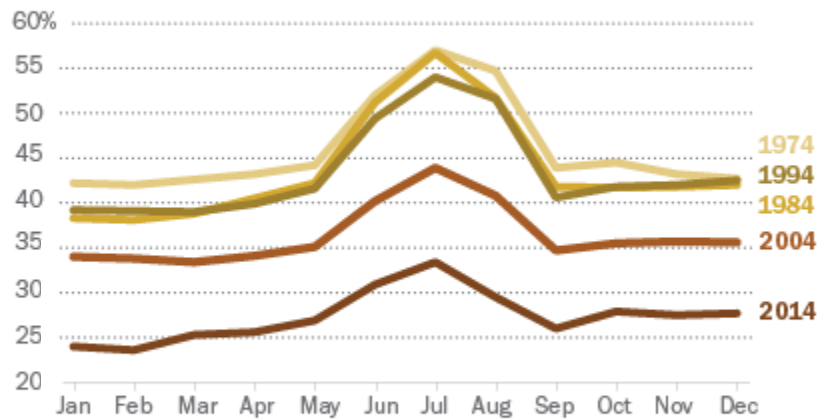
Coming out of the recession, employers have been trending toward a more flexible workforce, one that allows them to scale up and down quickly as staffing needs arise. This has led to temporary and contract jobs becoming a larger part of the general hiring mix.

According to a Pew report released June 23, employment among 16- to 19-year-olds has declined over the last two decades. Less than a third of 16 to 17-year-olds worked a summer job last year. For 18- to 19-year-olds, the summer employment rate last year was approximate 44%, which is still below the 62.6% average rate in the summer of 2000.

Fewer than 32% of teenagers were employed between June and August last year. The current percentage is close to the all-time low of approximately 30% in 2010 and 2011.

Teen Employment Has Fallen in Recent Decades

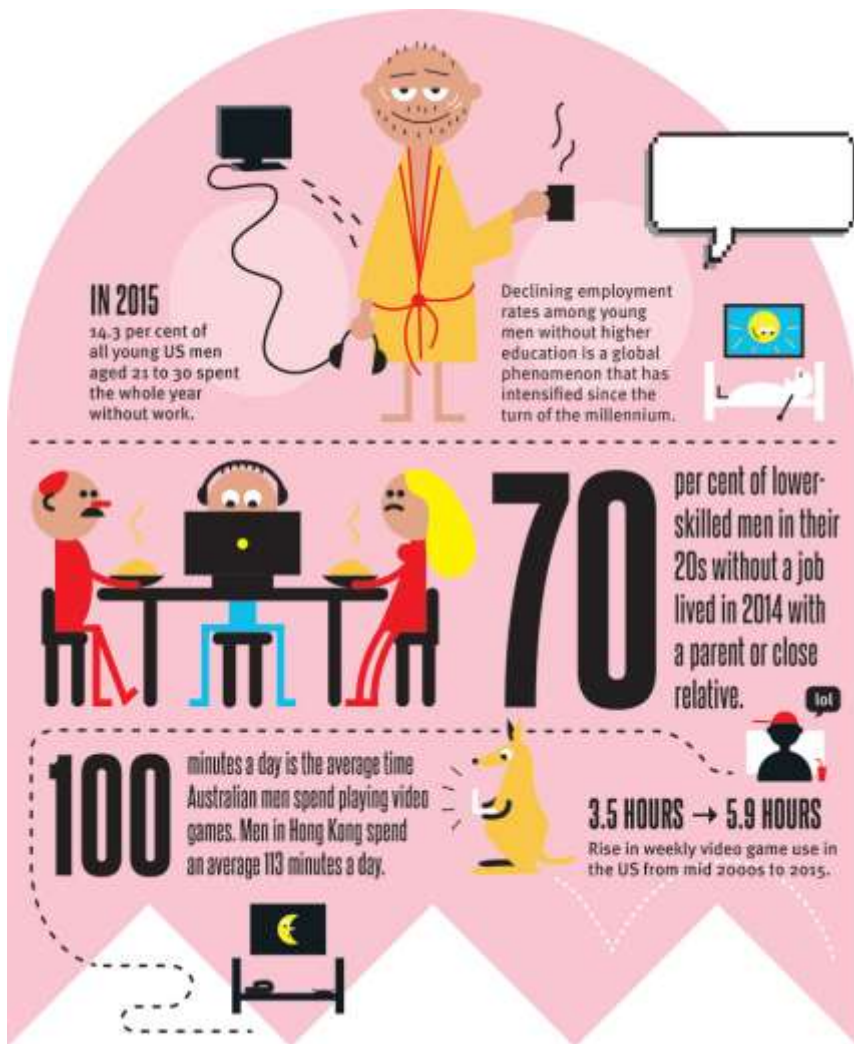
Share of 16- to 19-year-olds who are employed



Notes: Not seasonally adjusted.
Source: Bureau of Labor Statistics

PEW RESEARCH CENTER

New research has found a surprising culprit for the serious decline in working hours among young American men over the last 15 years: video games.



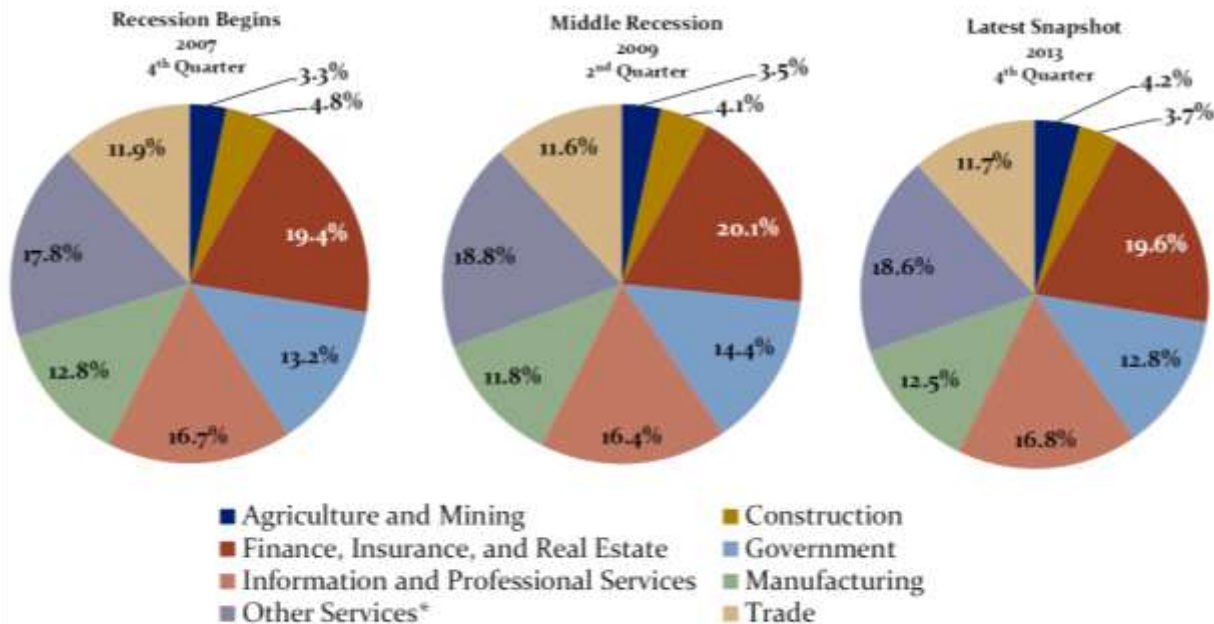
The decline of young men’s working rate has been steady and substantial over nearly two decades. As of 2016, 15% of men between 21 and 30 were not working or in full-time education—nearly double the 8% rate in 2000. Aggregate hours worked for men in that group fell by 12% between 2000 and 2015, higher than the declines for older male workers. A research team including faculty from Princeton and the University of Chicago now argues that “innovations in gaming/recreational computing”— and not, say, lower demand for less-skilled workers—explain as much as 79% of the difference in working rates between younger and older men.

On average, video game use rose from 3.5 hours per week in the mid 2000s to 5.9 hours per week by 2015. A quarter of young unemployed men reported playing at least three hours per day; 10 per cent played for six hours daily.

How Did the Recession and Recovery Change the Size of U.S. Industries?



Value Added by Industry Group as a Percentage of GDP

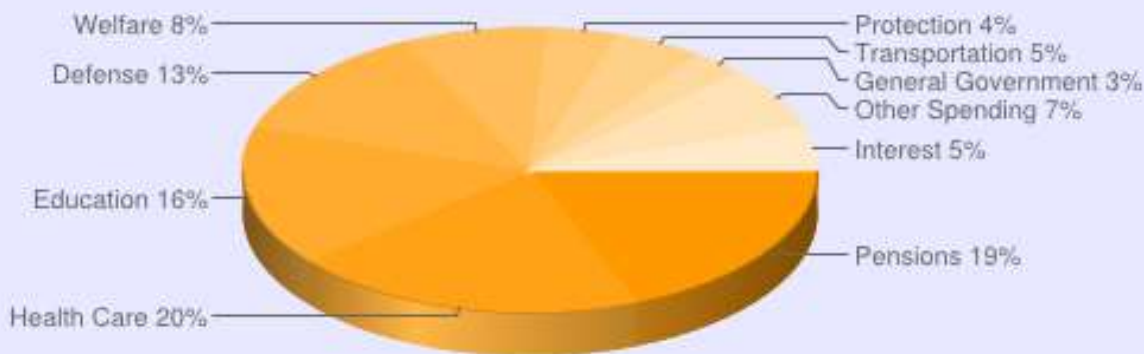


*Other Services includes Utilities, Transportation, Education, Health Care, Arts, Accommodation, Food Services, and Other Services Industry Groups.

www.bea.gov

11

Total Spending for United States - FY 2014



“The 50 Best Careers of 2017” was published on January 11, 2017 by US News and World Report, which includes job growth through 2024, stress level, typical education requirements (although they vary), and the national median salary for 2017.

<http://money.usnews.com/careers/best-jobs/rankings/the-100-best-jobs>

US NEWS & WORLD REPORTS 50 BEST CAREERS FOR 2017				
	Outlook - % of Job Growth 2014 – 2024	Stress Level	Education & Prep	National Median Pay 2015
Technology				
Software Developer	19%	Average	BS	\$98,510
Computer Network Architect	9%	Above Avg.	BS or MS	\$100,240
Web Developer	27%	Below Avg.	BS	\$64,970
Computer Systems Analyst	21%	Average	BS or MS	\$85,800
IT Manager	15.3%	High	BS or MS	\$131,600
Database Administrator	11%	Above Avg.	BS or MS	\$81,710
Mechanical Engineer	5%	Average	BS or MS	\$83,590
Healthcare				
Dentist	18%	Average	Doctorate	\$152,700
Nurse Practitioner	35%	Above Avg.	BS+	\$98,190
Pharmacist	3%	Above Avg.	Pharm. D	\$121,500
Occupational Therapist Assistant	43%	Average	AA	\$57,870
Occupational Therapist	27%	Average	MS	\$80,150
Dental Hygienist	19%	Average	AA	\$72,330
Physician	9%	High	Med School	\$187,200
Diagnostic Medical Sonographer	26%	Above Avg	Cert. or AA	\$68,970
Orthodontist	18%	Below Avg	Doctorate	\$187,200
Nurse Anesthetist	19%	Above Avg	Doctorate	\$157,140
Registered Nurse	16%	Above Avg.	AA or BS	\$67,490
Physician Assistant	30%	Above Avg.	MS	\$98,180
Psychiatrist	15%	Above Avg.	Med School	\$187,200
Pediatrician	10%	Above Avg	Doctorate	\$170,300
School Psychologist	20%	Above Avg	BS	\$70,580
Nurse Midwife	25%	Above Avg.	Certificate	\$92,510
Massage Therapist	22%	License	High	\$38,040
Speech Language Pathologist	NA	Above Avg.	MA	\$73,410
Psychologist	19%	Above Avg.	Doctorate	\$94,590
Respiratory Therapist	12%	Above Avg.	AA or BS	\$57,790
Medical Health Services manager	17%	Average	BS or MS	\$94,500
OB/GYN	18%	Above Avg.	Med School	\$187,200

Oral Surgeon	18%	Above Avg.	Dental School+	\$187,200
Optometrist	27%	Average	Doctorate	\$103,900
Chiropractor	17%	Above Avg.	DC	\$64,440
Occupational Therapy Aide	31%	Average	HS Diploma	\$27,800
Physical Therapist	34%	Above Avg.	DPT	\$84,020
Podiatrist	14%	Avg.	DPM	\$119,340
Surgeon	20%	High	Doctorate	\$187,200
Physical Therapy Assistant	41%	Average	AA	\$55,170
Prosthodontist	18%	Above Avg.	Doctorate+	\$119,740
Orthotist/Prosthetist	23%	Average	MS	\$64,430
Cardio Vascular Technologist	22%	High	AA or BS	\$54,880
Marriage and Family Therapist	15%	High	BS or MA	\$48,600
Engineering				
Cartographer	29%	Below Avg.	BS	\$61,880
Environmental Engineer	12.4	Average	BS	\$84,560
Business				
Mathematician	21%	Below Avg.	BA or MA	\$111,110
Operations Research Analyst	30%	Above Avg.	BA or MS	\$78,630
Accountant	11%	Average	BA	\$67,190
Financial Advisor	30%	Above Avg.	BA	\$73,900
Actuary	18%	Average	BA	\$97,070
Statistician	34%	Below Avg.	BA or MA	\$80,110
Financial Manager	7%	High	BA	\$117,990

- According to the seventh annual talent shortage survey from staffing firm ManpowerGroup, 49% of employers in all industries are experiencing difficulty filling open positions within their organizations, despite the fact that millions of people are still desperate for jobs and unemployment remains stuck at more than 8%.

10 Hardest Jobs to Fill in America	
1	Data Scientist
2	Electrical Engineer
3	Operations Manager
4	Home Health Aide
5	Information Security Analyst
6	Marketing Manager
7	Medical Services Manager
8	Physical Therapist
9	Registered Nurse
10	Software Engineer

Source: Forbes September 15, 2015

10 Hardest Working Countries		
Country	Avg. Annual Hours	Avg. Annual Wages
Mexico	2,317	\$9,885
Chile	2,102	\$15,820
Korea	2,092	\$35,406
Estonia	2,021	\$17,323
Russian Federation	2,012	\$15,286
Poland	1,893	\$20,069
USA	1,798	\$54,450
Hungary	1,797	\$19,437
Japan	1,765	\$35,143
Slovak Republic	1,749	\$19,068

Careerbuilder.com

TABLE 1: FASTEST GROWING OCCUPATIONS: 2013-2017

DESCRIPTION	2013 JOBS	2017 JOBS	CHANGE	% CHANGE	MED. HOURLY EARNINGS
Personal Care Aides	1,334,313	1,608,211	273,898	21%	\$9.77
Home Health Aides	950,273	1,150,340	200,067	21%	\$9.97
Market Research Analysts & Marketing Specialists	438,851	499,740	60,889	14%	\$29.10
Medical Secretaries	537,064	613,450	76,386	14%	\$15.17
Emerg. Med. Techs & Paramedics	238,658	268,892	30,234	13%	\$15.28
Software Developers, Systems Software	420,109	468,400	48,291	11%	\$47.64
Software Developers, Applications	626,262	688,020	61,758	10%	\$43.34
Medical Assistants	582,734	642,843	60,109	10%	\$14.35
Registered Nurses	2,727,171	2,983,874	256,703	9%	\$32.04
Network & Computer Systems Administrators	371,652	406,477	34,825	9%	\$35.14
Pharmacy Technicians	364,818	396,793	31,975	9%	\$14.29
Landscaping & Groundskeeping Workers	1,227,107	1,338,551	111,444	9%	\$11.07
Social and Human Service Assistants	376,214	410,625	34,411	9%	\$14.02
Computer Systems Analysts	524,040	564,502	40,462	8%	\$37.98
Management Analysts	727,928	788,085	60,157	8%	\$35.80
Cooks, Restaurant	1,052,514	1,131,878	79,364	8%	\$10.63
Insurance Sales Agents	695,384	747,949	52,565	8%	\$23.20
Nursing Assistants	1,487,171	1,604,571	117,400	8%	\$12.01
Licensed Practical & Vocational Nurses	754,387	817,707	63,320	8%	\$20.33
Food Prep. & Serving, Incl. Fast Food	3,088,847	3,326,039	237,192	8%	\$8.75
Receptionists & Information Clerks	1,050,120	1,135,155	85,035	8%	\$12.64

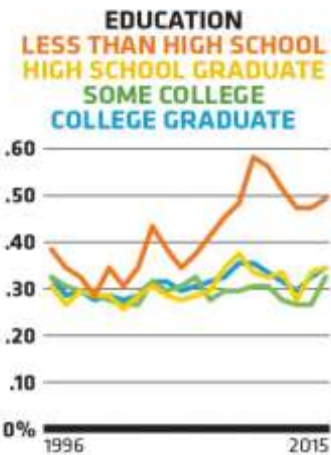
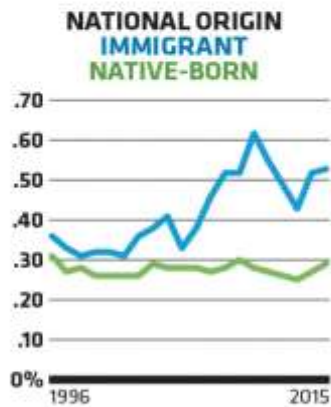
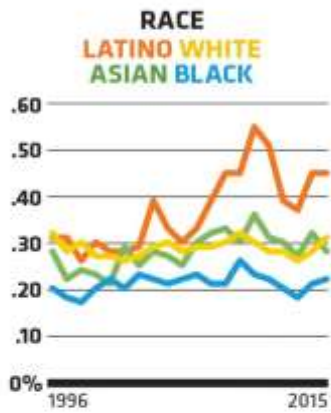
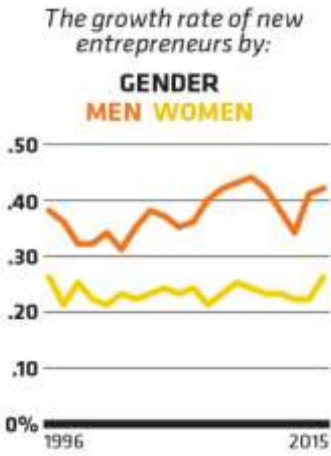
*Occupations with at least 8% growth and 30,000 jobs added

- The strong representation of women on the Upstart 25 list reflects the growth of female entrepreneurship both at home and abroad. Women now make up 40 percent of new entrepreneurs in the United States — the highest percentage since 1996, according to the 2016 Kauffman Index of Startup Activity.

Meanwhile, in the 40 economies participating in the sweeping Global Entrepreneurship Monitor (GEM) survey in both 2011 and 2016, women's entrepreneurship rates rose by 13 percent on average, while male rates increased by 5 percent, according to lead author Donna Kelley, a professor of entrepreneurship at Babson College, which prepares the report with Baruch College.

The growth has been very swift in recent years. From 2015 to 2016, women's entrepreneurship rates increased by 10 percent on average versus 5 percent for males, across 51 economies that participated in the GEM survey. And in 29 of the 51, the ratio of male to female entrepreneurs has increased.

- In the US, recent studies show that a record number of Americans identify themselves as entrepreneurs—approximately 27 million people, or 14% of all working-age adults; one in four millennials say they would like to eventually own their own business; and in higher education there's been a well-documented explosion of innovation and entrepreneurship (I&E) courses, programs, makerspaces, accelerators, competitions and more. Globally, countries from Vietnam to Senegal to Peru are developing innovative ecosystems, building networks, and expanding impact.



Inc.com



"Conditions for private companies today are very favorable," says Brian Hamilton, chairman of Sageworks, which tracks some 400,000 companies. Sales are still rising more than 7%, net profit margins even more.
CREDIT: Sageworks



65%
The average approved in bank loans sought

\$100,000
Median amount applied for—all capital sources



\$40,500
What entrepreneurs actually walked away with

Babson College's survey found that borrowers were getting a lot less than they asked for. And just 21% said it was important that their lending institution be in the community. Big banks are coming back into the game.
CREDIT: Babson College, State of Small Business in America 2016

The 2014 Annual Survey of Entrepreneurs statistics show that there were 949,318 minority-owned firms with paid employees, comprising 17.5 percent of all employer firms. These minority-owned employer firms generated \$1.1 trillion in receipts (approximately 3.3 percent of the receipts for all employer firms). Among minority-owned employer firms, 12.9 percent had been in business for less than two years, while only 1.4 percent had been in business for 16 or more years.

Of the 949,318 minority-owned firms with paid employees, more than half (506,595, or 53.4 percent) were Asian-owned; 108,473 (11.4 percent) were black or African-American-owned; 26,757 (2.8 percent) were American Indian or Alaska Native-owned; 4,701 (0.5 percent) were Native Hawaiian and Other Pacific Islander-owned; and close to a third (298,563, or 31.5 percent) were Hispanic-owned. The owner of a Hispanic-owned firm may be of any race.

Women owned approximately 1.1 million employer firms, or 19.4 percent, with receipts totaling \$1.3 trillion, or 4.0 percent. Of these, 10.8 percent had been in business for less than two years, whereas 1.9 percent had been in business for 16 or more years.

Veterans owned 405,235 employer firms, or 7.5 percent, with receipts of \$924.1 billion, or 2.8 percent. Of these, 6.8 percent had been in business for less than two years, while 3.6 percent had been in business for 16 or more years.



America's Entrepreneurs

How Long Have America's Firms Been in Business?



Note: The number of years a firm has been in business is determined by the first year that the Census Bureau received administrative records data for the business. This graphic does not show firms that are equally owned by men and women, veterans and nonveterans, minorities and nonminorities, nor Hispanic and Non-Hispanic. In some instances, percentages do not add to 100 due to rounding.

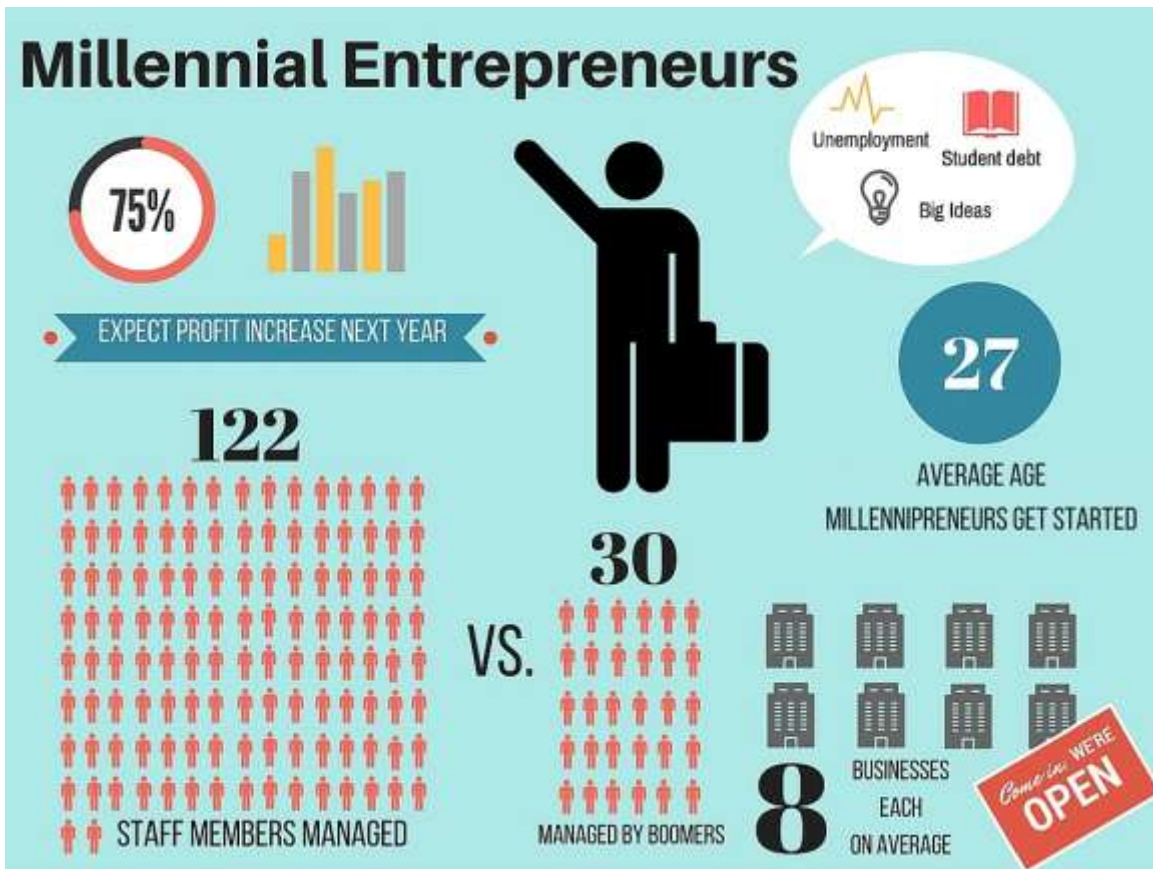


Top States for Women Entrepreneurs

- | | |
|----------------|------------|
| 1 North Dakota | 6 Maryland |
| 2 South Dakota | 7 Maine |
| 3 Hawaii | 8 Iowa |
| 4 Minnesota | 9 Colorado |
| 5 Virginia | 10 Montana |

fundera.com

Millennials are introducing businesses around the age of 27, while their parents didn't launch their first businesses until the age of 35 or so. The rapid advancement of technology has definitely aided Millennials in the success of business launches, but it's also an overall acceptance of their position. Society has shifted in the sense that young business owners are accepted and respected just as much as seasoned veterans who have been behind the desk or cash for 30 or more years. Millennials have surpassed nearly one third of boomers with 75% expecting their profits to increase within the next year, proving they are clearly attacking markets in the right way.



State of Maryland

- The minimum wage in Maryland is currently \$7.25 per hour for most workers. Recent legislation will increase the minimum wage in the following increments:
 - January 1, 2015 - \$8.00
 - July 1, 2015 - \$8.25
 - July 1, 2016 - \$8.75
 - July 1, 2017 - \$9.25
 - July 1, 2018 - \$10.10
- In 2013, the Maryland civilian labor force totaled 3,127,700 workers, with almost 90 percent living within the central Maryland region. The Maryland work force is highly industrious—nearly 70 percent of the state's population 16 years and older is in the labor force. During the current decade, Maryland's labor force is projected to increase by over 200,000, with participation remaining high. The state boasts a large number of female workers, as well as workers in the experienced 25 to 44 year age group.
- Maryland is home to a highly skilled civilian labor force of over three million workers, and filling this labor pipeline is a network of 57 accredited two-and four-year colleges and universities currently serving over 357,000 students around the state. The second highest concentration of professional and technical workers among the states, and the highest proportion of doctoral scientists and engineers in the nation can be found in Maryland. Though the workforce is highly skilled, wages in the state remain competitive, offering employers an exceptional value.
- In 2014, Maryland was ranked first in the nation in "Entrepreneurship and Innovation" by the U.S. Department of Commerce for the third year in a row. Maryland also ranked first for concentration of businesses and jobs in science, technology, engineering, and mathematics.
- In 2014, Maryland exports reached a record \$12.2 billion (State Exports via Maryland , U.S. Census Bureau). Trade to countries specifically targeted, such as Egypt and China, grew by 74% and 27% respectively. Key exports include transportation equipment, chemicals, and electronics

With 178,300 workers in 2014, Maryland tech employment density is the fourth highest in the nation. Aiding the State's growth is the InvestMaryland Program, which added \$84 million to Maryland's high-tech base during Fiscal Year 2012, and is overseen by the Maryland Venture Fund Authority.

- In 2014, Maryland ranked second in the nation in the fields of technology and science, as well as in human capital investment (Milken Institute index). Human capital investment is determined by creating a population average of SAT and ACT test scores, state education appropriations and spending, as well as academic degrees, particularly in the fields of engineering and sciences. Some 11,440 high-tech companies were located in Maryland as of 2013.
- The mission of Operation Hire Maryland is to create an ongoing program which supports employers as they develop or expand upon their veteran hiring and retention initiatives. Through the collaboration and efforts of Operation Hire Maryland participants, a veteran friendly business network will be established to share best practices and proven methods for veteran recruitment, hiring, on boarding, and retention in the civilian work place.

Businesses as well as federal, state and county/local governments who possess a Federal Tax ID Number are eligible to participate. Employers are not required to be based in Maryland; however for purposes of pledging hires, Maryland residents who have served in the military must be those hired.



- Maryland has more than 30 incubators, which provide companies with workspaces and resources and serve as hubs of innovation for the state's robust network of startups. Many incubators are mixed-use and others are industry-specific for companies in markets ranging from education technology to clean technology.

Software and biotech companies pulled in the biggest investments, both nationally and within the D.C. metro region, which includes the District, Maryland, Virginia and West Virginia.

The biotech industry is experiencing a financing boom due to research breakthroughs that have made venture capitalists more willing to invest in them, said Phillips.

Nationwide, biotech companies picked up \$2.2 billion in 126 deals in the quarter, while software companies picked up \$7.3 billion in 491 deals. Silicon Valley-based companies led the pack, followed by those based in the New York metro region and New England.

In the Washington region, Maryland brought in the most money.

Maryland-based companies brought in more than \$137 million raised in 19 deals, up from \$63 million in 25 deals a year ago. Many biotech firms are located in Montgomery County, which is also home to the National Institutes of Health and the Food and Drug Administration.

Maryland sees biotech venture capital boom

U.S. companies raised a historic \$17.5 billion in venture capital last quarter. Growth in the D.C. area was led by biotech and software companies.



Source: PwC/NVCA/Thomson Reuters

THE WASHINGTON POST

- Maryland's private nonprofit organizations the second largest industry in the state in terms of employment behind only retail trade. More specifically, Maryland nonprofits employ nearly six and a half times as many workers as the real estate industry, more than six times as many workers as the information industry and about three and a half times as many workers as the transportation industry. Nearly three times as many workers as the finance and insurance industry and more than two and a half times as many workers as state government. About two and a half times as many workers as the manufacturing industry and nearly twice as many workers as the construction industry.
- Maryland ranks first among the states in the percentage of professional and technical workers (28.3%) in the workforce.
- Maryland ranks third among the states in the percentage of the population age 25 and above with a bachelor's degree or higher (39.3%) and second in the percentage with a graduate or professional degree (18.5%).
- According to the Cyberstates 2017 report, Maryland ranks fifth in the concentration of tech jobs in the private sector workforce (8.6%) and sixth in the tech concentration in the total workforce (7.0%). Maryland ranks seventh among the states in average tech industry wages (\$107,193), seventh in the ratio of female workers in tech occupations (23.6%), and eighth for tech GSP as a percentage of total GSP (8.8%). Further, the state places ninth for most new tech startups and new tech business establishments in 2015 (1,040).
- Maryland ranks fourth among the states in federal government employment, with 145,783 non-military federal jobs in 2016. On a per capita basis, the state ranks first with 242 federal jobs per 10,000 residents. Non-military federal jobs generate \$14.5 billion in total wages in Maryland, ranking fourth among the states. Further, these jobs pay better in Maryland than in any other state, with an average annual wage of \$99,351, which is 27% higher than the national average.

- Sixty percent of Maryland's manufacturers are advanced – producing high-mix, low volume, high technology products. Using advanced materials, processes and machinery, companies develop heavily engineered, customized products such as sensors, unmanned and autonomous systems, medical devices, electronics and capital equipment.
- Manufacturing Maryland's traditional manufacturing industry includes a diverse blend of companies, some over 100 years strong. Spanning the continuum is W.R. Grace, established in the 1800s, the second longest operating chemical company in the U.S. and a leading global supplier of catalysts and engineered materials with sales of \$1.6 billion in 2016. The state hosts a variety of 21st century industries including defense electronics, aeronautics, systems engineering, medical diagnostics, specialty chemicals, software and aircraft engines. Further, moving products to market is enhanced by the state's central east coast location and excellent transportation infrastructure, including a deep water port, two Class 1 railroads, five major interstate highways, and access to four international airports. Maryland's 3,740 manufacturing businesses generate \$20.73 billion in gross state product. Major Manufacturing Employers in Maryland Employer Employment Product / Service Northrop Grumman 10,365 Electronic systems Lockheed Martin 3,255 Aerospace and electronics MedImmune/Astra Zeneca 2,920 Pharmaceuticals W. L. Gore & Associates 2,405 GORE-TEX® products McCormick & Company 1,900 Food flavorings Under Armour 1,855 Sports apparel BD Diagnostics 1,580 Medical equipment H&S Bakery 1,575 Commercial food products Perdue Farms 1,500 Poultry processing Volvo Powertrain 1,300 Diesel engines and transmissions Note: Numbers are rounded. Source: Maryland Department of Commerce, July 2017.
- Industry Snapshot – Manufacturing in Maryland v Employment (2016) – 103,330 jobs Leading subsectors: □ Computer and electronic product manufacturing – 17,600 jobs □ Food manufacturing – 15,100 jobs □ Chemical manufacturing – 11,500 jobs □ Fabricated metal product manufacturing – 7,900 jobs v Business establishments (2016) – 3,740 v Total wages (2016) – \$7.63 billion v Average salary (2016) – \$73,840 v Gross state product (2015) – \$20.73 billion 0817 Manufacturing ♣ page 2 v Federal procurement (FY2016) – \$4.5 billion v Exports (2016) – \$9.3 billion Sources: Maryland Department of Labor, Licensing and Regulation; U.S. Bureau of Economic Analysis; U.S. Census Bureau

- According to a study on business taxes by Ernst & Young, Maryland businesses pay the second lowest share of state and local taxes, with business taxes accounting for 30.5% of total taxes collected in the state, compared with 45.2% for the national average. Further, Maryland ranks ninth nationally in state and local business taxes as a share of private sector GSP. Maryland has a total effective business tax rate of 4.0% on economic activity compared with 4.8% for the U.S. as a whole.
- In the 2014 Enterprising States study which looks at how states are creating an environment in which the private sector can thrive, Maryland ranks first in “Technology and Entrepreneurship,” and third in the human capital “Talent Pipeline.”
- In the 2013 Business Facilities Ranking Report, Maryland ranks first overall among the states in education climate, fifth in per capita income and eighth in installed solar power capacity. In the logistics category, the Port of Baltimore ranks third among U.S. ports, and the Baltimore Foreign Trade Zone #74 ranks third among top FTZs in merchandise received.
- Maryland is a thriving location for space exploration, satellite technology and research, design and manufacturing of UAVs and robotics. The industry includes Department of Defense related activities such as biodefense, cybersecurity, avionics, informatics and ordnance and weapons testing. Under the Base Realignment and Closure (BRAC) process, Maryland added thousands of jobs, primarily at Aberdeen Proving Ground, Fort Meade, and the Naval National Medical Center at Bethesda. Maryland's 8,520 aerospace and defense businesses annually generate \$35.45 billion in economic activity and secure \$7.33 billion in federal contracts.
- Maryland's 11,440 information technology businesses are annually awarded \$9.92 billion in federal contracts and generate \$37.79 billion in economic activity, making it one of the nation's leaders and a major economic engine for the state.
- In 2014, Maryland ranked 4th nationally in concentration of technology jobs: 86 of every 1,000 private sector workers. The average annual wage for employees in this field is \$101,849, the eighth highest in the nation.

America's Career Info Net was the source of the following occupational data.

Top Highest-Paying Occupations by Median Hourly Wages in 2012 Requiring an Associates' Degree or Post-Secondary Training For the State of Maryland			
#	Occupation	Median wages, 2009	
		Hourly	Annual
1	Nurse Anesthetists	\$71.09	\$147,900
2	General and Operations Managers	\$53.74	\$111,800
3	Air Traffic Controllers	\$48.72	\$101,300
4	Nurse Midwives	\$46.93	\$97,600
5	Nurse Practitioners	\$43.40	\$90,300
6	Construction Managers	\$42.19	\$87,800
7	Dental Hygienists	\$38.91	\$80,900
8	Nuclear Medicine Technologists	\$37.46	\$77,900
9	Magnetic Resonance Imaging Technologists	\$36.76	\$76,500
10	Diagnostic Medical Sonographers	\$34.91	\$72,600
11	Registered Nurses	\$33.80	\$70,300
12	Electrical and Electronic Engineering Technicians	\$32.77	\$68,200
13	Engineering Technicians, Except Drafters, All Other	\$31.89	\$66,300
14	Radiation Therapists	\$31.86	\$66,300
15	Aerospace Engineering and Operations Technicians	\$31.70	\$65,900
16	Radiologic Technologists	\$31.41	\$65,300
17	Morticians, Undertakers, and Funeral Directors	\$31.37	\$65,200
18	Respiratory Therapy Technicians	\$30.60	\$63,600
19	Respiratory Therapists	\$30.19	\$62,800
20	Electrical and Electronics Drafters	\$29.89	\$62,200
21	Funeral Service Managers	\$29.39	\$61,100
22	Industrial Engineering Technicians	\$28.73	\$59,800
23	Occupational Therapy Assistants	\$28.54	\$59,400
24	Mechanical Engineering Technicians	\$27.89	\$58,800
25	Precision Instrument and Equipment Repairers, All Others	\$27.72	\$57,700

LEADERSHIP AND WORK EXPERIENCE MATTER MOST IF YOU CAN LAND THE INTERVIEW

On average, employers resoundingly selected these two areas over GPA, with “Honors and Awards” and “Community Service” having the least impact. This is consistent with the fact that a strong majority of firms (63%) had defined core competencies that they were looking for in candidates. They were looking for specific skill sets, not just good grades. Community service — which many believe to be very important in the college selection process — did not matter greatly in the recruitment process. We asked recruiters to rank the importance of these various factors in their recruitment process from most important (1) to least important (6).



In calendar year 2014, at least 264 projects were publicly announced in 21 local jurisdictions, representing 10,172 new jobs and \$8.2 billion in capital investment. Of these, 42 are businesses new to Maryland (or to a Maryland labor market) and 222 are expansions of existing businesses. Publicly announced plans for new establishments in calendar year 2014 represented at least 5,631 new jobs and \$1.8 billion in capital investment. Major new projects (ranked by number of new jobs) include:

- MGM National Harbor (Prince George's) – 4,000 new jobs, \$925M investment
- Capitol Concierge, Inc. (Montgomery) – 400 new jobs
- IronNet Cybersecurity (Howard) – 260 new jobs
- WebstaurantStore (Allegany) – 150 new jobs • Gordon Food Service, Inc. (Harford) – 150 new jobs, \$60M investment
- Compass Pointe Healthcare (Baltimore Co.) – 125 new jobs
- SAK Construction (Baltimore Co.) – 50 new jobs
- Salsa Labs, Inc. (Montgomery) – 50 new jobs, \$1M investment
- Quantum Controls, Inc. (Cecil) – 45 new jobs
- VSP Global (Baltimore Co.) – 40 new jobs
- Immunodiagnostic Systems (Montgomery) – 37 new jobs
- The Ivy Hotel (Baltimore City) – 30 new jobs, \$18M investment
- ScholarChip Card LLC (Baltimore Co.) – 30 new jobs

Publicly announced planned expansions of existing businesses in calendar year 2014 represented at least 4,541 new jobs and \$6.3 billion in capital investment. Major expansions (ranked by number of new jobs) include:

- Coastal Sunbelt Produce (Howard County) – 400 new jobs, \$1M investment
- MedImmune (Frederick County) – 300 new jobs, \$200M investment
- Costco Distribution Center (Frederick County) – 200 new jobs
- Sourcefire, Inc. (Howard County) – 200 new jobs
- Thompson Creek Window Company (Prince George's County) – 200 new jobs
- BSC America (Harford County) – 150 new jobs, \$20M investment
- Smiths Detection, Inc. (Harford County) – 141 new jobs
- Cinemark Towson and XD (Baltimore County) – 125 new jobs
- Tractor Supply Company (Washington County) – 125 new jobs
- Rapid Financial Services, LLC (Montgomery County) – 124 new jobs, \$2.5M Investment

**Maryland Employment and Wages by Industry
Annual Average – By Place of Work**

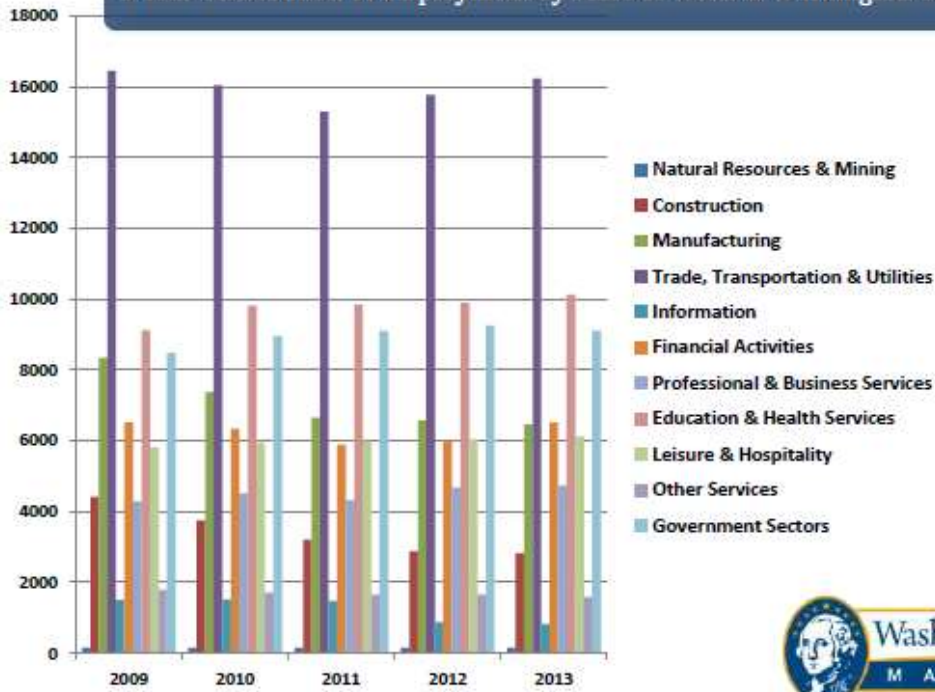
Industry Group	Number of Business Establishments	Employment	Percent of Total Employment	Average Weekly Wage
TOTAL	171,480	2,626,510	100.0	\$1,118
Total Government Sector	3,541	486,101	18.5	\$1,317
Federal Government	1,007	145,800	5.6	\$1,912
State Government	443	97,937	3.7	\$1,099
Local Government	2,091	242,364	9.2	\$1,046
Total Private Sector	167,939	2,140,409	81.5	\$1,072
<i>Goods-Producing</i>	20,960	270,891	10.3	\$1,276
Natural Resources and Mining	727	6,431	0.2	\$784
Construction	16,423	160,868	6.1	\$1,203
Manufacturing	3,810	103,592	3.9	\$1,419
<i>Service-Providing</i>	146,907	1,869,496	71.2	\$1,043
Utilities	169	9,838	0.4	\$2,298
Wholesale Trade	10,598	85,919	3.3	\$1,490
Retail Trade	18,791	290,416	11.1	\$592
Transportation and Warehousing	3,911	74,975	2.9	\$992
Information	2,701	37,695	1.4	\$1,675
Financial Activities	15,042	139,872	5.3	\$1,706
Professional and Business Services	41,556	442,057	16.8	\$1,439
Education and Health Services	20,040	425,693	16.2	\$1,004
Leisure and Hospitality	14,599	272,346	10.4	\$431
Other Services	19,500	90,685	3.5	\$775

Source: Maryland Department of Labor, Licensing and Regulation, Office of Workforce Information and Performance. Date of data: 2016.

Notes: Details may not add to totals due to rounding and exclusion of some industries. The statistics in this table are from Maryland's QCEW Program, which covers over 91 percent of all civilian employment in the state. Data are based on the North American Industrial Classification System (NAICS).

Employer Outlook

5 Year Distribution of Employment by Place of Work in Washington County



Business Outreach and Retention

Washington County Business Outreach Program Trending Chart



- Compared to the Washington/Baltimore metro region, the cost of doing business in Washington County is 18% lower and the cost of living is 23% lower. With a pro-business climate and lower operating costs, manufacturers greatly benefit from the County's manufacturing-friendly tax environment.
- A diversified regional workforce of 400,000 (skilled and manufacturing-oriented) includes over 12% of the employment base in advanced manufacturing. Customized workforce and training development programs are also offered through the Western Maryland Consortium, higher learning institutions, and Washington County Public Schools Academy of Manufacturing & Engineering
- Hagerstown has an established defense presence and is an ideal place to conduct defense related work because it is outside of Washington, DC's highly-controlled air traffic area, but still within an hour's drive of the Pentagon. Existing infrastructure such as the extended airport runway, aviation workforce, telecommunications, and local shipping powerhouses nearby, help businesses easily succeed at HGR.

Washington County and Hagerstown are historical aviation centers. The Hagerstown Regional Airport (HGR) has been a hub of the aviation business since before World War II, so consequently there is an available workforce with a strong background and training in aircraft maintenance and modifications.

Southern Business & Development magazine, ranks Hagerstown-Washington County as one of 20 areas in the Southern United States that feature a robust defense industry. This is attributed to the strong aero defense presence and growth at HGR.

Historically, Hagerstown's nickname of the "Hub City" came from the large number of railroads that served the city. Today that nickname applies as the intersection of Interstates 81 and 70, which makes Washington County a critical transportation hub. Business growth along the interstate corridors has created more employment opportunities in the Western Maryland. In addition, this interstate system established Washington County as a home for commuters to the Baltimore and Washington DC employment areas.

A diversified regional workforce of 400,000 (skilled and manufacturing-oriented) includes over 12% of the employment base in advanced manufacturing. Customized workforce and training development programs are also offered through the Western Maryland Consortium, higher learning institutions, and Washington County Public Schools Academy of Manufacturing & Engineering.

Washington County's 3,460 businesses employ 58,300 workers; nearly 100 of these businesses have 100 or more workers. Key employers include The Bowman Group, Citi, FedEx Ground, First Data, Fives Cinetic, Meritus Health System, Sierra Nevada, Staples Distribution, and Volvo Group. Washington County is home to more than twenty industrial, technology and business parks, Foreign Trade Zone #255, and two State Enterprise Zones. A significant project announced in 2016 is the purchase of the former Fort Ritchie base in Cascade, MD by Washington County. Known as "Cascade Town Center," the development is expected to attract foreign-direct investment. Other projects announced include a joint venture between the county and the city of Hagerstown for an Urban Improvement Plan.

The historic development of Washington County has led to a unique blending of the past with the present. A challenge for the County is the preservation and balance of its historic rural character with the need to grow in order to effectively compete in the new global economy.

Compared to the Washington/Baltimore metro region, the cost of doing business in Washington County is 18% lower and the cost of living is 23% lower. With a pro-business climate and lower operating costs, manufacturers greatly benefit from the County's manufacturing-friendly tax environment.

Biotechnology

Located an hour from Washington, DC's biotech corridor and less than 30 minutes from well-known national biodefense resource Fort Detrick in Frederick, Maryland, Washington County is an affordable place to do business with close proximity to local metropolitan areas.

About 25% of Fort Detrick's employees live in Washington County, MD and the activities and related agencies at Fort Detrick generate more than \$1.7 billion in economic activity in the region.

Hagerstown-Washington County is a transportation hub for the regional economy with easy access to major Atlantic coast cities and the Midwest. With three interstates, a regional airport, two major rail providers, and a location less than 90 minutes from the Port of Baltimore, our transportation infrastructure is unmatched.

- Washington County's available, relatively low-cost land, as well as its comparative lower property taxes and operating costs, make the area potentially attractive for start-up and expanding companies. The county's proximity to the Baltimore-Washington metropolitan area makes it an attractive site for a variety of businesses and its transportation network incorporates air, rail, and interstate connections.
- Likely future career growth areas in the local workforce include healthcare; education; law enforcement; biotechnology; advanced technology including systems and management; financial services; defense industries; government; security; gerontology; and hospitality/tourism/culinary arts. The clinical and allied health fields are the single most promising sources of jobs locally, where demand for nurses and a broad range of other medical support workers will be substantial, especially as the population ages.
- The College's role in the County's and State's economic development continues to expand. HCC's clinical and allied health programs, along with other certificate/degree programs including teacher education, business, technology-related development, and workforce development, will expand to help meet State and local work force needs.

- Along with the Biotechnology curriculum, additional investment in the future of bioscience in Washington County is represented by the construction of a 4,000 square-foot addition to the Technical Innovation Center (TIC), HCC's business incubator. The \$1.3 million addition, jointly funded by a state and local partnership composed of the Maryland Department of Business and Economic Development (DBED), the Maryland Technology Development Corporation (TEDCO), and the Washington County Board of County Commissioners, contains eleven private wet laboratories and one common laboratory. The wet lab addition opened in February 2008.

Distribution by Place of Work			
	Employment	Percent	Weekly Wage
Total Employment	66,884	100	\$822
Federal Government	592	0.9	\$1,024
State Government	2,216	3.3	\$976
Local Government	5,877	8.8	\$862
Private Employment	58,270	87.0	\$763
Natural Resources & Mining	146	0.2	\$847
Construction	2,825	4.2	\$872
Manufacturing	6,356	9.5	\$1,107
Trade, Transportation & Utilities	17,293	25.8	\$667
Information	691	1.0	\$931
Financial Activities	6,224	9.3	\$979
Professional & Business Services	5,553	8.3	\$819
Education & Health Services	10,861	16.2	\$835
Leisure & Hospitality	6,655	9.9	\$301
Other Services	1,666	2.5	\$553

* Figures represent the number of employees in the County from any origin. NOTE: Percentages may not total 100% due to rounding.

SOURCE: 2016 Annual Averages; Quarterly Census of Employment & Wages - Bureau of Labor Statistics (2016)

A large percentage of the local workforce is devoted to health care and services; financial services; education; state and local government; and transportation and warehousing.

Top 15 Employers in Washington County - 2016	
Employer	Employment
Washington County Public Schools	3,100
Meritus Medical Center	2,740
Citi	2,300
First Data	2,185
Washington County Government	1,352
Volvo Group	1,300
Fedex Ground	900
Hagerstown Community College	890
Bowman Group, LLC (The)	745
Federal Government*	567
Merkle Response Management Group	545
City of Hagerstown	500
Direct Mail Processors	500
City of Hagerstown	486
Brook Lane Health Services	485

SOURCE: Washington County Department of Business Development, based on 2016 year-end data reported by employers; Maryland Department of Commerce, Brief Economic Facts: Washington County, Maryland

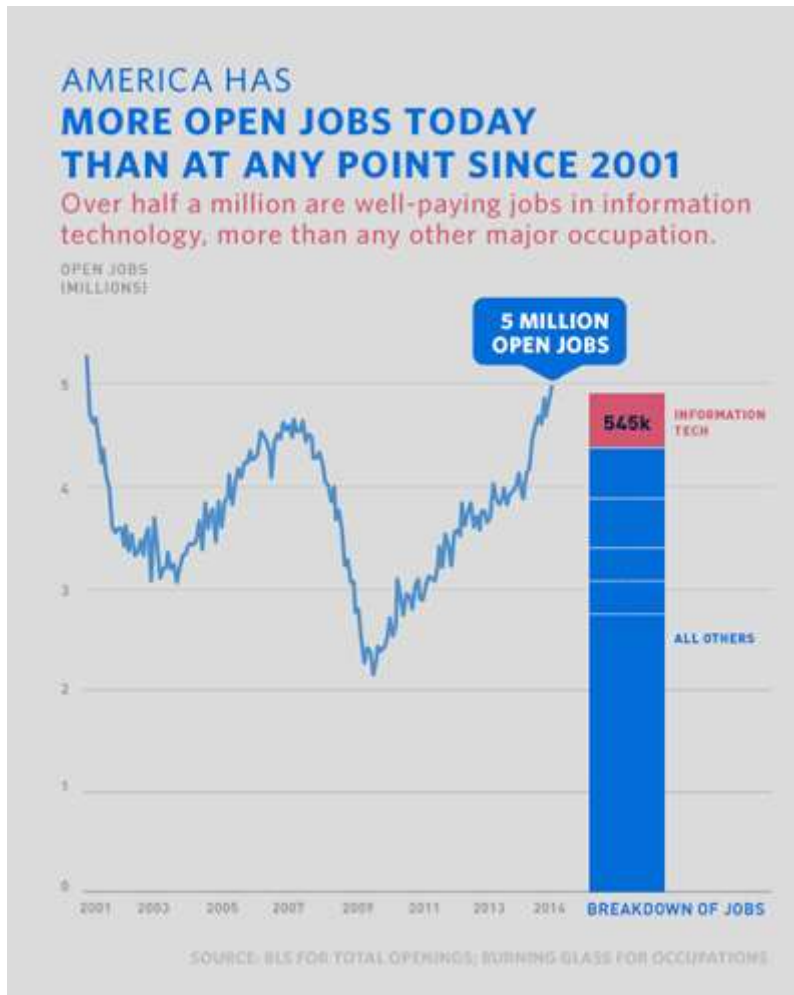
Regional Workforce Draw - June 2017						
State/County	Population*	Labor Force	Employed	UE	UE Rate	No. of Commuters into W. County**
State of Maryland	6,016,447	3,230,814	3,098,784	132,030	4.1%	
United States	323,127,513	160,145,000	153,168,000	6,977,000	4.4%	
Maryland						
Washington County	150,292	78,208	74,687	3,521	4.5%	21,987***
Allegany County	72,130	32,556	30,663	1,893	5.8%	588
Frederick County	247,591	133,260	12,296	4,964	3.7%	1,968
Pennsylvania						
Franklin County	153,851	77,300	73,800	3,500	4.6%	9,284
Fulton County	14,640	7,200	6,800	400	5.1%	1,142
West Virginia						
Berkeley County	113,525	56,340	54,290	2,050	3.6%	5,290
Jefferson County	56,368	30,190	29,230	960	3.2%	442
Morgan County	17,632	7,920	7,600	310	4.0%	882
Total Regional Workforce	826,029	422,974	405,366	17,598		19,596

Employment and unemployment data are seasonally adjusted

*U.S. Census Bureau - 2016 Population Estimates

TECHNOLOGY

The TechHire Opportunity

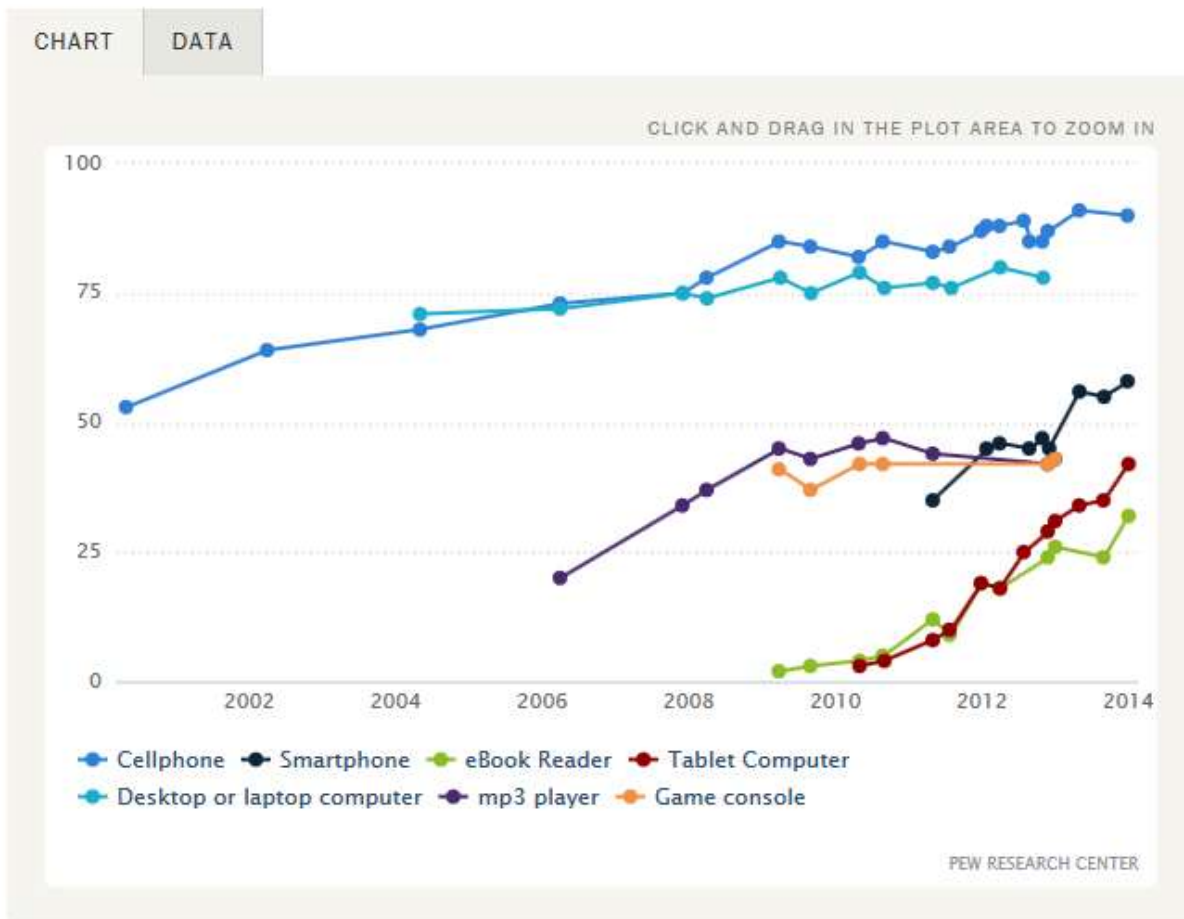


Today there are over half a million unfilled jobs in information technology across all sectors of the economy. These IT jobs make up ~12% of the approximately 5 million job openings making IT the largest occupational category for open jobs right now. Non-IT industries currently employ two-thirds of these private sector IT workers. **IT jobs in fields like cybersecurity, network administration, coding, project management, UI design and data analytics offer pathways to middle-class careers with average salaries more than one and a half times higher than the average private-sector American job.** IT and cybersecurity jobs are not only for people with advanced degrees

In fact, hundreds of thousands of these jobs require skills that can be learned not only in universities, but also in community colleges, in industry certified training programs, in “coding boot camps” or in high-quality online courses. And they’re not just in Silicon Valley, or in the high tech industry – many are in industries we don’t think of as part of the technology sector – in health care, retail, manufacturing, financial services, energy, transportation, or in local government. Helping more Americans train and connect to these jobs is a key element of the President’s middle-class economics agenda.

As of January 2014:

- 90% of American adults have a cell phone
- 58% of American adults have a smartphone
- 32% of American adults own an e-reader
- 42% of American adults own a tablet computer



- Tablets are now driving more traffic web traffic than smartphones. This means that tablet users are more engaged and active on their devices. According to Adobe, “Internet users view 70% more pages per visit when browsing on a tablet vs. a smartphone.” That’s an impressive number and a strong indicator that colleges should be preparing tablet-friendly experiences for their websites and course materials. Tablets handle desktop websites better than smartphones and don’t always require apps to offer students and faculty advanced functionality.

The latest Facebook facts and statistics

Here are some fascinating numbers on a range of Facebook facts and metrics from mobile, revenue and a host of other facts.

1. Every second there are 20,000 people on Facebook. This means in just 18 minutes there are 11 million users on Facebook
 2. On average there are 486,183 users a minute accessing Facebook from their mobile
 3. 79% of all users are accessing Facebook from their mobile.
 4. There are 745 million daily mobile users
 5. Facebook is adding 7,246 people every 15 minutes or 8 per second
 6. Every minute there are 150,000 messages sent
 7. Every 15 minutes there are over 49 million posts. To be precise 49,433,000 or 3 million posts per minute
 8. There are 100,000 friend requests every 10 minutes
 9. There are 500,000 Facebook “likes” every minute
 10. Facebook generates \$1.4 million in revenue every hour
 11. Nearly 73% of Facebook’s ad revenue comes from mobile advertising
 12. Facebook earns \$2.5 billion a quarter from mobile advertising
 13. People share 1.3 million pieces of content on Facebook every minute of every day
 14. In November of 2014 the number of video uploads to Facebook exceeded YouTube video uploads according to [Social Bakers](#)
 15. Facebook generated \$12.47 billion in sales in 2014 (a rise of 58% year on year)
 16. Photo uploads are 350 million per day
 17. Users spend 21 minutes per day on average on Facebook
 18. 31% of US senior citizens are on Facebook
 19. 66% of all millennials (15-34 year olds) use Facebook
 20. People spend 927 million hours a month playing Facebook games
 21. There are 1 billion mobile app links enabled on Facebook
- HCC was designated as a National Center of Academic Excellence in Information Assurance Two-Year Education (CAE-2Y) by the NSA and is one of only six two-year schools to receive this honor. This distinction enables students to transfer seamlessly from HCC to a four-year college in order to complete their degree. HCC’s designation as a CAE-2Y couldn’t have occurred at a better time because the Department of Defense, one of the largest employers of cyber security specialists, now requires incoming workers to have both a bachelor’s degree, as well as the necessary certification training needed to meet the rapidly changing demands of the information assurance field.

Mostly thanks to a massive solar farm placed on state prison lands south of Hagerstown, Washington County currently leads all Maryland counties in solar-energy production capacity with 33.8 megawatts, according to officials with the Maryland Energy Administration, or MEA.

MEA officials said the county's solar capacity represents about 18 percent of the state's total 184-megawatt capacity as of Aug. 4. Larger solar projects also have been undertaken by businesses and government, including Maryland's public-private partnership with First Solar Inc. that resulted in a 29-megawatt solar farm on state prison lands off Md. 65 in 2012. The power produced there is sold by First Solar back to Potomac Edison's electrical grid.

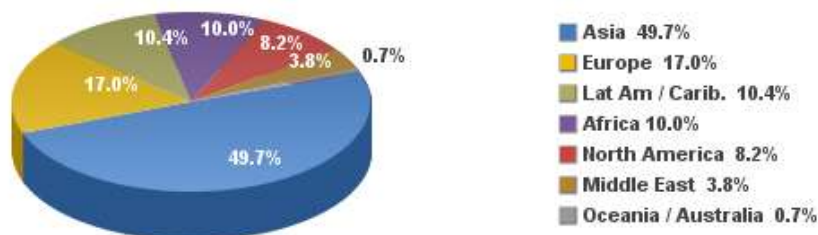
Staples and Walmart are among larger local businesses that have added solar panels to their facilities. On the government level, Washington County and the Town of Boonsboro have agreements in place for solar-farm projects in the near future.

The rise in solar technology has prompted a corresponding increase in the industry that sells, installs and maintains solar arrays.



- The world is seeing an accelerating pace of technological change, an increasingly multidisciplinary nature of technology, and continued globalization. Technology is an integral part of our lives, the economy, and education. All education sectors are increasingly dependent upon technological development support systems for teaching and learning including distance learning, E-learning, distributed learning, hybrid applications, access to information on-line, local integrated systems, and migration to fused media.
- Students are engaging with a number of different applications on their smartphones and tablets. More than 6 in 10 claim to regularly use games (73%), music (67%), entertainment (64%) and social networking (64%) apps, with a majority also putting photo and video (53%) apps to use. Interestingly, productivity apps are on the low end of the totem pole, with less than 1 in 5 saying they regularly use them.

Internet Users in the World by Regions - June 30, 2017



Source: Internet World Stats - www.internetworldstats.com/stats.htm
Basis: 3,885,567,619 Internet users in June 30, 2017
Copyright © 2017, Miniwatts Marketing Group

- Ramping up the bandwidth capabilities of campus networks certainly ranks among the top IT investments at many colleges. “Where we’ve really had to adapt and adjust is on our wireless network,” said Charles Spann, assistant vice president for service delivery and communications for the Division of Information Technology at George Washington University. “We’ve been in the process of upgrading our wireless network over the last two years, and it seems that whenever we finish our last wireless upgrade project it’s time to start the next.”

While student consumption of bandwidth has gone through the roof in recent years, the wireless network now plays an increasingly central role in teaching and administration, too. “Faculty are leveraging [student mobile devices] to be more creative in how they conduct their classes,” explained Spann. “It’s becoming more common for faculty to conduct an online quiz at the beginning of the class, for example, or have students take a test over the wireless network on the laptops they bring to class. This has caused quite a surprise at times when a faculty member’s use of a technology has got ahead of our wireless upgrade.”

- Cloud based computing is an important component that is driving the higher education market. In today's present competitive world, cloud based education has developed into an increasingly attractive alternative for educators to offer innovative learning platforms and services continuously. Educational institutions are implementing the model of cloud computing within the campuses so that it is easier to share, accumulate and collaborate the data from any location, and at any time.
- As college life becomes increasingly digital, universities are finding more ways to keep tabs on their students online and on campus.

Student ID cards can track students around campus. Computers can analyze students’ academic data and predict their future performance. For some, this

starts to feel like “Big Brother” is watching, a college that would be at home in George Orwell’s 1984.

But analytics companies and administrators both say they’re using the data to help students succeed.

“This is the ethical thing to do,” said Bridget Burns. “Students are investing thousands of dollars for an outcome they won’t be able to see if we aren’t giving them the tools.” Burns is the executive director of the University Innovation Alliance, an organization that advises schools on how to use predictive analytics.

Analytics relies on past student data, such as grades, credit hours and class difficulty, to predict how future students may fare. And so, when advisers look at the data, they aren’t spying, they’re helping, Burns said.

- 24 college students completed a survey on their views of the pros and cons of using smartphones in the classroom. Each student completed the survey twice: first in 2010, before they started using iPhones for classroom-related tasks, and then in 2011, after they had been using the phones for a year. The students' survey responses changed substantially over the year. Before the study period, most of the students thought the smartphone would help with their schoolwork. By the end of the study, most viewed their phones as a distraction and not very helpful.

Smartphones are the devices whose classroom use is most likely to be banned or discouraged, followed by wearable devices like Google Glass.

	Ban	Discourage	Neither discourage nor encourage	Encourage	Require
Smartphone	27%	24%	36%	12%	1%
Tablet or iPad	9%	9%	51%	28%	3%
Laptop	7%	8%	47%	32%	6%
Wearable (e.g., Google Glass)	21%	11%	64%	4%	0%

Note: Survey data were collected in February and March 2014 from 17,451 faculty members at 151 institutional sites.

Source: Educause Center for Analysis and Research

- Many people fear a jobless future - and their anxiety is not unwarranted: Gartner, an information technology research and advisory firm, predicts that one third of jobs will be replaced by software, robots, and smart machines by 2025.

Artificial intelligence and robots are not just challenging blue-collar jobs; they are starting to take over white-collar professions as well. Financial and sports reporters, online marketers, surgeons, anesthesiologists, and financial analysts are already in danger of being replaced by robots.

While one camp of experts predict that several unlucky Americans will be pushed out of work in the near future, others argue that this increase in computing prowess will simply eliminate old jobs and introduce new ones, resulting in a net-zero effect - or even an increase in jobs. New technology means new products and services, they argue, as we saw during the Industrial Revolution.

Experts are calling this movement the "Second Machine Age," as it is comparable to what we saw 200 years ago with the invention of the steam engine and the machine age that ensued.

- Students who want a solid footing in tomorrow's job market need look no further than information security.

Both the public and the private sector are shopping for talent to meet the demand in the workforce. The Bureau of Labor Statistics projects a massive shortage in the IT workforce by 2020: There will be **1.4 million openings, but only 400,000 computer science graduates** with the necessary skills to fill the positions.

In March, the U.S. Cyber Command announced a hiring spree, fast-tracking the hiring of 3,000 new personnel to staff the Pentagon's cyberdefenses.

The job growth rate for information security analysts is higher than the average for all occupations (37 percent and 11 percent, respectively), according to the Bureau of Labor Statistics' *Occupational Outlook Handbook* published in 2012. And that growth is accelerating due to the increasing threat of cyberattacks.

The **Higher Education Information Security Council** (HEISC) was established in 2000, under the EDUCAUSE umbrella, to help institutions improve information security governance, compliance, data protection and privacy programs.

1. **Developing an effective information security strategy** that responds to institutional organization and culture and that elevates information security concerns to institutional leadership.
2. **Ensuring that members of the institutional community** (students, faculty, and staff) receive information security education and training.
3. **Developing security policies** for mobile, cloud, and digital resources (includes issues of data handling/protection, access control, and end-user awareness).
4. **Using risk-management methodologies** to identify and address information security priorities.
5. **Developing, testing, and refining incident response capabilities** to respond to information systems/data breaches.

- Ransomware escalated across the globe as a profit center for criminals. Symantec identified 100 new malware families released into the wild, more than triple the amount seen previously, and a 36 percent increase in ransomware attacks worldwide.

The United States was the biggest – and softest – target. Symantec found 64 percent of Americans are willing to pay a ransom, compared to 34 percent globally. And the average ransom spiked 266 percent, with criminals demanding an average of \$1,077 per victim.

- In 2016, the most effective bank robbers were armed with computers, not guns; billions of dollars were stolen in virtual attacks. While some of these heists were the work of organized criminal gangs like Odinaff, for the first time, nation states appear to be involved as well. Symantec uncovered evidence of North Korea attacking banks in Bangladesh, Vietnam, Ecuador and Poland, stealing at least US \$94 million.



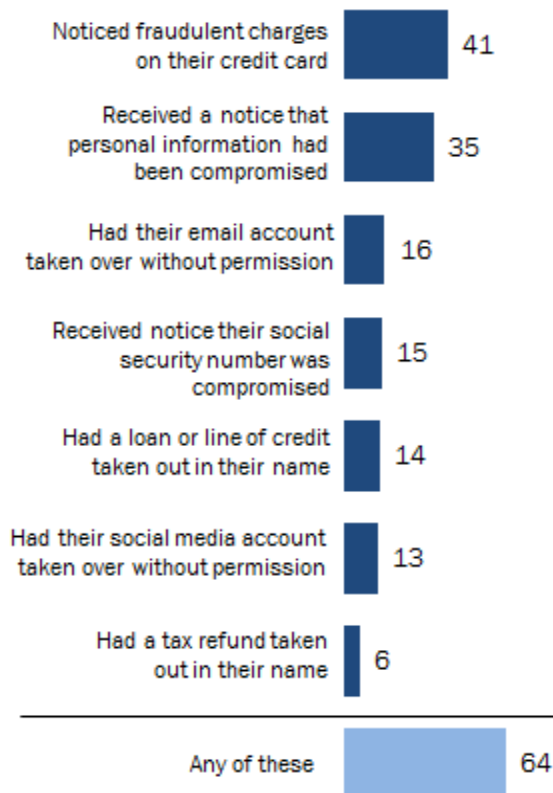
SOURCE: ISACA's State of Cyber Security 2017: Current Trends in Workforce Development
www.isaca.org/state-of-cyber-security-2017
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- 64% of Americans have an online account involving health, financial or other sensitive data
- 55% of Americans report having an online account with banks or other financial service providers.
- 36% have an online account with household utility providers.
- 32% have an online account with their healthcare providers.
- 39% have some other kind of online account that involves bill payments or transactions.

Many Americans have experienced some form of data theft

% of U.S. adults who have ever ...



Source: Survey conducted March 30-May 3 2016.
"Americans and Cybersecurity"

PEW RESEARCH CENTER

- Americans in their early 30s through mid-60s are especially likely to have encountered many of these forms of data theft. Nearly half (48%) of Americans ages 30 to 64 have noticed fraudulent charges on their credit cards, while around one-in-five (19%) have received notices that their social security number was compromised. Overall, nearly three-quarters of Americans in this age range (72%) have experienced at least one of the seven types of breaches (compared with 55% of those ages 18 to 29 and 50% of those 65 and older). Along with Americans in this age range, college graduates (78% of whom have experienced at least one of these breaches) and those with household incomes of \$75,000 or more per year (77%) are also relatively likely to have encountered these various types of data theft.

- A study released by data security solutions firm Datto, found that small-to-mid-sized businesses paid \$301 million in ransomware – or malicious software that blocks access to a system until a ransom is paid – to hackers last year alone. The company said 5% of all small-to-mid sized businesses across the globe fell victim to a ransomware attack in 2016.

- According to new research from the International Data Corporation, spending on the Internet of Things will jump from \$655.8 billion in 2014 to \$1.7 trillion by 2020, when devices, connectivity and IT services will dominate the IoT market.

While those figures represent spending across markets — including healthcare, government and manufacturing — they signal significant opportunities for higher education.

On-campus use of the IoT today is largely limited to facilities management. Bournville College in Birmingham, England, has long regulated building access and monitored foot traffic patterns with Cisco Physical Access Control technology. As far as other uses go, some universities' staff receive alerts when solar-powered trash cans are full, and students in residence halls can track the availability of washers and dryers through real-time laundry apps.

Technology repair services on campuses will likely be seen as a higher-ed essential critical to boosting outcomes and helping students save time.

A growing number of college bookstores are offering on-campus tech repair services to fix damages and minimize the time students are without their devices (should accidents happen).



As the use of technology in education continues to grow, and as students have become increasingly reliant on their smart phones, tablets and laptops, it's never been more critical to ensure students can successfully and efficiently complete their school work in a timely manner.

According to recent research from McGraw-Hill Education, 48 percent of students definitively said technology saves them time while studying. Moreover, 77 percent of those students indicated technology saves them two to five hours per week or more.

Whether it's a cracked screen on a phone or a virus on a laptop, the importance of quality repair services to alleviate problems such as these that students often face can not be understated moving forward, especially during important times such as finals week or simply when working on a group presentation.

Also, when technology repair services become readily available, students and even faculty often feel more comfortable about adopting new devices and software, due to the knowledge that they will be protected should anything go wrong.

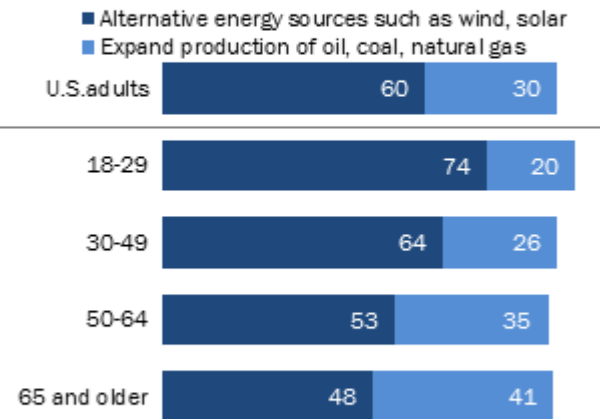
50%

PERCENTAGE OF CIOs WHO SAY LEARNING NEW SKILLS TO STAY CURRENT WITH TECHNOLOGY IS THE MOST IMPORTANT ADVICE THEY WOULD GIVE TO NEW COLLEGE GRADS IN TECHNOLOGY FIELDS

Hands-on experience should be a central part of any IT student's curricula, says Matthew Bourdeau, Miami regional vice president of Robert Half Technology, a national IT staffing firm. In a recent Robert Half survey, 71 percent of CIOs said that they prioritize proven skills and hands-on experience over formal education when evaluating job candidates, which obliges new grads to demonstrate real-world competence if they want to compete with veteran IT workers, Bourdeau says.

Younger Americans More Likely to Prioritize Alternative Energy

% of U.S. adults saying... should be the more important priority for addressing America's energy supply



Survey of U.S. adults Dec. 3-7, 2014. Q18. Those volunteering both or saying "don't know" are not shown.

PEW RESEARCH CENTER



25 JOBS THAT ROBOTS ARE LEAST LIKELY TO TAKE OVER

RANK	JOB TITLE	INDUSTRY	CHANCE OF BEING AUTOMATED
1.	Occupational Therapists	Healthcare Practitioners and Technical	0.30%
2.	Mental Health and Substance Abuse Social Workers	Community and Social Services	0.30%
3.	Dentists	Healthcare Practitioners and Technical	0.40%
4.	Physicians and Surgeons	Healthcare Practitioners and Technical	0.40%
5.	Dietitians and Nutritionists	Healthcare Practitioners and Technical	0.40%
6.	Oral and Maxillofacial Surgeons	Healthcare Practitioners and Technical	0.40%
7.	Choreographers	Arts, Design, Entertainment, Sports, and Media	0.40%
8.	Elementary School Teachers	Education, Training, and Library	0.40%
9.	Set and Exhibit Designers	Arts, Design, Entertainment, Sports, and Media	0.50%
10.	Podiatrists	Healthcare Practitioners and Technical	0.50%
11.	Clinical Counseling and School Psychologists	Life, Physical, and Social Science	0.50%
12.	Medical Scientists	Life, Physical, and Social Science	0.50%
13.	Education Administrators	Management	0.50%
14.	Computer Systems Analysts	Computer and Mathematical	0.60%
15.	Preschool Teachers	Education, Training, and Library	0.70%
16.	Curators	Education, Training, and Library	0.70%
17.	Medical and Health Services Managers	Management	0.70%
18.	Social and Community Service Managers	Management	0.70%
19.	Clergy	Community and Social Services	0.80%
20.	High School Teachers	Education, Training, and Library	0.80%
21.	Anthropologists and Archeologists	Life, Physical, and Social Science	0.80%
22.	Foresters	Life, Physical, and Social Science	0.80%
23.	Mechanical Engineers	Architecture and Engineering	1.10%
24.	Makeup Artists	Personal Care and Service	1.00%
25.	Forensic Science Technicians	Life, Physical, and Social Science	1.00%

SOURCE: NPS

BUSINESS INSIDER

- MarketsandMarkets forecasts the global Higher Education Market to grow from \$43.06 billion in 2013 to \$65.83 billion in 2019. In terms of regions, North America is expected to be the largest market in terms of market size, while Europe and Asia-Pacific (APAC) are expected to experience an increase in market traction, during the forecast period.
- Colleges have started to jump on the mobile craze, and schools such as Ohio State University and Massachusetts Institute of Technology have launched apps that allow students to check grades, manage their university accounts and track campus bus lines.

Apps created by colleges often go beyond just schedules and grades, says Chester Goad, director of disability services for Tennessee Technological University.

"Many colleges and universities upload tips and tricks for navigating campus, best places to eat, college traditions and more," he says, adding that these apps often include emergency alerts to help keep students safe on campus.

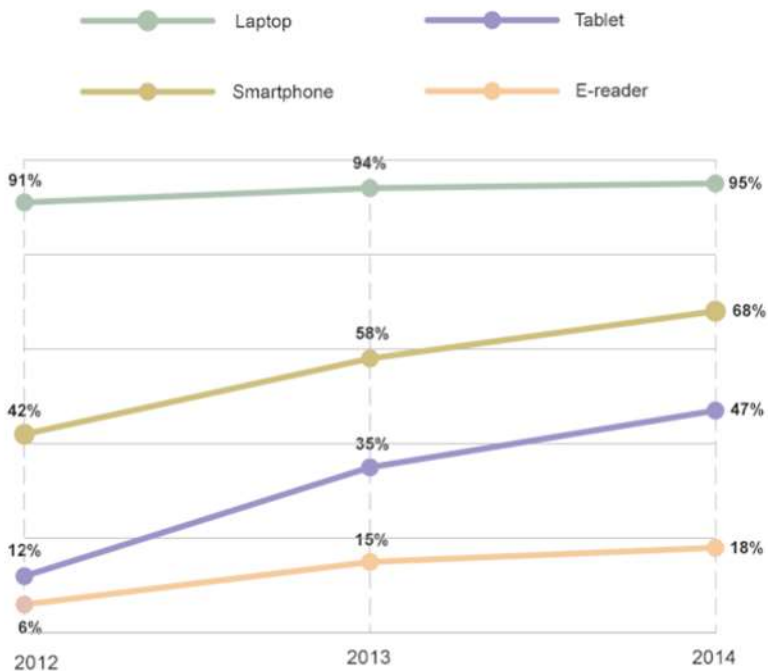
- Using those apps takes time, and college students are spending more of it with their devices. On average, they report spending 0.8 hours with a tablet, up from half-an-hour last year. And they're spending 3.6 hours a day with their cell phones and smartphones (presumably more on smartphones), up from 3.3 hours last year. By contrast, they're spending less time with computers, TVs, handheld gaming devices, and e-readers.
- Most relevant for college admins, the 2013 E-Expectations Report, conducted by Noel-Levitz, OmniUpdate, CollegeWeekLive, and NRCCUA, examined how social media and mobile devices are affecting students' search for the right college. About 2,000 students participated in the survey and the results were enlightening:

67 percent of the respondents said they still use Facebook, but that's a drop of 12 percentage points from last year

The survey also found that while virtually all of the students said they think information on a university's website is reliable, only about half of them said they trust information delivered through a university's social media

Growth in Student Use of Devices for Academic Work, 2012-14

Use of e-readers for college studies tripled in the past two years but remained under 20 percent. Use of tablets almost quadrupled; the devices were being used by almost half of students.



Note: Survey data for 2014 were collected from February to April 2014 from 75,305 students at 213 institutional sites. The findings for 2014 were developed from a representative sample of 10,000 students from 186 colleges in the United States. Data for 2012 and 2013 were developed from similar representative samples of about 10,000 students. Those samples were drawn from 106,875 students who responded to a survey from February to April 2012 and 113,035 students who responded to a survey from February to April 2013.

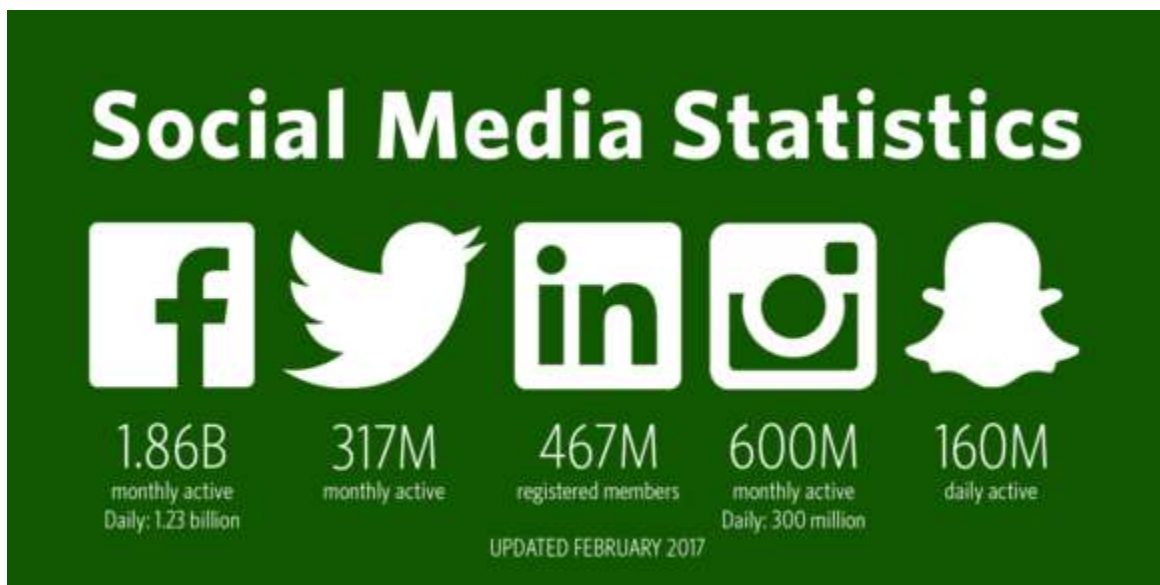
Source: Educause Center for Analysis and Research

5 Must-Have Tech Skills for College Students

- Typing ability
- Online etiquette skills
- Software suite basics
- Online research skills
- Privacy and security awareness

- Students expect the availability of wireless networks and immediate connectivity/ access to the Internet for e-mail and class assignments and projects. Students connected to the Internet are finding they can go anywhere in the world to learn. This gives them increasing choices about who provides their education and what mode of delivery best fits their busy lifestyle. Because of this trend community colleges have the opportunity to serve more students than those just in their service areas.
- So students are moving to quick services that are visually appealing and easy to use. Services like Snapchat were designed for mobile use and have grown at an impressive rate. According to CNET, in November 2013, the site was processing 400 million snaps per day while Facebook users were uploading approximately 350 million photos per day.

- Technological advances make it possible for people to live longer. As the overall population increases, community college enrollment is expected to grow. Technological innovations in the workplaces are expected to continue to fuel community college enrollment by people seeking training and skills upgrades. Distance learning technologies may increase community colleges' capacity without massive new building projects. Through distance learning, the Internet and other means, colleges can compete on a greater scale overcoming limitations in size, location, and costs.
- Rapid advances in information systems, technology and its applications are having a profound impact on teaching and learning, necessitating that colleges invest in technology and integrate it into curriculum and instructional practices.
- The rapid integration of evolving and emerging technologies influence how people live, learn and work. Hence, the public in general and students in particular, are putting an increased importance on the use of technology in education and training. Thus, there is a need for an interdisciplinary teaching approach that combines information technology, science and engineering.
- Technology in the biosciences will have a dramatic impact and influence during the next decade. The revolution of information availability and utility, and the use of multidisciplinary technology open the opportunity for technological breakthroughs and advancements.



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15 Most Popular Websites in 2017

1. Google
2. Facebook
3. Youtube
4. Yahoo
5. Amazon
6. Wikipedia
7. Twitter
8. Bing
9. Ebay
10. MSN
11. Microsoft
12. LinkedIn
13. Pinterest
14. Ask
15. WordPress

Messaging apps are especially popular with younger smartphone owners

Among smartphone owners, % who use ...

	Messaging apps	Auto-delete apps	Anonymous apps
Total	29%	24%	5%
Men	31	24	4
Women	27	23	7
18-29	42	56	10
30-49	29	13	6
50+	19	9	<1
High school or less	28	24	5
Some college	25	27	8
College+	33	21	4
Less than \$50K/year	28	27	5
\$50,000+	29	22	6

Note: Findings based on the 72% of American adults who own a smartphone.
Source: Survey conducted March 7-April 4, 2016.
"Social Media Update 2016"

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MOBILE LEARNING



Contact Info:

Designing Digitally, Inc. - eLearning, Serious Games, Training Simulations, Mobile Learning
 1-866-316-9126 @ www.designingdigitally.com



The worldwide market for Mobile Learning products and services reached **8.4 billion** in 2014



The global five-year compound annual growth rate is **11.3%**



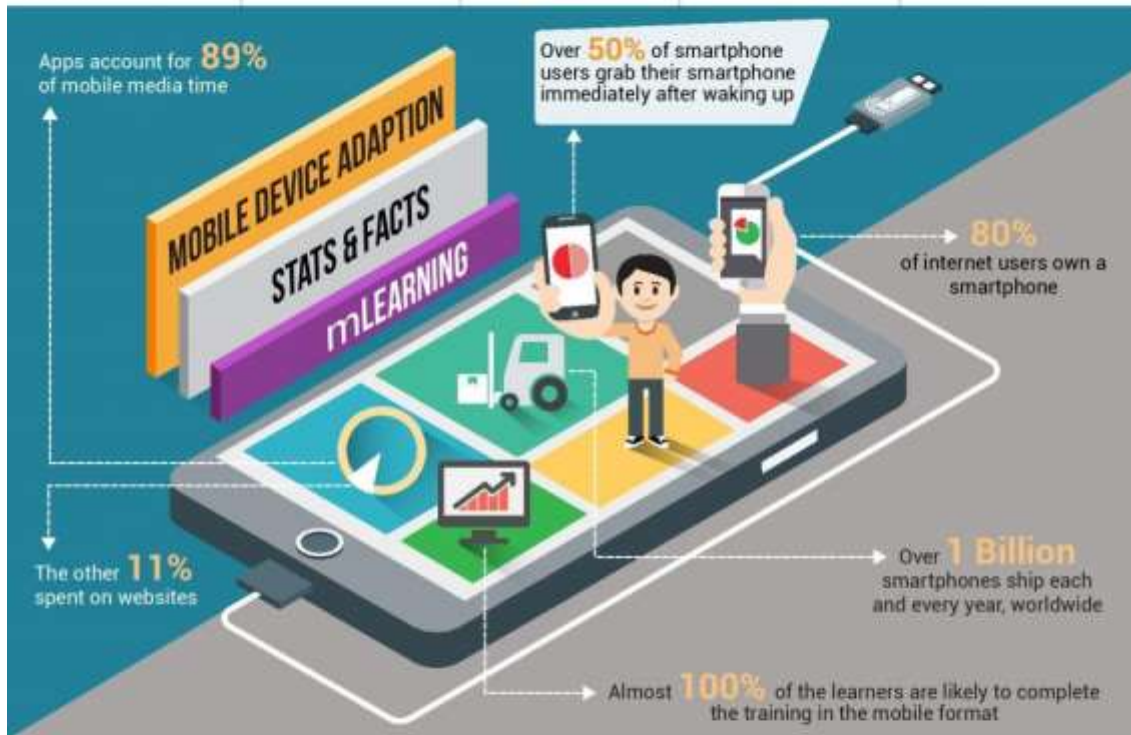
Estimated revenues will reach **\$14.5 billion** by 2019



By 2019, the top-buying country will be China, followed by the US, India, Indonesia, and Brazil



The US Mobile Learning Market could reach **\$2.1 Billion** by 2019



Over **36%** of mobile subscribers use iPhones or iPads to read email



80% of internet users own a smartphone



79% Of people surveyed use their smartphone for reading email



A higher percentage than those who used it for making calls



20% of all 19-34 year old Millennials don't use desktops at all



88% of consumers who search for a type of local business on a mobile device call, or go to that business within 24 hours



It is predicted that **70%** of professionals will do some work from their own, personal smart phones or tablets by 2018



By 2020, Millennials will form **50%** of the global workforce. They have grown up with technology at their fingertips and in their hands.



80% of workers access their corporate documents on the move using their mobile devices



mLearning tools see wide adoption, with **74%** of trainees using them while traveling. **52%** even use them in bed either right before sleep or right after waking up.



In 2014, \$19 billion was spent on mobile advertising, up 78% from the \$10.7 billion spent in 2013. Even that huge increase is far less than increases of the past two years, which saw growth rates of more than 170%.¹ Mobile ad spending now accounts for 37% of all digital ad spending, up from 25% last year.

- The percentage of Americans who have listened to a podcast in the past month has almost doubled since 2008, from 9% to 17% by January of 2015. The percentage listening in 2015 was up two points over 2014 levels (15%).
- More than half of Americans ages 12 and older have listened to online radio in the past month, according to 2015 survey data from Edison Research – a clear indication that online listening continues to move rapidly into the consumer mainstream. And more of that listening is now being done through mobile devices than through desktops. Traditional AM/FM radio, meanwhile, continues to reach the overwhelming majority of the American public – 91% of Americans ages 12 and older had listened in the week before they were surveyed in 2014, according to a Pew Research Center analysis of Nielsen Media Research data, essentially unchanged from 2013. And Sirius XM – the only satellite radio platform in the U.S. – reported a boost in subscriber numbers of almost 7% from 2013. More than 10 years after unmanned aerial vehicles – known typically as drones – began making an impact on the battlefields of Iraq and Afghanistan, they’re beginning to make their mark on college classrooms. According to the Government Technology Magazine, some schools are introducing majors that focus on drone technology to their science, technology, engineering and mathematics staples.

Newspaper Audience Distribution by Platform

% of newspaper readership that takes place in ...

	2013	2014
Print only	55%	56%
Print/desktop	15	11
Print/desktop/mobile	10	11
Desktop only	7	6
Desktop/mobile	5	7
Print/mobile	4	5
Mobile only	3	5

Source: Scarborough USA + Study, R1, 2014

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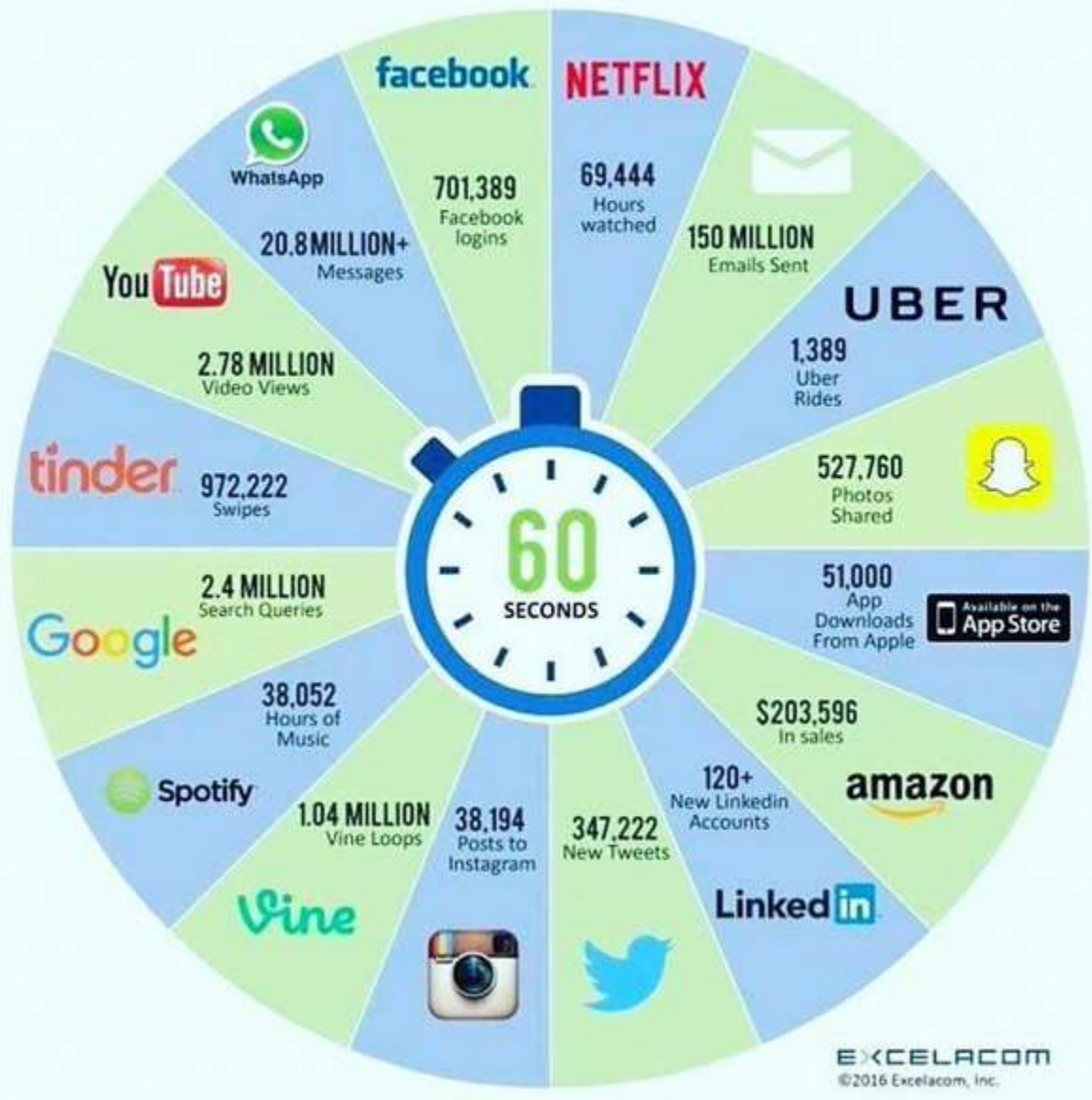
Mobile Drives Online Traffic



Source: comScore Media Metrix, January 2015, U.S.

PEW RESEARCH CENTER

2016 What happens in an INTERNET MINUTE?



EXCELACOM
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In Maryland, an effort to improve STEM education began in 2009. A state task force recommended curriculum changes, internship opportunities and teacher professional development to help meet a goal of increasing the pool of STEM college graduates. Representatives from companies such as Lockheed Martin and Apple worked with educators on the task force. Meanwhile, a national effort was ongoing to redesign science education. Maryland and 26 states worked alongside the National Science Teachers Association, the American Association for the Advancement of Science, and Achieve, as well as teachers from around the country. Two Maryland school board members, including the president, have been directly involved in the effort funded by the Carnegie Foundation.



As scientists look to find alternatives to traditional fossil fuels, a number of major projects, including Cape Wind (in Massachusetts' Nantucket Sound) and Deepwater Wind (near Block Island, Rhode Island), are vying to become the first offshore windfarm in the U.S.

Two companies, Cape Wind and Deepwater Wind, are competing to lead the way in offshore wind power in the U.S. Alongside power from volcanoes, waves, biomass and the sun, , wind power is set to become a significant alternative energy source in 2014.

-
- President Obama has signed an Executive Order calling for the US to significantly up its game in the supercomputer space. The effort, known as the National Strategic Computer Initiative (NSCI), will aim to build the world's fastest supercomputer by 2025.

Synthetic biology begins to grow

Marcus Fairs, the editor of *dezeen.com*, a highly influential online design magazine, says that in his view 2014's most significant emerging technologies will be in the field of synthetic biology.

"This emerging field started to hit the headlines at the end of last year and will be huge in 2014," Fairs say. "It involves the creation of new types of artificial life forms that perform useful functions. At the smallest scale it could mean man-made microbes that live inside your body and detect illness; at the largest scale it could mean synthetic creatures that are released into the wild to clean up pollution or attack parasitic species."

- Effective programming in distance learning and on-line education requires application of best practices in designing and delivering instruction. The expansion of on-line and distance learning and a commitment to the assessment of student learning outcomes are required of any community college wishing to remain competitive and effective. To do so requires sound faculty and staff development programs and the funding to maintain the curriculum and equipment necessary for quality programming.
- Electronic portfolios are becoming a common place repository for student work.
- The advancement in technology represents another challenge that has significantly impacted traditional methods of delivery. Many students come to campus expecting to find a far more sophisticated environment than the one that exists. The so called iPod generation is demanding eye-catching visuals, interactive instructional methods, and active engagement in learning.

Energy & Sustainability

Maryland's natural gas, electricity and nuclear power companies are joined by solar, wind, geothermal and biomass enterprises with a shared vision toward the state's "smart, green and growing" energy future. The state receives electric power via North America's largest power pool, the PJM Interconnection. Calvert Cliffs Nuclear Power plant, in operation since 1975, supplies all of Maryland's nuclear power and accounts for more than one-fourth of total electric generation. Further, Maryland's Renewable Portfolio Standard (RPS) requires that 25 percent of the state's energy come from renewable sources by 2020. The state's 1,280 energy and sustainability businesses generate \$8.16 billion in gross state product. Major Energy & Sustainability Employers in Maryland Employer Employment Product / Service Exelon 5,200 Energy services Washington Suburban Sanitary Commission 1,580 Water and wastewater services W.R. Grace & Company 1,100 Petroleum refining technologies SolarCity 1,000 Solar energy contractor Johnson, Mirmiran & Thompson (JMT) 600 Environmental planning and engineering services Rummel Klepper & Kahl (RK&K) 550 Water and wastewater services Siemens 500 Environmental controls Southern Maryland Electric Cooperative (SMECO) 460 Energy products and services Washington Gas 400 Natural gas distribution Waste Management 370 Waste treatment and disposal KCI Technologies 325 Environmental planning and engineering services NRG 185 Energy services Note: Numbers are rounded. Source: Maryland Department of Commerce, July 2017.

Maryland ranks ninth in the 2016 State Energy Efficiency Scorecard compiled by the American Council for an Energy-Efficient Economy. The report ranks states on the adoption and implementation of energy efficient policies which reduce energy costs, spur job growth, and benefit the environment. Maryland is a top ranked state in the combined heat and power policy category. v In the 2015 Enterprising States study, which looks at how states are creating an environment in which the private sector can thrive, Maryland ranks second in the high-tech "Talent Pipeline," third in "Innovation and Entrepreneurship," and fifth in "High Tech Performance." v Maryland ranks ninth in solar industry jobs per capita, with 5,429 total jobs in 2016. v Maryland ranks seventh among the states in the square footage of LEED-certified commercial and institutional green buildings per capita for 2016.

- Many students, including non-traditional, are comfortable with the newest technological devices as they use camera phones, keep Blogs, use wireless devices effortlessly, use Instant Messaging (IM) constantly, and regularly use videoconferencing and Internet based telephony. Though many will not need training in the use of these tools, some will. Meeting the needs created by these varying degrees of expertise is a challenge.

- With the expansion of on-line learning opportunities for students, issues of faculty training and development, intellectual property rights, adequacy of technical infrastructure and evaluation of learning are becoming major pieces of the accountability concerns for this relatively new mode of student learning.
- Tuition costs at online institutions tend to be significantly higher than those of community colleges and many four-year institutions.
- Having the ability to do mass messaging is becoming more important on college campuses today. The potential use of such a messaging system is important for emergency messaging and campus-wide announcements.
- Technological security at the college is also an essential issue, which includes security of institutional databases, as well as the security of its students when online. Due to the large quantities of downloading and internet surfing worms and viruses are rampant on college campuses and can be quite expensive to be removed.
- Technological changes will pave the way for a greater demand for data transparency. Transparent data are those that can be accessed from one entry point, such as your personal web page, and are constantly available. Transparent data are critical for speeding up the pace of institutional planning. Decisions need to be data driven, with data easily found and manipulated for fast turnaround. Data transparency is not limited to college administration. Students need transparency within their own data sets so they can increase their learning. Use of a student portal should allow individual students to see all of their own data and interact with data sets that will help them make decisions.
- With changing demographics nationally, as well as locally, students should be able to speak any language because of translation software. This will allow the classes to become more tailored for each student while simultaneously expanding enrollments internationally. While a lecture going on, students will be able to pull up information, on their individual screen, for a topic for which they are having trouble.
- Nanotechnology is a type of manufacturing technology that will build objects from the atom up as well as be able to manipulate atoms within a current structure. It is technology that works with elements the size of a nanometer, and it will play a major role in the future of security, medicine, economic productivity, and environment. The National Science Foundation estimates that 2 million workers are expected to be needed to support the industries of nanotechnology worldwide within the next 15 years.

- According to the Microsoft Corporation, the following are technological changes that will be used in colleges across the country by 2020:
 - Simulation technologies and powerful sensor technologies provide scalable models engage in learning by doing. Sensors in laboratories provide students feedback as they reconstruct and deconstruct various objects in real time, with real materials.
 - There are intelligent laboratory objects where technology is embedded in them. Students receive physical components that instruct the students on how to design, test, and connect them together. Instrumentation is also managed remotely. Internet based laboratories are the norm where students are able to run laboratory experiments wherever they find them.
 - All scientific disciplines require increasing amounts of computing sophistication. Thus, students will need to know how to program software. So, students must be taught to identify opportunities and customers, manage their requirements, provide effective documentation, and manage source code.
 - Voice technology eases communication as students will wear technology on their clothing.

- As reported by the National Intelligence Council, biotechnology, (the use of living organisms to make a product or run a process) is revolutionizing industry, modern medicine and agriculture, will show continued expansion improving the quality and length of human life. The ability to work and manipulate materials using technology at the “nano” level will allow industry in general to better design and produce chemical, fluidic, optical, mechanical and biological components. Not only are these technologies having impact on our lives, but they are heavily intertwined, making the technology revolution highly multidisciplinary and accelerating progress in each area. Fundamental changes in what and how we manufacture will produce unprecedented customization and fundamentally new products and capabilities.

- With new technology also comes the issue of cost. Technology has the costs of employees that can install and maintain the new technology as well as the cost of the technology itself. Classrooms are seen as out of date if technology is not used. Therefore, the issue becomes how to balance an effective classroom at reasonable cost.

- Alternate sources of revenue can increase institutional giving by leveraging technology. As funds from the state continue to tighten, Institutional Advancement offices at community colleges look for new sources of funding. The institution's Benefactor system can be tapped for valuable data leading to improved targeting of Alumni for events and fund-raisers that will particularly interest them.

Based on the analysis of more than 270,000 job postings, the research uncovered the 50 fastest growing freelance jobs and skill areas for online work:

1. 3D Rendering
2. Ghostwriting
3. Software Development
4. 3D Animation
5. Mobile Phone
6. 3D Modeling
7. Android Development
8. Logo Design
9. Illustration
10. Telemarketing
11. iPhone Development
12. Objective C
13. Brochure Design
14. Photoshop Design
15. Accounting
16. Photo Editing
17. Visual Basic
18. After Effects
19. User Interface
20. Graphic Design
21. Engineering
22. iPad Development
23. Animation
24. Sales
25. Web Scraping
26. Video Services
27. Wordpress
28. Database Administration
29. HTML5
30. Leads
31. Copywriting
32. ASP
33. .NET
34. Website Design
35. Business Analysis
36. Software Architecture
37. C# Programming
38. Photoshop
39. Web Hosting
40. PSD to HTML
41. Copy Typing
42. Advertising
43. Shopping Carts
44. Software Testing
45. E-commerce
46. JavaScript



47. HTML
48. Virtual Assistant
49. Data Processing
50. SQL

businessnewsdaily – April 2014

Information Technology

- Maryland's information technology industry thrives on a concentrated and collaborative environment spurring innovative communities in cybersecurity, information technology, interactive technologies and communications. A strong network of research and education resources and a highly educated and talented workforce stimulate myriad opportunities for new and expanding businesses. Maryland's 11,600 information technology businesses are annually awarded \$10.36 billion in federal contracts and generate \$39.55 billion in economic activity, making it one of the nation's leaders and a major economic engine for the state. Major Information Technology Employers in Maryland Employer Employment Product / Service Northrop Grumman 10,365 Electronic systems Verizon 6,500 Telecommunications Johns Hopkins University Applied Physics Laboratory 5,545 R&D, systems engineering Comcast 4,000 Telecommunications Lockheed Martin 3,255 Aerospace and electronics Leidos 2,595 National security, health and engineering services Booz Allen Hamilton 2,100 IT services, systems engineering Westat 2,000 Contract research and surveys CSC 1,230 IT services, systems engineering KeyW 700 Information technology services BAE Systems 580 Defense electronics, aerospace Cisco 350 Network security Tenable Network Security 350 Network security Note: Numbers are rounded. Source: Maryland Department of Commerce, July 2017.
- Maryland ranks first among the states in the percentage of professional and technical workers (28.3%) in the workforce, third in the percentage of the population age 25 and above with a bachelor's degree or higher (38.8%) and second in the percentage with a graduate or professional degree (17.7%). v Maryland ranks third in the Milken Institute's State Technology and Science Index for 2016, including first in the component categories of technology and science workforce, and technology concentration and dynamism. v Maryland ranks fifth in the 2014 State New Economy Index, a measure of a state's economy as knowledge-based, globalized, entrepreneurial, innovative, and information technology-driven. v Maryland ranks fifth in the concentration of IT jobs, which employed 86 of every 1,000 private sector workers in 2016 according to the Cyberstates report.

PUBLIC POLICY AND ACCOUNTABILITY

The public will continue to demand increased return on its investment in education. From an institutional point of view, this will require much better results when assessing institutional effectiveness. Not only will it mean educators must increase their ability to measure it, to assure the validity and reliability of the data being gathered and used, but also they must show evidence of continuous improvement in quality in order to remain competitive. As competition in the educational arena increases from for-profit educational providers, community colleges will need to continually improve to survive.

Accrediting bodies, through their standards, expect institutional commitments to providing high quality education congruent with their institutional mission. Colleges are required to conduct ongoing institutional evaluation and improvement. Evaluation must focus on student achievement, student learning, and the effectiveness of processes, policies, and organization. Institutions are required to make improvements through an ongoing and systematic cycle of evaluation, integrated planning, implementation, and re-evaluation.

Accountability challenges related to performance are requiring more comprehensive monitoring of student outcomes data related to special initiatives developed to improve student performance. Student learning outcomes are central to accreditation standards. Student learning outcomes are knowledge, skills, abilities, and attitudes that a student has attained at the end (or as a result) of his or her engagement in a particular set of collegiate experiences. Institutions are asked to demonstrate the effectiveness of its efforts to produce and support student learning by developing student learning outcomes at the course, program, and degree level. Student learning outcomes must be measured and assessed to determine how well learning is occurring so that changes to improve learning and teaching can be made. Colleges must show evidence of a conscious effort to create a culture of evidence.

Accreditation standards emphasize the need for integration of the college's many planning activities, with an emphasis on the integration of planning and budgeting. As components of accountability mandates, educational entities need to demonstrate, through outcomes assessment and cost benefit studies, efficiencies in all areas, including academic programs, support services and administration. Additionally, colleges are required to demonstrate institutional integrity (i.e., concern with honesty, truthfulness, and the manner in which it represents itself) to all stakeholders, internal and external.

Government will continue to be involved in education, establishing standards and demanding accountability. In all probability, the government will not be able to provide the strong or consistent financial support institutions require. Government support for educational institutions is subject to change and often accompanied by performance mandates and “other strings” attached.

Faced with the “trickle down” effect of the national economy, the State of Maryland has decreased its funding to colleges and universities. Additionally, the State is cutting aid to counties, some of which, in turn, are cutting local support for community colleges. Diminished public resources will require community colleges to be more productive with the resources they have, pursue innovative partnerships with community entities, and be more innovative in fundraising.

The current political climate calls for a better response from colleges and universities to address the critical shortage of teachers and nurses, as well as workforce development.

Diversity awareness, support, and programming will become increasingly central to the community college’s mission.

With a greater array of choices for the community, competition will present a challenge to make programs responsive, accessible, convenient, and current.

Managing internal data has become imperative in this age of accountability. Getting the right data into a resource system(s) and then getting it back out has posed many challenges for community colleges. Data systems are particularly important when administering Federal grants.

As students earn more, they pay higher taxes. Employers also pay higher taxes through their increased output and spending.

Federal, state, and local governments will collect a present value of \$285.7 billion in the form of higher tax receipts over the students' working lives.

Students who achieve higher levels of education are statistically less likely to have poor health habits, commit crimes, or claim welfare or unemployment benefits.

The improved lifestyles of students result in a reduced demand for government-supported services. Better health leads to reduced health care costs. Reduced crime leads to a reduced burden on the criminal justice system. Further, increased employability leads to fewer claims for welfare and unemployment benefits.

As a result, U.S. taxpayers will see a present value of \$19.2 billion in savings to federal, state, and local governments over the students' working careers.

In 2012, U.S. taxpayers paid \$44.9 billion to support the operations of America's community colleges.

For every \$1 of public money spent on the colleges, taxpayers receive a cumulative return of \$6.80 over the course of students' working lives in the form of higher tax receipts and public sector savings. The return on investment to taxpayers (i.e., the benefit-cost ratio less the cost of the original investment) comes to \$5.80 returned over and above every \$1 in costs.

Students earn more because of the skills and qualifications they acquire at America's community colleges. Further, employers earn more because the added skills of the students they hire make their businesses more productive.

Together, increases in earnings and business output stimulate corresponding increases in income and employment throughout the U.S. Over their working lives, the 2012 student population at America's community colleges will generate a present value of \$1.1 trillion in added income in the nation.

As community college students achieve higher levels of education, they are statistically more likely to develop good health habits. This leads to a present value of \$37.5 billion in savings to students and to society as a whole for medical treatment related to smoking, alcoholism, obesity, drug abuse, and mental disorders.

Students enjoy better employment opportunities as a result of their community college education. This makes them less likely to require income assistance and less likely to commit crimes. These effects translate to a present value of \$546.9 million in unemployment-related savings and \$8.3 billion in law enforcement savings to society as a whole.

Altogether, savings to society amount to a present value of \$46.4 billion, equal to the sum of avoided costs related to health, crime, and unemployment.

U.S. taxpayers paid \$44.9 billion to support the operations of America's community colleges in 2012. In return for this support, society as a whole will receive a present value of \$1.2 trillion in benefits, the sum of the added income and social savings that the 2012 student population will generate in the U.S. economy.

For every dollar that federal, state, and local taxpayers spent on America's community colleges, society as whole in the U.S. will receive a cumulative value of \$25.90 in benefits, for as long as the 2012 students remain active in the U.S. workforce.

Impact of student productivity

Over the years, students have studied at America's community colleges and entered or re-entered the workforce with newly-acquired skills. Today millions of former students are employed in the U.S. workforce.

The accumulated contribution of the increased productivity of former students working in the U.S. amounted to \$806.4 billion in added income in 2012.

Impact of international students

About 1.3% of students attending America's community colleges in 2012 were international students.

In order to attend college, international students paid \$1.2 billion to cover the cost of their tuition and fees and purchase books and supplies. The net impact of these expenses was approximately \$1.5 billion in added income.

International students also spent money for room and board, transportation, and other personal goods and services. These expenditures added approximately \$1.1 billion in income to the national economy.

Altogether, international student spending added a total of \$2.6 billion in income to the U.S. economy in 2012.



The 2012 student population at America's community colleges paid \$18.7 billion to cover the cost of tuition, fees, books, supplies, and interest on loans. They also forwent \$78.7 billion in money that they would have earned had they been working instead of learning.

In return for the monies invested in the colleges, students will receive a present value of \$469.3 billion in increased earnings over their working lives. This translates to a return of \$4.80 in higher future income for every \$1 that students invest in their education.

The students' return on investment (i.e., benefits less the cost of the original investment divided by total cost) thus comes to a net of \$3.80 in additional benefits over and above every \$1 paid. • The average annual internal rate of return for students is 17.8%.

Society as a whole the U.S. will receive a present value of \$1.1 trillion in added income over the course of the students' working lives. Society will also benefit from \$46.4 billion in present value social savings related to reduced crime, lower unemployment, and increased health and well-being across the U.S.

For every dollar that U.S. taxpayers spent on America's community colleges during the analysis year, society will receive a cumulative value of \$25.90 in benefits, for as long as the 2012 student population remains active in the U.S. workforce.

Federal, state and local taxpayers paid \$44.9 billion to support the operations of America's community colleges in 2012.

The net present value of the added tax revenue stemming from the students' higher lifetime incomes and the increased output of businesses amounts to \$285.7 billion in benefits to taxpayers. Savings to the public sector add another \$19.2 billion in benefits due to a reduced demand for government-funded services.

Dividing benefits to taxpayers by the associated costs yields a 6.8 benefit-cost ratio, i.e., every \$1 in costs returns \$6.80 in benefits. Subtracting the costs of the original investment yields a net return on investment of \$5.80 over and above every \$1 in costs.

The average annual rate of return for taxpayers is 14.3%



State and Local

While MHEC received a 2% across-the-board reduction in general funds in fiscal 2016 cost containment, no cuts were made to State aid for community colleges.

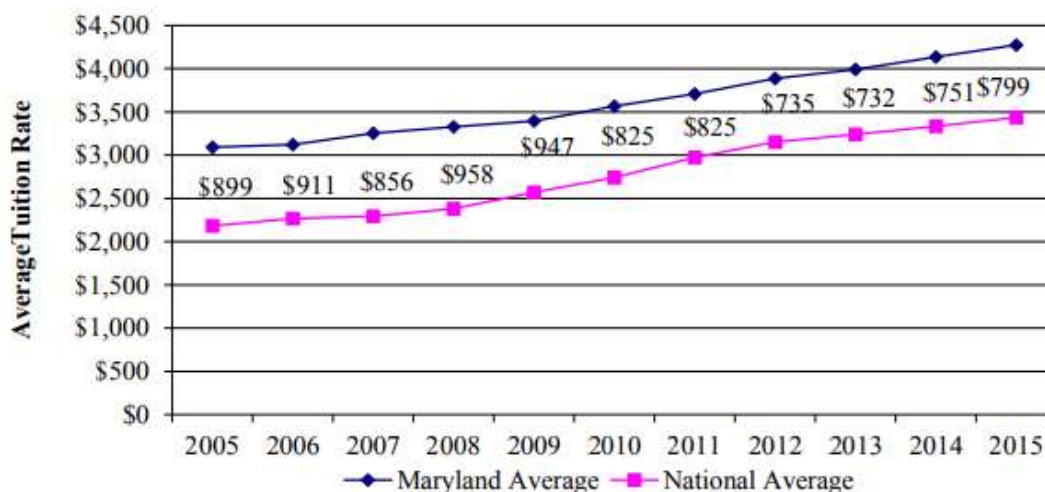
The English for Speakers of Other Languages (ESOL) program provides funding for instructional costs and services for ESOL students. Funding is capped at \$800 per eligible FTES and \$8 million in total State aid for the program.

The Statewide and Health Manpower Grant programs permit some students to attend out-of-county community colleges and pay in-county tuition rates. The grants reimburse colleges for out-of-county tuition waivers. If funding in a single year is not enough to cover the entire program, MHEC prorates funding based on the number of participating students.

State aid for the 15 local community colleges is provided through the Senator John A. Cade Funding Formula under Section 16-305 of the Education Article. The current formula has been used in determining funding since 1998. The amount of aid is based on a percentage of the current year's State aid per student to selected four-year public higher education institutions and the total number of full-time equivalent students (FTES) at the community colleges. The total is then distributed to each college based on the previous year's direct grant, enrollment, and a small-size factor. Chapter 333 of 2006 phased in a 5 percentage point increase in the formula over five years, ending in fiscal 2013. State fiscal difficulties have delayed the formula enhancement, and full funding is currently expected in fiscal 2023.

Students enrolling at community colleges often have different goals than those at traditional four-year institutions. Community college students tend to have higher developmental education needs and obtaining an associate's degree may not be the top priority. With these differences, it is difficult to directly compare the outcomes between the two segments. For community college students, successful persister rates are used to measure student performance. A successful persister is a student who attempts at least 18 credits in his or her first two years, and who, after four years, is still enrolled, has graduated, or has transferred.

Community College Tuition and Fee Rates
Maryland and National Average
Fall 2005-2015



Community colleges offer a significantly lower entry cost into higher education compared to four-year institutions for students living within the community college's service area. According to the College Board, the enrollment-weighted average of Maryland public four-year institution's tuition and fee rate was \$9,163 in fall 2015, compared to \$4,274 at the State's community colleges. This means, on average, community colleges are 53% less expensive based upon tuition and fees. However, the State's community college tuition and fee rates are higher than the national average. Exhibit 9 shows the difference between the State and national average from fiscal 2006 to 2016 in unadjusted dollars. Although the gap has narrowed from a high of \$958 in fiscal 2009, Maryland remains \$799 higher than the national average according to the College Board data.

Another goal for the State is to narrow the achievement gap in the four-year graduation/transfer rate of minority students compared to all students. Minority student enrollment grew from 45% of total community college enrollment in fall 2004 to 53% in fall 2012 according to the most recently available MACC data.

A county government is required to maintain or increase the total dollar support for the local community college or risk losing an increase in State support, a concept known as maintenance of effort. In fiscal 2013, each college received an increase in State support

MACC made estimates based on an ACP-style program in Maryland which it named Maryland Invests. MACC took fiscal 2015 numbers to estimate an annual cost of about \$55 million in the first year, which would be offset by \$25 million in existing federal aid and State financial aid programs. In R6210005 – Aid to Community Colleges Analysis of the FY 2017 Maryland Executive Budget, 2016 26 year two, when the program is fully up and running and existing aid sources are backed out, the annual cost would be \$60 million to \$70 million in new public support. If this was entirely new State support in fiscal 2015, State funding would be close to surpassing local support for community colleges and would likely surpass it given the longer graduation times generally associated with community college students.

The biggest overall source of aid for noncredit students comes from the federal Workforce Innovation and Opportunity Act, which provides some funding for nearly 500 occupation trainings in Maryland across 75 institutions.

According to the Lumina Foundation in 2015, about 80% of the jobs lost in the recession were those requiring a high school education or less and newly created jobs increasingly require some level of specialized training. The Georgetown University Center for Education and the Workforce agrees, stating that many more jobs now require “middle skills,” that is more than a high school education but less than a postsecondary degree. Such skills are obtained by taking workforce training courses, which are made up of training sequences. These are part of the broader spectrum of noncredit classes offered by community colleges.

Exhibit 15
Types of Noncredit Enrollment
At Maryland Community Colleges
Fiscal 2014

<u>Type</u>	<u>Unduplicated Annual Headcount</u>	<u>Course Enrollments</u>	<u>Example</u>	<u>Financial Aid</u>		
				<u>Federal</u>	<u>State</u>	<u>Support</u>
Professional licensure or certification	112,951	204,555	real estate, welding	Yes ¹	No	Yes
Basic skills development	38,672	72,224	reading, computer skills	Yes ²	No	Yes ²
Recreation or lifelong learning	71,513	170,392	cooking, gardening	No	No	No
Total	223,136	447,171				

¹ In Maryland, only the Community College of Baltimore County meets regulations to allow federal aid for these sequences.

² Only for students taking English for Speakers of Other Languages classes.

Exhibit 15 shows some of the limited information MHEC does collect on continuing education programs, divided by type of enrollment. Workforce training actually accounts for 51% of noncredit enrollment, as the remainder is made up of basic skills development (not to be confused with remedial education) and recreational classes (generally taken only for personal enjoyment). In terms of course enrollments, the numbers shift slightly more toward the recreational courses, but are still broadly similar, as workforce training is still 46% of enrollments.

An estimated 78% of HCC students remain in Maryland and contribute to economic growth. Students who enter the workforce expand the tax base by generating higher earnings and reducing social costs.

Given the low completion rates of community college students, policymakers and educators are regularly looking at ways to grow the number of degrees awarded to students. Only 18% of Maryland students entering a community college earn an associate's degree after four years. Many students transfer to four-year institutions before completing their degree, and although they may not continue on to complete a bachelor's degree, their work at the four-year institution may satisfy the community college's associate's degree requirements. To recognize the work done by these students, colleges are beginning to implement reverse transfer programs. After completing the necessary requirements for an associate's degree, the four-year institution sends a copy of the student's transcript back to the community college, usually at no charge to the student. The community college then evaluates the student's work and awards an associate's degree if all requirements are met.

The declines in the developmental completion rates are discouraging given the important work of community colleges serving as open access institutions where students of all preparedness levels enroll expecting to make progress toward a degree. The majority of students who enter community colleges test into developmental education, but few of them complete the required coursework.

Credit enrollment eligible for the Cade formula peaked in fiscal 2012 and since then almost all institutions have struggled with enrollment declines. One opportunity to increase enrollment in a previously untapped population is the statewide effort to boost dual enrollment opportunities for high school students.

AACT FAST FACTS 2017



TOTAL 1,108

NUMBER & TYPE OF COLLEGES (2017)¹

Public 982 Tribal 36 Independent 90

HEADCOUNT ENROLLMENT (FALL 2015)

Estimated change, Fall 2015—Fall 2016: -2.69%

CREDIT NON CREDIT

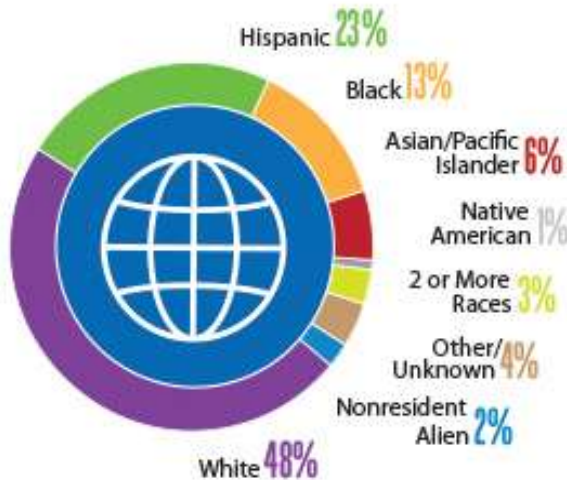
59% 7.2M TOTAL 12.2M

41% 5.0M

DEGREES AND CERTIFICATES AWARDED (2014-2015)⁷

ASSOCIATE DEGREES 806,766 CERTIFICATES 516,820

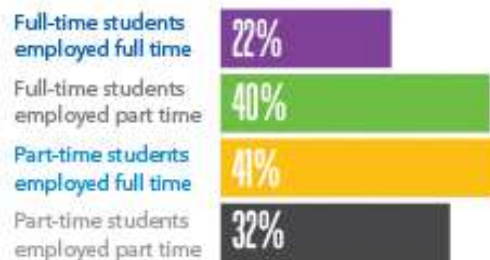
DEMOGRAPHICS OF STUDENTS ENROLLED FOR CREDIT²



CREDIT BY ATTENDANCE²



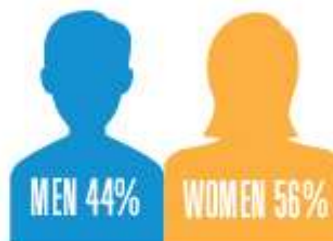
EMPLOYMENT STATUS (2011-2012)⁴



OTHER SIGNIFICANT DEMOGRAPHICS⁴

First generation to attend college36%
 Single parent17%
 Non-U.S. citizens7%
 Veterans4%
 Student with disabilities ... 12%
 Students with prior bachelor's degree.....7%

GENDER²



AGE⁴

AVERAGE:28 MEDIAN:24
 51% 39% 10%
 <21 22-39 40+

REPRESENTATION OF COMMUNITY COLLEGE STUDENTS AMONG UNDERGRADUATES (FALL 2015)²



MEDIAN EARNING OF FULL-TIME EMPLOYEES BY EDUCATIONAL ATTAINMENT¹⁰



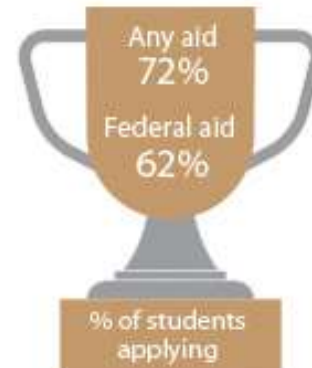
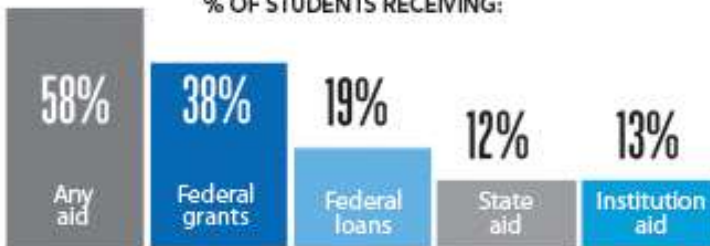
% OF FEDERAL AID RECEIVED BY COMMUNITY COLLEGE (2014-2015)³



COMMUNITY COLLEGE REVENUES BY SOURCE (2014-15)³

Tuition	\$17,242,808,691	29.1%
Federal	\$7,989,717,218	13.5%
State	\$18,559,987,011	31.3%
Local	\$10,762,068,143	18.2%
Other	\$4,721,411,387	8.0%

STUDENT FINANCIAL AID (2011-2012)⁴
% OF STUDENTS RECEIVING:



AVERAGE ANNUAL TUITION AND FEES (2016-2017)⁵



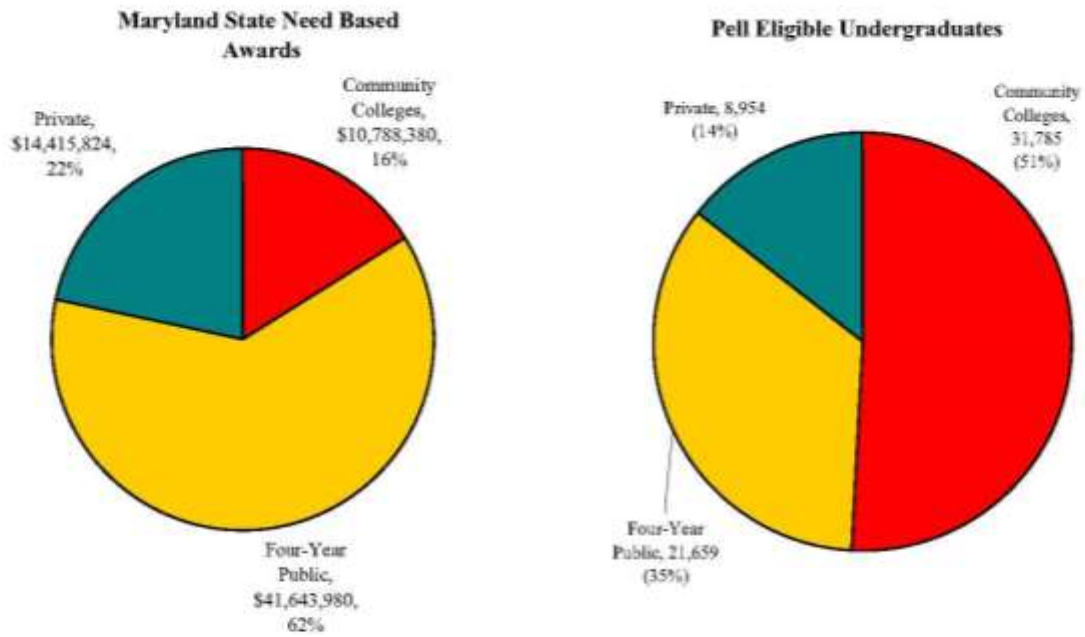
PUBLIC COMMUNITY COLLEGES WITH ON-CAMPUS HOUSING⁹

SOURCE:

- ¹ AACC membership database, January 2017.
- ² NCES. (2017). IPEDS Fall 2015 Enrollment Survey [AACC analysis].
- ³ National Student Clearinghouse. (2016). Term Enrollment Estimates Fall 2016.
- ⁴ NCES. (2017). 2011-12 National Postsecondary Student Aid Study (NPSAS: 12) [AACC analysis].
- ⁵ College Board. (2016). Trends in Student Aid: 2016.
- ⁶ College Board. (2016). Trends in College Pricing: 2016.
- ⁷ NCES. (2016). IPEDS 2014-2015 Completion Survey [AACC analysis].
- ⁸ NCES. (2016). IPEDS 2014-15 Finance Survey [AACC analysis].
- ⁹ NCES. (2016). IPEDS 2015 Institutional Characteristics Survey [AACC analysis].
- ¹⁰ Bureau of Labor Statistics. (2017). Current Population Survey, Career Outlook: More Education: Lower Unemployment, Higher Earnings.



Maryland Community College students receive a small portion of State grants but represent the largest number of needy undergraduates.



Maryland Community Colleges average less than half of the capital funding (including local support) versus four-year public institutions.

The Maryland DREAM Act was enacted in 2011 (Chapter 191). The law authorizes certain individuals, including undocumented immigrants, to pay in-state tuition rates at Maryland public higher education institutions. Prior to passage of the law, in-state tuition rates and policies at most community colleges and public four-year institutions of higher education did not include individuals who were unable to establish permanent residency. As a result, these students were considered nonresidents for tuition purposes regardless of how long they had lived in Maryland.


1. Stronkowski, Lory with others, "The Impact of Immigrants in Maryland," Report, Commission to Study the Impact of Immigrants in Maryland, February 9, 2012. 2. "Basic Facts About In-State Tuition for Undocumented Immigrants," National Immigration Law Center.

IN MARYLAND

Foreign-born workers accounted for **more than half** of work force expansion in Maryland between 2000 and 2010:

57%

12 states have passed legislation extending in-state tuition to undocumented students, including Maryland.



Undocumented Marylanders contributed **\$275 million** in state and local taxes in 2010, enough to fund four year's tuition at the University of Maryland for close to

TEN THOUSAND STUDENTS

WHY WE NEED THE MARYLAND DREAM ACT


THE FACTS ABOUT IMMIGRATION

Nearly two-thirds of undocumented adults have lived in America for at least 10 years...

...and nearly half are parents of children.


In Maryland, there may be as many as **275,000** undocumented immigrants.

In Maryland, more than **3 in 4** immigrant children are proficient in English.




THROUGHOUT THE NATION

72% of Americans support a path to citizenship for undocumented immigrants (as long as they pay fines, hold jobs, and pass background checks).³




Extending in-state tuition to undocumented immigrants has been shown to **increase non-citizen college enrollment by 31%**



and **decrease the high school drop-out rate among non-citizen Latinos by 14%.**⁴

IMMIGRANTS' RIGHTS ARE HUMAN RIGHTS
To find out more, visit amnestyusa.org/immigrantsrights

AMNESTY INTERNATIONAL 

3. "Support for a Path to Citizenship," May 2011. 4. "New Americans in Maryland," Immigration Policy Center, American Immigration Council, January 11, 2012.

SOURCES

- ◆ America's Career Info Net – Career One Stop (<http://acinet.org>)
- ◆ American Association of Community Colleges (<http://www.aacc.nche.edu>)
- ◆ AOL Money & Finance (www.money.aol.com)
- ◆ Baby Boomer Death Counter (www.boomerdeathcounter.com)
- ◆ Bureau of Labor Statistics – US Department of Labor (<http://www.bls.gov/>)
- ◆ Business Insider
- ◆ CareerBuilder
- ◆ CCbenefits: The Economic Contribution of Hagerstown Community College
- ◆ Centers for Disease Control and Prevention (<http://www.cdc.gov/>)
- ◆ CNN Money (money.cnn.com)
- ◆ Comcast (www.comcast.net)
- ◆ Community College Journal
- ◆ Community College Review
- ◆ Community College Week
- ◆ eCampus News
- ◆ Education Week
- ◆ Edtechmagazine.com
- ◆ “Education, Economic Development, and 21st century jobs: The Case for Planned Growth of Biosciences in Washington County, August 2008” (Discussion paper prepared by Dr. Diane Weaver)
- ◆ FAIR: Federation for American Immigration Reform (www.fairus.org)
- ◆ FoxNews.com
- ◆ Gas Buddy (www.gasbuddy.com)
- ◆ Hagerstown Community College's Official Enrollment Reports
- ◆ Hagerstown Economic Development Commission (www.hagerstowncdc.org)
- ◆ Huffington Post
- ◆ InflationData.com (<http://inflationdata.com/>)
- ◆ Internet World Stats
- ◆ Inside Higher Ed
- ◆ Kauffman Foundation (www.kauffman.org)

- ◆ League for Innovations Conference, 2005
- ◆ Maryland Association of Community Colleges
- ◆ Maryland Higher Education Commission (MHEC)
- ◆ Maryland State Department of Education (www.msp.msde.state.md.us)
- ◆ Metropolitan Regional Information Systems, Inc.
- ◆ Microsoft Corporation
- ◆ MSNBC (www.msnbc.msn.com)
- ◆ National Center for Educational Statistics [NCES] (<http://www.nces.ed.gov> and <http://nces.ed.gov/ipdes/cool>)
- ◆ 2005 National Education Summit on High Schools (sponsored by the National Governors Association and Achieve.org)
- ◆ National Science Foundation
- ◆ NPR.org
- ◆ Parade magazine (www.parade.com)
- ◆ Pew Research Group (www.pewresearch.org)
- ◆ The Philanthropy (www.philanthropy.com)
- ◆ Quad-State Business Journal
- ◆ Reuters (www.features.us.reuters.com)
- ◆ Senior Journal (<http://www.seniorjournal.com>)
- ◆ Technology Review
- ◆ “Technology, Talent and Capital: State Bioscience Initiatives 2008.” The Battelle Memorial Institute, 2008
- ◆ The Boston Globe (www.boston.com)
- ◆ The Chronical for Higher Education
- ◆ The Financial Engineer
- ◆ The Gallup Poll (<http://galluppoll.com>)
- ◆ The Herald-Mail Newspaper (<http://www.herald-mail.com>)
- ◆ The Literacy of America’s College Students, Justin D. Baer, Andrea L. Cook and Stéphane Baldi, American Institutes for Research (funded by the Pew Charitable Trusts), January 2006
- ◆ The National Center for Public Policy and Higher Education (www.highereducation.org)
- ◆ The New York Times (www.nytimes.com)
- ◆ Time magazine
- ◆ Washington Post (www.washingtonpost.com)

- ◆ U.S. Census Bureau (<http://www.census.gov/> and <http://factfinder.census.gov>)
- ◆ USA Today (<http://www.usatoday.com>)
- ◆ US News & World Report (<http://www.usnews.com>)
- ◆ Yahoo Education (www.education.yahoo.net)