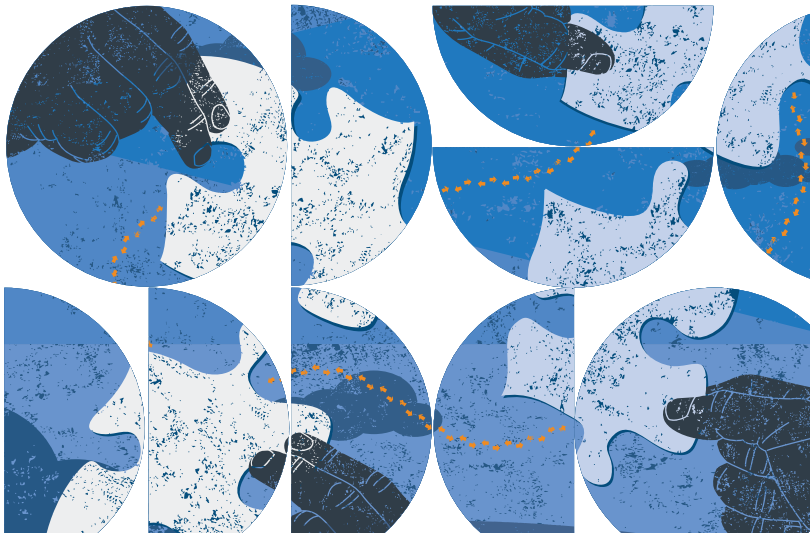
EAB

The State of **College and Careers**

Helping Students and Families Make Sense of a Complex and Evolving Landscape

District Leadership Forum



A Rapidly Changing Postsecondary Landscape

Students Need More Support Than Ever Navigating Complex Options

The postsecondary landscape has never been more complex than it is today, and it continues to change at a rapid pace. The number of occupations in the US more than tripled from 1950 to 2010, and postsecondary programs of study in US colleges and universities have grown more than fivefold since 1980.

This complexity makes it incredibly difficult for students to fully understand their postsecondary options and the long-term consequences of the college and career decisions they are making at a relatively young age.

As summarized by Georgetown University's Center on Education and the Workforce, it used to be sufficient to advise students to study hard, get good grades, get a degree, and then get a job. However, students today need better guidance systems to help them make smart decisions about their futures.

Proliferation of Career and College Options

Occupations

Number of occupations grew from

270 to 840

(1950 to 2010)

Programs of Study

Number of postsecondary programs of study grew from

410 to 2,260

(1985 to 2010)

Institutions

Number of colleges and universities grew from

1,850 to 4,720

(1950 to 2014)

College Students

Number of college students grew from

2.4M to 20.2M

(1985 to 2010)

> “Go to college. Study hard. Get good grades. Get a degree. Get a job. This is great advice that has served many generations well. But these simple principles are no longer enough in today’s more complex world. The relationship between education after high school and jobs has become trickier and harder to navigate. **Learners and workers need a clear guidance system that will help them make good college and career decisions and enable them to lead fulfilling, purposeful lives while supporting their families.**”

“Career Pathways: Five Ways to Connect College and Careers,” 2017
GEORGETOWN UNIVERSITY, CENTER ON EDUCATION AND THE WORKFORCE

Society Looks to K-12 to Prepare for What's Next

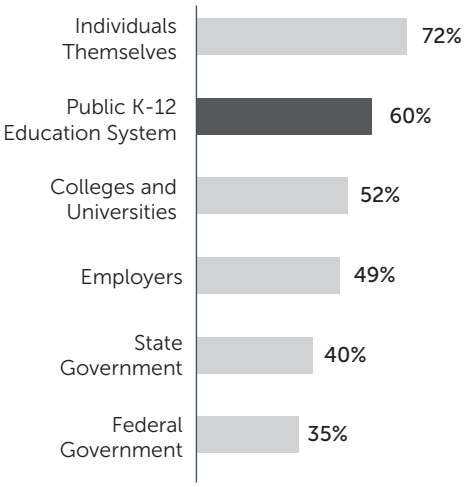
But Many Feel That Public Schools Are Falling Short

The Pew Research Center found that 60% of survey respondents said the public K-12 education system has "a lot" of responsibility for preparing today's workforce—ranking second only to individuals themselves, and higher even than colleges and employers.

Unfortunately, many constituents feel public schools are currently doing an inadequate job with workforce preparation. The majority of students, parents, and employers give schools mediocre or failing grades on adequately preparing students for careers and work.

Who Should Make Sure Workers Have the Right Skills for Today's Economy?

Percentage of Americans Saying _____ Should Have "a Lot" of Responsibility for Preparing Today's Workforce



Students, Parents, Employers Dissatisfied with Workforce Preparation

74% Of **18- to 24-year-olds** felt their schools failed to fully prepare them for the professional world

63% Of **parents** give students a "C" or lower on their level of preparedness for their first jobs

62% Of **employers** believe schools aren't preparing students for work

How Do Students Actually Fare?

Suboptimal Outcomes for Students Across the Attainment Spectrum

National educational attainment and employment data illustrates how students fare after leaving secondary education, and there are clear causes for concern across all educational attainment levels.

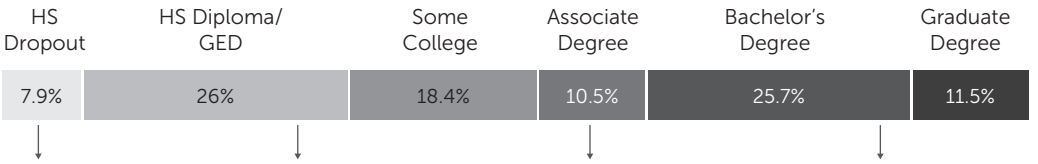
It is encouraging that high school graduation rates are at an all-time high given that high school dropouts face a high unemployment rate and earnings that are significantly below the country's median income. Those who earn only a high school diploma or a GED fare better but still face a much higher than average unemployment rate and earnings that are a fraction of what college degree holders earn.

The good news for those who go on to both two- and four-year colleges is that they generally experience low unemployment rates. However, graduation rates for these students remain alarmingly low at about 30% and 60%, respectively. Some estimates also place underemployment rates for bachelor's degree holders as high as 34%.

Public school leaders should be mindful of the fact that these outcomes, good and bad, are not distributed equitably across demographic groups, with a substantial gap in college enrollment based on income and significant gaps in college completion based on race.

Postsecondary Pathways and Outcomes

Distribution of 25- to 34-Year-Olds by Educational Attainment, 2017



HS Dropout

Unemployment[1]: 5.5%

44% of HS dropouts earn half the country's median income or less

HS Diploma

Unemployment[1]: 4.3%

Earn 56% less than college graduates, on average

Associate Degree

Unemployment[1]: 3.6%

Graduation rate[2]: 30.9%

Bachelor's Degree

Underemployment: 34%

Graduation rate[2]: 59.4%

20%

Gap in **college enrollment** between low-income and high-income students

27%

Gap in **four-year college completion** between black and white students

10%

Gap in **four-year college completion** between Hispanic and white students

1 March 2018 data.

2 Data is for 2009 starting cohort; three-year graduation rate at two-year institutions, six-year graduation rate at four-year institutions.

What Guidance Should We Give?

Students' Suboptimal Postsecondary Outcomes Prompt Several Major Questions

1. Is a Bachelor's Degree Still a Worthwhile Investment?

2. What Does the Job Market Look Like Based on Educational Attainment?

3. How Do We Prepare Students for Jobs of the Future?

1

Is a Bachelor's Degree Still a Worthwhile Investment?

Doubts About Higher Education at an All-Time High

It seems nearly impossible to read the news today without seeing headlines and articles questioning the value of a college degree. These doubts are not limited to the popular press; school leaders, parents, and the general public often express doubts about young people going off to college as well.

It is critically important to look at the data behind these concerns in order to sufficiently guide students through the decisions they need to make about their postsecondary path before graduating from high school.

> "Is College a Lousy Investment?"
>
> NEWSWEEK

> "For too many students, the amount of debt they take on **exceeds the benefit of a college degree**."
>
> PUBLIC SCHOOL SUPERINTENDENT

> "I see students coming back from college working at a coffee shop and living at home and **I wonder if we did right by them**."
>
> PUBLIC SCHOOL SUPERINTENDENT

Some Good Reason for Concern

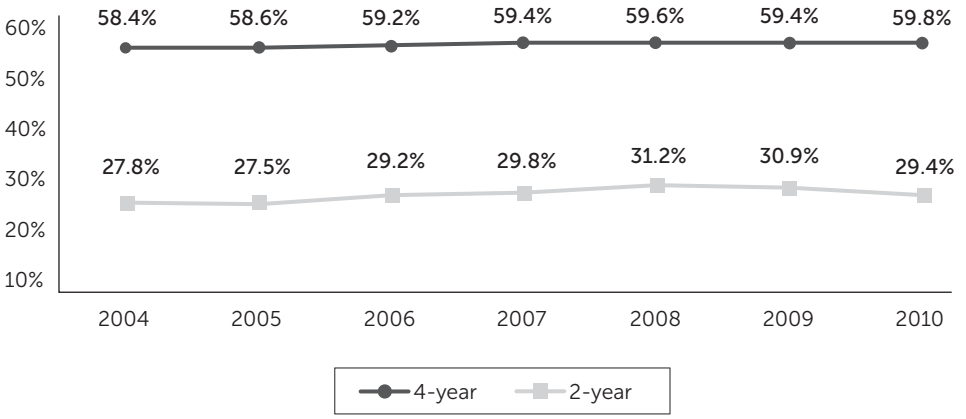
Despite years of investment to improve student success at two- and four-year colleges, graduation rates have remained stubbornly flat. As the public becomes increasingly aware of these disconcerting outcomes, it is important to note that there has also been a significant increase in access to higher education across this same period. Arguably, without investments in student success, graduation rates would likely be declining rather just flatlining.

Still, in addition to stagnant completion rates, college tuition has also been skyrocketing. Since 1980, tuition at public four-year institutions has grown 19 times faster than median family income.

Rising higher education costs have significantly outpaced inflation, largely driven by the defunding of higher education. Colleges and universities have been forced to supplement holes in their budgets by raising tuition and fees, leaving students and families to bear an ever-increasing share of college financing. As a result, total outstanding student debt has reached a record $1.3 trillion.

College Graduation Stagnant as Costs Rise

Percentage of Students Graduating with a Degree Within 150 Percent of Normal Time,[1] Two-Year and Four-Year Postsecondary Institutions



The Rising Financial Burden of a College Education

19x **Tuition and fees** at public four-year institutions growing 19 times faster than the median family income since 1980

$1.3T Americans owe more than $1.3 trillion in **student loan debt**

1 Three-year graduation rate at two-year institutions, six-year graduation rate at four-year institutions.

Most Leave College with Little or No Debt

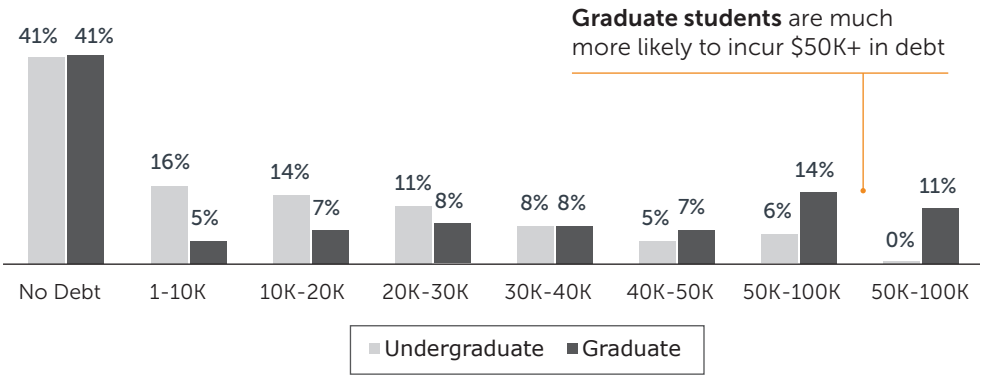
Graduate Students Most Likely to Accrue High Debt

While $1.3 trillion in total student debt is an indisputably large number, there are some misconceptions about college debt that are exacerbated by the media. In an analysis conducted in 2012 of news stories about student debt, the average amount of debt of a student covered in the news was $89,100 while the actual average debt of all students was $29,400.[1]

While the cost of college is certainly one of the most important factors for students to consider when choosing a postsecondary path, exaggerated news reporting has troubling consequences as at-risk families often grossly overestimate the cost of a college education.

Ultimately, graduate school debt is a huge contributor to the overall debt load. The less frequently reported reality is that more than 40% of students graduate having accumulated no debt at all. The median debt levels outlined below for two-year, four-year, and graduate students provide a much more accurate sense of what a typical student is likely to owe and are less subject to being skewed by outliers.

Cumulative Debt at Graduation for Undergraduate and Graduate Students, 2012



Median Federal Student Loan Debt by Institution Type, 2013–2014

Public Two-Year	Four-Year	Graduate-Only
$11,650	$24,537	$45,890

1 Includes graduates of public, private nonprofit, and for-profit postsecondary institutions.

Average Debt on the Rise for Four-Year Degrees

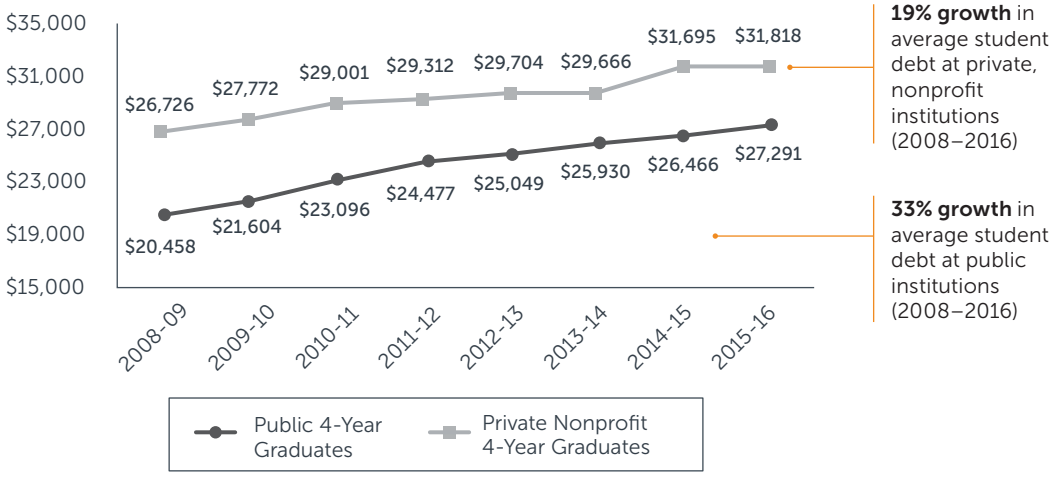
But Students Are Still Able to Reasonably Service Debt After Graduation

Still, more than ever before, it is true that students and families are bearing a higher cost to attend college. Average debt for graduates of four-year institutions has steadily climbed in the last decade. Alarmingly, the average debt load of graduates has grown faster at public four-year institutions than at private institutions, reflecting decreases in public funding for higher education.

But analysts who have examined debt-to-income ratios agree that 8 to 10% of gross income is a manageable percentage that a borrower can be expected to devote to education loan repayment. This cutoff for a "manageable" debt burden is also used in the rules for federal income-driven loan repayment plans—with a ratio higher than 12% of total income considered "burdensome."

While 2016 graduates did take on more debt than previous graduates to finance their education, starting salaries for college graduates are also on the rise and generally leave students able to reasonably manage loan repayment.

Average Debt of College Graduates, Public and Private Nonprofit Four-Year Institutions



$50,359

Average starting salary for a Class of 2016 bachelor's degree graduate

$350

Average monthly student loan payment for a Class of 2016 graduate

8.4%

Average education debt burden among Class of 2016 graduates

Student Loan Defaults Remain a Concern

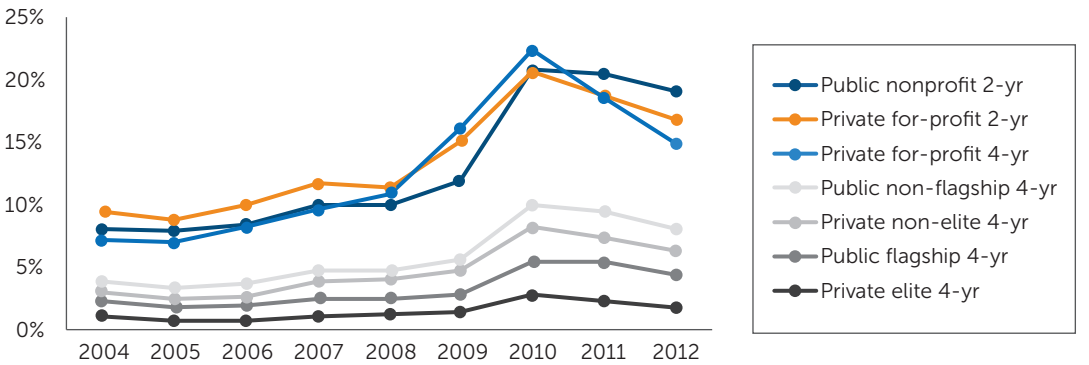
Default Rates Vary Dramatically by Institution Type

There has also been significant concern about student loan defaults, which spiked following the 2008 recession. Disaggregating student loan default data by institution type presents a clearer picture of who is most at risk.

Historically, the highest default rates have been for students who attended for-profit postsecondary institutions, which account for 35% of all federal student loan defaults. The alarming trend more recently, however, is that public community college students now experience the highest default rates on student loans.

The majority of student loan defaults are among college non-completers and are relatively small loan amounts, well below $5,000. It is critical that school administrators and staff direct students to postsecondary institutions that are likely to support their success in completing a degree that holds value in the labor market.

Student Loan Default Rate by Institution Type



59%

Of college **non-completers** drop out with debt[1]

$8,225

Average loan amount for borrowers who dropped out

63%

Of **defaulted student loans** are from non-completers

35%

Of all federal student loan defaults are from **for-profit college** students

1 From federal student loan programs (i.e., Stafford, Perkins loans).

"Underemployment" Not Synonymous with "Low Pay"

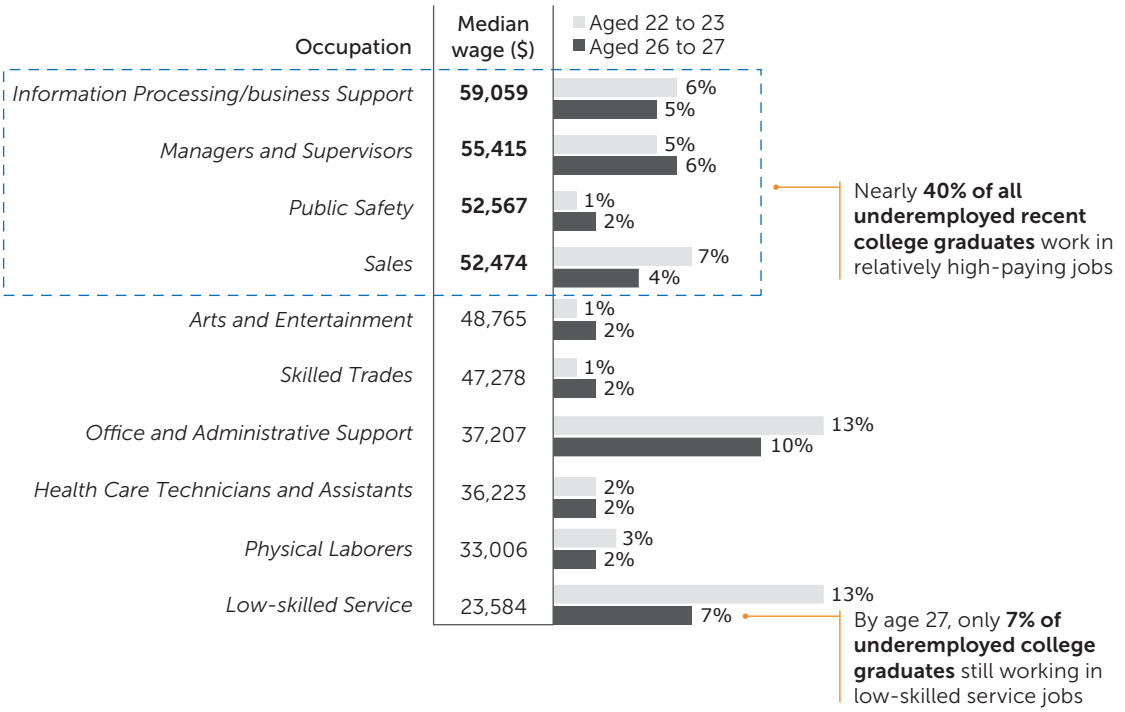
Low-Skill Service Jobs Less Common Than Expected, and Mostly Temporary

Anecdotal reports of college-educated baristas have contributed to skepticism about the value of a postsecondary degree. While there is a significant percentage of bachelor's degree holders who are working in positions that do not require a college degree, headline underemployment figures can, once again, be deceiving.

In an analysis conducted by the New York Fed that looked at the wages and jobs of underemployed young graduates, 40% were working in relatively high-paying jobs in fields such as sales or management that earn salaries above the median.

The portion of young (i.e., aged 22 to 23), underemployed graduates working in low-skill service jobs is certainly not insignificant. But this was found to be a largely temporary situation, with very few of these individuals remaining in those roles a few years later (i.e., by ages 26 to 27).

Distribution of All Underemployed Recent College Graduates[1] by Occupation Category



1 "Younger" recent college graduates are aged 22 to 23; "Older" recent college graduates are aged 26 to 27 with a bachelor's degree or higher.

> Stories of under- and unemployed college graduates **may sell well, but they're mostly myths**. File them under the heading of fake news."

Dispelling The Myth of Underemployed College Graduates, 2017
FORBES

Value of a College Degree Has Never Been Higher

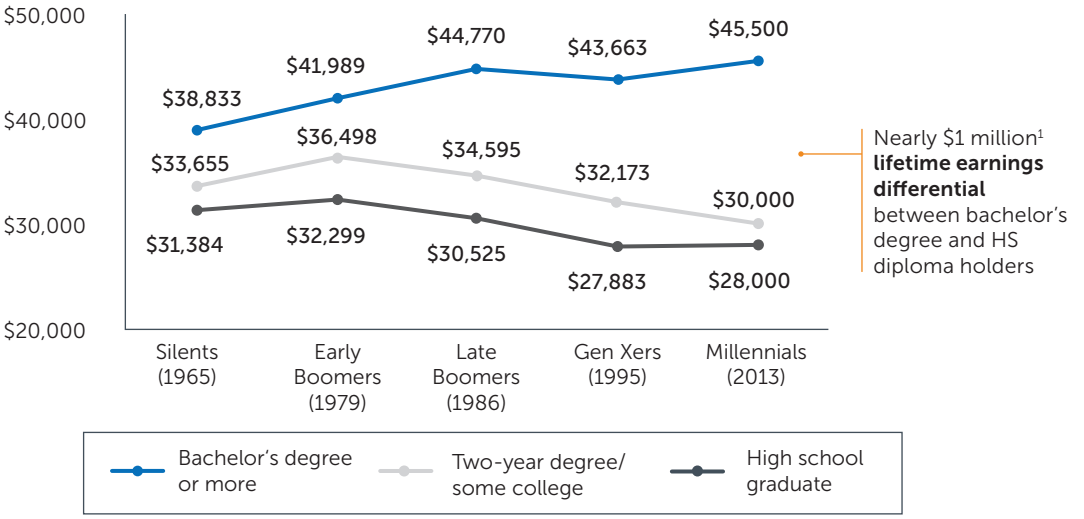
Bachelor's Degree Holders See ROI in Lifetime Earnings and Beyond

The reality is that a college degree has never been more valuable. The wage premium provided by a bachelor's degree over an associate degree or a high school diploma has never been higher, as evidenced by the gap in earnings that has grown from a rather modest difference for those in the Silent Generation to a sizable gulf for Millennials.

In fact, the lifetime earnings differential between bachelor's degree and high school diploma holders is nearly $1 million. Over a lifetime, this is more than enough to justify the expense of tuition and the debt that students might incur to finance their education.

The benefits of a college education have also been found to extend beyond earnings into several additional measures of quality of life. This value is often harder to quantify but is equally important to—if not more important than—the financial gains.

Median Annual Earnings Among Full-Time Workers Aged 25 to 32



1 Median lifetime earnings differential is $964,000.

Benefits Beyond Earnings

+47%
Likelihood of having health insurance through employment

+72%
Likelihood of having a retirement plan through employment

+44%
Likelihood of reporting health to be very good or excellent

+21%
Likelihood of being married

Is a Bachelor's Degree Still a Worthwhile Investment?

1. **Unequivocally yes.** The lifetime earnings differential makes a college degree a good educational investment.

2. **Median debt remains manageable for most borrowers** despite negative media coverage. Rising tuition and debt levels are largely the result of state funding cuts for higher education.

3. **The biggest concern over student loan defaults lies with for-profit and community college students** as default rates have risen post-recession.

4. **The college-educated barista is largely a myth.** Most underemployed degree-holders work in high-paying jobs and tend to work in the service sector only temporarily.

What Does This Mean for Districts?

It's critically important that students and families hear the message that a college degree is still a good investment, even if it costs more. It is imperative for K-12 districts to support students in making smart college and career choices and to prepare students to earn a postsecondary credential.

2

What Does the Job Market Look Like Based on Educational Attainment?

Job Prospects Dwindling for High School Diploma Holders

Jobs That Require an Associate Degree or Some College Have Grown Significantly

One of the reasons the wage differential is so great between bachelor's degree and high school diploma holders is that job prospects are dwindling for those with only a high school degree. The economy shed over 5.5 million jobs for high school diploma holders during the 2008 economic recession and recovery, while the number of jobs requiring a bachelor's degree increased substantially.

Need for a Postsecondary Degree Underscored in Post-recession Economy

	Employment Change During the Recession (2008–2010)	Employment Change Post-recession (2010–2016)
Jobs requiring a **high school diploma**	-1.8M	-5.5M
Jobs requiring at **least a bachelor's degree**	+187K	+8.6M

Looking Ahead

65% **By 2020**, 65 percent of all jobs will require education and training beyond high school

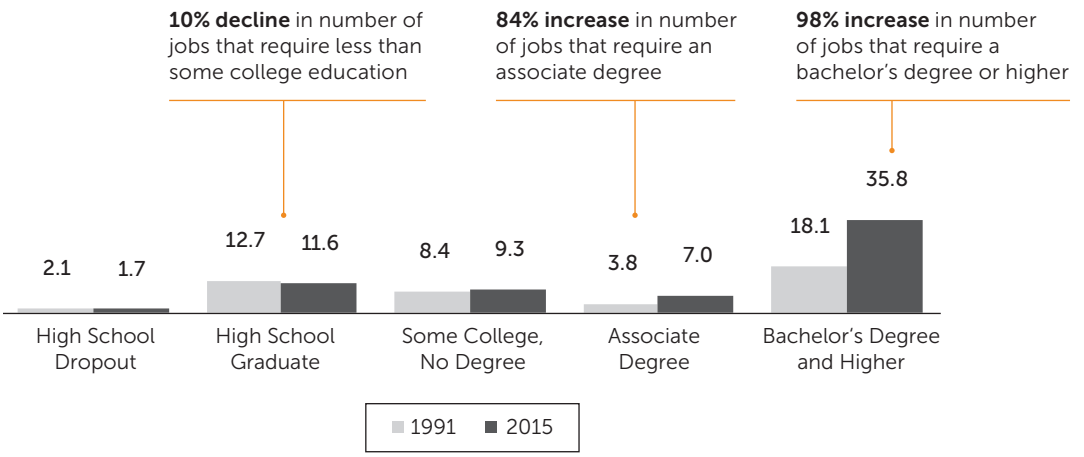
In fact, data from Georgetown University's Center on Education and the Workforce analyzed trends in the number of "good jobs" by educational attainment, defined as a job that pays at least $35,000 or one that pays $45,000 for those over the age of 45. It is evident by the data below that the number of good jobs that require less than some college education has also declined since 1991.

The largest growth in the number of good jobs has been for those that require a bachelor's degree or higher. However, there has also been significant growth in good jobs that require some college training or an associate degree.

Number of Good Jobs by Level of Education

Good Jobs Pay at Least $35K and Pay at Least $45K for Those Aged 45 or Older

In Millions



It's Possible for AAs to Outearn BAs...

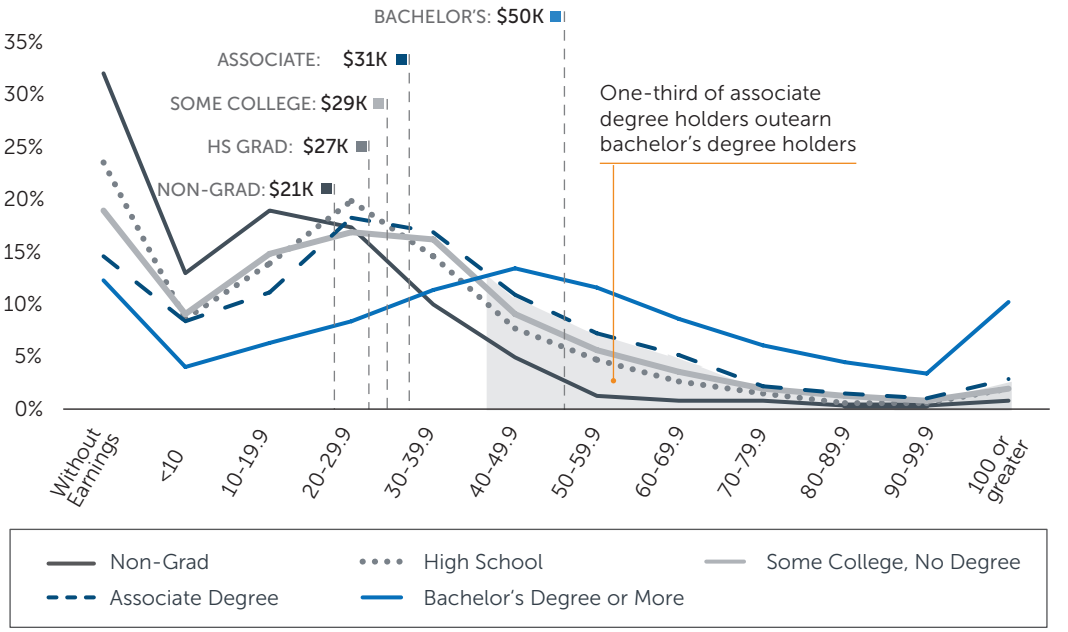
...In Fact, It Happens One-Third of the Time

When further considering earnings by educational attainment, median salary data shows a clear separation among earners by education. In general, the adage "you earn what you learn" holds true—the more educated a person is, the more money he or she can command in the job market.

However, median salary data conceals just how much overlap there is between educational attainment groups. Looking at income distribution data from the U.S. Census Bureau disaggregated by educational attainment, about one-third of associate degree holders outearn bachelor's degree earners.

Educators need to help students understand the full range of their postsecondary options and consider all of the pathways that can ultimately lead to a family-sustaining income. Ultimately, much of the variation in students' earnings will be influenced by their chosen program of study in either a two- or four-year college.

Income Distribution and Median Earnings of 25- to 34-Year-Olds
By Educational Attainment



Choice of Major Also Influences Earnings Potential

Low-Paying Bachelor's Degrees Primarily in Social Service Fields

This data from the Brookings Institute ranks college majors by median lifetime earnings. Unsurprisingly, the majors with the highest earnings are all engineering fields, followed by computer science and business majors.

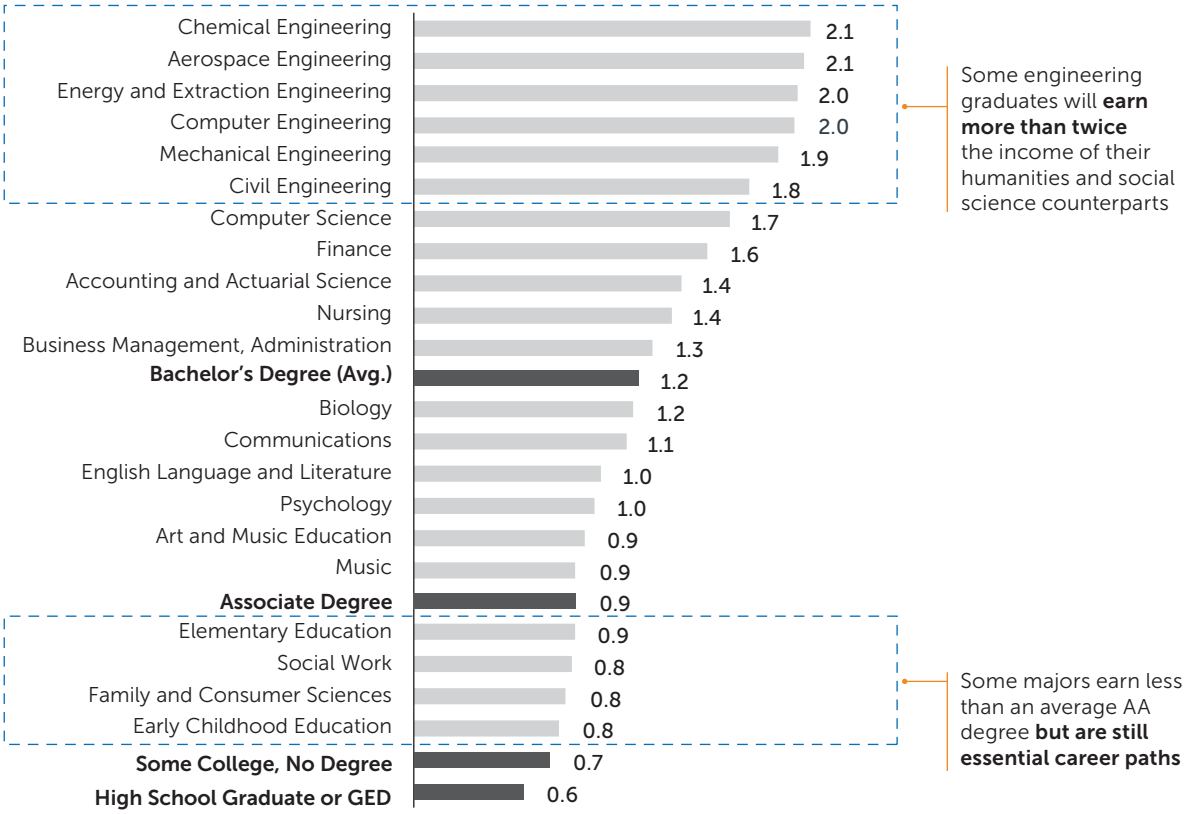
Perhaps more important, however, are those majors listed at the bottom of the list—those that are outearned by the average associate degree holder. Also somewhat predictable, if not entirely disheartening, is the fact that those majors include elementary education, social work, family and consumer services, and early childhood education.

Given that these roles are essential, we must consider the implications of discouraging students from pursuing them due to the lower earnings potential. People are likely called to these fields out of passion rather than money, but students must go into these career paths with eyes wide open about the implications of making a living in a relatively underpaid profession.

Students Need to Be Aware of the Wide Range of Earning Outcomes

Median Lifetime Earnings by Major and Educational Attainment

$ Millions



Tech and Health AAs Particularly Lucrative

Top Ten Fields Where AAs Outearn BAs

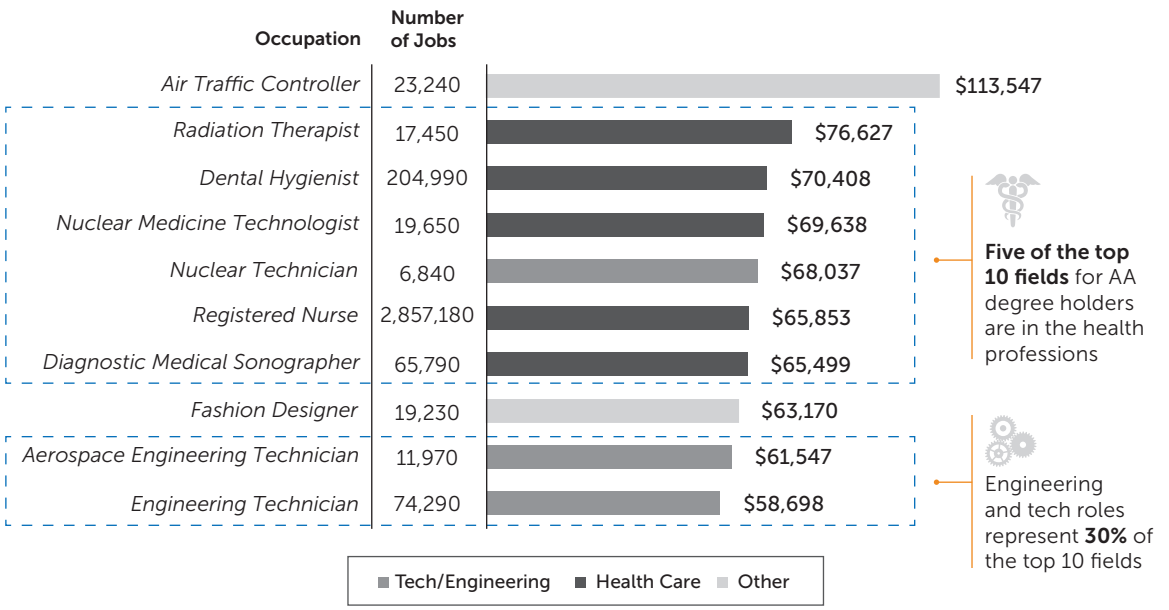
Now to review those jobs requiring an associate degree that do outearn some jobs that require a bachelor's degree. Many of these jobs vary considerably from one community to the next, which makes it critically important for school leaders to stay abreast of state and local labor market trends.

There are, however, some general trends in the two-year degrees that are likely to be a wise investment for students. EMSI, a labor market data firm, analyzed the top-paying jobs where an associate degree was the primary qualification.

Five of the top 10 fields for associate degree holders are in health care. Further, engineering and technology jobs represent 30% of the top 10 fields. These fields are the areas in which school leaders should target career education programs at the secondary level and in partnership with local community colleges.

Health and Engineering/Tech Occupations Tend to Outearn BAs

Median Earning by Occupations That Require an Associate Degree



What Does the Job Market Look Like Based on Educational Attainment?

1 **Jobs that require only a high school diploma are on the decline**, while those requiring an AA or BA have seen significant growth—a trend that is expected to continue.

2 **A third of associate degree holders outearn bachelor's degree holders**, but those BA holders generally work in callings such as education and social work.

3 **Health care and STEM fields** largely contain the fast-growing, high-earning associate degree jobs.

What Does This Mean for Districts?

Students need to understand the implications of not just educational attainment but also major selection and career fields. Orient career programs toward well-paying, growing jobs in health care and engineering. Educate students about the earnings potential of different careers to ensure an informed decision.

3

How Do We Prepare Students for Jobs of the Future?

Career and Earnings Shifts Are Part of a Larger Trend

Importance of a College Education Will Rise with Shift to Services Economy

Supporting workforce development and determining how to best guide students' postsecondary choices requires school leaders to understand the types of jobs that will be likely available long after students graduate high school. Data from the Bureau of Labor Statistics on the growth and decline of broad sectors of the economy can begin to inform the world of work that students will likely face.

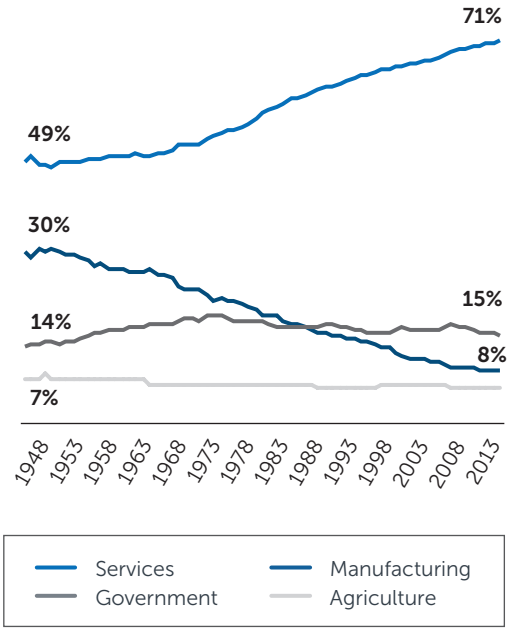
There was, of course, a large shift from agriculture to manufacturing jobs during the industrial revolution. Economists now debate whether the United States is entering a "post-industrial" economy and are bringing into question what will become of our manufacturing sector.

Health care and other service industries are projected to grow in the coming years, while the manufacturing and agriculture industries are expected to continue to contract. Construction and mining are the only goods-producing industries projected to grow through 2024.

It seems that our economy overall will continue to shift toward services, but technology will still continue to shape, and potentially disrupt, the economy in ways that are difficult to anticipate.

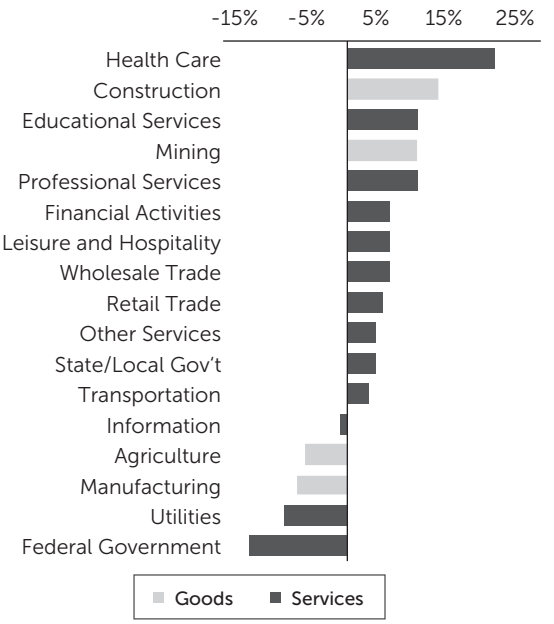
US Economy Dominated by Services...

Percentage of US Employment by Sector
1948 to 2016



...And the Trend Will Only Continue

Projected Employment Growth by Industry
2014 to 2024



Automation Looms in the Future...

Not All Service Jobs Are Safe Despite the Macro Shift Toward Services

The role that automation will play in the development of the economy in the near future is also a hot topic of debate—from talk of driverless cars to robot-operated Amazon warehouses to packages delivered by drones.

The data below is from a 2013 study examining the likelihood of jobs being replaced by automation. The economists leading the study determined the probability that various jobs will be replaced by a computer or automation in the near future, and low-skill service jobs emerged as most at risk of automation.

Professions at Risk of Losing Jobs to Automation in 20-Years' Time

Sample of Various Service Jobs by Likelihood of Job Loss Due to Automation

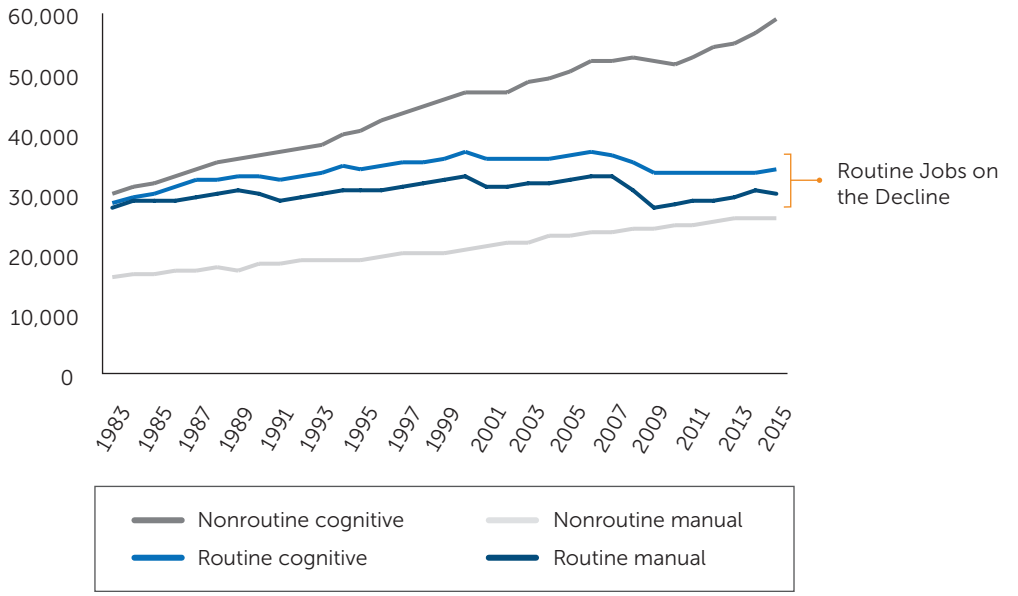
Routine Jobs That Do Not Require Critical Thinking Most at Risk

Low-skill service jobs are not the only ones at risk of automation. The Bureau of Labor Statistics classifies jobs as routine or nonroutine and cognitive or manual. The jobs that are most at risk of automation are those that are routine, both cognitive and manual, that do not rely on critical thinking skills.

Even jobs that have traditionally required a degree, and in some cases advanced degrees, are susceptible to automation. For example, computer algorithms designed to identify tumors are actually 50% better than radiologists at doing so, and Zillow and other appraisal algorithms have dramatically reduced the need for real estate appraisers to go in person to inspect properties.

Routine Jobs at Greatest Risk of Automation

US Employment, by Type of Work, in Thousands



Even Highly Educated Occupations at Risk

Radiologists

Computer systems are 50% better at classifying malignant tumors than are doctors

Real Estate Appraisers

20% decline in number of appraisers over past ten years due to Zillow's algorithms

Lifelong Learning More Essential Than Ever

A Dynamic Economy Will Require Workers to (Repeatedly) Reinvent Careers

Although the pace of change has accelerated, the reality remains that our economy is, and always has been, a dynamic one. The coming decades will present fascinating challenges for today's students, as our economy is expected to create 24 million new jobs between now and 2020, resulting in part from automation and impending Baby Boomer retirements.

It is estimated that 65% of the jobs that Generation Z will occupy do not even exist yet, and job and career changing is much more common among Millennials and Generation Z than it once was. This means that the most important skills a student can acquire are how to learn, how to adapt, and how to solve problems. Lifelong learning is an economic imperative.

Strong Job Growth Outlook...

US Economy Expected to Create 55M Jobs by 2020

- 24M new positions created
- Automation creating more jobs by reducing costs and boosting demand
- 31M openings due to expected Boomer retirements

...And a Trend Toward Frequent Job Changes Yield Need for Continuous (Re)Learning

Continuous Career Reinvention Is Now the Default

- **65% of the jobs** Gen Z will perform do not even exist yet
- Millennials and Gen Z should expect to make an average of **12–15 job changes** over a lifetime
- **1 in 3 workers** in their twenties changes occupations annually, compared with 1 in 10 in previous generations

Lifelong Learning as an Economic Imperative

"A college degree at the start of a working career does not answer **the need for the continuous acquisition of new skills**, especially as career spans are lengthening."

The Economist
January 2017

How Do We Prepare Students for Jobs of the Future?

1 **The US economy is continuing a long-term trend away from manufacturing** to an economy dominated by services and technology.

2 **Low-skill service jobs are increasingly at risk of automation**, along with some jobs previously held by college-educated workers.

3 **Frequent job and career changes are likely for all workers**, making the ability to learn new skills across a lifetime absolutely essential.

What Does This Mean for Districts?

Problem solving and higher-order thinking are the most enduring job skills students can acquire as jobs of the future will increasingly require nonroutine, cognitive skills. Help students identify a good postsecondary path and give them the opportunity to try on different jobs, but do not expect that a narrow set of job skills will last a lifetime.

Learn More

About the District Leadership Forum

The District Leadership Forum's purpose is to partner with our members to solve the most urgent and consequential problems faced by public school districts by discovering and disseminating the best ideas from exemplar educational organizations.

Our inaugural research provided actionable insight on closing the college access gap alongside an examination of the best ways to integrate career and academic development for all students. This research has established the Forum as a thought partner and evidence-based resource for district leadership teams across the country.

› Closing the College Access Gap: Supporting Underrepresented Students on the Path to Postsecondary Education

There is considerable evidence that even academically qualified low-income and minority students face persistent gaps in two- and four-year college enrollment, and disproportionately enroll in institutions that are unlikely to support them to graduation. Given the importance of a postsecondary degree in the labor market supporting equitable college access is a moral imperative.

This study offers practical solutions to help districts overcome the unique barriers that low-income and minority students face on the path to college. The practices featured focus on:

- Increasing underrepresented students' college-going identity
- Building students' confidence through advanced coursework
- Supporting optimal college selection
- Enabling successful college application and matriculation

› Meeting the Career Readiness Imperative: Best Practices for Career Awareness and Exposure

Most students do not receive the career development support they need to be successful in the labor market, and a large share of students makes uninformed decisions about their next steps after high school graduation. Few high school graduates make industry-specific postsecondary decisions that align with their strengths and interests, and correcting these mistakes at a later date is costly in terms of time and money.

This study outlines ways districts can integrate academic and career development for all students into a continuous, coordinated strategy focused on:

- Broadening and cultivating early career awareness
- Increasing access to career experiences
- Providing personalized and frequent decision support
- Expanding opportunities for students to hone and communicate their professional skills

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EAB interviews and analysis.

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