

Useful Data

The following data are offered for research purposes and for any reader to get a relatively quick look at the arguments made for an applied educational program. Those not inclined to spend the time to read our essays, are encouraged to look through this data as a summary of our educational establishments' problems.

I think the fitting place to start is to place the researcher of this data in the appropriate frame of mind given the profundity of our challenges. *A Nation at Risk*, The National Commission on Excellence in Education, 1983, provides a lasting impression on any who care about the future of education and our country.

“Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world. This report is concerned with only one of the many causes and dimensions of the problem, but it is the one that undergirds American prosperity, security, and civility. We report to the American people that ... the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future....”

“If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exist today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves. ... Moreover, we have dismantled essential support systems which helped make those gains possible. We have, in effect, been committing an act of unthinking, unilateral educational disarmament.

“Our society and its educational institutions seem to have lost sight of the basic purposes of schooling....”

“On the occasion of the Commission's first meeting, President Reagan noted the central importance of education in American life when he said: ‘Certainly there are few areas of American life as important to our society, to our people, and to our families as our schools and colleges.’”

Another government report that helps set the stage for researchers' consideration is *What Work Requires of Schools, A SCANS Report for America, 2000*, The Secretary's Commission on Achieving Necessary Skills (SCANS), U.S. Dept. of Labor, June 1991.

“SCANS research verifies that what we call *workplace know-how* defines effective job performance today. This know-how has two elements: *competencies* and a *foundation*. This report identifies five competencies and a three-part foundation of skills and personal qualities that lie at the heart of job-performance. These eight requirements are essential preparation for all students, both those going directly to work and those planning further education. Thus, the competencies and the foundation should be taught and understood in an integrated fashion that reflects the workplace *contexts* in which they are applied.

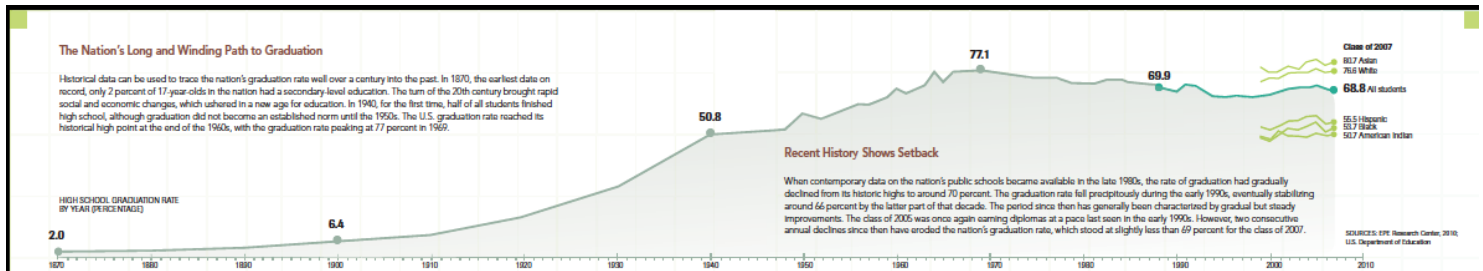
“We believe, after examining the findings of cognitive science, that the most effective way of learning skills is ‘in context,’ **placing learning objectives within a real environment rather than insisting that students first learn in the abstract what they will be expected to apply.**” (p. viii) (Emphasis added)

The following list provides a quick reference to general issues the data cover. Click anyone of them to be taken to the associated data.

1. Educational attainment
2. Educational requirements of our economy
3. Preparation for school and work
4. Return on investment
5. Shortcomings of public education system
6. Income disparities
7. Alternative paths
8. Gender differences
9. Financial challenges
10. Summarizing Data

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1. Educational attainment (including history)

High school graduation rates: 1870-2007 (Swanson, Christopher, Education Week, *U.S. Graduation Rate Continues Decline*, June 2, 2010.)



A misleading bit of information regarding reported high school graduation rates in the literature is the lack of distinction between those who **actually** graduate high school versus those who receive their high school equivalency credential through the GED. The former is an actual diploma, while the latter is a credential. High school is an actual physical experience, historically in a brick and mortar environment over an extended period of time. The GED is a short cut to literacy and numeracy outcomes. I do not disparage a GED credential, however, it is not a high school diploma and therefore data needs to reflect this since lifetime economic performance between the two is different.

Educational Attainment in the United States: 2015

“This report provides a portrait of educational attainment in the U.S. based on data collected from the Current Population Survey (CPS). The report examines educational attainment of the adult population by demographic and social characteristics such as age, sex, race and Hispanic origin, and disability status, as well as differences in educational attainment between the native and the foreign born.”

Population 25 and older High School Graduate or More Some College or More Associate's or More Bachelor's or More

212,132,000

88.4%

58.9%

42.3%

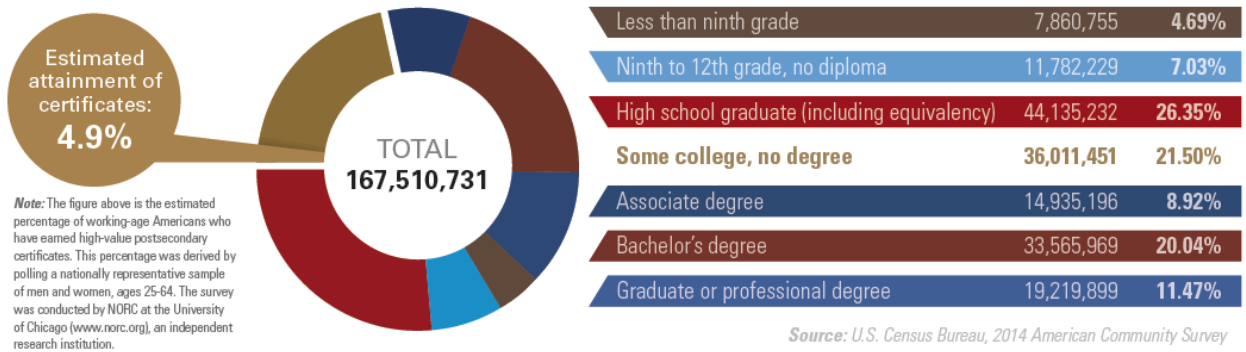
32.5%

Source: U.S. Census Bureau, 2015 Current Population Survey page 2.

<http://www.census.gov/content/dam/Census/library/publications/2016/demo/p20-578.pdf>

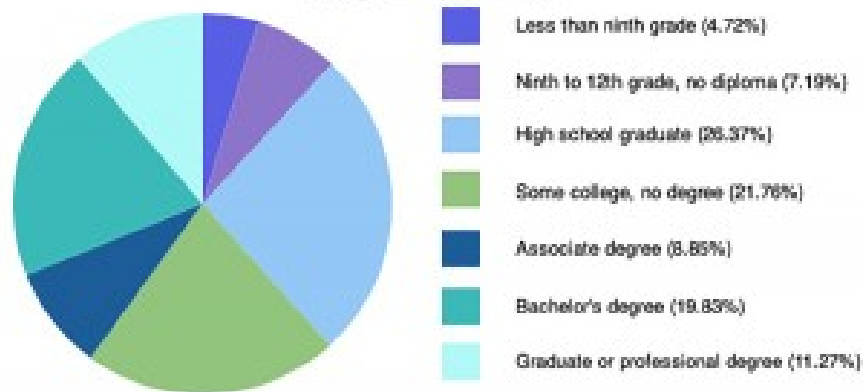
A Stronger Nation, Lumina Report, 2016, page 2.

Levels of education for United States residents, ages 25-64



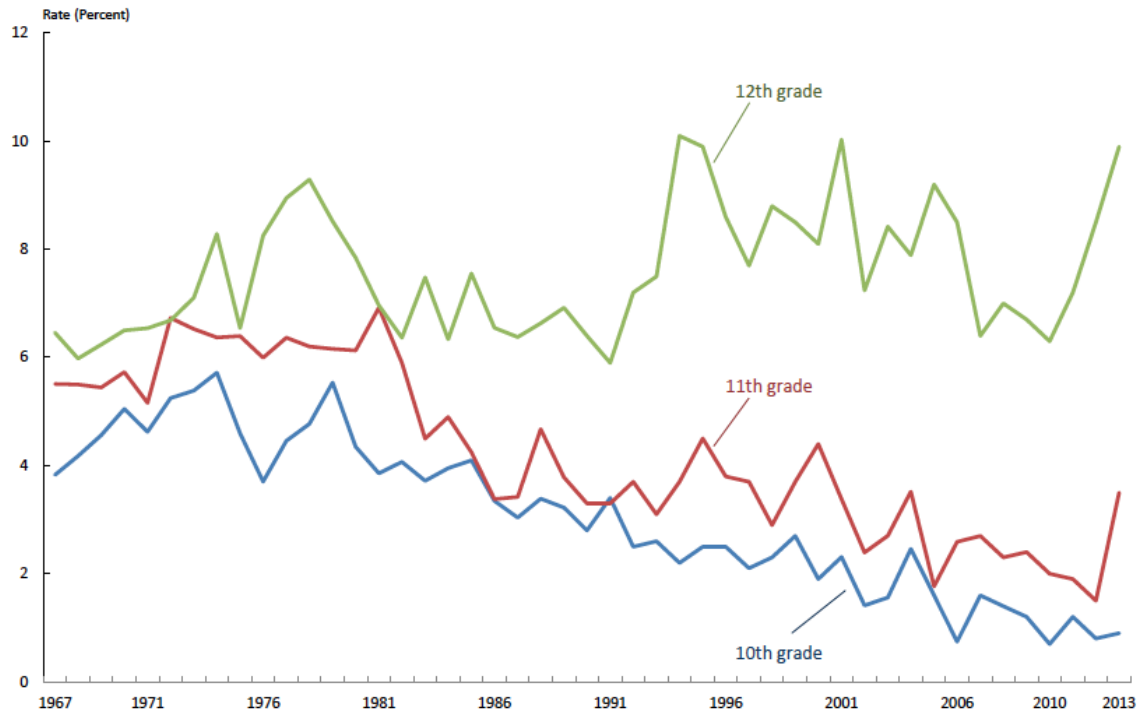
In the same report, Lumina shows college completion rate at 52.9% for 2015 for those who enter college, page 6.

Levels of Education in the United States (ages 25-64)



Source: Lumina Foundation

Figure A-4. Event Dropout Rate of 10th to 12th Grade Students, by Grade, 1967-2013



Source: U.S. Census Bureau, Current Population Survey.



Is the decline in the “dropout rate” for 10th and 11th grades real or tied to the significant expansion of those using the GED as an alternative to high school?

The American High School Graduation Rate: Trends and Levels, by Heckman and LaFontaine, Article provided by MIT Press in its journal The Review of Economics and Statistics. Vol. 92, Issue 2, May 2010, pp. 244-262.

The authors estimated the levels and trends in U.S. high school graduation rates: “We establish that (a) the true rate is substantially lower than widely used measures; (b) it peaked in the early 1970s; (c) majority/minority differentials are substantial and have not converged for 35 years.... Depending on the data sources, definitions and methods used, the U.S. graduation rate is claimed to be anywhere from 66 to 88 percent in recent years—a wide range for such a basic educational statistic. ... Many estimates of the effects of policies on high school graduation that are reported in the literature are based

on poorly constructed graduation estimators that produce inflated levels and inaccurate time-trends.”

The authors point out that there is a discrepancy between a secondary credentialed “*completer*” and a “*graduate*.” “Following the NCES convention, we use the term ‘high school *completer*’ to indicate a person who either graduated high school or obtained an alternative credential (e.g., GED). High school *graduates* are those who receive a traditional high school diploma from an accredited high school program. ... [W]e are interested in estimating the high school graduation rate – the rate at which individuals in cohorts graduate high school through a normal process of matriculation, seat time and formal graduation. ... Historically, GED recipients have also been counted as high school graduates in many official federal, state, and local education statistics.” The authors point out that such practices significantly skew economic data:

“Although GED recipients have the same measured academic ability as high school graduates who do not attend college, on average, they have the economic and social outcomes of otherwise similar dropouts who do not exam certify. Despite having similar measures of cognitive ability, GED recipients perform significantly worse in most dimensions of economic and social life when compared to high school graduates. GED recipients lack non-cognitive skills such as perseverance and motivation that are essential to success in school and in life. ... The GED opens education and training opportunities but GED recipients do not reap the potential benefits of these options because they are unable to finish the skill enhancement programs that they start. GED recipients attrite from the military at the same rate as other dropouts and they exit post-secondary schooling with nearly the same degree attainment rates as other dropouts who start with no credential.”

The authors then provide some data on GED statistics:

“Over 700,000 high school dropouts attempt to certify as ‘high school equivalents’ each year through the GED program and over 65 percent of test takers are under the age of twenty-four. In 1960, only 2 percent of all new high school credentials were awarded through equivalency exams in the United States. Of all new high school credentials issued in the U.S. each year, currently 15 percent are obtained through GED certification.

“... Another troubling aspect of the GED program is its disproportionate use by minorities. The GED program conceals serious problems in minority educational attainment rates. Historical trends in the status completion rate suggest that minorities are closing the secondary schooling gap with majorities. However, black male high school completers are almost twice as likely as white males to possess a GED certificate. ...

“The overall graduation rate is increased by 7.4 percentage points when GED recipients are counted as high school graduates. ...

“By this measure, the overall U.S. graduation rate steadily increased throughout the early 1960s and peaked in the early 1970s. It then steadily declined from this point until the early 1980s. Graduation remained stagnant throughout the 1980s until declining sharply

during the early 1990s only to rebound again after 2000. However, even with this recent surge, the U.S. high school graduation rate today is still below the peak attained during the early 1970s. ...

“Calculations by gender reveal very different patterns for males and females. The decline in high school graduation is concentrated almost exclusively among young males. Female rates have remained nearly constant throughout the past 40 years. The forces affecting the increasing high school dropout rate operate more strongly on men than on women. ...

“A substantial fraction of the measured growth in the college-high school [economic] premium and the decline in the real wages of dropouts relative to college graduates in recent decades can be explained by the growth in GED certification over this period. Both before and after certification, GED recipients on average earn more than uncertified high school dropouts and less than high school graduates. Growth in GED certification leads to a decline in both the estimated return to graduating high school as well as the measured wages of those who drop out.”

The authors provide, “estimates of the contribution of the GED to distortions in measured skill prices between educational categories for younger workers over the period of the 1980s to early 1990s” show “a dramatic change in GED reciprocity from the oldest ... cohort to the youngest. The percentage of GEDs among reported high school graduates increases from 9% to 20%. The percentage of dropouts who receive a GED increases from 38% to 60%. ...

“There is a sizeable change in conventionally measured college-high school gaps in earnings, weekly wages and hourly wages over the same period for 25–29 year olds. ‘College’ here means having a four year degree or higher. ‘High school’ means the standard measure used in the literature: those who either graduated with a diploma or are exam-certified GED recipients. A bias arises from measuring college-high school gaps when high school completers and GED recipients are lumped into one category in log wage regressions. The estimated bias ... is the difference in the estimated college-high school gap between a procedure that aggregates GED recipients into the high school category and a procedure that disaggregates them. The downward bias in estimated wage returns that results from assuming that the two types of high school completion status produce the same wages more than doubles over the sample period. This is true for all compensation measures. The percentage of the nominal college-high school compensation gap explained by the GED ... increases from 6.1% to 9.5% for annual earnings, from 3.3% to 6% for weekly wages and from 2.6% to 5.9% for hourly wages.

“... For the college-high school wage gap for 25–29 year olds, 18% of the growth in the gap in annual income, 13% of the growth in the gap in weekly wages and 14% of the growth in the gap in hourly wages is due to misclassification bias. The gap is greater for annual earnings than for other compensation dimensions. This reflects the lower labor supply of GEDs compared to high school graduates.

“... Improperly accounting for GED recipients also leads to different conclusions regarding relative wage trends by education. Using March CPS data, [Autor, Katz and Kearney](#) estimate that real high school graduate weekly wages declined by 9.9 percent

between 1979 and 1995. [W]e find a similar 10.5 percent decline in weekly wages over a similar time frame (from a .215 to .193 log point gap relative to dropouts). However, almost all of the measured decline is due to growth in GED certification. Separating GEDs from regular high school graduates reveals that high school wages were stable over this period (.225 to .221). ...

“There is also a lot of evidence suggesting a powerful role for the family in shaping educational and adult outcomes. A growing proportion of American children are being raised in single parent families and for an increasing fraction of their childhoods. Children reared in these adverse environments are more likely to drop out of high school. The analysis of Krein and Beller shows that boys in single parent homes complete less schooling than girls, which may help to explain divergent trends in dropout rates by gender. ...

“The most important source of bias in estimating high school graduation rates comes from the inclusion of GED recipients as high school graduates. In recent years, this practice has biased graduation rates upwards of 7-8 percentage points. ...

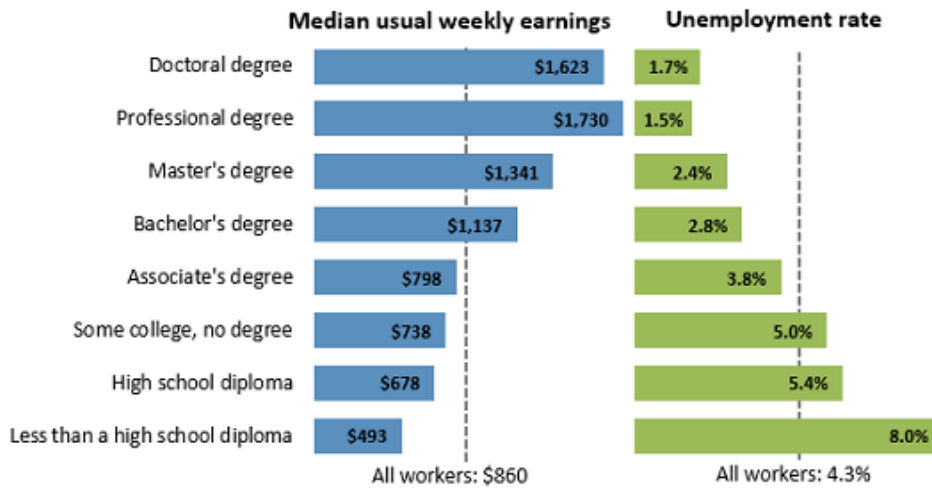
“We link part of the measured slowdown in the growth of college attendance and completion, growing gender difference in college attainment and rising wage premiums to lower high school graduation rates over the past 40 years. In the first half of the 20th century, growth in high school graduation was the driving force behind increased college enrollments. The post-1970 declines in graduation flattened college attendance and completion rates as well as the skill attainment of the U.S. workforce. To increase the skill level of the future workforce, America needs to confront its high school dropout problem.” This requires offering the marginalized majority alternatives such as significantly increased access to more highly developed CTE programs, and an applied studies program for those who do not fit the traditional college prep high school experience.

To conclude, by including GED credentials to high school graduation rates, the earnings of high school graduates appears lower than it actually is. Here is an example of broad statistics painting the wrong picture for parents, the education community, and policy makers to base decisions upon.

2. Educational requirements of our economy

Bureau of Labor Statistics Employment Projections:

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

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

Last Modified Date: March 15, 2016

http://www.bls.gov/emp/ep_chart_001.htm

Please note that general data as broad as this hide a great many details that contradicts these averages. For example: There are entrepreneurs with only a high school diploma that make far more money than those with professional or doctoral degrees. Also, many tradesmen with a certificate make more than many with a bachelor's degree. Also, those with bachelor's degrees that have little to no demand, or where there is a surplus of those holding certain bachelor's credentials, experience the same levels of income and unemployment as high school graduates. Perhaps most importantly, this data is based on cultural perceptions of educational levels of attainment in contrast with levels of real knowledge. If the educational paradigm were to shift dramatically to a more knowledge based applied approach with multiple alternative choices available to individuals, the data provided above would be turned on its head.

College May Not Pay Off for Everyone, by Abel and Deitz, Liberty Street Economics, Federal Reserve Bank of New York, Sept. 4, 2014.

The authors begin this report by pointing out that “the benefits of a bachelor’s degree still far outweigh the costs. However, this does not mean that college is a good investment for

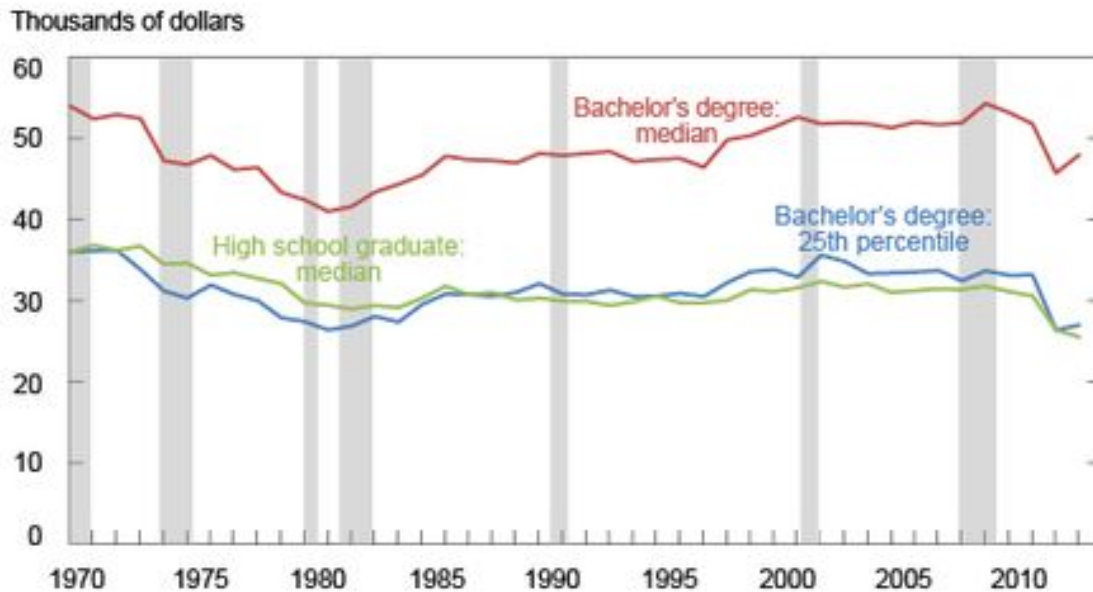
everyone.” This conclusion is held by most because “the *average* wages of college graduates are significantly higher than the average wages of those with only a high school diploma. ... In this post, we show that a good number of college graduates earn wages that are not materially different from those of the typical worker with just a high school diploma. This suggests that, at least from an economic perspective, college may not pay off for a significant number of people.

“The chart below plots the median annual wage for full-time employed workers with a bachelor’s degree between 1970 and 2013, together with the median annual wage for those with only a high school diploma. We also plot the annual wage for the 25th percentile of college graduates. All figures are expressed in constant 2013 dollars.”

The authors then point out that the wages for the 25th percentile of college graduates is almost no different than the median wage for high school graduates. “This means that the wages for a sizable share of college graduates below the 25th percentile are actually less than the wages earned by a typical worker with a high school diploma.”

“Overall, these figures suggest that perhaps a quarter of those who earn a bachelor’s degree pay the costs to attend school but reap little, if any, economic benefit. In fact, once the costs of attending college are considered, it is likely that earning a bachelor’s degree would not have been a good investment for many in the lowest 25 percent of college graduate wage earners. So while a college degree appears to be a good investment on average, it may not pay off for everyone.”

Annual Wage by Education, 1970-2013



Source: U.S. Census Bureau and U.S. Bureau of Labor Statistics, Current Population Survey, March Supplement; U.S. Bureau of Labor Statistics, consumer price index.

Notes: Dollar figures are expressed in constant 2013 dollars. Shaded areas indicate periods designated recessions by the National Bureau of Economic Research.

Career/Technical Education (CTE) Statistics

Table H128. Average number of credits and percentage of total [credits](#) that public high school graduates earned during high school, by curricular area: 2009

Curricular area	Average number of credits earned
All curricular areas, total	26.91
Academic, total	19.96
Core academics, total	15.76
English	4.44
Mathematics	3.78
Science	3.46
Social studies	4.08
Fine arts	2.12
Foreign languages	2.09

Enrichment/other	3.38
Career/technical education (CTE), total	3.57
Non-occupational CTE, total	1.10
Family and consumer sciences education	0.34
General labor market preparation, total	0.76
Basic keyboarding/typewriting	0.09
Career preparation	0.56
Industrial arts	0.04
Introduction to technology	0.04
Other general labor market preparation	0.02
Occupational education, total	2.47
Agriculture and natural resources	0.20
Business	0.40
Business finance	0.10
Business management	0.19
Business support	0.12
Communications and design	0.36
Computer and information sciences	0.23
Construction and architecture	0.11
Architecture	0.03
Construction	0.08
Consumer and culinary services	0.26
Consumer services	0.16
Culinary arts	0.10
Engineering technologies	0.14
Health sciences	0.20
Manufacturing	0.17
Marketing	0.11
Public services	0.11
Education and library science	0.04
Education	0.03
Library science	0.01
Protective and legal services/public administration	0.07
Protective services	0.06
Public administration and legal services	#
Repair and transportation	0.17
Mechanics and repair	0.15
Transportation	‡

Rounds to zero.

‡ Reporting standards not met.

NOTE: Detail may not sum to totals because of rounding.

SOURCE: U .S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, School Transcript Study (HSTS), 2009.

These data reveal the bias in our education system. With 74.4% of credits earned in academic classes and only 13.1% in CTE, it becomes obvious we offer little preparation to those not college bound or those not destined to complete college. This is an injustice of the first order.

Americans Agree: U.S. Must Develop Its Workplace Talent, by Busted and Stutzman, Gallup, Sept. 8, 2015

“While Americans may be politically polarized, they have found consensus in one area: the need for the U.S. to invest in the talent of its workforce. Such was the key finding of a recent Gallup-Lumina Foundation Poll.

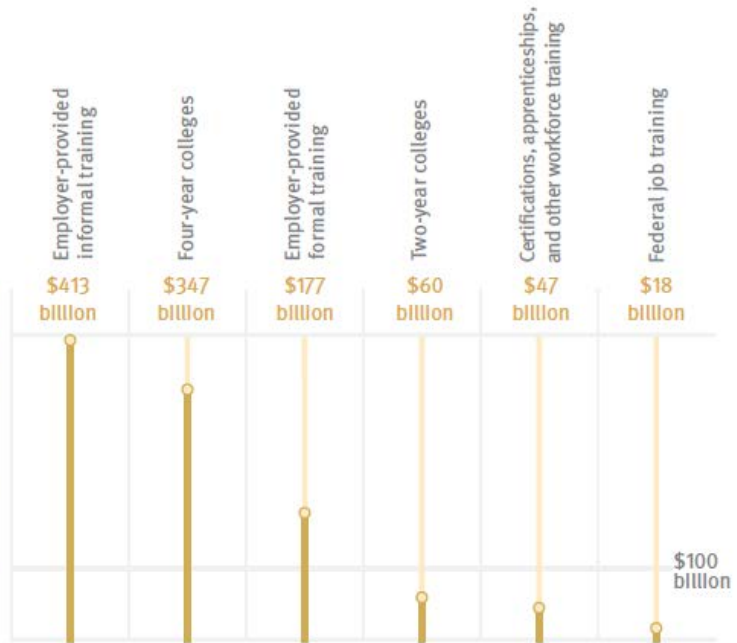
“Gallup asked respondents to think about talent as “the knowledge or skills people develop or obtain through education, work or other life experiences.”

- *Majority say government must make increasing talent a priority*
 - *78% say U.S. will lag behind other countries if talent isn't developed*
 - *Most agree, cities that commit to talent have stronger economies”*
-

College is Just the Beginning: Employers’ Role in the \$1.1 Trillion Postsecondary Education and Training System, by Carnevale, Strohl, and Gulish, Center on Education and the Workforce, Georgetown Univ., 2015.

Figure 1. The United States spends \$1.1 trillion on formal and informal postsecondary workforce education and training annually.²

Source: Georgetown University Center on Education and the Workforce analysis of data from the Department of Education, Bureau of Labor Statistics, and Government Accountability Office. See Appendix for more detail.

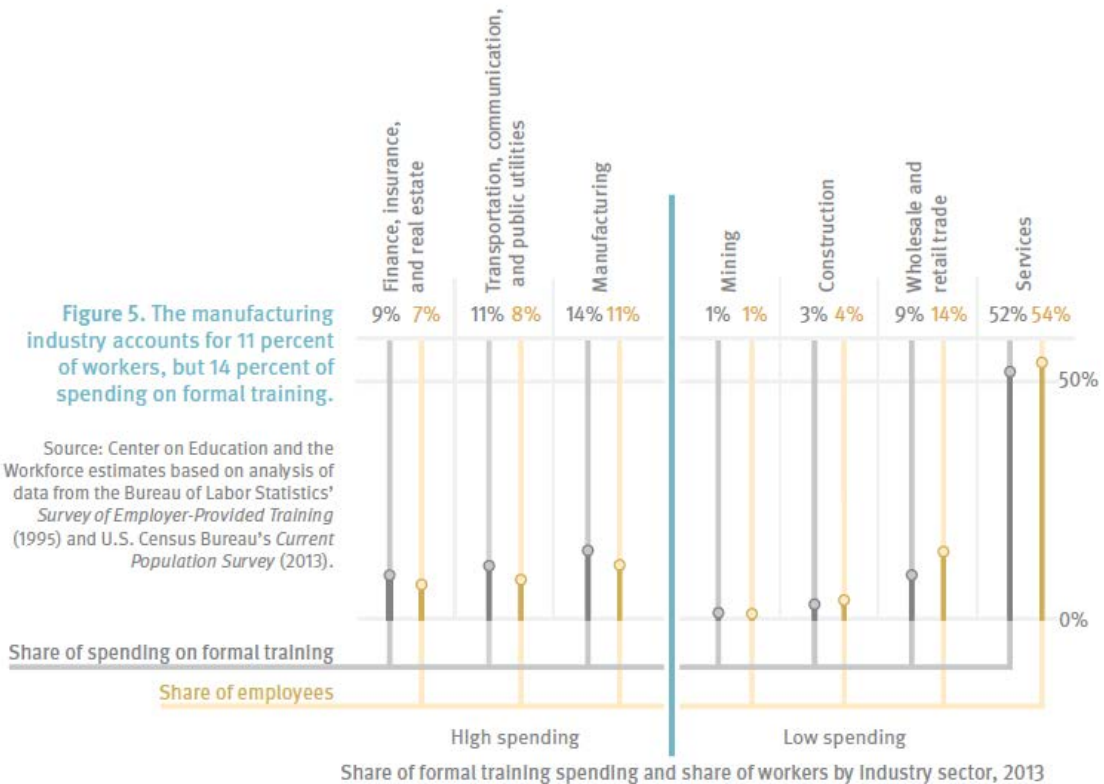


Annual postsecondary education and training spending (2013\$) by Institutional type

1. Formal learning or training features a scheduled, regimented series of learning or training sessions, typically administered by an assigned trainer. Informal learning or training, by contrast, occurs through experience on the job; it is commonly referred to as on-the-job training.
2. Because education and training programs often span across multiple institutions, these spending categories may overlap.

Figure 5. The manufacturing industry accounts for 11 percent of workers, but 14 percent of spending on formal training.

Source: Center on Education and the Workforce estimates based on analysis of data from the Bureau of Labor Statistics' *Survey of Employer-Provided Training* (1995) and U.S. Census Bureau's *Current Population Survey* (2013).



Share of formal training spending and share of workers by Industry sector, 2013

Table 1. The services industry spends \$91.6 billion on formal training each year, accounting for 52 percent of national spending on formal training.

Source: Center on Education and the Workforce estimates based on analysis of data from the Bureau of Labor Statistics' *Survey of Employer-Provided Training* (1995) and U.S. Census Bureau's *Current Population Survey* (2013).

<i>Industry sector</i>	<i>Employer spending on formal training in 2013 (billions of 2013\$)</i>	<i>Share of total spending on formal employer training (%)</i>
Services	91.6	52
Manufacturing	25.1	14
Transportation, communication, and utilities	19.2	11
Finance, insurance, and real estate	16.6	9
Wholesale and retail trade	15.9	9
Construction	5.8	3
Mining	2.5	1
Total	177.0	100%

Note: Due to rounding, the column may not sum to the total.

Overinvesting in Higher Ed, by Vedder, Aug. 11, 2010.

“Most new jobs simply don’t require college graduates. Of the 30 occupations with the highest expected growth from 2008 to 2018, only 8 require a bachelor’s degree or higher. The fastest-growing occupation in the country, registered nurse, requires only an associate’s degree. Most of the top ten (including home health aides, customer service representatives, retail salespersons and office clerks) require only short-term on-the-job training.

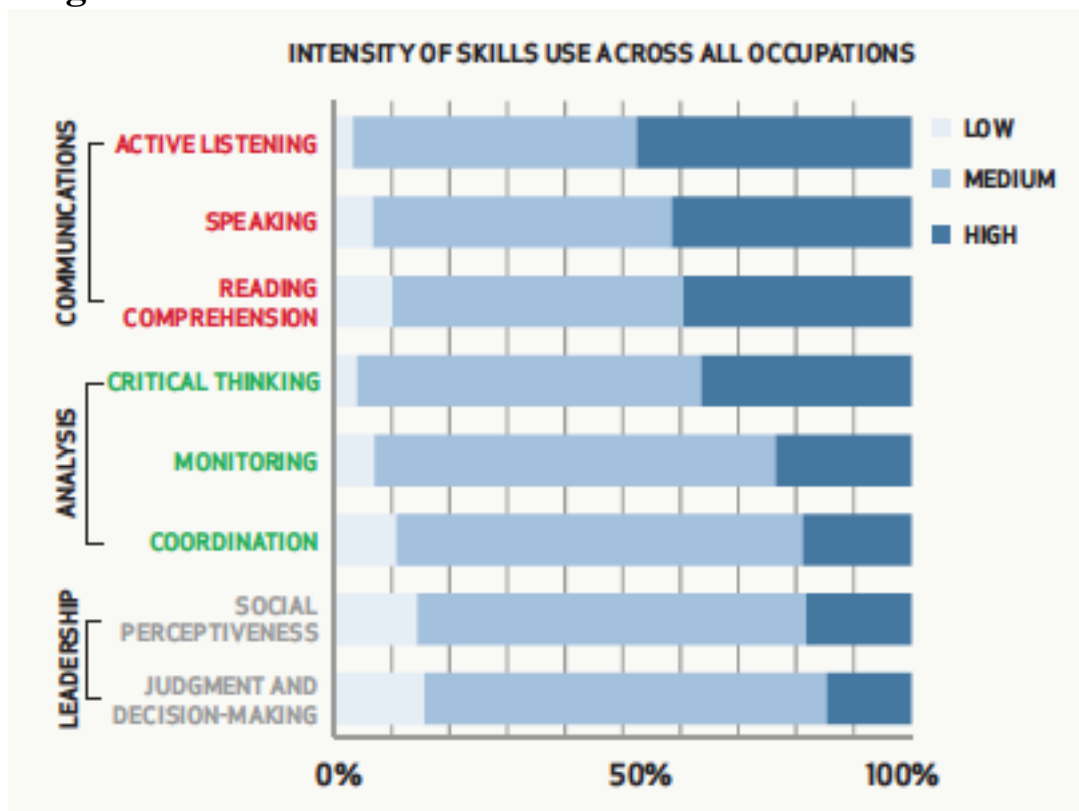
“The consequence of this mismatch between supply and demand is predictable: tree-trimmers with a master’s degree in history, furnace repairmen with math degrees. Why should society subsidize people to go to college for five or six years in order to take jobs requiring at most a high school education and some on-the-job training?

“Credential inflation is at work. When 90% of the applicants for a job have diplomas, the 10% who don’t look like losers, even if they are qualified. It is said that college education

functions as a signal to employers of who is the best and the brightest. It's an expensive signal. Moreover, it no longer signals hard work. The typical college student spends less than 30 hours a week on academics, according to the Bureau of Labor Statistics Annual American Time Use Survey. A lot of colleges compete not by making academic demands on their customers but by offering golf courses, climbing walls and fancy dorms.

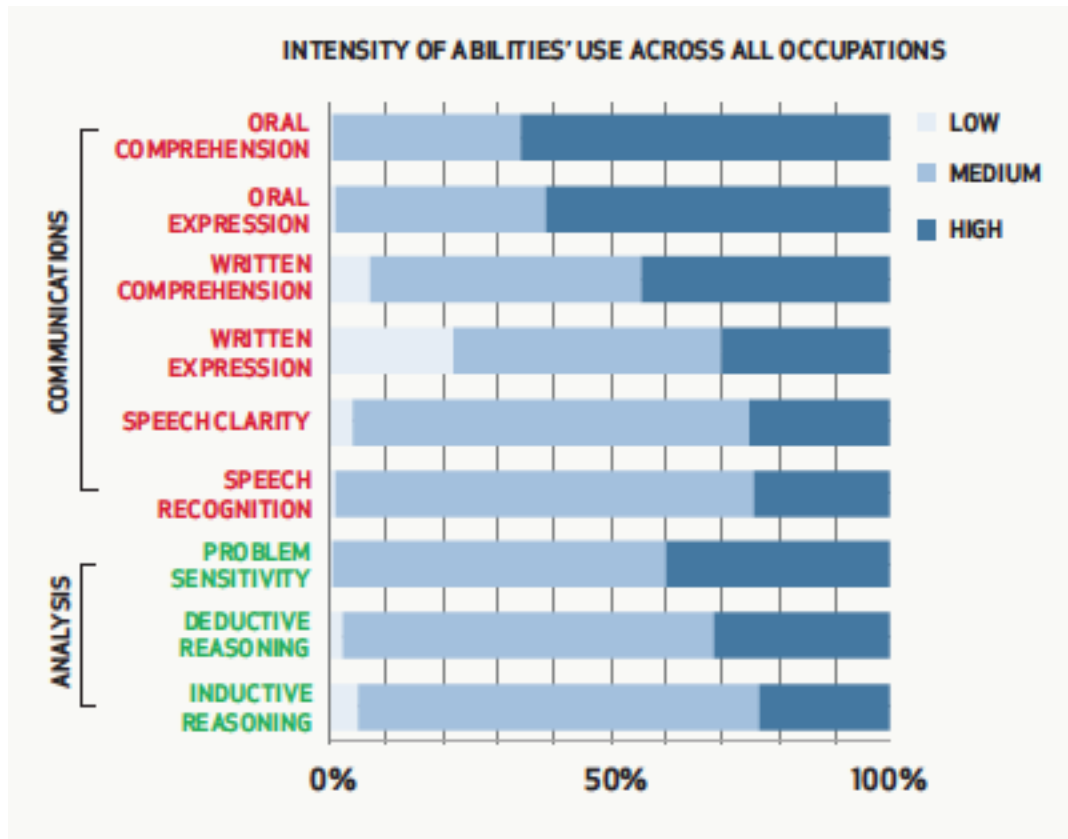
“The pell-mell investment in sheepskins is beginning to look an awful lot like something our economy has seen in real estate: a debt-fueled asset bubble. It might end just as badly.”

***Recovery: Job Growth and Education Requirements Through 2020*, by Carnevale, Smith and Strohl, Center on Education and the Workforce, Georgetown Public Policy Institute, Georgetown Univ.**



If we compare this to Howard Gardner’s multiple intelligence theory, we may observe that intelligences our educational establishment address do not fit well with what employers are seeking. Let’s dissect these attributes employers have need of:

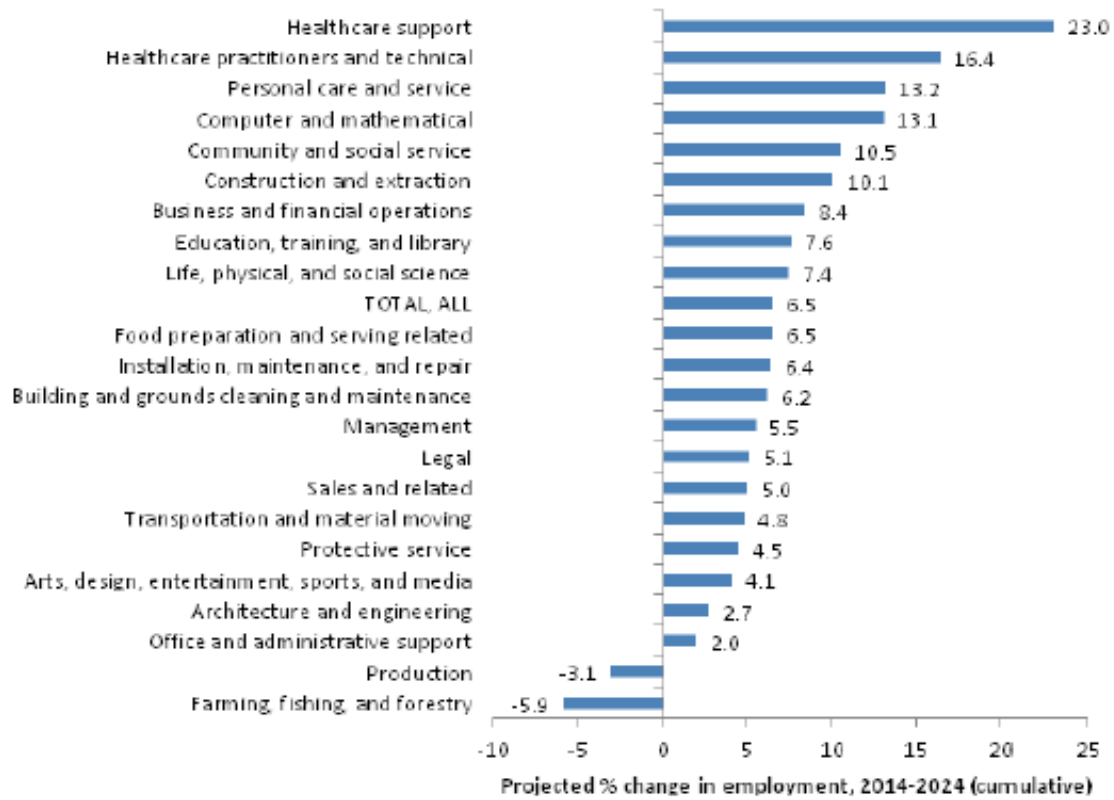
1. Active listening – Education does not prepare individuals for *active listening* that connects dots between what is communicated and how it relates to real world needs. Rather, our educational establishment prepares individuals for *passive listening* – that is, memorizing and/or taking orders.
2. Speaking – Very little effort is exerted in teaching for verbal communication. A class in speech or debate might be all the exposure some students might get in learning how to verbally communicate ideas to fellow workers.
3. Reading comprehension – This might arguably be an area where education provides preparation for a percentage of the school age population – though certainly not a majority – for real world needs.
4. Critical thinking – Students are not taught to think, so critical thinking is largely absent from the educational program – in spite of what educators believe. Businessmen have a very different perspective of this term compared to educators.
5. Monitoring – This is a vague word given the context, but generally speaking education does not address what monitoring of projects or people mean. Project management and supervisory skills are very important. There is a great deal education can do to develop them and businesses would be very appreciative of such development.
6. Coordination – Since students are typically taught based on passive learning, there is little if anything for them to coordinate; therefore, such abilities are not developed during the formative years.
7. Social perceptiveness – Since this is under the heading of “leadership,” again it must be pointed out that students are taught to be passive. Therefore “social perceptiveness” from a leadership position is completely absent from educational programs. Academics’ understanding of “social perceptiveness” is very different from businessmen. Academics tend to see it through the lenses of class struggles – i.e. social warfare – rather than pursuing social or institutional harmony that businesses seek.
8. Judgment and decision-making – Here is where public education falls flat on its face. One might even argue that the system teaches illogical reasoning. The system is so influenced by popular political fads driven by emotions which completely ignore consequences, it becomes evident that the health of society must be sacrificed in order to gratify the whims of popular faddish opinion. As it relates to businesses, these fads harm citizens which in the end harm employees (think of companies leaving the U.S. in order to escape unreasonable Big Brother regulation and taxation that our educational establishment endorses with gusto).



For the chart provided above, the authors state, “Over 60% of all occupations require oral comprehension and expression to be either very important or extremely important to success.” This demonstrates that superfluous information that academia demands students learn, detracts from the need to develop the all important communication skills. Secondary curriculum may be supportive of the ends of education, but it must not be allowed to hijack it. For example: The memorization of data that passes for education in science classes detracts from development of the mind as it relates to real world applications.

The Jobs and Workers of Tomorrow, by Kolko, 2015.

Projected Job Growth by Major Occupational Group (BLS)



Fastest Growing Occupations

#	Occupation	% change in jobs, 2014-2024
1	Wind turbine service technicians	108.0
2	Occupational therapy assistants	42.7
3	Physical therapist assistants	40.6
4	Physical therapist aides	39.0
5	Home health aides	38.1
6	Commercial divers	36.9
7	Nurse practitioners	35.2
8	Physical therapists	34.0
9	Statisticians	33.8
10	Ambulance drivers and attendants, except emergency medical technicians	33.0

BLS employment projections, published 12/8/15

Fastest Declining Occupations		
#	Occupation	% change in jobs, 2014-2024
1	Locomotive firers	-69.9
2	Electronic equipment installers and repairers, motor vehicles	-50.0
3	Telephone operators	-42.4
4	Postal service mail sorters, processors, and processing machine operators	-33.7
5	Switchboard operators, including answering service	-32.9
6	Photographic process workers and processing machine operators	-32.9
7	Shoe machine operators and tenders	-30.5
8	Manufactured building and mobile home installers	-30.0
9	Foundry mold and coremakers	-27.7
10	Sewing machine operators	-27.1
<i>BLS employment projections, published 12/8/15</i>		

This information is crucial for individuals to make wise decisions for their future. One may dream of going into farming or forestry, but as shown above, it just might be better to make them a hobby rather than as a means of making a living.

The Skills Gap in U.S. Manufacturing: 2015 and Beyond, by Giffi, Dollar, Drew, McNelly, Carrick, and Gangula, Manufacturing Institute and Deloitte.

The skills gap is widening

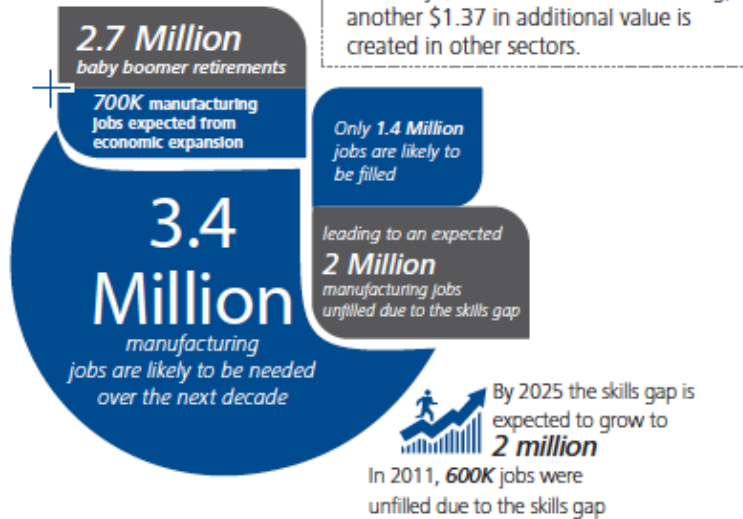
Over the next decade nearly 3 1/2 million manufacturing jobs will likely be needed and

2015 **2 Million** 2025
are expected to go unfilled due to the skill gap

The implications are significant

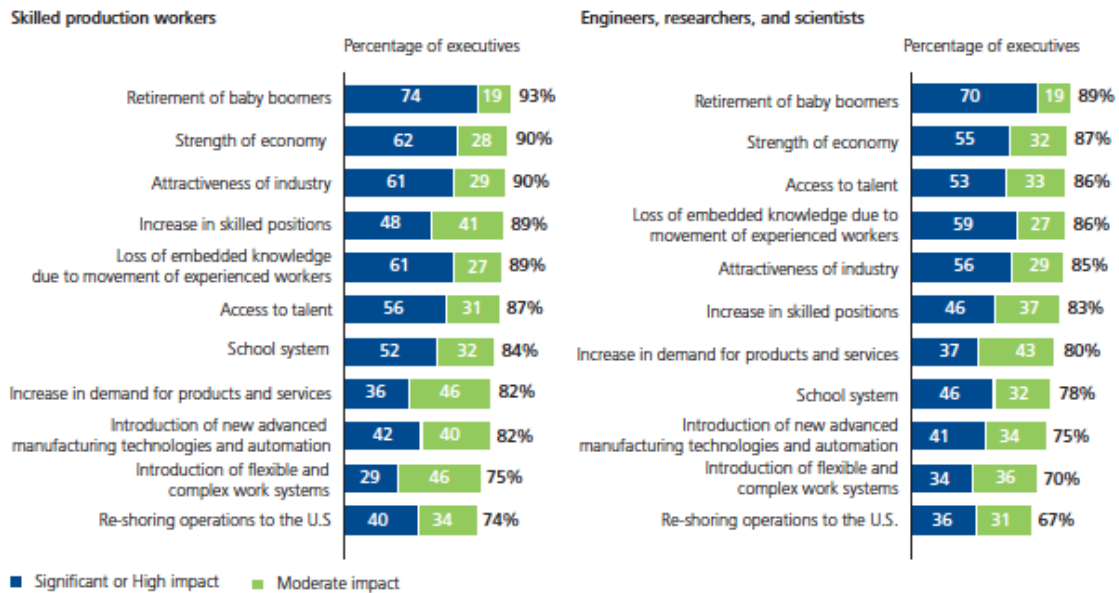
Every job in manufacturing creates another 2.5 new jobs in local goods and services.

For every \$1 invested in manufacturing, another \$1.37 in additional value is created in other sectors.



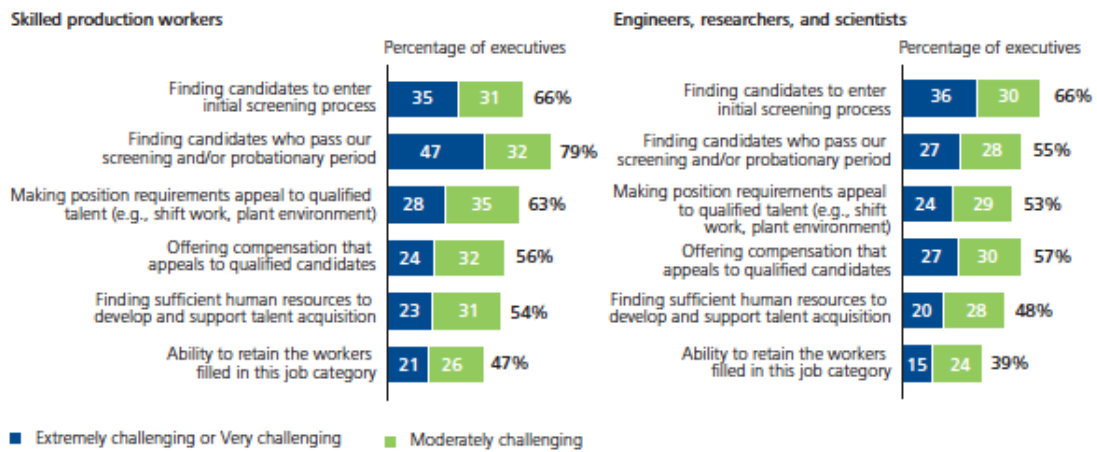
Source: Deloitte analysis based on data from U.S. Bureau of Labor Statistics and Gallup Survey.

Figure 3: To what extent do the following factors contribute to the future talent shortage?



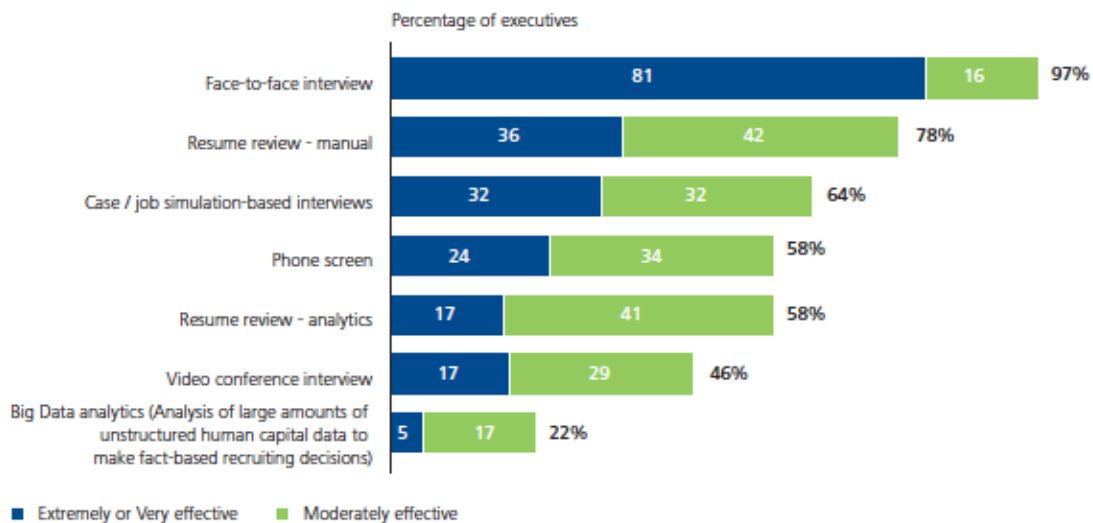
Note: "Significant impact" and "High impact" responses have been summed together.

Figure 8: What are the major challenges faced during recruitment of skilled and highly skilled workers?



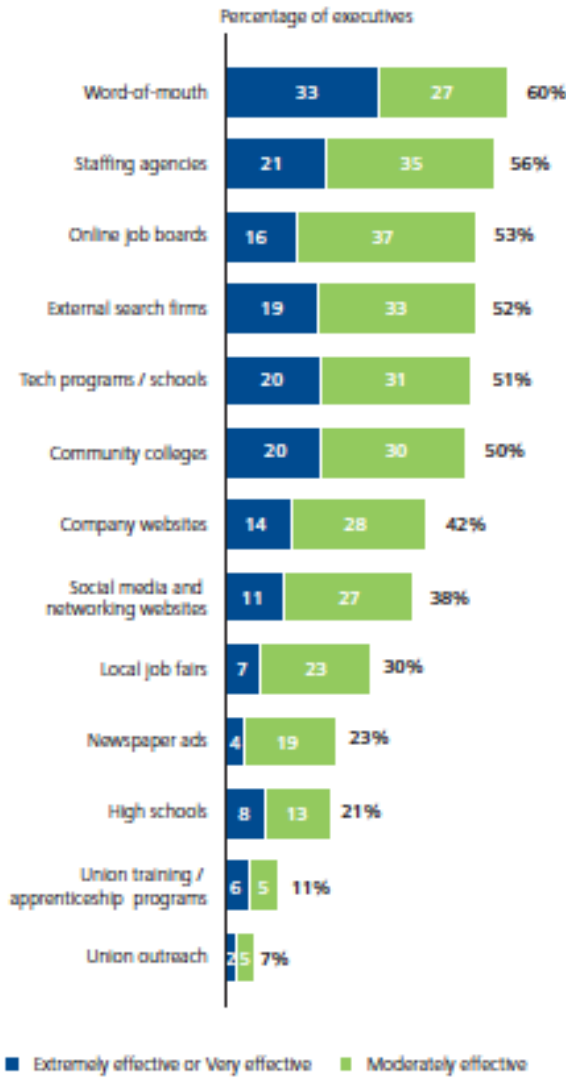
Note: "Extremely challenging" and "Very challenging" responses have been summed together.

Figure 14: Identify from the following the most effective methods your company uses for narrowing candidate selections.



Note: "Extremely effective" and "Very effective" responses have been summed together.

Figure 12: Identify which of the following are your company's top sources of employee recruitment for skilled production workers, including the effectiveness of each.



Note: "Extremely effective" and "Very effective" responses have been summed together.

Figure 13: Identify which of the following are your company's top sources of employee recruitment for engineers, researchers, and scientists, including the effectiveness of each.

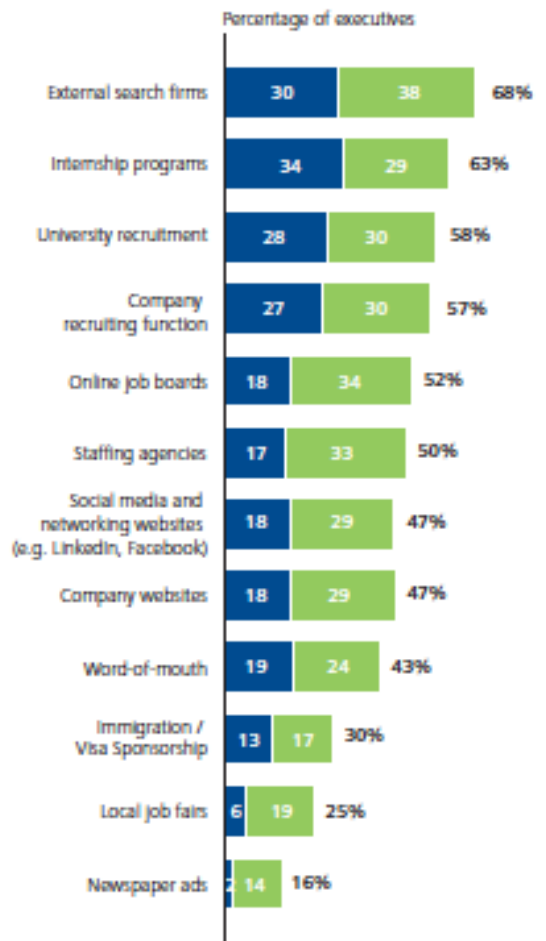
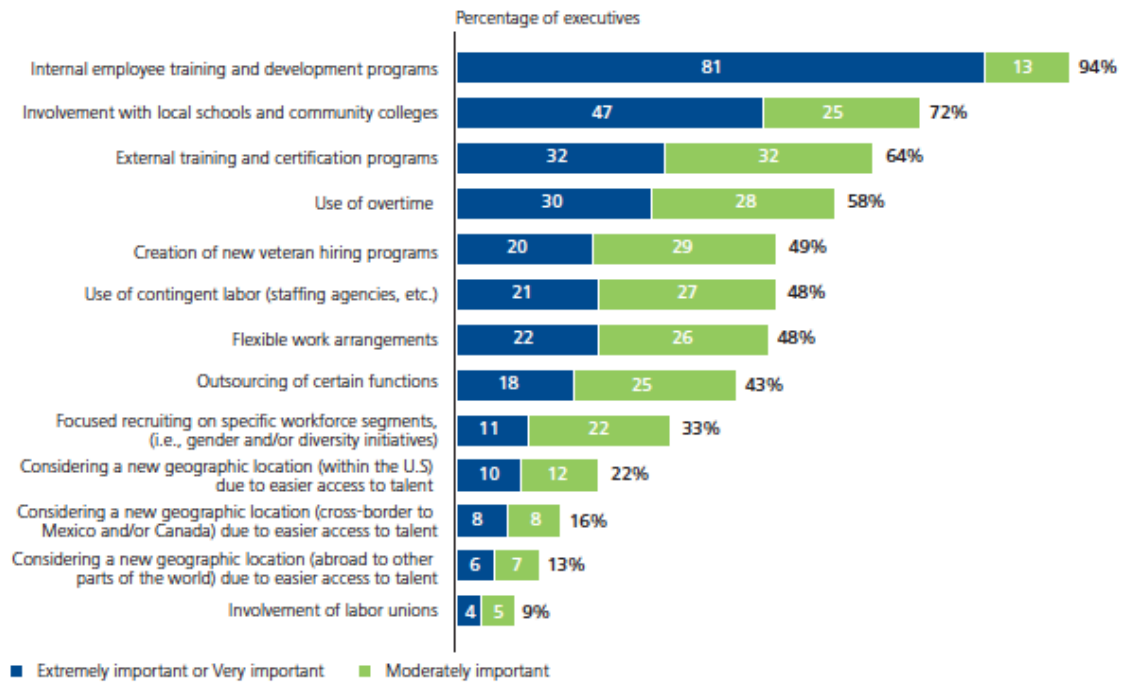


Figure 16: How important are the following techniques to mitigate the effects of existing skills shortages for a skilled production workforce?



Note: "Extremely important" and "Very important" responses have been summed together.

The 2014 Manufacturing Skills Gap survey was conducted by The Manufacturing Institute and Deloitte, in which over 450 manufacturing executives participated.

Figure 18: Participating company primary industry classification

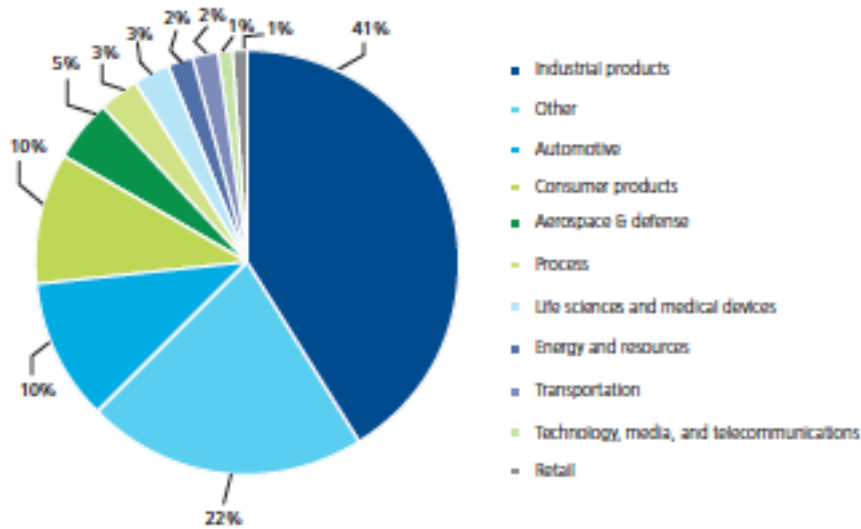


Figure 19: Participating company size, based on annual revenue

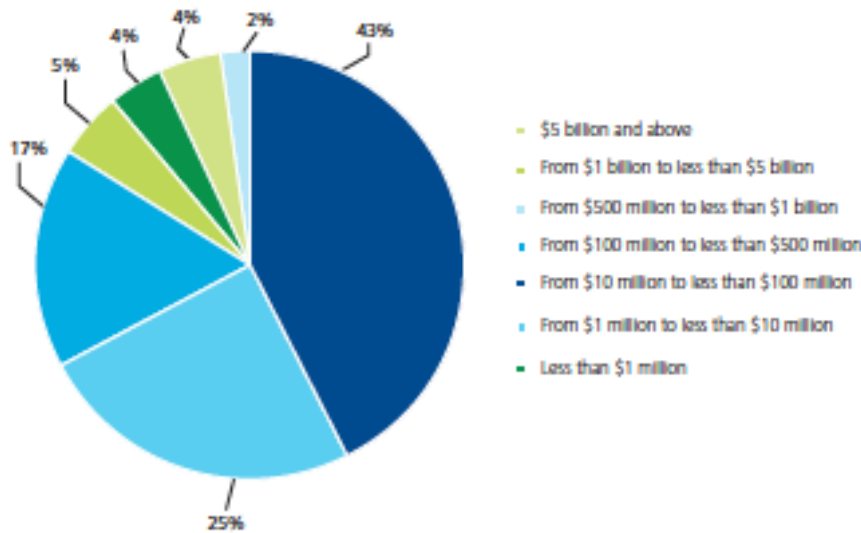
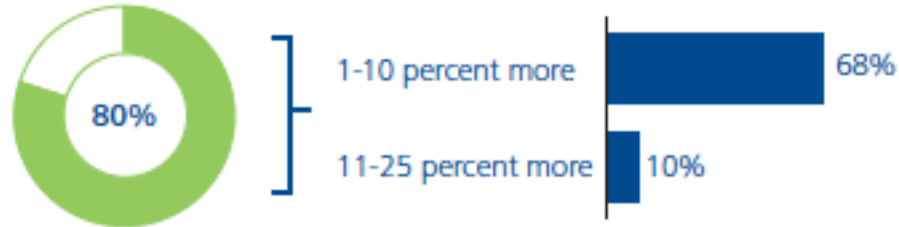


Figure 9: Willingness to pay more for tackling talent shortage

80 percent of executives are willing to pay more to tackle the talent crisis but the extent of compensation increase differs



Note: Remaining 2 percent of executives are willing to pay more than 25 percent.

What all of this data reveals is the opportunities awaiting individuals smart enough to see the goose that lays golden eggs. Given such shortages in skilled labor, there will also be shortages in supervisory and managerial positions of those who rise through the ranks. In the military, such people are referred to as mustangs. The sky really is the limit!

Educating the Worker of the Future, by Schneider, Issues in Science and Technology, Summer 2015.

TABLE 1

Degrees and certificates nationwide

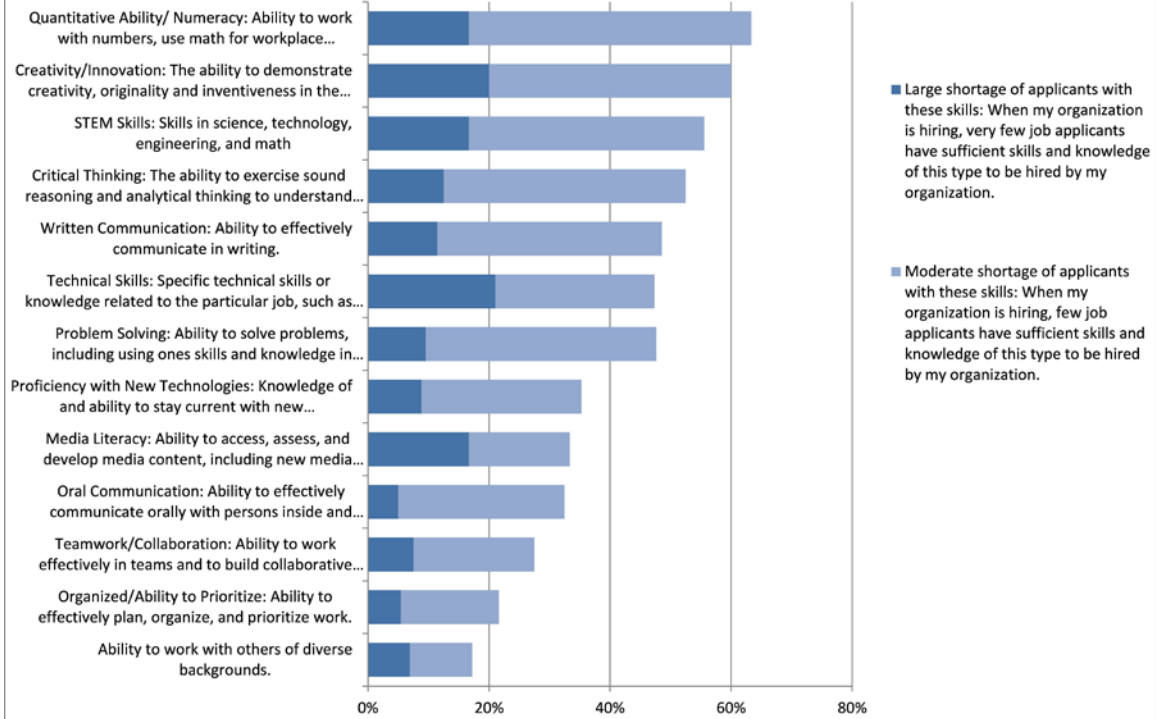
	Associate's degree	Bachelor's degree	Certificates of less than 1 year	Certificates of 1 year but less than 2 years
2008	731,175	1,553,187	266,053	182,638
2013	1,006,961	1,836,812	339,569	298,726
Percent growth	38%	18%	28%	64%

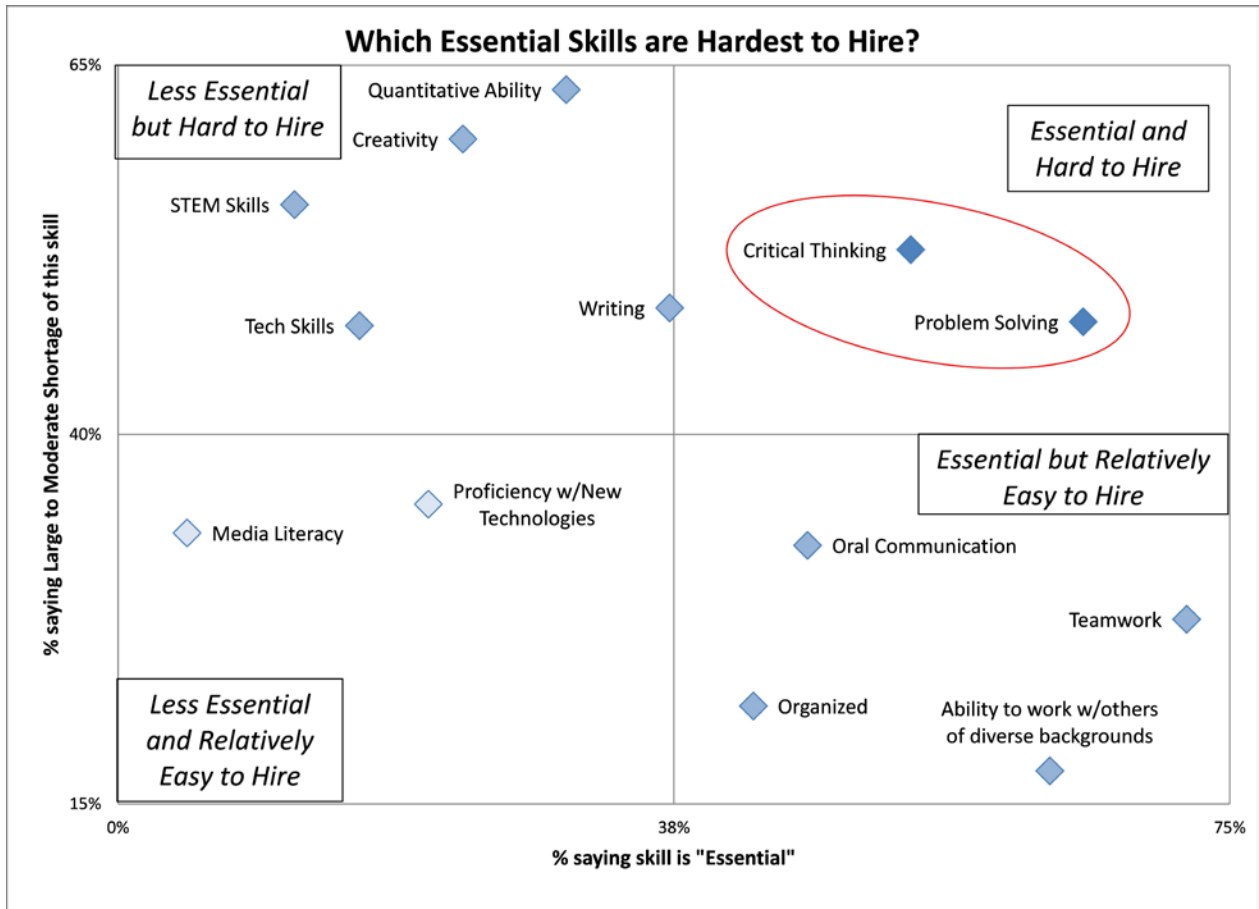
Source: U.S. Department of Education, Integrated Postsecondary Data System.

What Are Essential Competencies on the Job? By Herk, OECD Committee for Economic Development, Sept. 22, 2015.



Which Competencies Are Hardest to Hire? (Responses from Members who Rated the Skill "Essential" or "Very Important")





3. Preparation for school and work

***Rising to the Challenge* report provided by Achieve. Views on High School Graduates' Preparedness for College and Careers**

Few Instructors Think U.S. Public High Schools are Adequately Preparing Students for the Expectations They Will Face in College

“Do you feel that as a whole, public high schools are adequately preparing graduates to meet the expectations they will face in college classes, or not?”

In 2015:

14% responded, “Public high schools are adequately preparing students”

78% responded, “Public high schools are not doing a good enough job preparing students”

8% responded, “Not sure”

A Majority of Employers Also Think Public High Schools Are Not Doing Enough to Prepare Students for the Expectations of the Work World.

“Based on your experiences with public HS graduates who do not have further education or formal training, do you feel that as a whole, public high schools are adequately preparing graduates to meet the expectations they will face at work?”

In 2015:

29% responded, “Public high schools are adequately preparing students”

62% responded, “Public high schools are not doing a good enough job preparing students”

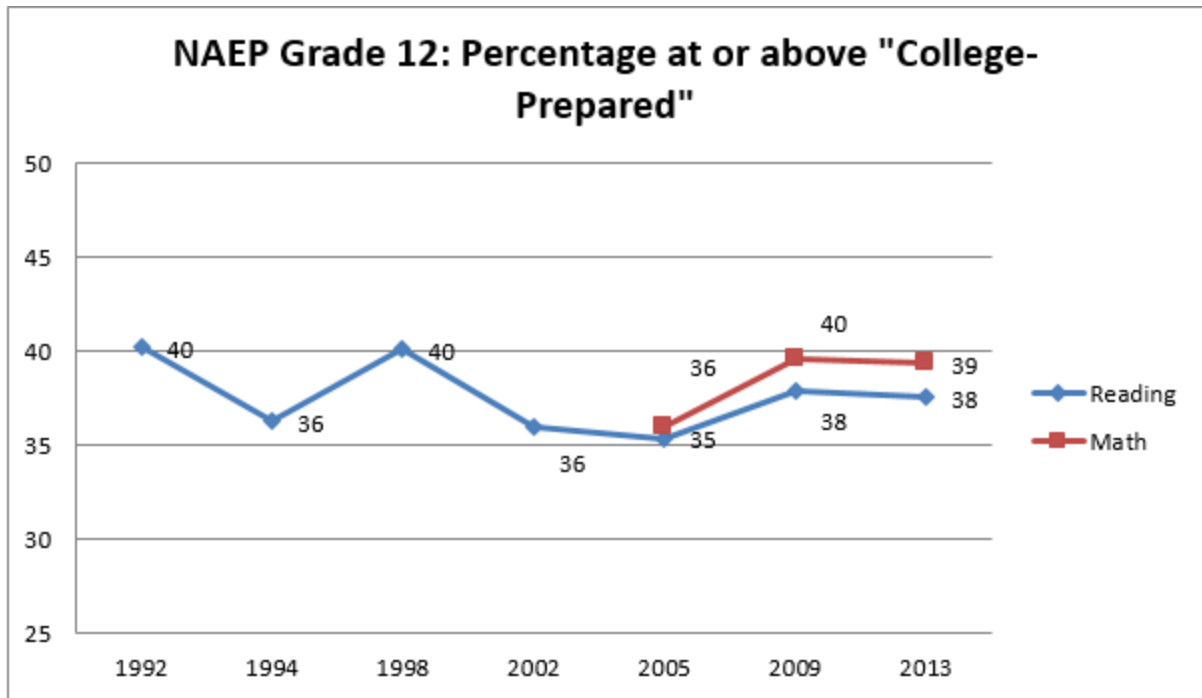
9% responded, “Not sure”

College Preparedness Over the Years, According to NAEP, Fordham Institute, by Petrilli and Finn, April 8, 2015.

This article reveals how the educational system has been optimized for particular talents. We’ve hit a point of diminishing returns. Further investment into improving these numbers will have marginal effects.

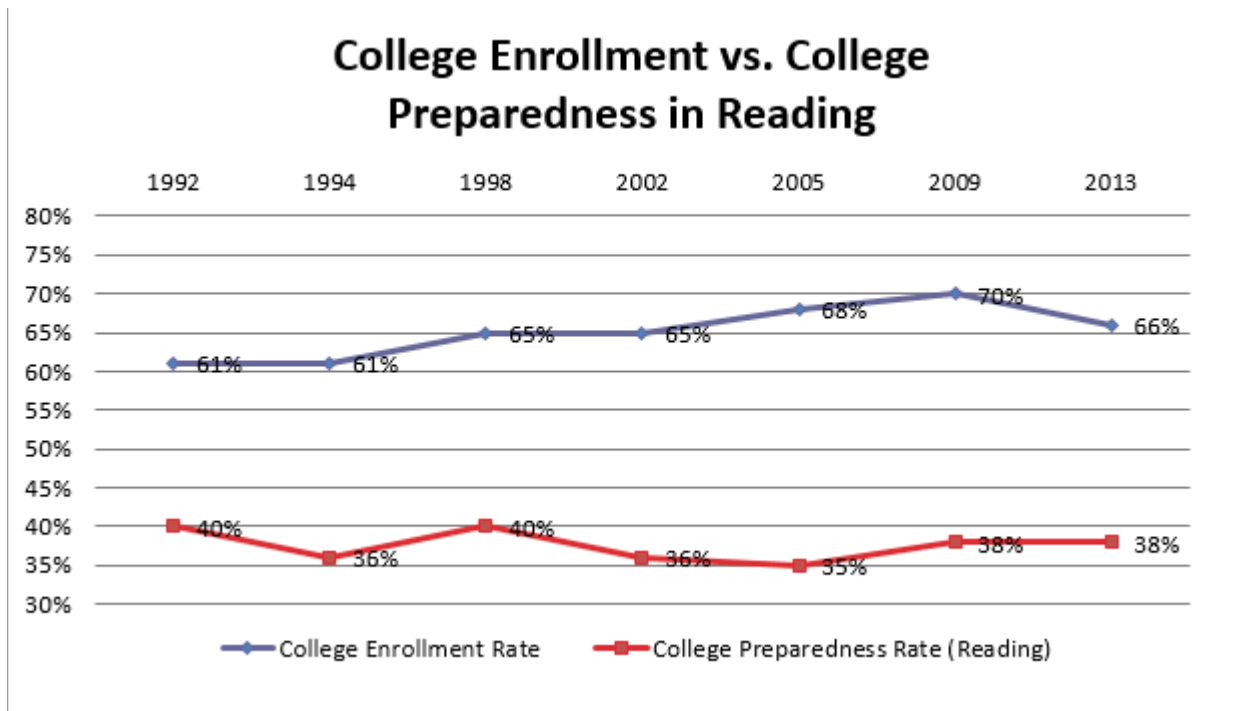
The National Assessment Governing Board (NAEP) sought to determine “the percentage of [12th grade] students who ‘possess the knowledge, skills, and abilities in reading and mathematics that would make them academically prepared for college.’” They found that the 2013 results showed that “39% of students in the 12th grade assessment sample met the preparedness standard for math and 38% did so for reading.” This correlates well with the percentage of the U.S. population that possesses a college degree – associate’s to graduate levels are around 40%.

“Here’s what we found—the trends for ‘college preparedness’ over time—since 1992 for reading and since 2005 for math:



The main storyline is consistency. The rates have bounced between 35 and 40 percent.”

“[T]he proportion of recent high school graduates *attending* college is far higher than the proportion of twelfth graders who are *prepared* for college—and that gap *has* worsened over time. It started at 21 percentage points in 1992, grew to 33 points in 2005, and stood at 28 points as of 2013. (These numbers are for reading.)”



“To repeat: The ‘college preparation gap’ is larger now than in 1992 even though the college preparedness rate has remained relatively flat, due to the fact that the proportion of recent high school graduates enrolling in college rose sharply between 1994 and 2009—from 61 percent to 70 percent—before easing back down to 66 percent in 2013.”

“As Charles Murray recently [wrote](#) in the *Wall Street Journal*, ‘What we need is an educational system that brings children with all combinations of assets and deficits to adulthood having identified things they enjoy doing and having learned how to do them well.’ That means taking the ‘career’ half of ‘college- and career-ready’ much more seriously, especially when designing options for high school students.”

America’s “No Confidence” Vote on College Grads’ Work Readiness, Gallup, by Busteed, April 24, 2015

“Only 13% of Americans strongly agree college graduates in this country are well-prepared for success in the workplace. That’s down from 14% two years ago and 19% three years ago. This is effectively a “no confidence” vote in college graduates’ work readiness, and if we don’t work to fix it, there will be catastrophic effects for the American education system and economy.

“The no confidence vote gets worse: Americans *with* college degrees are *much less likely* to strongly agree college grads are ready for the workforce than Americans *without* college degrees – 6% vs. 18%, respectively.”

*Views of Graduates' Preparedness for the Workforce,
by Level of Education*

On a five-point scale, please say whether you agree with the following statement: "College graduates in this country are well-prepared for success in the workforce."

	% Strongly agree
Some college, no degree or less	18
Associates degree or higher	6
Total	13

GALLUP®

Education to Employment: Designing a System That Works, by Mourshed, Farrell, and Barton, McKinsey Center for Government.

Exhibit 1

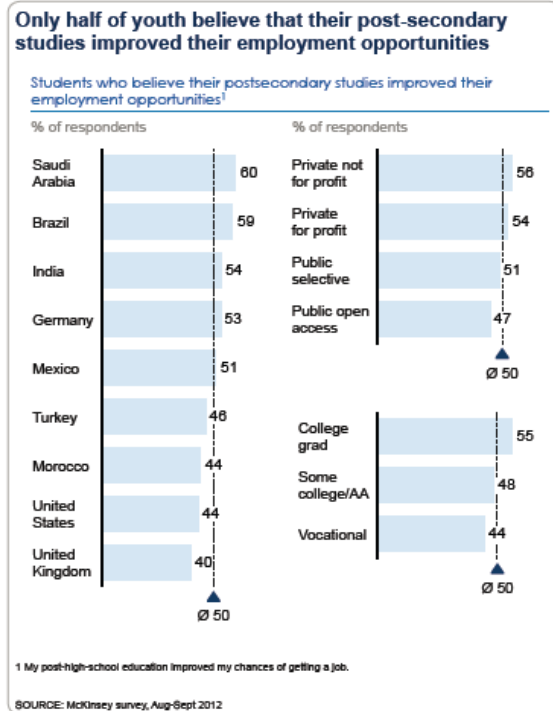
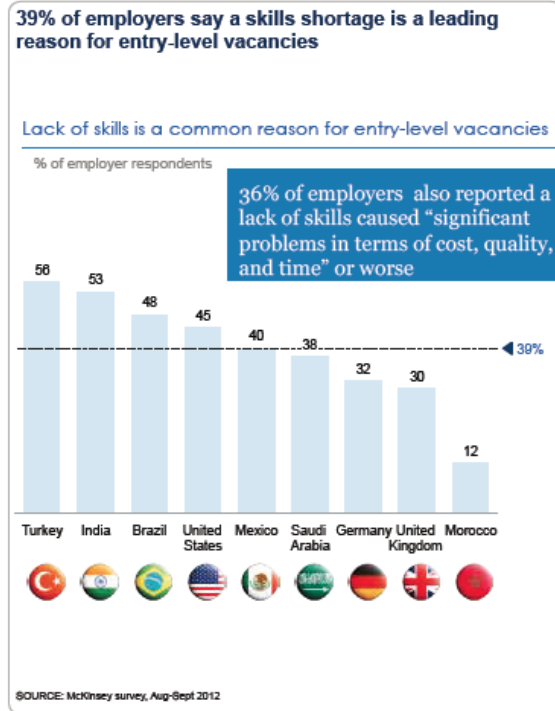


Exhibit 2



“The Report’s findings include the following six highlights:

“Employers, education providers, and youth live in parallel universes. To put it another way, they have fundamentally different understandings of the same situation. Fewer than half of youth and employers, for example, believe that new graduates are adequately prepared for entry-level positions. Education providers, however, are much more optimistic: 72% of them believe new graduates are ready to work. The same disconnect occurs with regard to education; 39% of education providers believe the main reason students drop out is that the course of study is too difficult, but only 9% of youth say this is the case (they are more apt to blame affordability).

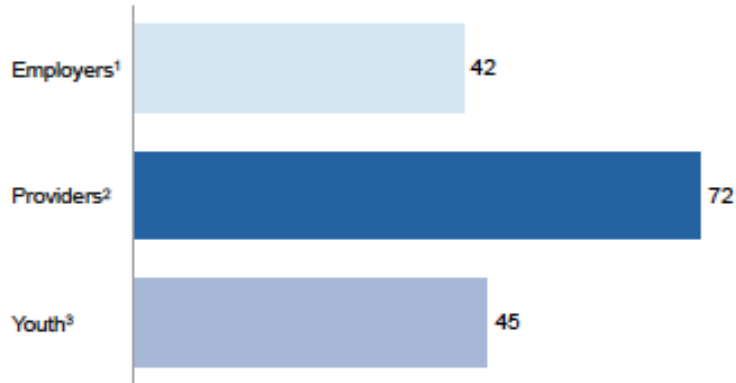
“Why are the three major stakeholders not seeing the same thing? In large part, this is because they are not engaged with each other.”

Exhibit 3

Stakeholders hold different views about the readiness of graduates for the job market

Agreement that graduates/new hires are adequately prepared

% of respondents



1 Overall, employees we hired in the past year have been adequately prepared by their prehire education and/or training.

2 Overall, graduates from my institution are adequately prepared for entry-level positions in their chosen field of study.

3 Overall, I think I was adequately prepared for an entry-level positions in my chosen field of study.

SOURCE: McKinsey survey, Aug-Sept 2012

The Broken Link Between Higher Education and Workplace Readiness, Gallup, Dec. 15, 2015.

U.S. BUSINESS LEADERS WHO STRONGLY
AGREE GRADS HAVE NECESSARY SKILLS

11%

GALLUP/LUMINA FOUNDATION, 2013

Only Half of Students Who Started College in 2009 Have Graduated, by Schulzke, Desert News, Nov. 27, 2015.

“Summary: Surge in college attendance came when jobs were scarce, but college gamble has not paid off for thousands.

“Just over half of new college students in 2009, or roughly 53 percent, had earned their bachelor's degree six years later, a new study by the National Student Clearinghouse Research Center finds, a dramatic drop from the 56 percent from the 2007 cohort.

“‘Administrators and policymakers should use caution when assuming the best way to increase postsecondary degree attainment is to increase college enrollment,’ the paper argues. ‘Given current levels of academic preparation in secondary schools, many students are not prepared for success at four-year, and even two-year colleges.’”

College credit? Kill that, by Amy Laitinen, CNN, March 30, 2015.

“Story highlights:

Is American higher education worth the price? Are students and their

families getting what they're paying for?

Amy Laitinen: The big problem is that we measure education in terms of time, rather than learning.

“... Given the cost of college, students and families need to know that they're making a good investment. That's why we need to move to a system where we measure learning outcomes, not just time spent in a classroom accumulating credits.

“... [F]or all the attention paid to the price of college, we haven't given enough thought to whether students and their families are getting their money's worth. Is American higher education worth the price? Are students and their families getting what they're paying for?” *Not even close! If it were not for the illusion of status and prestige credentials are supposed to confer upon their owners, people would see through the thin veil and most would abandon the idea of pursuing a bachelor's degree.*

“There's plenty of evidence that for many of them, the answer is no. In 2006, a government study found that nearly 70% of college graduates could not perform basic tasks like comparing opposing editorials.” *This reveals that many go to college (a narrowly tailored institutional system for those with specific talents) simply because they are told they are supposed to. It shows that this 70% is not being served based on their talents and needs.* “In a 2011 book, “Academically Adrift,” researchers studied 2,000 students at two dozen universities over four years and found that 45% of them showed no significant gains on a test of critical thinking, complex reasoning, and communication skills after two years of college. Even at the end of four years, 36% of the students hadn't gained those skills.

“Given the evidence, maybe it's not a surprise that employers aren't impressed by recent college graduates.” *This is why businesses need to push very hard for a paradigm shift.*

Seat time ≠ ready for work

1800 hours is the average amount of time spent in college classes for a 120 credit bachelor's degree.

“Only **11%** of business leaders strongly agreed that college graduates have the skills necessary to succeed on the job.”

“**One-quarter** of employers say that colleges and universities are doing a good job in preparing students effectively for the challenges of today's global economy.”

“... A recent Gallup poll found that only 11% of business leaders strongly agreed that college graduates have the skills necessary to succeed on the job. In addition to money, these graduates have spent hours and hours in classrooms and taking tests, but the time doesn't seem to have translated into learning.

“Why is this? Perhaps it's as simple as this: We measure education in terms of time, rather than learning. A four-year degree attests that you have acquired 120 credits. That's an accidental result of the credit hour system, which was created by philanthropist Andrew Carnegie more than 100 years ago, for the purpose of providing struggling professors with pensions.

“At the turn of the 20th century, Carnegie created a \$10 million free pension fund to help professors retire. The Carnegie Foundation for the Advancement of Teaching, which was set up to administer the fund, determined that only "full-time" faculty would qualify for pensions, which they defined as teaching 12 "credit units," with each unit equal to one hour of faculty-student contact time per week, over a 15-week semester. While originally a narrow measure of faculty workload, the credit hour quickly morphed into much more. The Carnegie Foundation warned against using the credit hour as a proxy for student learning, but the temptation of an easy-to-understand and seemingly standardized measure was too great to resist. It just made organizing the whole higher education enterprise much easier.” *This reveals the dangers of centralization. People look for simple and easy standardized ways of controlling systems. It is simple and easy for the bureaucrats, but it is detrimental to the beneficiaries.*

“If credit hours truly reflected a standardized unit of learning, they would be fully transferable across institutions. An hour in Arizona is an hour in New York. But colleges

routinely reject credits earned at other colleges, suggesting that even though they use credit hours themselves, they know they are not a reliable measure of how much students have learned. Many students, however, believe the fiction that the credit hour is a standardized currency and assume that credits will transfer from one school to the next. This is an unfortunate and costly assumption, as community college students in Louisiana will tell you.

“Until recently, Louisiana students with an associate degree typically lost between 21 and 24 credits when transferring to a four-year state school. That's a year of time and money lost. Given that nearly 60% of students in the United States attend two or more colleges, the non-transfer of credits has huge costs, not only to individuals, but also to the federal government and states that are financing this duplicative classroom time. If higher education doesn't trust its own credits, why should anyone else? And Louisiana students aren't alone; transfer students across the country lose credits, which lengthens their time to get a degree.

“So we have two problems: Students who have earned credits -- at great expense in time and money-- can't use or transfer them. Others who have accumulated costly credits haven't learned much.

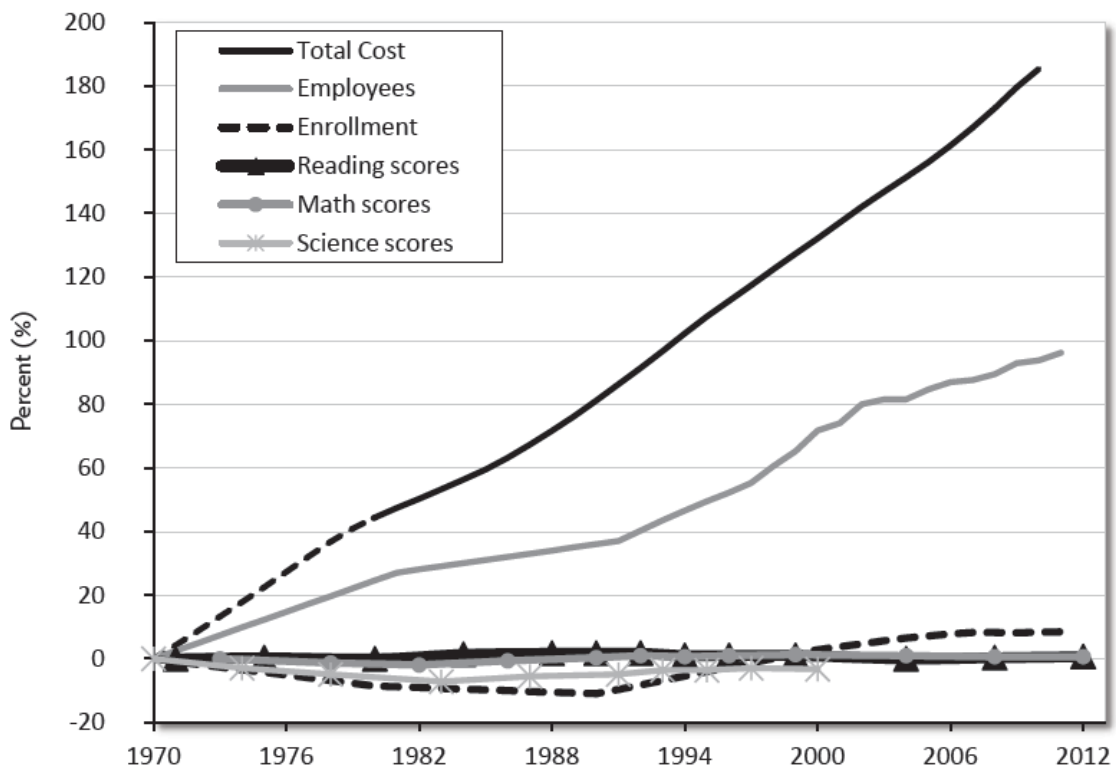
“And then there's a third dimension: Millions of people who have learned a great deal have no 'credit' because they learned it at the wrong place — that is to say, not at a 'college.' ... Employees at a biotech company with a high-quality on-the-job training program might learn more than someone in a two-year college science program, but unless this training is attached to an accredited institution of higher learning, the learning won't 'count.' For the millions of adult workers looking to retrain and reskill, the focus on time rather than learning, especially when between family and work, their time is scarce, is a daunting proposition.

“State and federal governments add to the problem, because while they spend hundreds of billions on higher education each year, most of it is for time served, in the form of credit hours, rather than learning achieved.

“We need to stop counting time and start counting learning.”

4. Return on investment

Trends in American Public Schooling Since 1970



Sources: U.S. Department of Education, "Digest of Education Statistics"; and NAEP tests, "Long Term Trends, 17-Year-Olds."

Note: "Total cost" is the full amount spent on the K-12 education of a student graduating in the given year, adjusted for inflation. In 1970, the amount was \$56,903; in 2010, the amount was \$164,426.

This reveals that while costs have escalated exponentially along with more employees to run the educational system, little improvement is being realized. And yet, educators still cry for more money. Obviously, the lack of money is not the problem; the bureaucratic system is the problem. This demonstrates market failures of monopolies.

Recent Survey Reveals Only 21% of Parents Feel Cost of College is Justified, by Williams, Education News, Mar. 21, 2016.

"According to a recent [survey](#) by Kaplan Test Prep and MONEY Magazine, many parents and high school counselors are questioning the value-for-cost of college. Selected survey results reveal:

“When asked if they thought the cost of college is clearly justified for the value it delivers:

- 21% of parents agree
- 58% of parents don't agree
- 21% of parents aren't sure

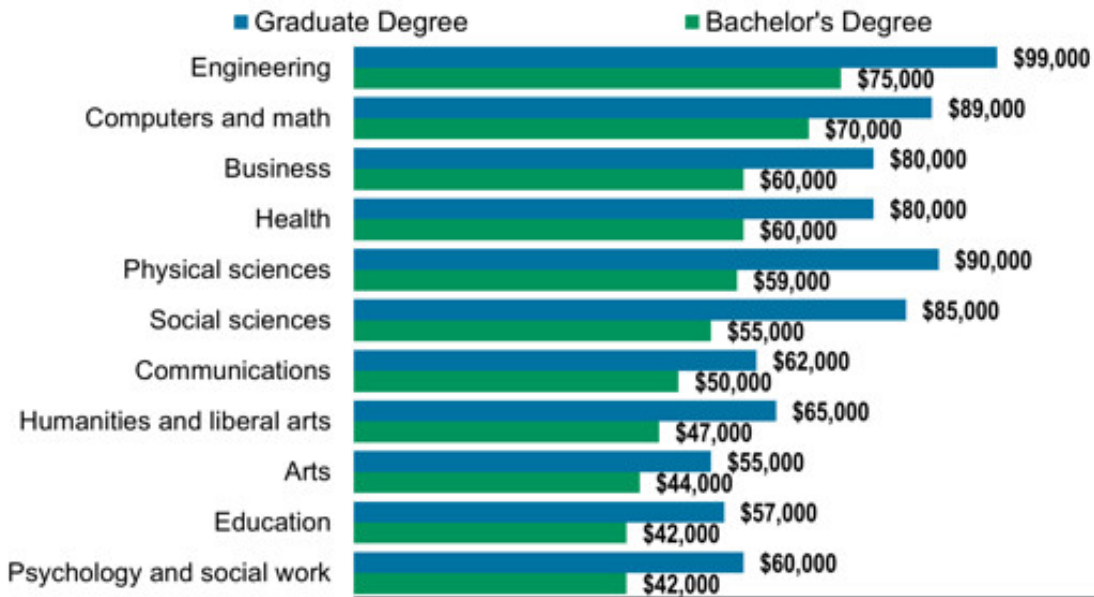
“Only 37% of high school counselors strongly agree that the cost of college is clearly justified.”

White House and Census Set to Collide Over College Education Data, by Zumbrun, The Wall Street Journal, December 22, 2014.

“We’re going through lots of hand-wringing and political struggle trying to figure out how to inform the public on the value of the colleges they go to,” said Mr. Carnevale. “What we know, largely because of the ACS data, is it’s not about the value of colleges, it’s about the value of the major you take when you go to college.”

Be True To Your Major

Median earnings for individuals with different college majors. The Census Bureau has proposed this data for elimination.



Source: American Community Survey, Georgetown University | WSJ.com

The following provides an excellent example of what associate's degrees can offer:

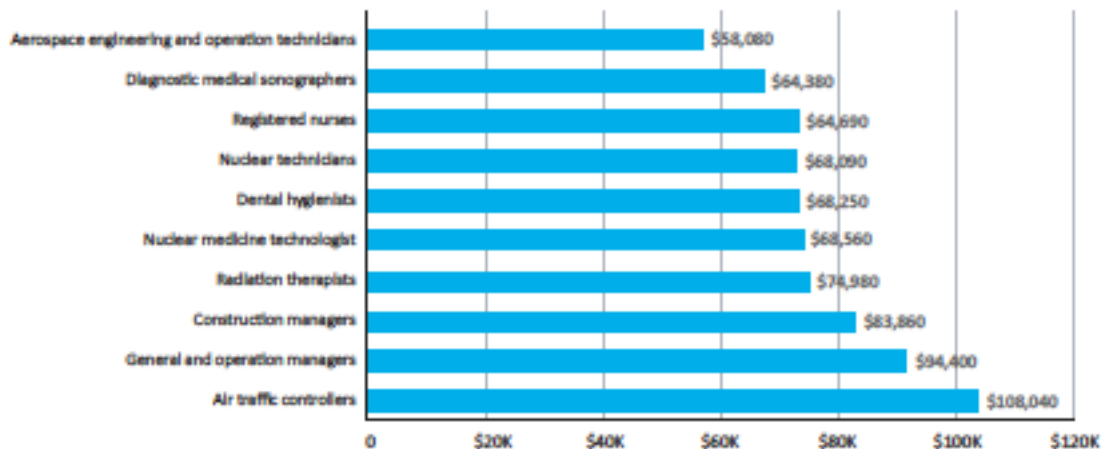


October 2014

High-paying occupations

Associate degree recipients tend to have higher earnings than other workers who do not have a bachelor's degree.

Selected median annual wage - 2010



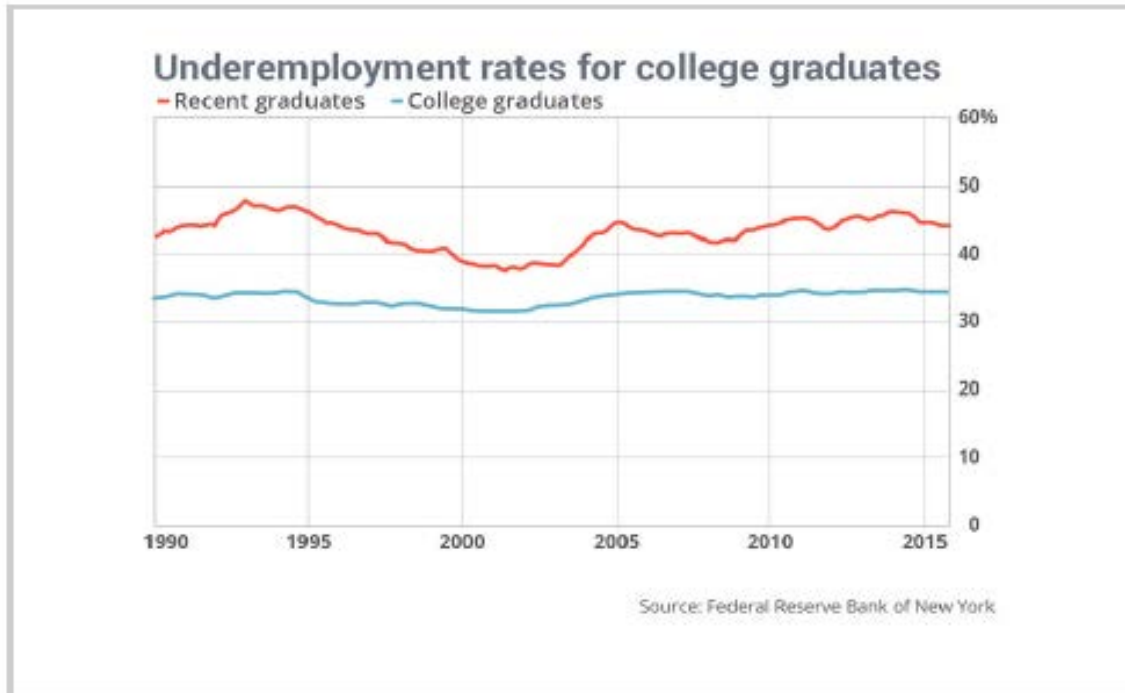
Source: U.S. Bureau of Labor Statistics "High wages after high school without a bachelor's degree," Occupational Outlook Quarterly, Summer 2012. Retrieved on September 30, 2014.



Associate degrees provide competitive labor market opportunities for high-paying and high-demand jobs. The 2010 median annual wage for all occupations was \$33,840. The chart above shows the top 10 occupations that typically require an associate degree and are projected to have the most job openings between 2010 and 2020. Air traffic controllers, for example, earn on average \$108,040; the field expects 10,200 job openings by 2020. General and operations managers earned \$94,400, with 410,100 projected job openings. Construction managers earned \$83,860, with a 120,400 job openings between 2010 and 2020. Most of the top 10 occupations are in health care, which is expected to be one of the fast-growing industries in the next decade. Projections call for 1.2 million openings for registered nurses and 104,900 for dental hygienists.

For more information, contact Kent Phillippe, associate vice president for research and student success at the American Association of Community Colleges, at (202) 416-4505 or kphillippe@aaccc.nche.edu, or Rahel Tekle, AACC research associate, at (202) 416-4508 or rtekle@aaccc.nche.edu

How Recent College Graduates Are Faring, by Jillian Berman, Market Watch, Jan. 30, 2016.



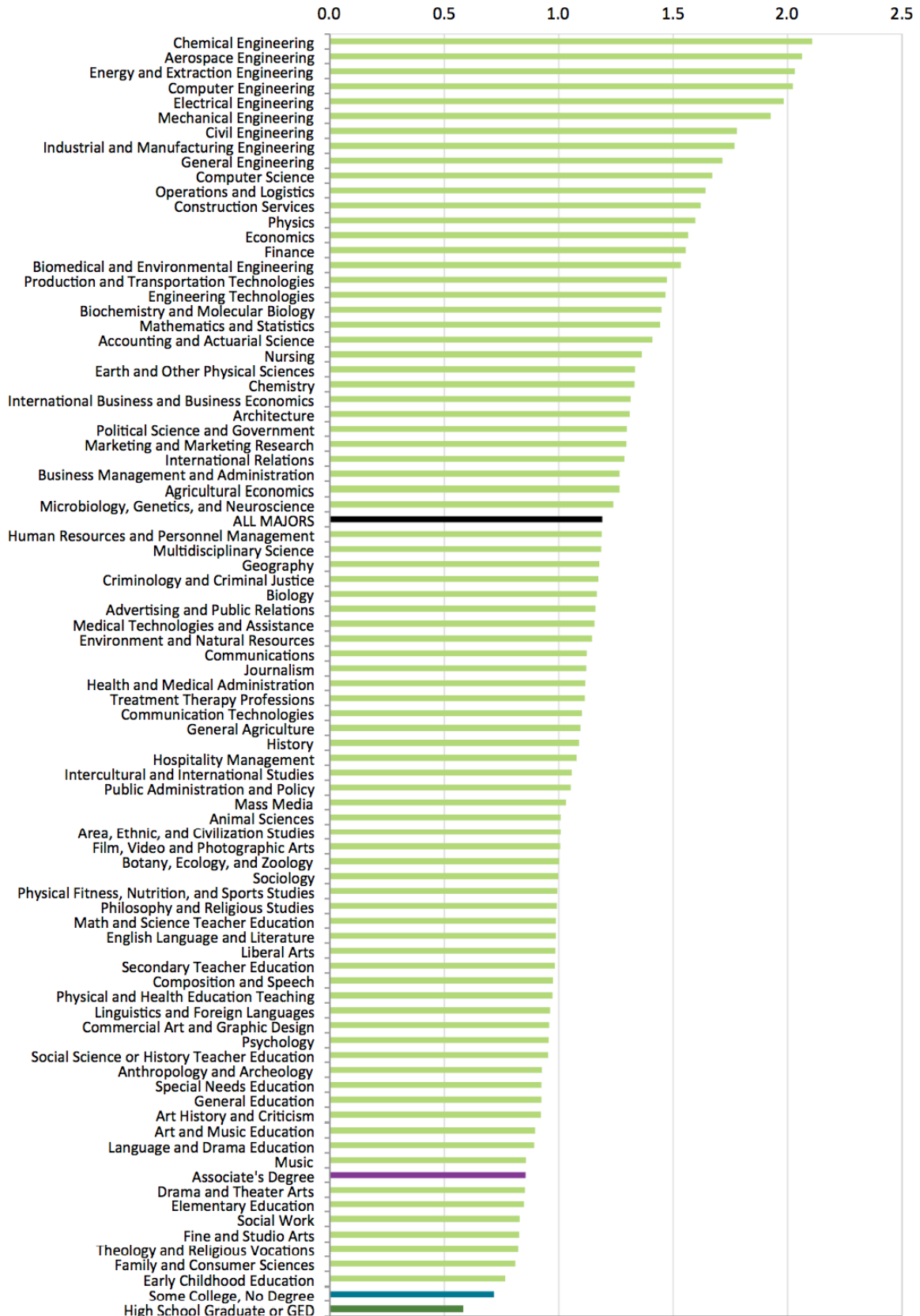
This paints a very important picture to comprehend. The underemployment rate of those with college degrees is very high and very consistent. Alternatives must be demanded by citizens and business executives.

Major Decisions: What Graduates Earn Over Their Lifetimes, by Hershbein and Kearney, The Hamilton Project, Sept. 29, 2014.

The authors do a nice job of providing a list of many of the highest paying jobs that require a college degree, but some majors pay a lot better than others. Of course, other researchers have found that high school graduates with narrowly tailored credentials can make a lot more than many college graduates. Therefore, it is very important that accurate and specific data be provided to individuals to make wise career choices based

on facts rather than the standard fare that we have all been misled to believe that one can only be successful in life with a college degree in hand.

Figure 2: Median Lifetime Earnings, by College Major (millions of dollars)



The College-Graduate Glut: Evidence From Labor Markets, by Vedder, July 20th, 2012.

“The price system works marvelously to allocate resources in our society, but in higher education, prices often do not reflect the true value society places on resource usage, as they are often distorted by a variety of policies. The price of elite colleges, for example, is actually well below what demand-and-supply conditions would warrant, while the price of college in general has been distorted upward by extravagant federal student financial-assistance programs....

“But labor markets are largely free of these distortions, and very recent evidence from them on the whole supports the hypothesis that the huge gains from obtaining a bachelor’s degree may be diminishing for a simple reason: Supply has been rising faster than demand for college graduates.

“The large differential between the earnings of high-school and college graduates is often cited as proof that college has a high payoff. Elsewhere I have argued that this is not an entirely useful comparison, since the behavioral traits of high-school graduates are markedly different than those who complete college. Moreover, those differentials have actually narrowed some in recent years. Compare 2008 and 2010, looking at the average earnings of those working full-time, year-round. For males with a high-school education, earnings rose 1.87 percent, while for those with bachelor’s degrees, they fell 4.17 percent (for those with master’s degrees, earnings were essentially unchanged). Those with a less than 9th-grade education fared better in terms of earnings change than those with degrees, whether associate, bachelor’s, or master’s. In inflation-adjusted terms, the earnings of those with bachelor’s degrees on average fell well over five percent (and over \$3,500 in absolute dollars) at a time when college costs were rising at least as much.

“... As more and more college graduates take jobs as janitors, bartenders, truck drivers, etc., I suspect we will see the earnings differentials narrow more, at the same time that college costs continue to rise at rates greater than inflation. However, people respond to market conditions. If the gains from a college degree fall relative to its costs, people will start seeking substitutes, be it in the form of cheaper degrees or in the form of non-degree credentialing.

“Partly by design, colleges develop cultures that are relatively isolated from the real world. Highly subsidized, the university community is loath to change, contemptuous of the discipline of markets.... College professors hold views on a wide variety of issues fairly widely at variance with those of the American population, for example. Concern

about labor-market outcomes of students is decried by some as “mindless vocationalism” or “corporatist thinking.”

This is due to their own inability to survive in such an environment – they simply don’t have the talent/intelligence for the market. This frightens them and makes them feel very insecure, which is the reason for their contempt of it (most people instinctively hate that which frightens them). If they were capable, they would be confident of their abilities and wouldn’t need the unwarranted protections they currently expect and enjoy.

“This sort of political myopia may have serious adverse consequences on the academy in the long run. You cannot thumb your noses at economic realities or popular opinion forever without having people ask “Why are we subsidizing this activity?”

The Ever-Tightening Job Market for Ph.D.s: Why Do So Many People Continue to Pursue Doctorates?, by Mckenna, The Atlantic, April 21, 2016.

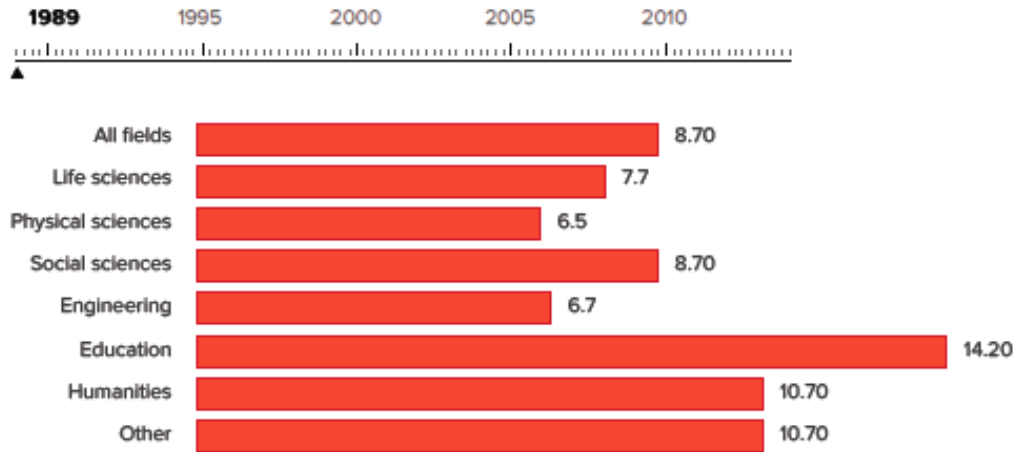
The author references a report, *Doctorate Recipients From U.S. Universities* by the National Science Foundation Dec. 2015, to reveal a problem with the number of people pursuing Ph.Ds. “The report finds that many newly minted Ph.D.s complete school after nearly 10 years of studies with significant debt and without the promise of a job. Yet few people seem to be paying attention to these findings; graduate programs are producing more Ph.D.s than ever before. ... Ph.D.s are typically nearing or in their 30s by the time they begin their careers. Many of their friends have probably already banked a decade’s worth of retirement money in a 401K account; some may have already put a down payment on a small town house.

“... So, you would think that this kind of information, which has already been discussed in many news articles and books over the years, would dissuade universities from admitting more students. You might even think that super smart students would try their hands at other careers. After all, when news about the bad employment market for lawyers came out, the number of applications to law schools plummeted. Wouldn’t the same thing happen to Ph.D. programs? Apparently not.

“... Why hasn’t all this information helped winnow down the ranks of aspiring professors – why hasn’t it proved to be an effective Ph.D. prophylactic? Are people risking so much in the hopes of getting a cushy job with a six-figure salary and no teaching requirements? Is it because academia is a cult that makes otherwise sane people believe that there is no

life outside of the university? Are graduate programs failing to inform their students about the realities of the job market?"

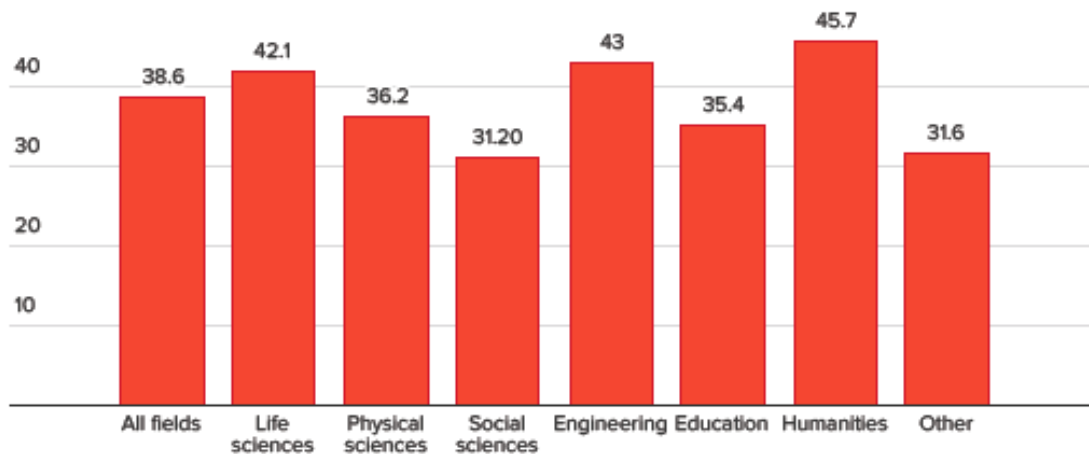
Median Years It Took to Receive a Doctorate, 1994-2014



[Get The Data](#) | [Embed](#)

The Atlantic

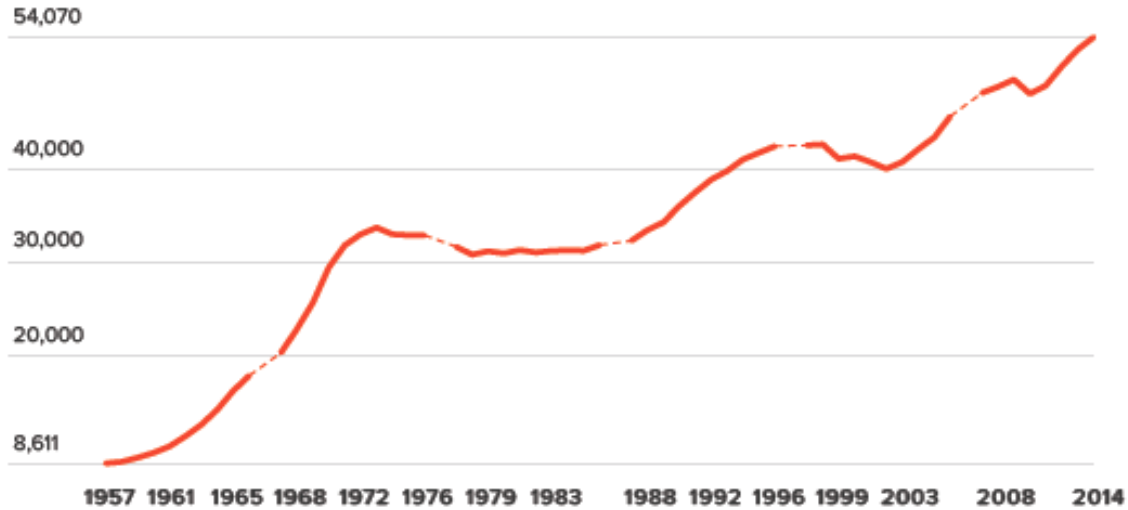
Percentage of Doctoral Recipients Without Employment Commitments, 2014



Source: NSF, NIH, USED, USDA, NEH, NASA, Survey of Earned Doctorates | [Get The Data](#) | [Embed](#)

The Atlantic

U.S. Recipients of Doctorate Degrees, 1957–2014



Source: NSF, NIH, USED, USDA, NEH, NASA, Survey of Earned Doctorates | [Get The Data](#) | [Embed](#)

The Atlantic

I believe this article demonstrates that the quest for graduate degrees is often driven by the pursuit of status and prestige, which is an illogical motivator and which make many people so arrogant as to be intolerable; or because graduate candidates know no other life than academia; or, in some cases, it might be due to the love of a subject, which is perfectly respectable. Given the time frame and the questionable returns on investment, individuals seeking doctoral degrees really need to consider costs versus benefits absent the hype many get caught up in. In other words, wisdom needs to come into play.

For those who do not have a significant amount of wealth at their disposal, this article reveals the foolishness of drinking the academic Kool-Aid. The “aura” that surrounds graduate degrees in the minds of many, needs to be dispelled so real world decisions can be made based on the true value and contributions such degrees might offer society and the credential holder.

Status and prestige are empty idols that provide nothing to society. They simply swell the heads of those with graduate credentials since they were told they are the most special people in the world. This is a relic of our feudal past when it was believed there were superior genes – hence the term *blueblood* and a lot of selective in-breeding. Of course, the belief in genetic superiority was the origin of the American Progressives’ ambitions with eugenics and the Nazis’ adoption of this effort but escalating it into genocide.

The foolishness of so many people pursuing an empty promise demonstrates that Ph.D. holders are not as smart as academics would have us believe. They may very well have a talent in a given specialization, but this does not mean they are any more intelligent in other realms. In fact overspecialization tends to diminish their understanding of the

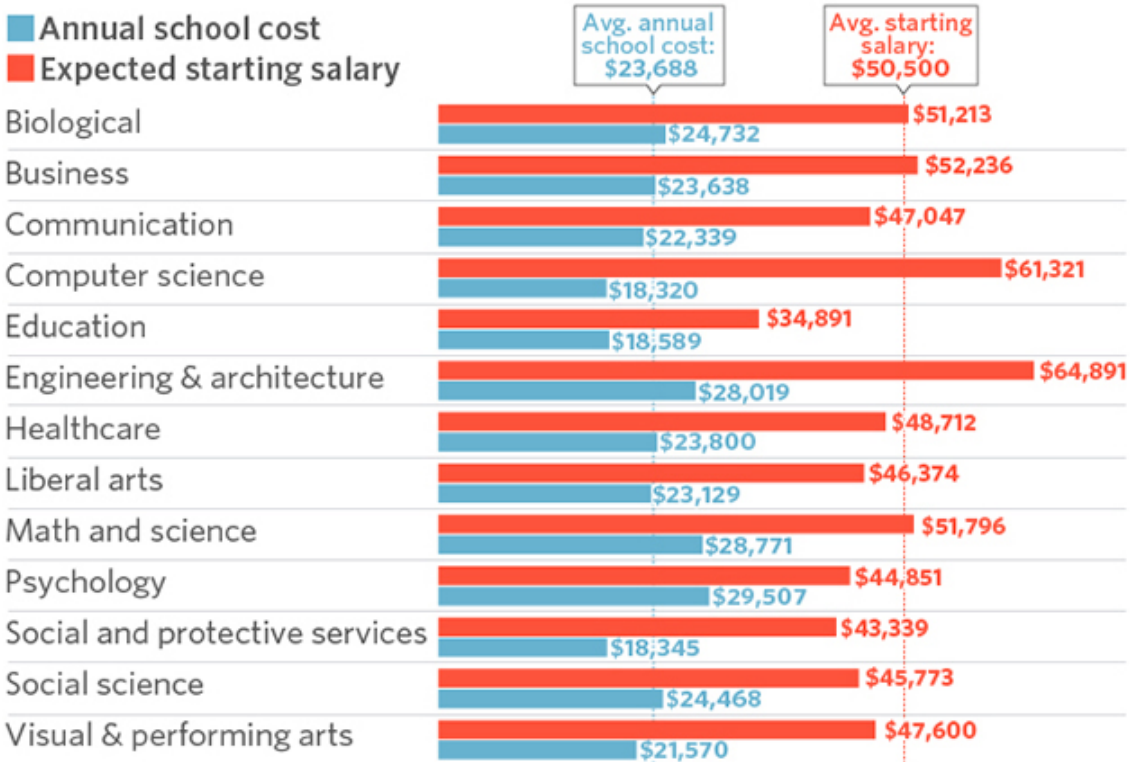
bigger picture, making it more difficult for them to connect dots outside of their specialization. This may also be due to the academic community prohibiting specialists from stepping outside their own field of study. Specialists' turf is very jealously guarded by their own.

It's time to shed light on the charade academia has been perpetuating that Ph.Ds. are of superior stock and intelligence. The quantity of education they thrive on does not equate to quality. To the contrary, quantity, in many cases, diminishes quality when quantity, as we now have it, becomes the goal.

This Chart Shows the True Cost of a College Degree Really Depends on Your Major, by Berman, Market Watch, June 30, 2016.

What a college degree really costs

The return on investment is different for different majors



Source: Sallie Mae

***What's The Value of An Associate's Degree?: The Return On Investment For Graduates and Taxpayers*, by Jorge Klor de Alva and Mark Schneider, Nexus Research & Policy Center and American Institutes for Research, Oct. 2013.**

“In 2011, the median starting salary for graduates of the community colleges in our sample was about \$35,000. On average, graduates from the lowest performing community colleges in our study (20th percentile) earned a median starting salary of about \$31,600 (or about \$3400 less than the median starting salary), and graduates from the highest performing community colleges in our study (80th percentile) earned a median starting salary of about \$38,500 (or about \$3500 more than the median starting salary). The spread between colleges with the best paid and least well paid graduates widened when we examined mid-career earnings. At mid-career, students graduating from the lowest performing schools (20th percentile) earned on average less than \$44,000, while those graduating from the highest performing schools (80th percentile) earned on average more than \$57,100.

“Even after factoring in the costs that graduates incur when earning the degree, the associate’s degree is a good investment: with a median net gain during a 40-year work-life of more than \$259,000 compared with that of a high school graduate in the state where the community college is located. This translates into an annualized median rate of return of more than 4%.

“However, there is a wide range in net gain, with students graduating from some community colleges realizing gains of less than \$100,000 on their college investment during their work-life, while graduates from other schools experience gains of more than \$400,000.

“As graduates earn more, they pay more in taxes. In turn, taxpayers also benefit, gaining on average \$67,000 in additional tax revenues from a graduate of a median community college. ... However, the annualized benefit to the taxpayer is low – with a median taxpayer ROI of -0.8%.”

5. Shortcomings of public education system

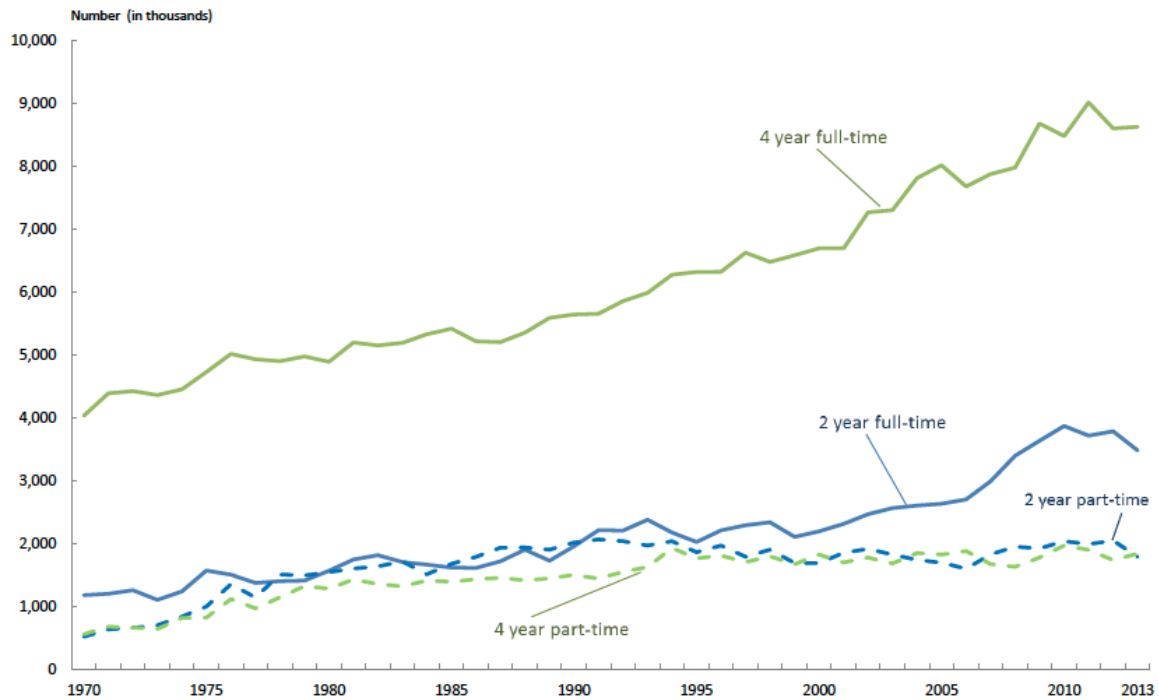
The Lifetime Earnings Premia of Different Majors: Correcting for Selection Based on Cognitive, Non-cognitive, and Unobserved Factors, by Webber, Temple Univ. Dept of Economics, May 2, 2013

Webber offers a very interesting perspective on the “college premium,” i.e. higher lifetime returns that are alleged to occur for those with college degrees. Of course as other data have pointed out, this is not necessarily the case. Amongst other variables, Webber adjusts his data taking ability sorting into consideration.

“Both Cognitive and non-cognitive ability play a large role in the choice of a college major. Given the strong positive link between these factors and wages, failure to account for cognitive and non-cognitive measures will lead to an overstatement of the returns.”

While Webber’s conclusions have been addressed elsewhere and are not particularly eye-opening, ability sorting is a very important issue to take into consideration. There are those who might perform incredibly well in an academic environment but may perform terribly in an economic one. Some people are highly social and perform best when surrounded by many people; while others need to work alone, otherwise they perform terribly. The list goes on and on regarding abilities or personality attributes and the effect they have on outcomes. Therefore, a college degree in and of itself has no significance unless many other issues are taken into account.

Figure A-7. Number Enrolled in College by Type of School and Enrollment Status, 1970 to 2013



Source: U.S. Census Bureau, Current Population Survey.



The same pattern occurred for high school from the latter part of the 19th century to around 1970 when high school graduation rates leveled off. Until the latter part of the 19th century, a high school education was typically an exceptional education with high schools and colleges competing for the same students; and in some cases, high schools outperforming colleges in their students' academic competencies. However, as more people entered high schools in the 1890s and beyond, the quality of a high school education plummeted until it became useless – other than for the perceived value as a rite of passage into the work force or college.

We see the same pattern occurring with postsecondary education today. As a higher percentage of the school age population enters postsecondary education, the quality of instruction declines – due to the attempt to be all things to all people but with a one size-fits-all strategy, which is an oxymoron – at the same time prices rise due to higher demand. This is inevitable when a system optimized for certain talents – i.e. memory and recall abilities – is inundated with individuals lacking those talents. In addition, graduates discover, to their dismay, that their college degrees – as previously occurred with high school degrees – provide little to no improvement in employability and income. The law of economics dictates that as a population is saturated with a given credential, that credential's value becomes marginalized.

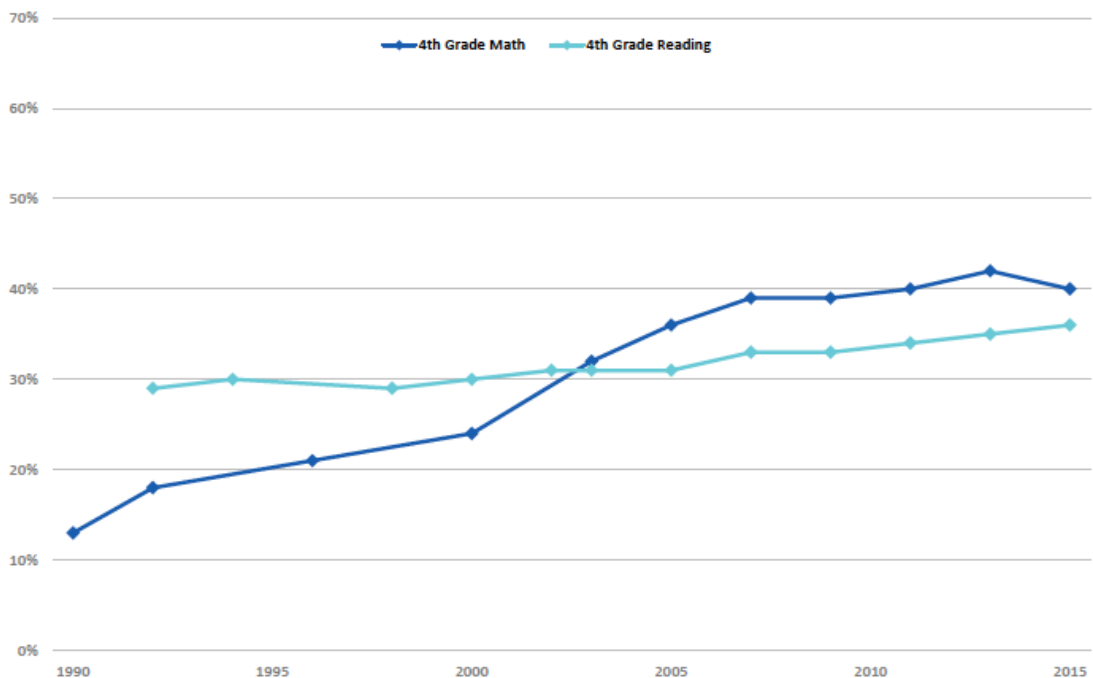
It then becomes an issue where those who do not possess the credential are further marginalized because, given a choice, employers will hire individuals with the higher

credential regardless of its uselessness. It acts like an insurance policy; or it's a choice of the lesser of evils (however, personally, I would not take the person over-credentialed with a college degree because given the first opportunity, that person would leave as soon as a job opening in the appropriate field of study became available). This does not speak favorably of a system society expends trillions of dollars on. In fact, this reveals it is a catastrophic failure.

Rather than continuing down the same 125-year-old misguided policy path of addressing educational challenges strictly based on quantity of education, it's time we break this bad habit and look at quality. If quality were dramatically improved by formulating curricula for the multiple intelligences and interests that exist amongst humans, the quantity we currently labor under, that does tremendous social harm, would actually fall precipitously, thereby saving individuals the time they invest while potentially saving society trillions of dollars.

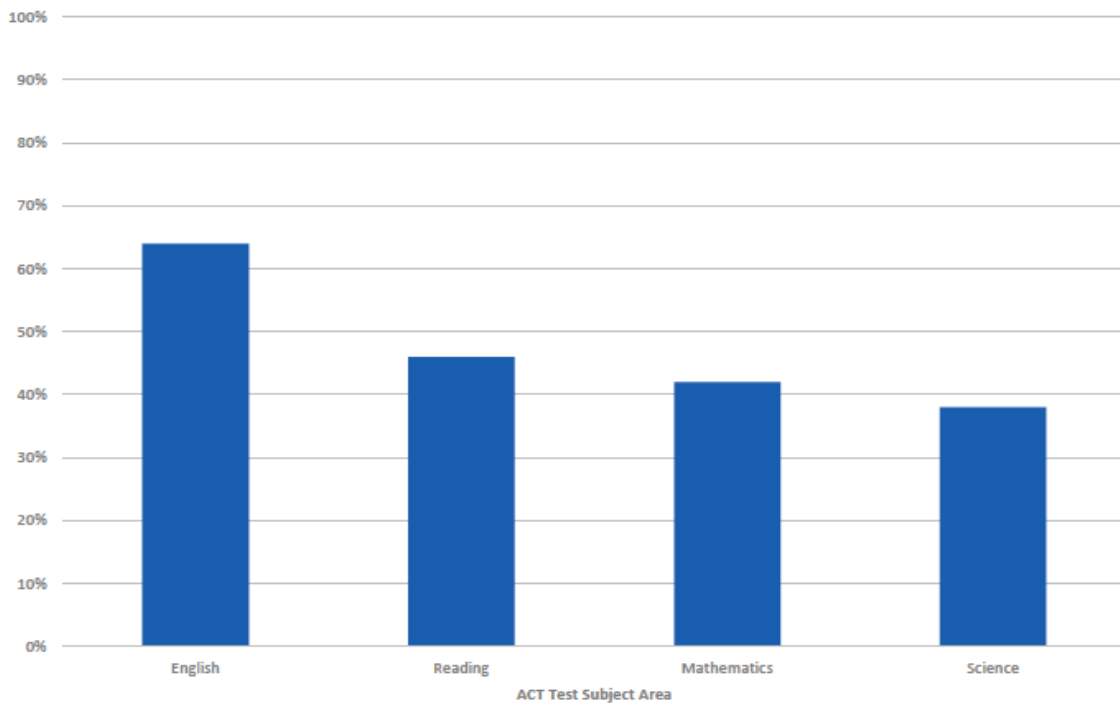
TREND IN U.S. 4TH-GRADE MATH & READING TEST SCORES

Percent of 4th-Grade Students Performing at or above Proficient on NAEP Tests, by Subject Area, 1990-2015



COLLEGE READINESS OF HIGH SCHOOL GRADUATES

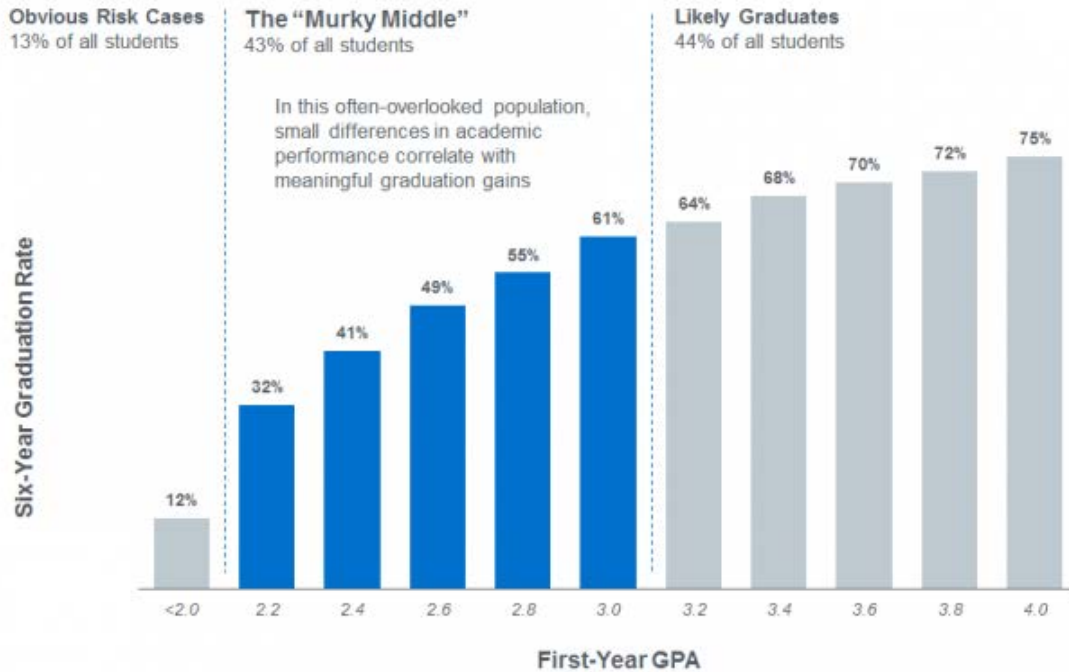
Percent of ACT-Tested U.S. High School Graduates Meeting College Readiness Benchmarks, by Subject Area, 2015



From these two graphs showing academic abilities, we can see the optimization of certain talents by a minority and the marginalization of the rest. Colleges reflect this same trend. If ever there were an example of social inequality, I think this is a glaring one. Trying to improve these numbers without radically changing the system (and not by “dumbing-down” the system) to fit the various intelligences will always prove fruitless, other than small and incremental changes. However, a plateau will be reached which will be impossible to improve, but only after leaving the point of diminishing returns far behind in the history of such an effort. The one-size-fits-all approach does not work.

The ‘Murky’ Middle, Inside Higher Ed, by Tyson, Sept. 10, 2014.

Graduation Rates by First-Year GPA



Access to Attainment: An Access Agenda for 21st Century College Students, Institute for Higher Education Policy

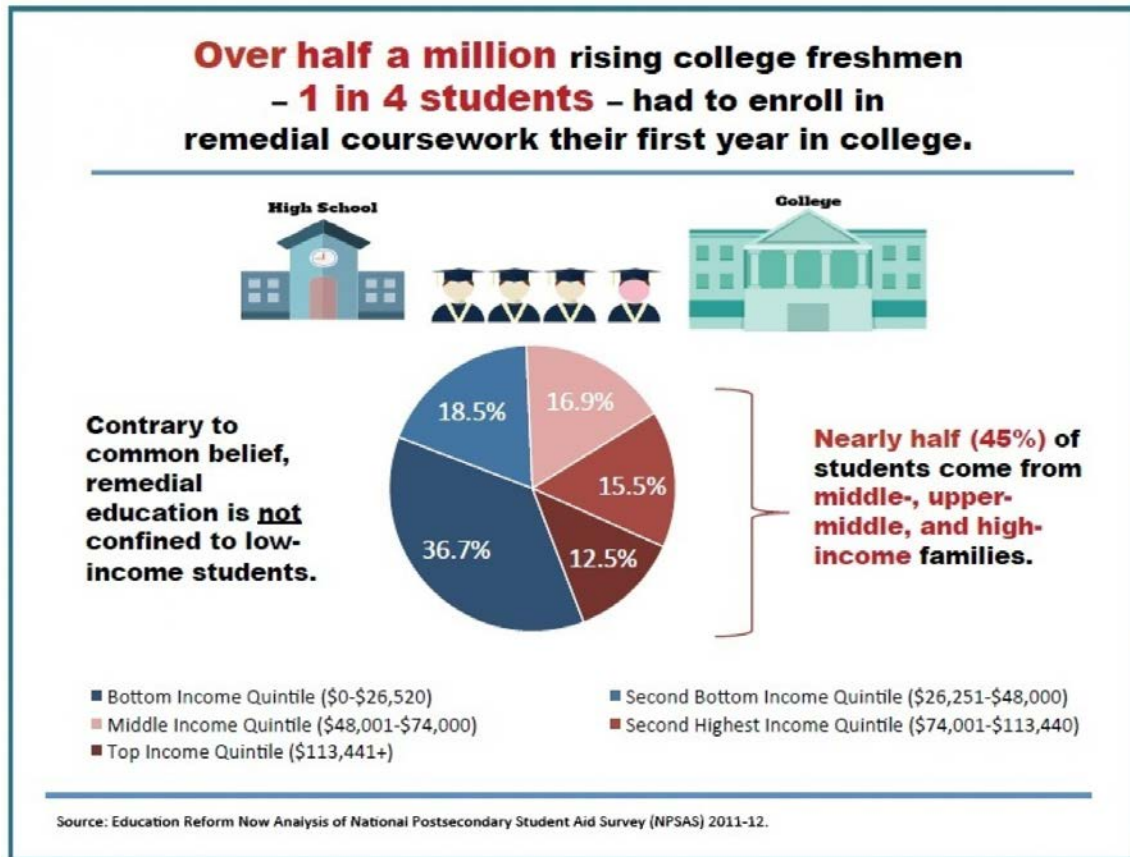
“Fifty percent of college students require remediation; 20% take 3 or more remedial courses.”

Remedial Classes Have Become a Hidden Cost of College, by Gabriel, The Washington Post, April 6, 2016.

The author reports on a study done by Education Reform Now, which shows that remedial classes are costing American families \$1.5 billion per year, yet such classes provide no credit toward a degree, thereby delaying the ability to graduate in a timely

manner. “[S]tudents who take such courses their first year are 74% more likely to drop out of college.” In addition, it is estimated to add another year to college who finally graduate due to a “sub-par K-12 education. ... ‘People are underestimating the breadth and depth of high school underperformance. They think it’s not their kids,’ said Michael Dannenberg ... co-author of the report.”

“The rise in college remediation ... has shifted the expenses of a public K-12 education system into the more privatized higher education market. In other words, families are footing the bill for the failures of primary and secondary school systems.”



This report demonstrates that the public education system is a total failure. Only bureaucracies can get away with such dismal results. Isn't it time we dramatically change this failing paradigm?

Calculating the Costs of Remedial Placement Testing, by Rodriguez, Bowden, Belfield, and Clayton, CCRC Analytics, Community College Research Center, May 2015.

“Many community college students are assigned to remediation. Of the more than one million new students who enter community colleges each fall, nearly 70% are assigned to remedial coursework. These students are deemed underprepared for college-level courses in at least one subject (reading, writing, or math) based on their performance on placement tests taken at college entry. The cost of providing remediation is high – nationwide, the direct cost at community colleges alone may be as much as \$4 billion annually – yet the evidence about the effectiveness of remediation is not compelling.

“Many students assigned to remediation never progress to take college-level courses. And studies comparing students who scored just above and just below the remedial placement test cutoffs have found that, with a few exceptions, assignment to remediation among such students does little to improve student outcomes.”

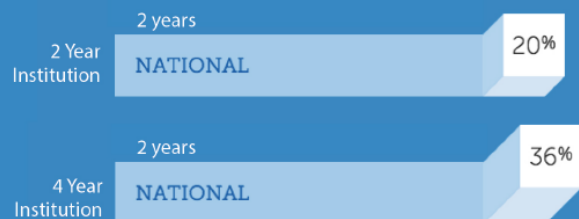
Corequisite Remediation: Spanning the Completion Divide, Complete College America.

Traditional Remediation Fails Most Students

Few remedial students ever enroll in, let alone complete, their introductory (gateway) courses in math and English. Only 17% will graduate.

It comes down to attrition. Most students succeed in their remedial courses but simply fail to enroll in subsequent courses. Off-track and often out of money, more give up than fail. Consequently, many who might have succeeded stop before they ever actually start college-level coursework.

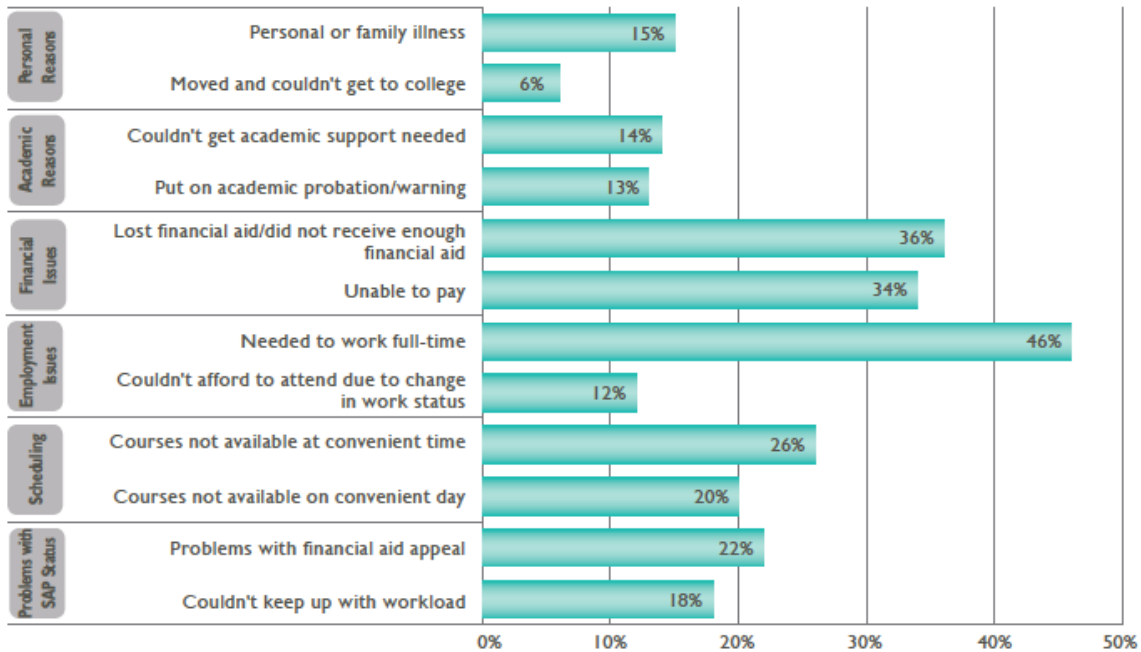
Percent of students enrolled in remediation who complete the associated introductory (gateway) course in 2 years.



Here is yet another example of the problems with a failed educational system.

Adult College Completion In the 21st Century, Higher Ed Insight, by Erisman& Steele, June 2015

FIGURE 4: Reasons for Non-Completion Among Former Students, Ivy Tech Community College, 2013

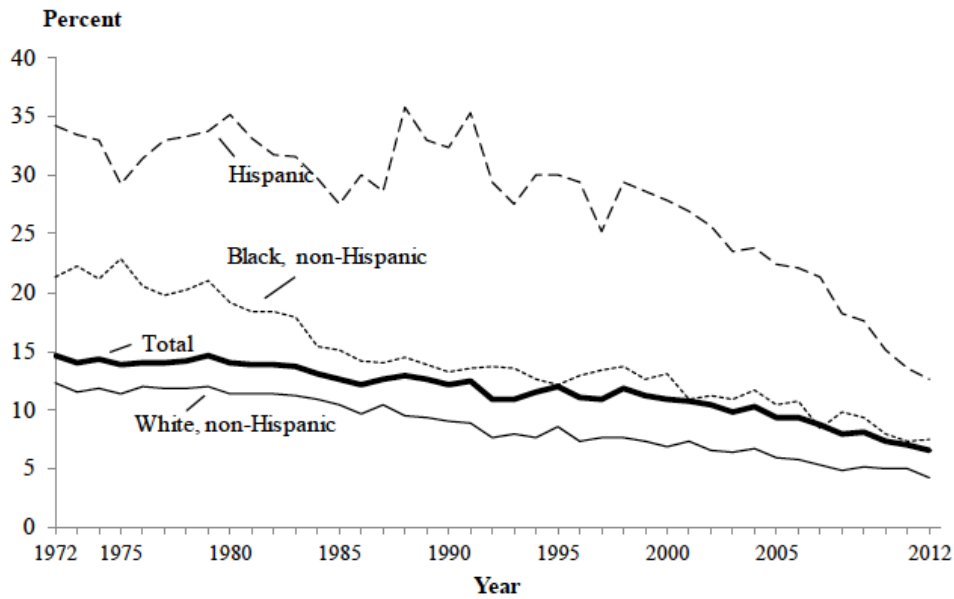


Source: Ninon, Sonia. 2013. *Non-Returning Students Survey Results*. Indianapolis, IN: Ivy Tech Community College.

A burdensome system such as ours, that demands SO much time and money, will always have a large percentage of the population that will not be able to use it. Whereas, changing the paradigm from one of quantity to that of quality will allow most, if not all, citizens to take advantage of a highly effective system.

Trends in High School Dropout and Completion Rates in the United States: 1972-2012, by Stark and Noel, U.S. Dept. of Education, National Center for Education Statistics, NCES 2015-015, June 2015.

Figure 2. Status dropout rates of 16- through 24-year-olds, by race/ethnicity: October 1972 through October 2012



“Note: The status dropout rate indicates the percentage of 16- through 24-year-olds who are not enrolled in high school and who lack a high school credential. High school credentials include high school diplomas and alternative credentials, such as a General Educational Development (GED) certificate. (page 21)

“While GEDs provide an important opportunity for those who do not earn a regular high school diploma to obtain a high school credential, GED recipients tend to fare significantly worse than those holding regular diplomas across a range of measures.”

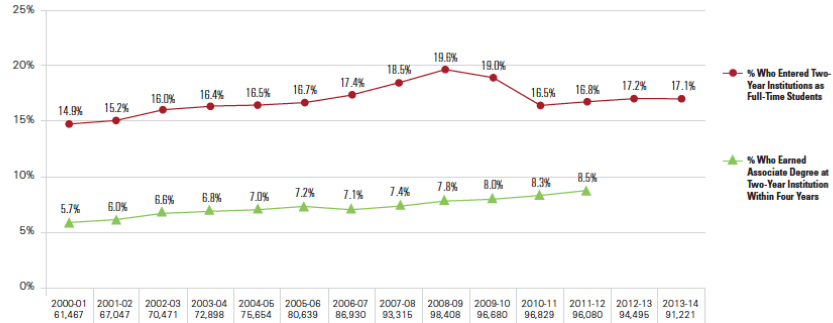
Two-Year Credentials and Enrollment Intensity

Typically, a bachelor's degree earner who subsequently enrolls in a two-year institution will be doing so as a part-time student. On average, for the period covered in this report, only 17 percent of these students began their two-year enrollments on a full-time basis. That percentage climbed to a recession-era high of 20 percent in 2008-09, before stabilizing once again at 17 percent.

Only a small percentage of the post-bachelor's two-year enrollments resulted in an associate degree within four years, although this figure has been gradually increasing. The percentage was just 8.5 percent for 2011-12 bachelor's degree earners, suggesting that the primary goal of enrolling in the two-year institution is more often related to industry certifications or professional licensures.

With data current through June 2016

Bachelor's Degree Earners Who Subsequently Enrolled in Two-Year Institutions: Enrollment Intensity and Credentials Earned at the Two-Year Institutions



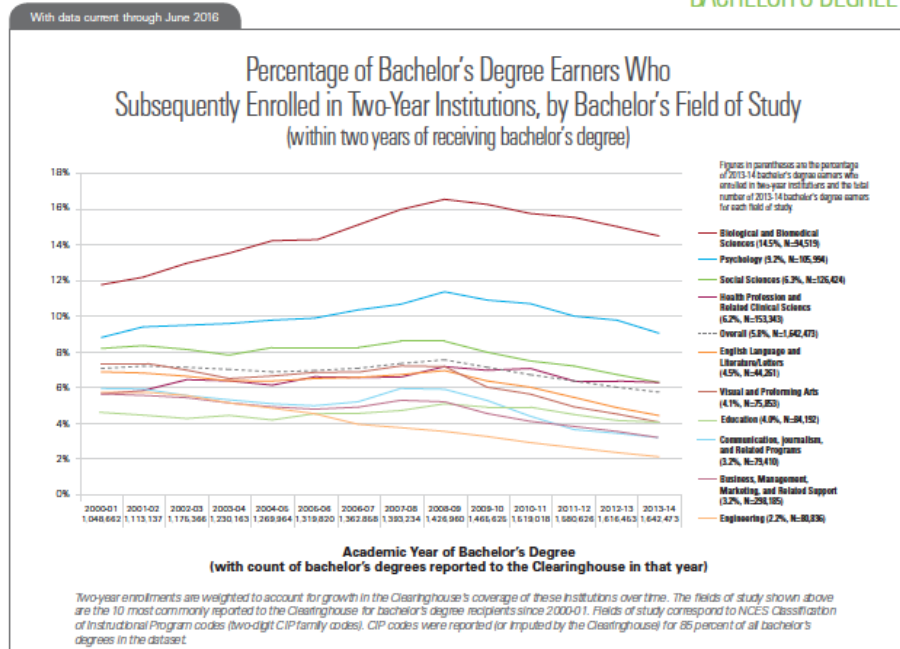
Academic Year of Bachelor's Degree
(with count of bachelor's earners at two-year institutions within two years of earning bachelor's degree)

The percentage who earned associate degrees is limited to those who earned associate degrees within four academic years of earning a bachelor's degree. The enrollment intensity at the two-year institution is based on the starting enrollment intensity for the earliest term at a two-year institution following the bachelor's.

Bachelor's Degree Field of Study

The percentage of bachelor's degree earners pursuing additional education in a two-year institution varies widely depending on the bachelor's degree field of study. Career fields, such as healthcare and social services, often require additional training and credentials that can be earned at two-year institutions.

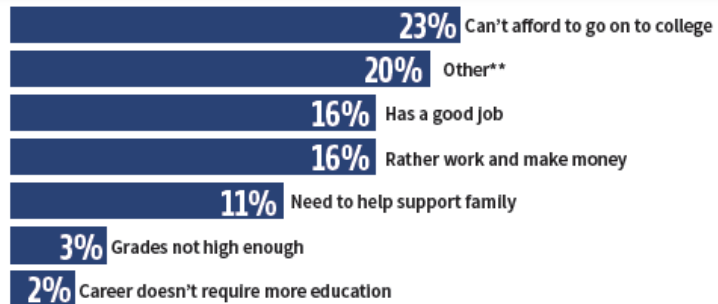
The figure shows two-year enrollment trends for the 10 most common fields of study for bachelor's degree recipients. The fields are listed in descending order by the percentage of 2013-14 graduates who enrolled in two-year institutions within the next two academic years. Since the end of the recession, post-bachelor's enrollment in two-year institutions has declined in each of the fields shown.



These charts indicate that besides individuals attending community colleges for certificates or personal development, many are pursuing degrees since their bachelor's did not prepare them for a career.

The Path Least Taken; A Quest to Learn More About High School Graduates Who Don't Go On to College, National School Boards Assoc., Center for Public Education, Sept. 2014.

Finances were cited most often for not attending college. Yet there were other factors.



**Combines the responses of pregnancy/child care/marriage, taking a break, undecided, military, and other infrequently cited reasons such as incarceration.

Perhaps a more important question to ask is: Why should you go to college? Currently, in the U.S. it is due to lack of alternatives, along with the imprudent notions of status and prestige that a college diploma is supposed to bestow upon the bearer. However, I think Jake New said it well: “Colleges are producing graduates with happy memories of their time in college but little sense of purpose or any ‘clear way forward.’” (*Aspiring Adults Adrift*, Inside Higher Ed, Sept. 2, 2014.) College frequently prolongs adolescence rather than developing well-adjusted adults.

The Labor Market for Recent College Graduates, Federal Reserve Bank of New York.

“This web feature provides regularly updated information on labor market outcomes of recent college graduates. The underlying data are available for download.

“Interactive charts allow users to:

- compare the unemployment rate of recent college graduates with that of other workers;
- monitor the underemployment rate of recent college graduates, as well as trends in the types of jobs held by those who are underemployed;
- track the demand for college graduates, as measured by help-wanted online advertisements; and
- gauge the earnings of recent college graduates against those of workers holding only a high school diploma.

“There is also a table for exploring labor market outcomes of recent

graduates by college major.

“Click on the images below to view the charts and the table, and to access the data. Most of the charts are updated quarterly, and the table annually.”





Explore Labor Market Outcomes ^[SEP] of College Graduates by Major

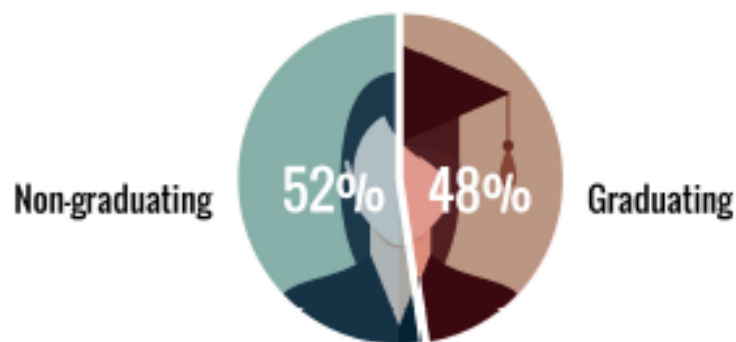
	Unemployment Rate	Underemployment Rate	Median Wage Early Career	Median Wage Mid-Career	Share with Graduate Degree
Accounting	4.0%	26.8%	\$45,000	\$68,000	27.1%
Advertising and public relations	4.9%	46.1%	\$40,000	\$61,000	16.3%
Aerospace engineering	2.4%	20.8%	\$60,000	\$90,000	49.3%
Agriculture	1.8%	54.2%	\$36,000	\$55,000	22.1%
Animal and plant sciences	2.8%	58.7%	\$32,000	\$52,000	35.1%
Anthropology	8.8%	59.1%	\$30,000	\$50,000	47.7%
Architecture	6.8%	37.1%	\$40,000	\$68,000	36.1%
Art history	7.8%	58.9%	\$32,000	\$53,000	42.6%
Biochemistry	4.2%	32.2%	\$35,200	\$75,000	74.1%

“Contact Us: If you have any questions about *The Labor Market for Recent College Graduates*, submit them by email to research.publications@ny.frb.org.”

<https://www.newyorkfed.org/research/college-labor-market/index.html>.

***What Free Won't Fix: Too Many Public Colleges are Dropout Factories*, by Hiler and Hatalsky, Third Way, Aug. 10 2016.**

Graduation Rate at the Average Four-Year Public College



“The graduation rate for first time, full time students at the average four-year public institution is 48.3%. ... This means that today, a first-time, full-time student who enters the average public institution is more likely to NOT graduate from that school than they are to graduate – a reality that should be distressing to any prospective student hoping to earn a degree from the same institution where they first enroll. ... And while many may say that rising costs or a more difficult-to-serve population at four-year public institutions are solely to blame for this low performance, the data simply does not bear that out.”

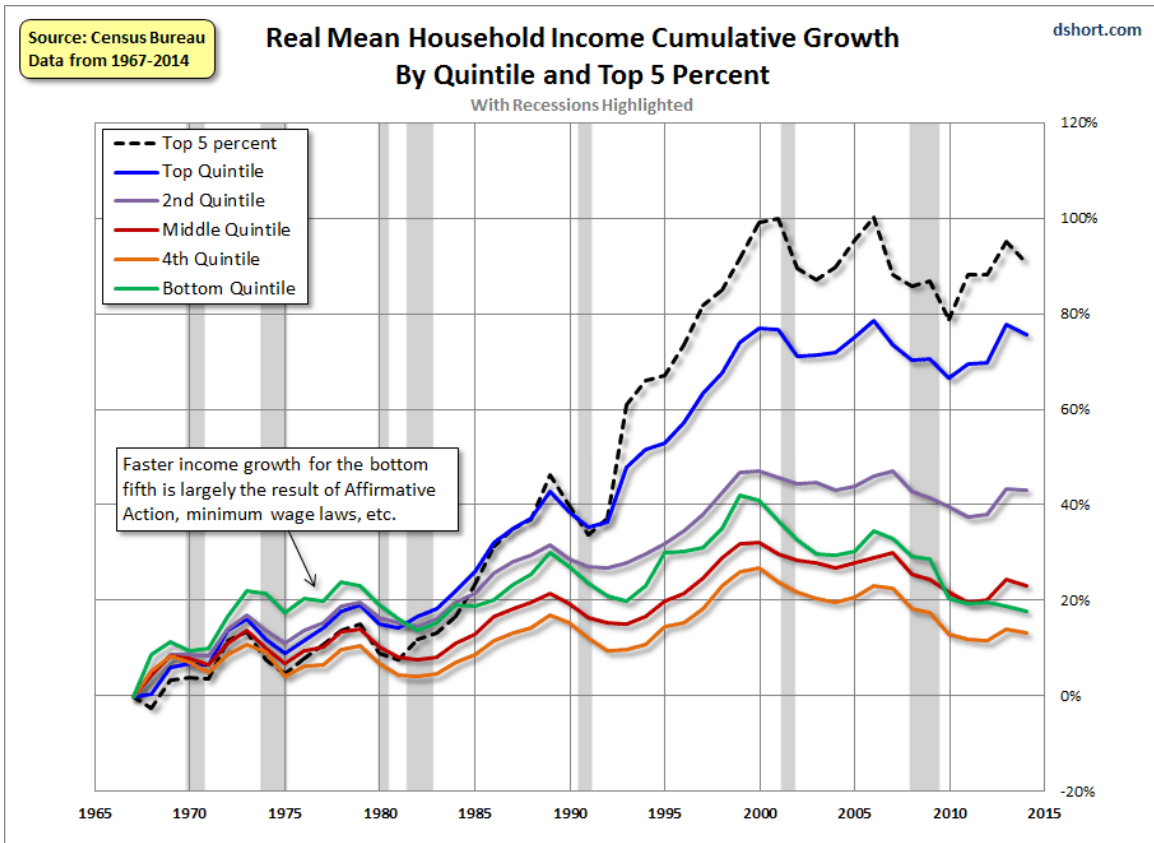
The primary reason for such a high dropout rate is due, in large part, to academics themselves. Many of them believe their job is to weed out as many people as possible in order to maintain academics’ “elevated status.” “Academic rigor” is code for “Let’s make curriculum extremely difficult so as to eliminate a large percentage to make those who make it through the program appear smart.” This is most apparent with gatekeeper courses.

Another reason for such a high dropout rate is the demand that students take courses like algebra (a subject with little to no connection to application in entry level college courses) when their chosen major really has no need of it. In addition, some of the required general education college courses were covered in high school. Intelligent people see this as a wasteful repetition of academic work. The more courses that are repetitive, the greater number of people who will decide college is not for them. Much to the chagrin of academics, many people do not see the college experience as a pleasure. The greater the number of challenges there are, the greater number of people who will walk away from what they see as an unpleasant institutional experience.

6. Income disparities

U.S. Household Incomes: A 47-Year Perspective, by Doug Short, Sept. 17, 2015

“To give us a better idea of the underlying trends in household incomes, we've prepared charts of the [nominal](#) and [real](#) percentage growth since 1967. Here is the real version. Note in particular the growing spread between the top quintile (and especially the top 5%) and the other four quintiles.”



“As for the cumulative household income growth by segment over the past 47 years, the adjacent table shows the real, inflation-adjusted, difference between 1967 and 2014.”

Real Income Growth Since 1967	
Top 5%	90.7%
Top Quintile	75.6%
2nd Quintile	43.1%
Middle Quintile	23.2%
4th Quintile	13.1%
Bottom Quintile	17.7%

<http://www.advisorperspectives.com/dshort/updates/Household-Income-Distribution.php>

Short shows an unsustainable economic trend. As the income divide grows wider, social unrest will escalate. This trend can be reversed by a properly designed educational program that takes all talents/abilities into consideration. In addition, it will also require

the reversal of the concentration of power in a centralized government. Power must be dispersed as far and wide as a social system will allow.

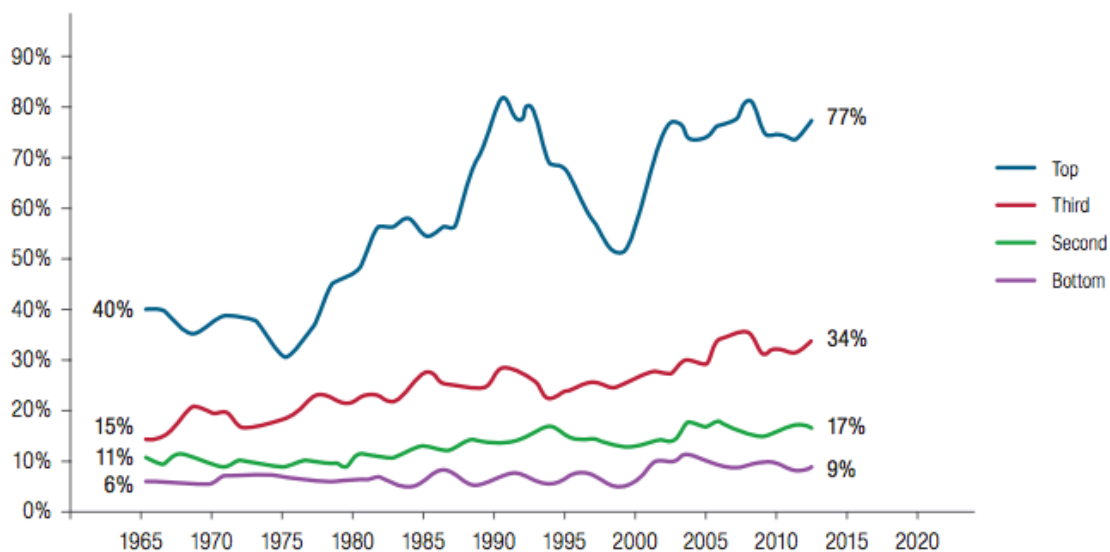
With dramatic changes to education that takes into account the various individual interests and talents, citizens, in large part, will be in the driver's seat.

Though this is a speculative view, it can be imagined that a far larger segment of society will be able to open small companies that will compete with larger ones. Like the positive effects of the dispersal of government power to individuals and municipalities, a properly educated citizenry will spread economic power and wealth to individuals and municipalities as well. The *real income growth* trends shown in the above charts will reverse with the lower quintiles reaping their share through natural forces. This will have the effect of reversing our path down the socialistic road.

The Vast Income Gap in College Degrees, In 3 Charts, by Nelson, Vox, Feb. 4, 2015.

“This chart shows the percentage of 24-year-olds with a bachelor's degree based on their family income. Of the top quartile, 77 percent eventually get a degree. In the bottom quartile, just 9 percent do:

Equity Indicator 5a: Bachelor's degree attainment by age 24 for dependent family members by family income quartile: 1970-2013



“Chart of all 24 year olds with bachelors' degrees”

It is obvious that income does not dictate intelligence; so what this chart reveals is that greater wealth provides greater access to mechanisms colleges have been optimized for. If society abandons its current reverence of college degrees and looks to competency forms of education, the social implications this chart encompasses would lose significance.

7. Alternative paths

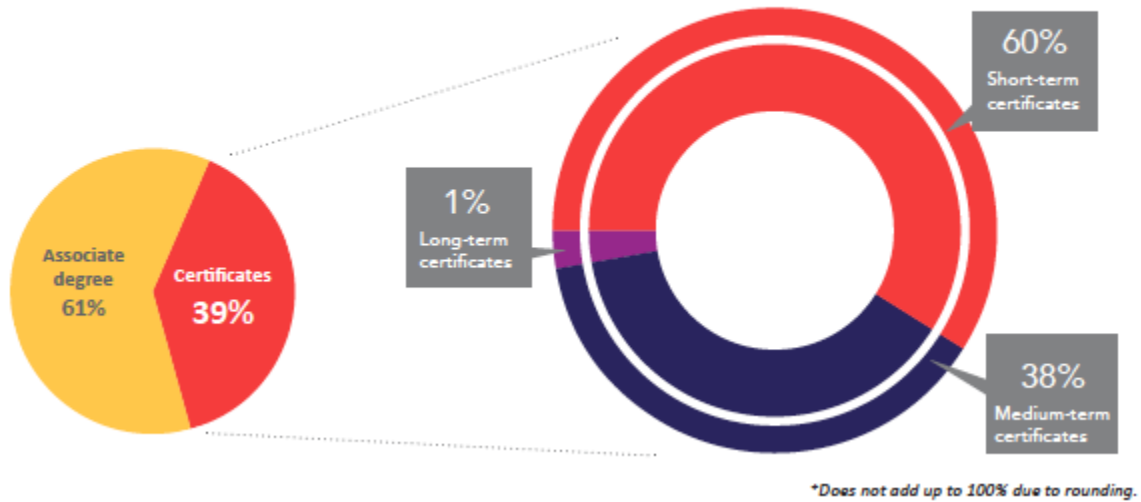
What About Certificates? Evidence On The Labor Market Returns to Non-Degree Community College Awards in Two States, by Xu and Trimble, Community College Research Center, Teachers College, Columbia Univ., Nov. 2014.

“The annual number of certificates (non-degree awards that typically require less time to complete than degrees) awarded by community colleges has increased dramatically since 2000, but relatively little research has been conducted on the economic benefits of certificates in the labor market. Based on detailed student-level information from matched college transcript and employment data in two states, this paper estimates the relationship between earning a certificate and student earnings and employment status after exiting college. **While prior research in this area has explored how returns to certificates vary across broad fields of study, there may still exist substantial variation across programs within broad fields of study.** Our paper extends prior research by examining the returns to specific programs that are most popular in each state. Our results indicate that certificates have positive impacts on earnings in both states overall, and in cases where there is no impact on earnings, certificates may nonetheless lead to increased probability of employment. **In addition, we find substantial variation in the returns across fields of study and, more importantly, across specific programs within a particular field. These results suggest that important evidence is lost when information about the benefits of certificate programs are simply averaged together.**” (Emphasis added) This last point holds true for college degrees as well.

Boom in Certificates, Data Points, American Association of Community Colleges, Jan. 2016.

Between 2000 and 2014, the number of certificates awarded at community colleges increased by 236 percent.

Certificates awarded at community colleges: 2014



The Path Least Taken II: Preparing Non-College Goers for Success, by Jim Hull, Center for Public Education, July 23, 2015.

CHART 1: Credentials matter for non-college goers

Non-college goers with 'high credentials' – that is, a strong high school preparation plus professional certification – were more likely to be employed and have health insurance than college goers, although they were less likely to have a retirement fund.

Percent of 26-year-olds who report that they

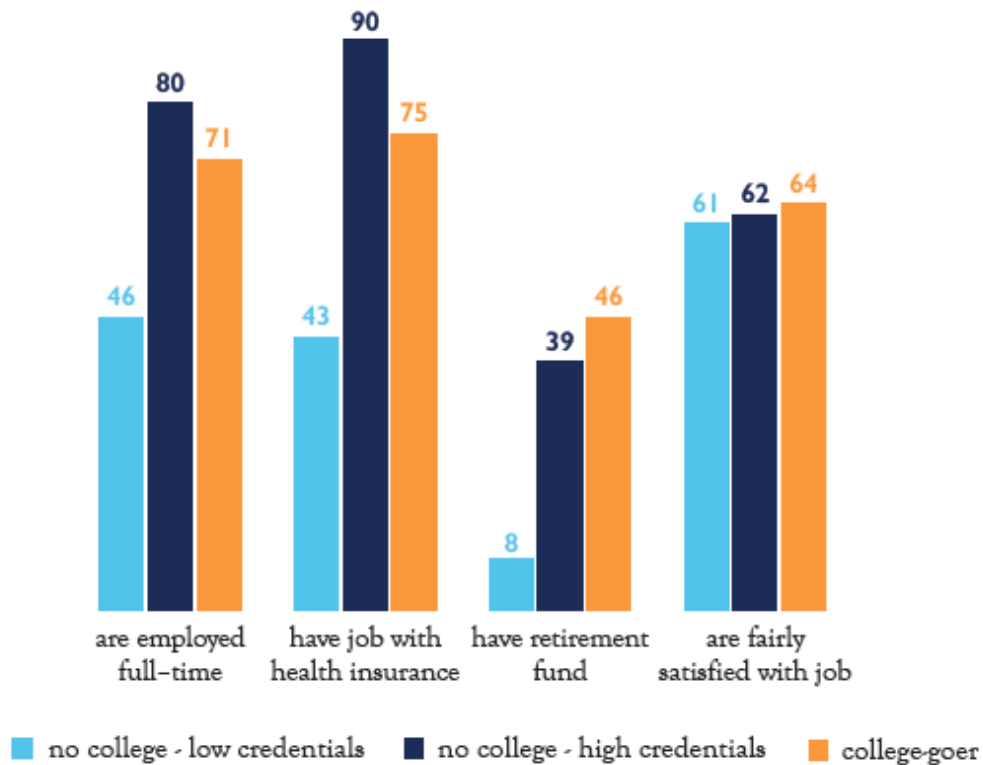
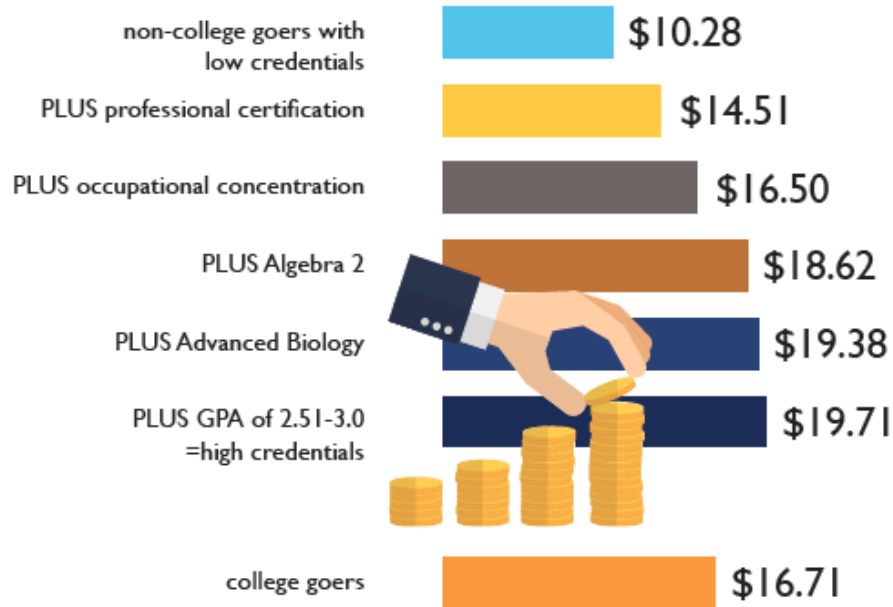


CHART 2: Average hourly wages of 26-year-olds by education and professional credentials



High school preparation can make a big difference for non-college goers, especially when combined with certification.

Each added credential increases average wages to the point that non-college goers with high credentials out earn the average college goer.

26-year-olds who reported they ...	No college Low credentials	No college High credentials	College goers
Had a full-time job (≥ 35 hrs/wk)	46%	80%	70%
Had been unemployed at any time 2009-12			
Ever unemployed	55%	43%	37%
Unemployed more than 6 mos	36%	13%	16%
Hourly wage most recent job	\$10.28	\$19.71	\$16.71
Current employer offers medical insurance	43%	90%	75%
Had a retirement plan in 2012	8%	39%	46%
Supervised other employees at most recent job	29%	47%	40%
Are fairly satisfied with their job	61%	62%	64%
Had ever received public assistance	35%	24%	14%

CHART 3: The employment gap by race narrows as credentials increase

High-credentialed non-college goers of all racial groups are more likely to work full-time than the average college goer

Percent of 26-year-olds employed full-time, 2012

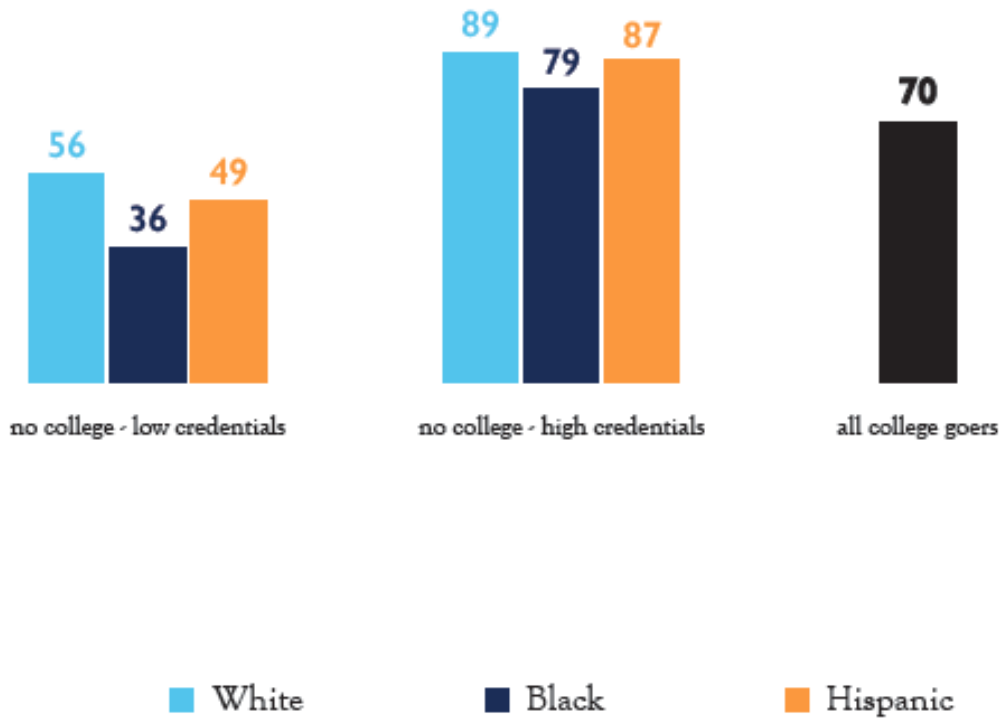


CHART 4: High-credentialed non-college goers of all racial groups are more likely to earn more than the average college goers

Hourly wages of 26-year-olds, 2012



26-year-olds who reported they ...	No college Low credentials	No college High credentials	College goers
Registered to vote	57%	82%	81%
Voted in recent local, state, or national election	29%	39%	42%
Performed volunteer work in last two years	18%	35%	44%

“Recent research is clear that it takes more than a high school diploma to obtain a good job. But this doesn’t have to mean earning a four-year degree. In fact, it doesn’t necessarily mean tomorrow’s jobs will require a two-year degree. As this study has shown, training that leads to a professional license along with a strong academic high school program can translate into positive economic and social outcomes for young adults.”

This demonstrates that a rigorous applied studies program should improve what Hull is providing in this report.

“Our analysis points to professional licenses or certification as the credential with the most value for a non-college goer in terms of employment, wages, and social engagement. Interestingly, taking random vocational courses from different occupational disciplines had little effect. But taking at least three courses in a specific labor market area significantly increased the chances a non-college enrollee had a good job after high school, particularly if those vocational courses also led to a professional certification or license.

“... Finally, it’s important for schools to provide all students with knowledgeable college and career counseling, even beginning as early as middle school, in order to help students make informed decisions about the personal career and educational goals and help them develop plans that will get them there.”

Why It’s Time to Disrupt Higher Education by Separating Learning From Credentialing, by Kennedy, Castro, and Atkinson, Information Technology & Innovation Foundation, Aug. 2016.

“Creating alternatives to traditional degrees would let students pursue their best options for learning and apply competitive pressure on colleges and universities to improve quality and reduce the costs of education.

“Across modern economies, innovators and entrepreneurs are marshaling the power of information technology to reorganize business processes and reimagine entire industries, thereby improving quality and lowering the costs of goods and services. But higher education has largely escaped such disruption, even as IT and the Internet have created new ways to research, learn, and impart knowledge. The reason is that colleges and universities hold a unique franchise: They are responsible for educating students and for granting them degrees. Schools thus lack incentive to help students learn outside the classroom, even if it would lower costs or be more effective, since it would cut into their revenue, and they lack incentive to raise standards for their degrees because it would drive away customers. Students meanwhile have little incentive to push themselves harder than necessary to earn their degrees, since degrees are opaque, deriving their value from institutional brands rather than clear measures of academic achievement. This paper argues that the federal government should spur reform by promoting alternatives to traditional college diplomas that allow individuals to more effectively demonstrate educational mastery to prospective employers. This would give students the freedom to pursue their own best options for learning, incentivize students to study harder and schools to teach better, and apply competitive pressure on colleges and universities to reduce to costs of education.

“There are at least two major problems with allowing colleges and universities to control through granting of degrees the primary way learning outcomes are assessed. First, these institutions usually limit students from mixing and matching various, and usually cheaper, ways of learning ... if students want to receive the ‘sheepskin’ showing mastery. ... Second, since each college and university has its own grading practices and degree standards, students, parents, and employers have little ability to compare the quality of education that different schools provide for a particular degree. Instead, each school is evaluated mostly on reputation and other factors such as quality of its facilities, notoriety of its graduates, and SAT scores of entering students. This lack of transparency regarding outcomes diminishes the incentives schools have to compete on how well they actually educate students, and also the need for students to work hard, because many know this will have limited bearing on their future employment prospects, as long as they do enough to simply earn a diploma. This is one explanation of why the quality of higher education in the United States is uneven, and many college graduates enter the workforce underprepared.

“If we want more educational innovation and lower costs, as well as higher-quality educational outcomes, then it is time to break the legacy connection between teaching students and certifying their academic achievements and move to a model where students have alternative ways of demonstrating their knowledge and skills. ... The federal government should [foster] the creation of a national network of certified organizations that assess the learning and skills of young people before they enter the workplace. ... Congress can move America’s higher education system in this direction by taking the following steps:

- Establish a process to accredit organizations that provide certifications;

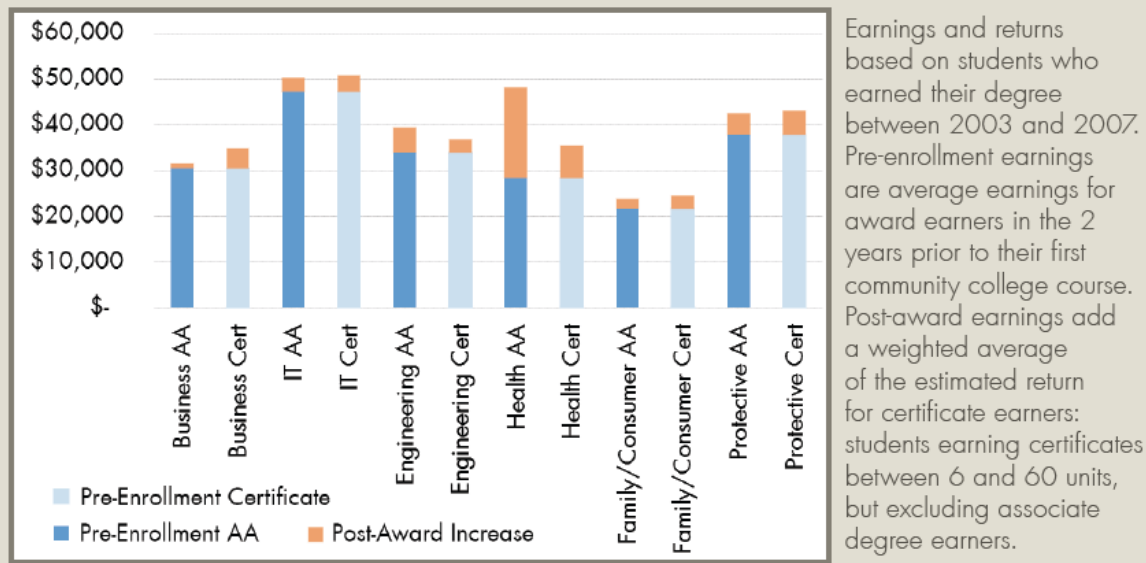
- Encourage federal agencies to accept alternative certifications in lieu of degree requirements;
 - Require the administration to encourage the private sector to recognize and rely on alternative certifications in their hiring decisions;
 - Allow students to use federal aid for alternative learning options, such as MOOCs;
 - Ensure graduate programs consider applicants with alternative certifications; and
 - Require the administration to conduct a regular survey of employer needs.”
-

Community College Career Technical Education Programs Significantly Increase Earnings, by Stevens, Kurlaender and Grosz, Center for Poverty Research, Vol. 4, No. 5

“Using administrative data from California, we find that students who earn vocational certificates and degrees see large earnings gains that vary substantially by course of study. ...

“These estimates show that CTE programs can boost workers’ earnings, but that the size of returns varies by the length and type of CTE program. Information on the likely returns to specific programs, such as those estimated here, should be made available to CTE students so that they understand the likely financial outcomes and can choose programs that both fit their career goals and offer meaningful wage returns.”

Figure 1: Pre-enrollment Earnings and Post-award Returns across CTE Fields



Do the Benefits of College Still Outweigh the Costs? By Abel and Deitz, Current Issues in Economics and Finance, Federal Reserve Bank of New York, Vol. 20, No. 3, 2014.

“In recent years, students have been paying more to attend college and earning less upon graduation – trends that have led many observers to question whether a college education remains a good investment.”

The College Wage Premium: Average wages for those with a college degree compared to those without one, which, *on average*, is higher than those with only a high school degree – but not always. The college wage premium is misleading and bad information if the data is not broken down into the return on each and every degree that is offered. For example, on average, those with, social science degrees have the same average income as those with a high school degree, yet they invested significant time and money – not including the opportunity cost – in the pursuit of such degrees. Hardly a wise economic investment.

Average Wages Over Time: Over time, wages for the various levels of education fluctuate. For example, the average wages of those with a bachelor’s degree “spent as much time declining as increasing during the past four decades. ... In fact, the falling wages of workers with a bachelor’s degree during the 1970s raised concerns that the large number of people going to college had produced an overeducated workforce. ... Between

2001 and 2013, the average wage of workers with a bachelor's degree declined 10.3%, and the average wage of those with an associate's degree declined 11.1%; for high school graduates, the average wage dropped a more modest 7.6%. ... College graduates entering the labor market during recessions start their careers earning less than those who enter in better times, and this wage penalty can carry forward throughout their working lives." However, as statistics show, *on average*, the wage premium for those with college degrees has been a positive trend.

Lifetime Earnings: Wage profiles for each education group – high school only, associate's, and bachelor's degrees – “can be used to estimate expected lifetime earnings by adding up the wages a worker typically earns over his career.” The authors assumed “that all workers retire at age sixty-five and that those who, as students, pursued a college degree followed the traditional full-time path – taking two years to complete an associate's degree or four years to complete a bachelor's degree – and did not earn wages while enrolled in school.”

Economic Costs of College: The authors “measure two components of the costs associated with obtaining a college education. The first is *direct costs*, which include the out-of-pocket expenses associated with attending college that would not otherwise be incurred. Tuition is the clearest example of a direct cost. By contrast, room and board ... needs to be paid regardless of whether someone decides to go to college, so it is not considered a direct cost of college from an economic perspective. The second type of cost is an *opportunity cost*, which represents the value of what someone must give up to attend college. For most people, the opportunity cost of a college education is equivalent to the wages that could have been earned by working instead of going to college.”

Direct Costs: “While published tuition and fees [provided by the College Board and the U.S. Dept. of Education] represent the ‘sticker price’ for attending college, many students, if not most, do not actually pay this price. Because of the many forms of financial aid students receive ... the actual prices students pay may differ significantly from these figures. Using data on the various forms of aid students receive, we compute the average ‘net tuition’ cost, which subtracts funds students receive that need not be paid back....” The mistake with calculating educational costs this way is that once students graduate and enter the work force, they will subsidize younger people's education through taxation. So to say that students will not need to pay back the assistance they received is truly a misnomer. It is simply a postponed *indirect cost*.

“As for how much these [direct] costs have changed over time, the sticker price of a bachelor's degree has increased sharply, more than tripling from about \$4600 per year in the 1970s to nearly \$15,000 per year in 2013. ... [T]he sticker price of an associate's degree nearly tripled from roughly \$1100 per year in the 1970s to more than \$3000 per year in 2013.....”

Opportunity Costs: “As explained earlier, attending college on a full-time basis often requires delaying entry into the labor market and forgoing wages that would be available to those with a high school education. Thus, the average wages earned by a high school

graduate during his first two or four years of employment provide a good proxy for the opportunity cost of college. our 2013 life-cycle wage estimates indicate that someone pursuing a bachelor's degree would forgo almost \$96,000 in wages....”

Total Costs: “We now put the pieces together, adding direct costs and opportunity costs to estimate the total costs of a bachelor's degree and an associate's degree over time (Chart 4). ... We estimate that over the four years typically required to earn a bachelor's degree, a student would have paid about \$26,000 in tuition and fees and would have forgone nearly \$96,000 in wages. Thus, the total economic cost of a bachelor's degree was about \$122,000 (top panel). For an associate's degree, total costs amounted to roughly \$43,700 in 2013 (bottom panel). As the Chart makes clear, forgone wages have represented the vast majority of the total costs of college for more than four decades.”

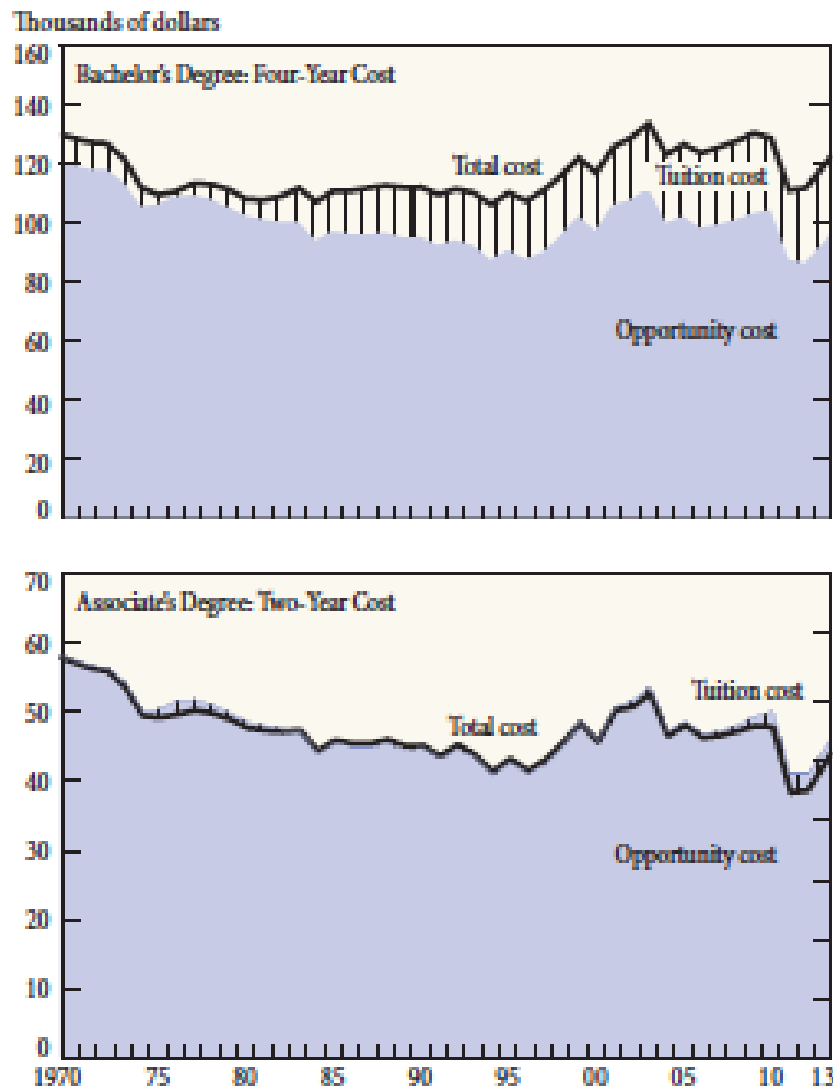
Conclusion: “With tuition rising, wages falling, and many college graduates struggling to find good jobs, the value of a college degree may seem to be in doubt. However, these factors alone do not determine whether a college education is a good investment. Indeed, once the full set of costs and benefits is taken into account, investing in a college education still appears to be a wise economic decision for the average person.

“Why is this the case? The answer lies in the declining fortunes of those without a college degree....”

Here lies the dilemma Americans face: Continue the same trend that started in the first half of the 19th century – i.e. continue increasing the volume of education required by citizens without any self-reflection by society of whether this strategy is working – or look at alternative systems, such as Switzerland, for winning examples. If we adopted innovative systems, this “college for all” approach would evaporate.

Chart 4

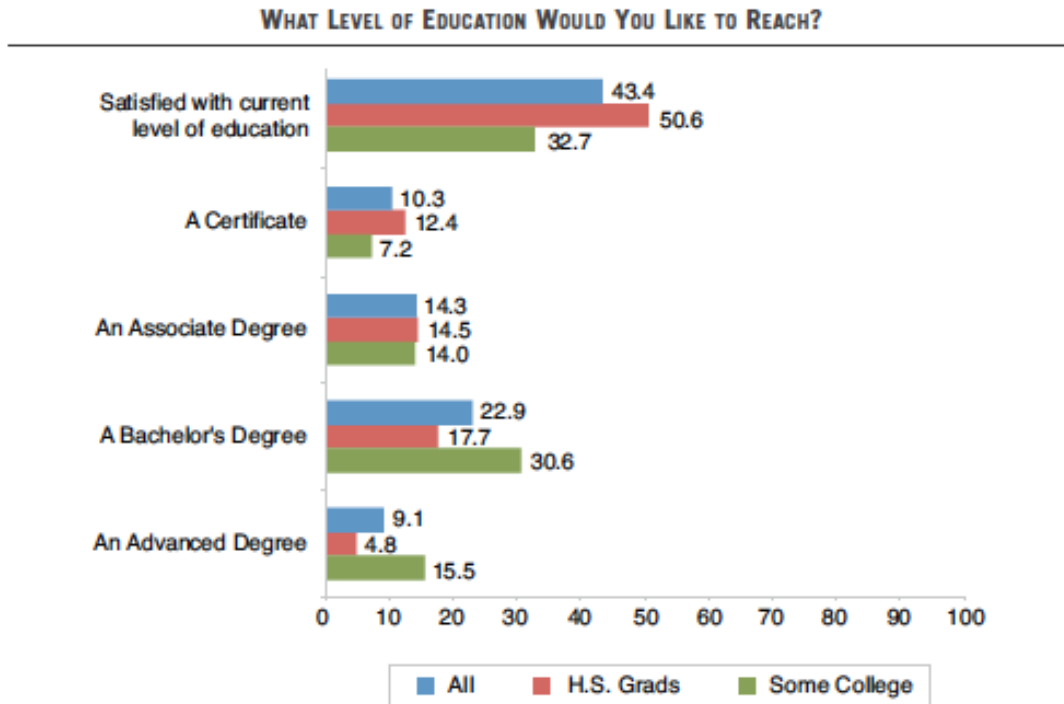
Total Cost of a College Degree 1970-2013



Sources: U.S. Census Bureau and U.S. Bureau of Labor Statistics, Current Population Survey, March Supplement; U.S. Bureau of Labor Statistics, consumer price index; U.S. Department of Education, Digest of Education Statistics 2012; The College Board, Trends in College Pricing 2013 and Trends in Student Aid 2013.

Note: Dollar figures are expressed in constant 2013 dollars. For associate's degree figures, net tuition costs are negative when opportunity costs exceed total costs.

High Costs, Uncertain Benefits: What Do Americans Without a college Degree Think About Postsecondary Education?, by Kelly, Center on Higher Education Reform, American Enterprise Institute, April 2015.



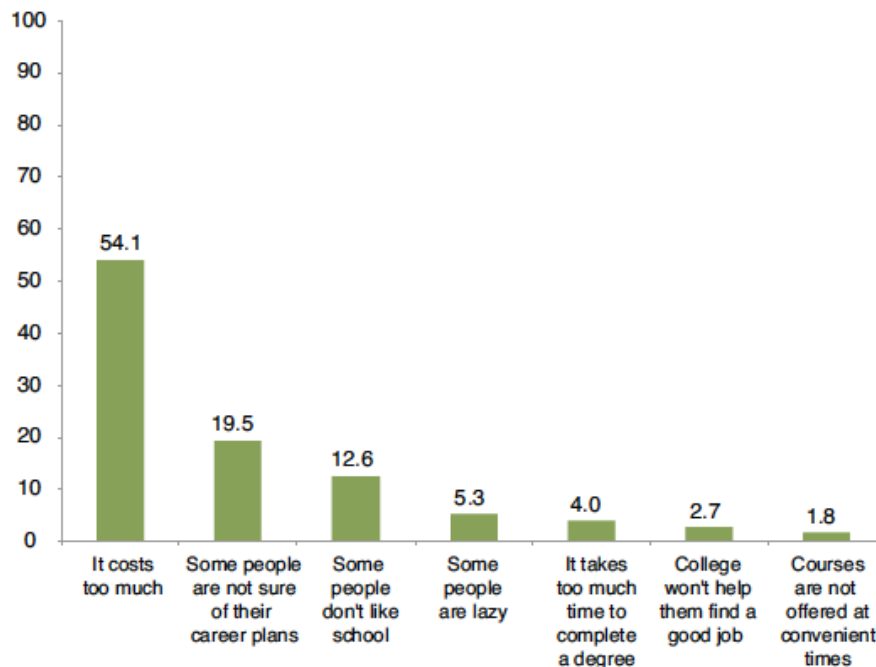
Note: Bars represent the percentage of respondents who answered the question in each category. Sampling weights applied. Weighted N = All: 1,530, High School Grads: 914, Some College: 616.
 Source: Author's calculations using AEI Survey of Adults without a College Degree.

TABLE 2
HOW LIKELY ARE YOU TO ENROLL IN SCHOOL IN THE NEXT 12 MONTHS?

	All	High School Grad	Some College
Definitely or Probably	14.7	8.9	23.4
Possibly	16.2	16.4	16.0
Probably Not or Definitely Not	69.0	74.7	60.6
Weighted N	1,549	923	626

Note: Cells contain the percentage of the sample in each category. Sampling weights applied.
 Source: Author's calculations using AEI Survey of Adults without a College Degree.

TOP REASON SOME PEOPLE DO NOT ENROLL IN COLLEGE



Note: Columns correspond to the percentage of respondents who provided each response. Sampling weights applied. Weighted $N = 1,533$.
Source: Author's calculations using AEI Survey of Adults without a College Degree.

These graphs demonstrate that the “college for all” strategy promoted by academia is disconnected from reality and can be seen as a deceitful marketing ploy. However, as long as academia, the media, and politicians follow this illogical strategy, secondary schooling – the period in which education can have, by far, the greatest effect and therefore do the greatest good – will continue to be, in large part, ignored.

I believe one of the major problems within our culture is the status a college degree is alleged to confer upon individuals – though those of us in the business community do not see it this way. Academics are so enamored with degrees and credentials – regardless of preparation for the real world – they are unable to see the forest for the trees. That is they simply cannot fathom how anyone would not want a college degree. It is a form of idolatry that is grounded in devotion to academia and it is believed all should partake in this “religion faith.” As long as this idolatry continues to exist, change to postsecondary schooling will be resisted and secondary schooling will continue to be marginalized. All the people represented in the graphs above who are not interested in college will continue to be either repressed by this optimized system or they will be marginalized as well.

It is time citizens recognize the hoax they’ve been laboring under in believing college is the answer to life’s problems. It never has been and it never will be. Let’s start diverting a large portion of the billions of dollars expended on universities to secondary schools where it belongs. Let’s invest it in CTE and applied studies based on the needs of individuals rather than on the needs of the religious faith practiced by academics.

Higher Education Pays: But a Lot More for Some Graduates Than for Others, by Schneider, College Measures.

“Short-term credentials include associate’s degrees and occupationally oriented certificates, and many who hold them will out-earn graduates with bachelor’s degrees....”

“What you study matters more than where you study.”

“... In a market-based economy, earnings data indicate what employers are seeking in first-year graduates. These data are reliable and useful, because they are objective and not subject to the political whims of government officials and leaders of postsecondary institutions.”

“... Certificates are the fastest growing postsecondary credential in the nation. More than 600,000 certificates were awarded in 2012. Given the ballooning cost of college and an uncertain job market, students, not surprisingly, are enrolling in these programs in growing numbers, especially at community colleges. Certificates often cost less to attain than an associate’s degree and generally lead to jobs that pay higher salaries than those received by job candidates with only a high school diploma. Certificates ... can also result in higher earnings than those experienced by graduates with associate’s or even bachelor’s degrees.”

“... In Texas, the first-year earnings of graduates with technical associate’s degrees are on average more than \$11,000 higher than that of graduates with bachelor’s degrees.”

“... Based on earnings outcomes, some colleges and universities are producing graduates who earn far less than graduates from other schools and graduates from some institutions earn far more. But a surprising number of colleges and universities in every state produce graduates with roughly identical earnings. This should be encouraging news for the many students across the nation who attend regional comprehensive campuses instead of flagship campuses.

“But field of study appears to affect earnings more so than choice of institution. Graduates of some very popular programs (in particular, Psychology) do not earn high wages initially in the job market.”

“... The analysis of associate’s and bachelor’s degree programs finds that high paying programs are all technical and career-oriented and low paying ones are concentrated in the liberal arts and social sciences. Critics of previous College Measures reports have argued that first-year earnings of bachelor’s degree graduates will systematically

discriminate against graduates with liberal arts degrees, because it may take them more time to launch careers (and possibly achieve higher earnings). However, this analysis finds that even at the master's degree level, where students are older and more likely to further along in their careers, earnings of graduates with master's degrees in liberal arts lag behind overall state averages and the earnings of graduates with more technical and career-oriented credentials.”

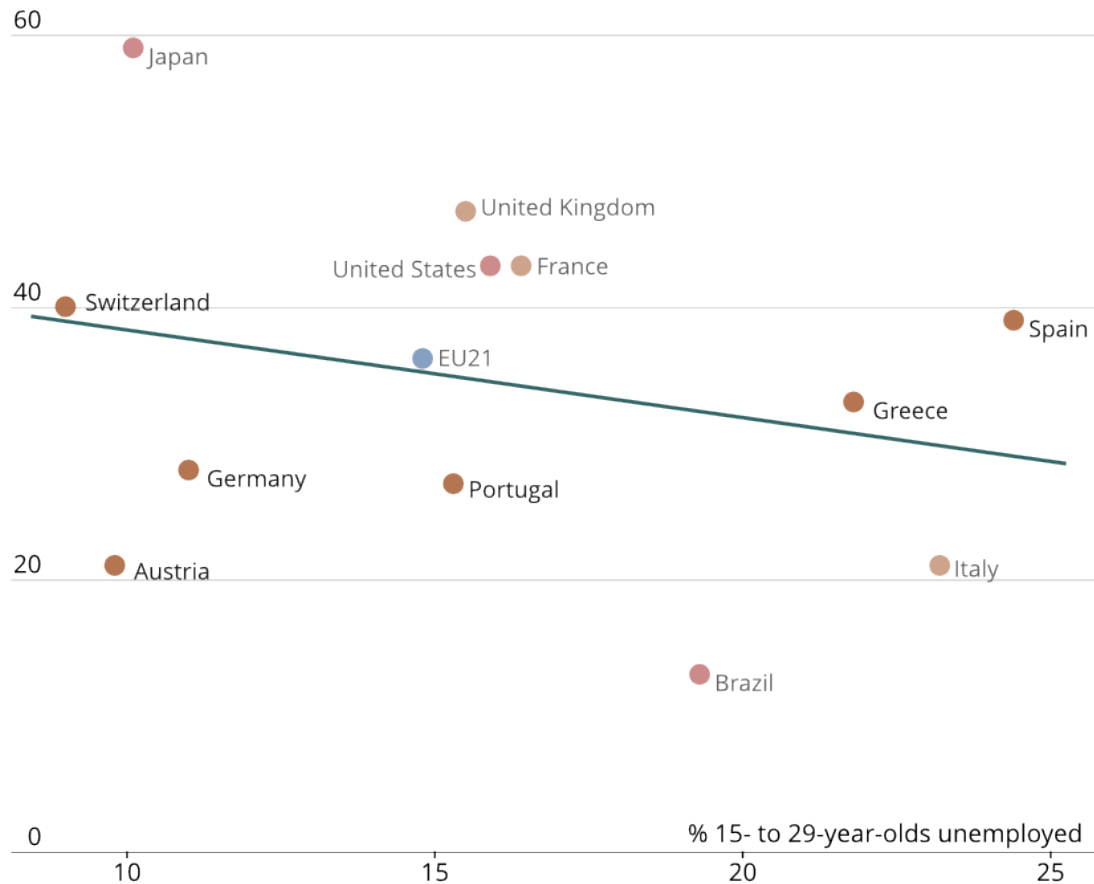
“... As student debt tops \$1 trillion nationwide, better decisions about where and what to study based on likely earnings after graduation could ease the financial woes of undergraduates and the nation's growing debt problem.”

***Young and Jobless? The Solution Isn't Always University, By
Duc-Quang Nguyen, Aug. 25, 2014***

“The chart below shows no clear correlation between the number of young people with a university degree and overall youth unemployment. Quite the opposite, actually: Germany and Austria are among the European countries with the least number of university-educated youth but they boast a very low youth unemployment rate.

Youth unemployment vs university education

% of 25- to 34-year-olds who attained tertiary education



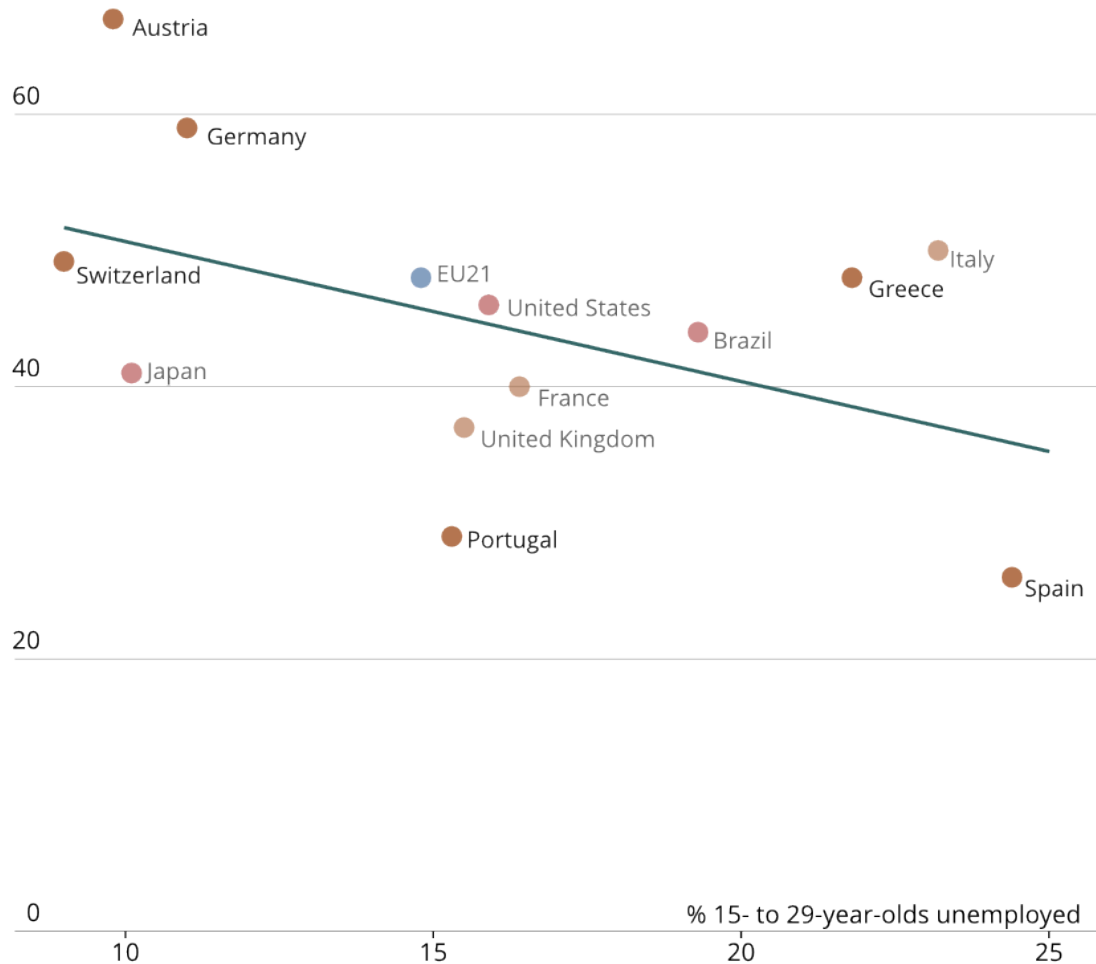
Source: OECD Education at a glance 2013

SWI swissinfo.ch

“Upper secondary education could involve general studies preparing for university as well as apprenticeship, and it is unfortunately impossible to separate these two paths from the data. But, according to the OECD in 2009, about three-quarters of the graduates whose highest level of education was upper secondary in Switzerland and Austria followed the apprenticeship route instead of the general academically based education. In Greece, a similar figure came in at around 30% and in the United States, close to 0%. In those countries, the apprenticeship system is less valued in the workplace than in the Austrian, German and Swiss labour markets.

Youth unemployment vs upper secondary education

% of 25- to 34-year-olds who attained upper secondary education



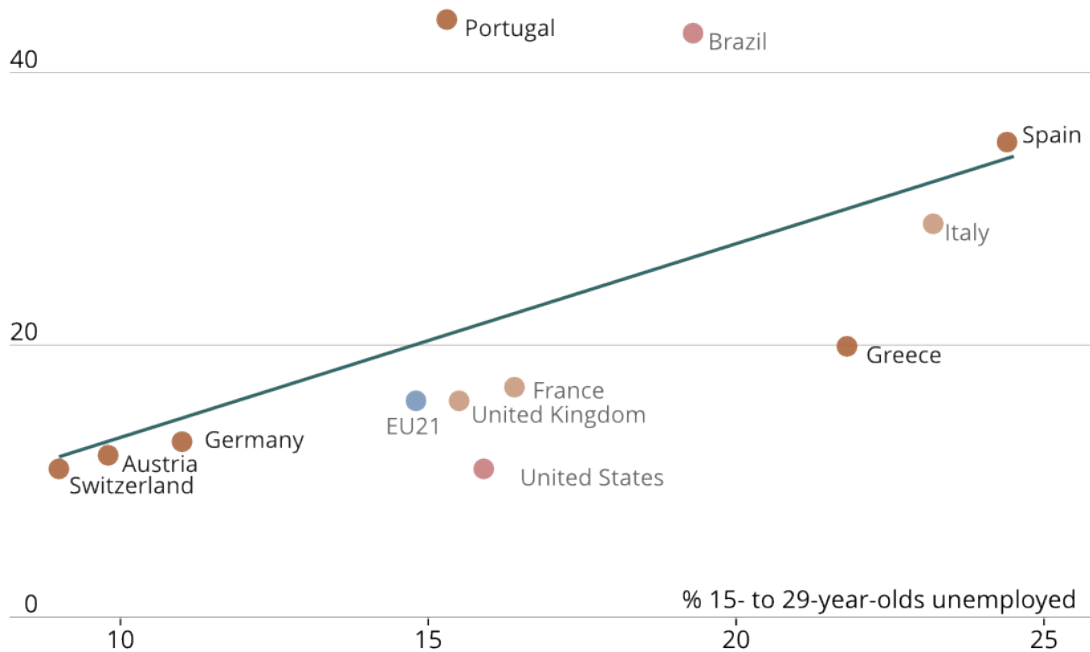
Source: OECD Education at a glance 2013

SWI swissinfo.ch

“There is, however, a correlation between the percentage of youth who did not attain upper secondary education and youth unemployment. Once again, Switzerland, Germany and Austria are unique here – they’re the European countries with the least number of young people who only completed mandatory school.”

Youth unemployment vs basic education

% of 25- to 34-year-olds without upper secondary education



Source: OECD Education at a glance 2013

SWI swissinfo.ch

This last graph shows when the vast majority of the population is well educated, that portion of the population that is not, will still have a higher standard of living and greater employment opportunities since they have far less competition from their better educated brethren.

http://www.swissinfo.ch/eng/by-the-numbers_young-and-jobless--the-solution-isn-t-always-university/40518378

Occupational Licensing: A Framework for Policymakers, This report was prepared by the Dept. of the Treasury Office of

Economic Policy, the Council of Economic Advisers, and the Dept. of Labor for The White House, July 2015.

“Systematic data on who holds a license have been hard to come by until only very recently, making historical analysis difficult. What we know about the rise in licensing over time comes from the efforts of Kleiner and Krueger (2013), who chart the historical growth in licensing using a combination of data from the Council of State Governments, the Department of Labor, and two surveys that they commissioned through Gallup and Westat in 2006 and 2008, respectively. We reproduce their results below (Figure 2). Using their data, we show that the percentage of the workforce covered by State licensing laws grew from less than 5% in the early 1950s to 25% by 2008, meaning that the State licensing rate grew roughly five-fold during this period.

Figure 2: Share of Workers with a State Occupational License



Sources: The Council of State Governments (1952); Greene (1969); Kleiner (1990); Kleiner (2006); and Kleiner and Krueger (2013), Westat data; CEA Calculations.

“...These fields, as shown below, have some of the highest rates of licensing in current data (Figure 4).

Figure 4: Percent of Workers Licensed Within Occupations



Source: Kleiner and Krueger (2013), Westat data; UST and CEA calculations.

“The importance of an increase in the number of licensed occupations – not just the number of licensed workers – suggests that licensing has expanded considerably into sectors that were not historically associated with it. The figure below shows that among licensed workers today, fewer than half are in health care, education, and law – traditionally very highly licensed occupations. Instead, large shares of licensed workers today are in sales, management and even craft sectors like construction and repair.

Figure 6: Share of All Licensed Workers in the 12 Occupations with the Most Licensed Workers



Source: Kleiner and Krueger (2013) Westat data; Current Population Survey Outgoing Rotation Group; CEA calculations.

“A trend toward increasing skill and job training requirements over time may be one factor in the political process behind more licensing. Conversations with regulators and industry groups indicate that practitioners in new fields often view licensing as one necessary step – along with others, such as forming professional schools, associations, and accreditation systems – toward achieving professionalization. Following in the footsteps of more established professions such as physicians and lawyers, practitioners in newer areas may view professionalization as both beneficial for the profession – in helping to achieve greater legitimacy, cultural authority and income – as well as serving wider social interests, through improving quality and public safety.

“In addition, some argue that by identifying qualified practitioners, licensing can spur demand for licensed workers by reducing consumer uncertainty about the quality of the licensed service. In this way, licensing itself can increase the number of licensed workers. Indeed, there is evidence from the turn of the 20th century that licensing was adopted in response to increased specialization and technological developments that made it more difficult for consumers to judge the quality of professional services.

“Others argue that producer groups tend to be much more politically influential than consumer groups. Licensing is a policy with concentrated benefits (for the licensed practitioners) and diffuse costs (for consumers and would-be practitioners). Thus, practitioners have a greater interest in licensing and may be better able to influence policy through their active professional associations. Empirical work suggests that licensed professions’ degree of political influence is one of the most important factors in determining whether States regulate an occupation. These organizational factors may therefore also play a role in the overall rise in licensing.

“Finally, licensing boards are often revenue neutral, and in some cases, even revenue-generating. While there has been some movement over time away from funding licensing

boards exclusively through fees, fees remain the primary funding mechanism. Thus, legislators considering a new licensing proposal often do not have to grapple with the prospect of finding additional funding.”

An economic sector to analyze in order to better understand effective licensing and certification is the medical field. They have an excellent internship/apprenticeship system to prepare their workers for a career.

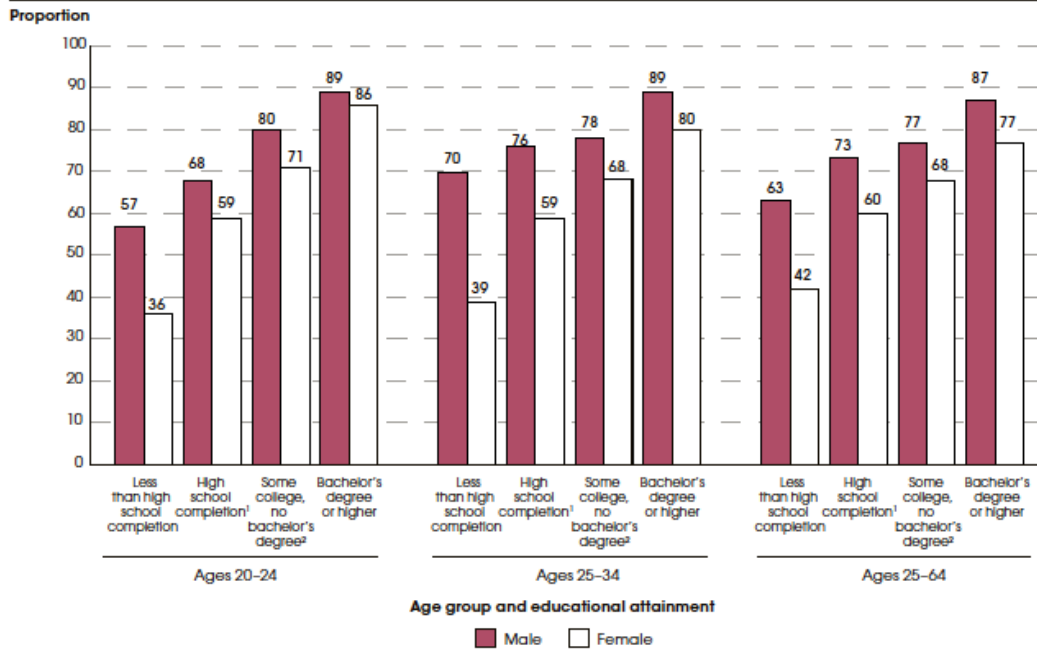
8. Gender differences

I believe it is important to analyze differences in employment between men and women to provide an example of how general employment statistics, which are correlated to educational levels, need to be perceived by the public with a certain measure of skepticism. We know that women graduate high school and college at significantly higher levels than men (see *The Growing Difference in College Attainment Between Women and Men*, by Aliprantis, Dunne, and Fee, Economic Commentary, Federal Reserve Bank of Cleveland, No. 2011-21, Oct. 18, 2011), yet the chart below demonstrates that this does not correlate to higher employment levels.

Obviously there are numerous reasons for this discrepancy – such as taking time off to raise children or choices in acquiring economically unproductive college degrees. Yet the beating of the academic drum suggests that college degrees are a “guarantee” of higher wages and constant employment. However, as we delve into subcategories of statistics, contradictions begin to show their ugly head. This is not to say that pursuing more education is a bad thing; it is simply stating that people should not take general statistical information to the bank. They may be very disappointed with the investment they make. Like any investment, people should do their homework.

Trends in Employment Rates by Educational Attainment,
National Center for Education Statistics, Last updated May
2013.

Figure 2. Employment to population ratios, by age group, educational attainment, and sex: 2012



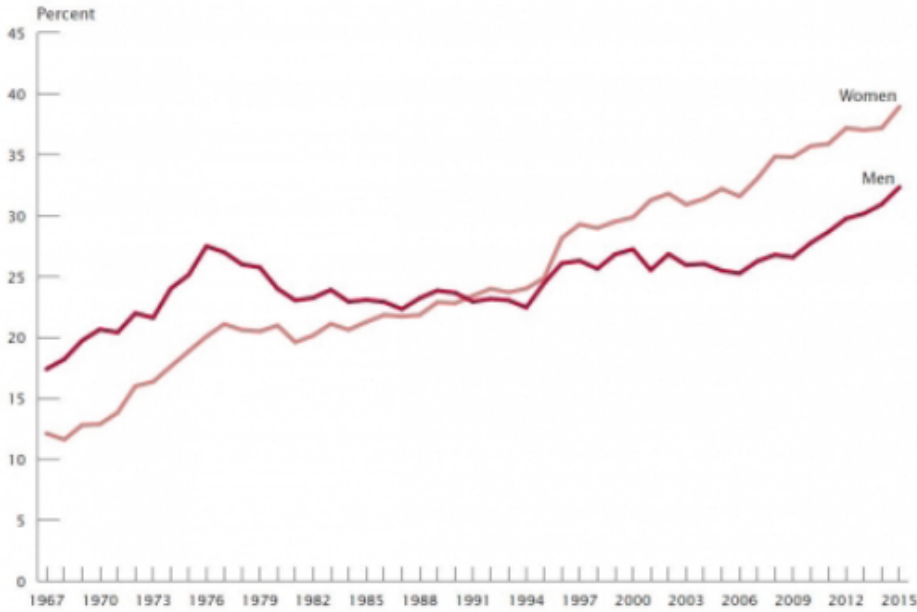
¹ Includes equivalency credentials, such as the General Educational Development (GED) credential.
² Includes persons with no college degree as well as those with an associate's degree.
 NOTE: The employment to population ratio is defined as the proportion of the civilian population that is employed. Educational attainment refers to the highest level of education achieved (i.e., less than high school completion, high school completion, some college, or a bachelor's degree or higher). Data for 20- to 24-year-olds exclude persons enrolled in school.
 SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Office of Employment and Unemployment Statistics, unpublished 2012 annual average data from the Current Population Survey (CPS). See *Digest of Education Statistics 2012*, tables 432 and 433.

(Also, see *On Pay Gap, Millennial Women Near Parity – For Now*, Pew Research Center, Dec. 11, 2013)

Women's higher levels of unemployment skew economic data as it relates to education – in particular, as it relates to employment for those with and without a high school diploma. Many women choose to forgo employment in the economy for the pleasures of job responsibilities in a family life – perhaps the most challenging, rewarding, and gratifying job there is in society. It is certainly the most important job in any society.

Latest Census Data on Educational Attainment Shows Women Lead Men in College Completion, Mar. 30, 2016.

Figure 1.
**Percentage of the Population Aged 25 to 29 With a Bachelor's or Higher Degree,
by Sex: 1967 to 2015**



Source: U.S. Census Bureau, 1967–2015 Current Population Survey.

Figure 1 shows the percentage of men and women in the U.S. population age 25 to 29 who had completed a bachelor's or higher degree. Before 1986, men had higher college completion; from 1996 forward, women were in the lead. Across the period, women had a fairly steady increase in college attainment, while men's attainment has been more subject to ups and downs.

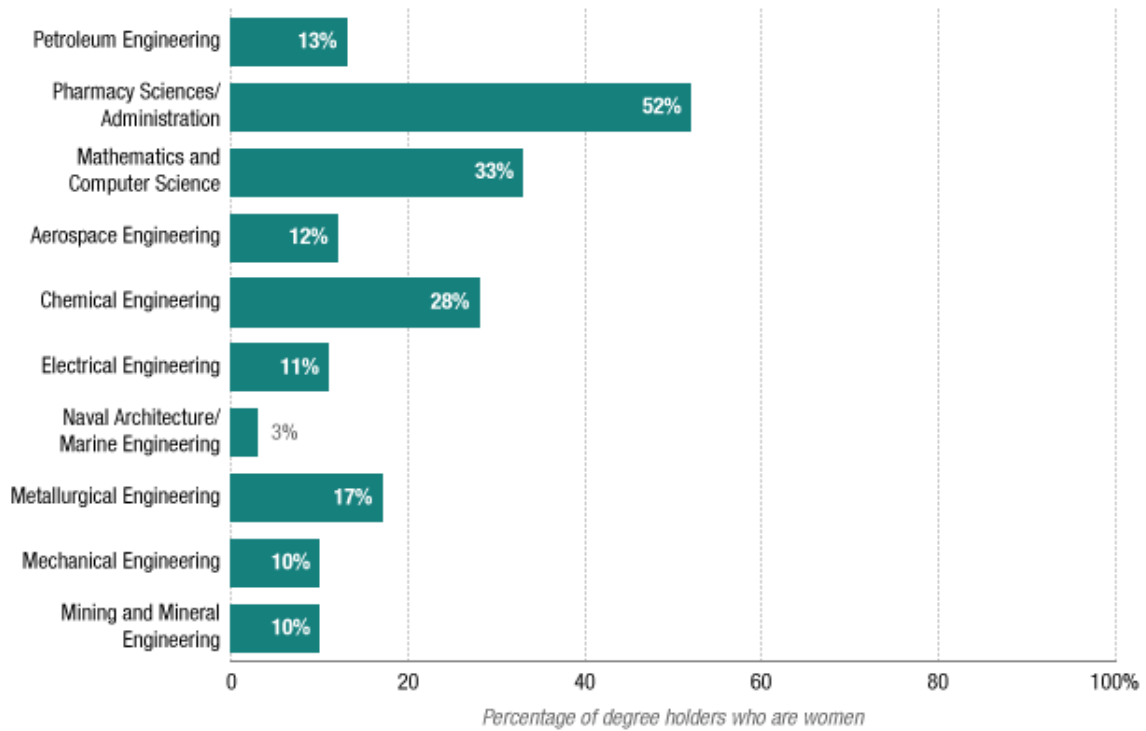
And yet this does not correlate to higher wages or higher employment compared to men. This demonstrates that bachelor's degrees are not as important as many believe. Job and life satisfaction should trump income, in large part; and if women prefer less lucrative jobs, then social scientists and media talking heads should not criticize them or men when such discrepancies are observed. It then becomes a political agenda rather than the pursuit of social harmony. If we stopped believing that material wealth and power were idols to prostrate to, perhaps we could chart a new course toward social peace and happiness rather than social/political war as we now have it.

Now let us look at statistics that help explain some statistical discrepancies regarding pay gaps and employment numbers between men and women.

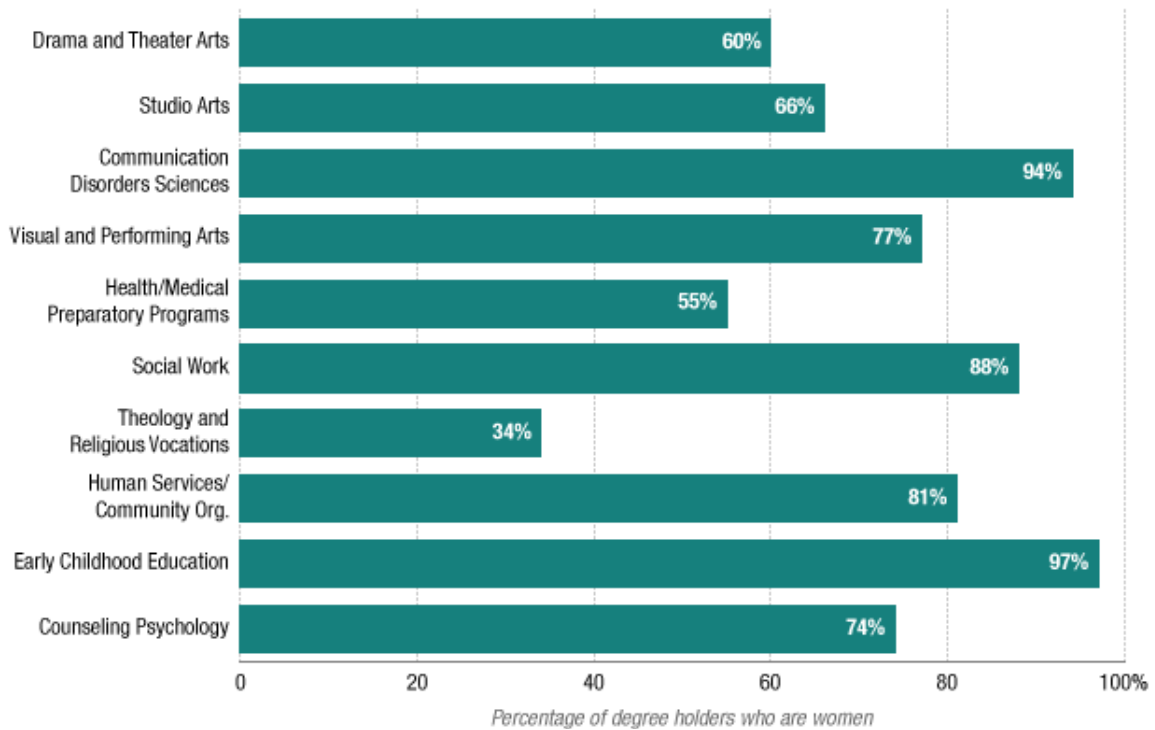
The following graph was published in *Why Women (Like Me) Chose Lower-Paying Jobs*, by Chow, Planet Money, Sept. 11, 2013. It also addresses choices women make to be happy in a job rather than seeking gratification in high-income jobs.

Percentage of women graduating in the highest paying and lowest paying majors.

Percentage Of Women In Most Lucrative Majors



Percentage Of Women In Least Lucrative Majors



Source: Anthony Carnevale, Georgetown University
Credit: Quoc Trung Bui

I think this reveals that instead of focusing on communistic principles of perfect equity between various social groups, we need to change our educational strategy to assist individuals in discovering their ambitions correlated to their talents, developing them, and then finding the way to participate in the economy to the extent they desire rather than what social equity interest groups desire. This would go a long way to improving social harmony and peace in contrast to the divide and conquer political battlefield we are now engulfed in.

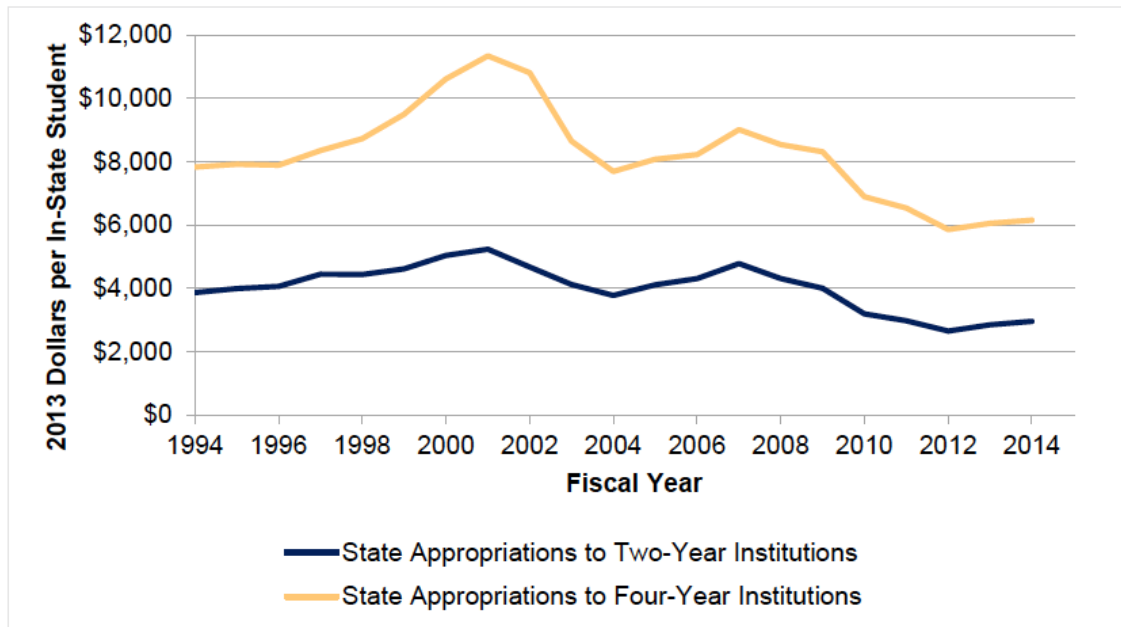
9. Financial challenges

Access to Attainment: An Access Agenda for 21st Century College Students, Institute for Higher Education Policy

“Tuition has increased at nearly 5 times the rate of inflation over the past 30 years, even faster than healthcare costs.”

The Effects of Rising Student Costs in Higher Education: Evidence from Public Institutions in Virginia, by Mulhern, Spies, Staiger, and Wu, Ithaca S+R, Mar. 4, 2015.

Figure 2.2. State Appropriations per In-State Student over Time

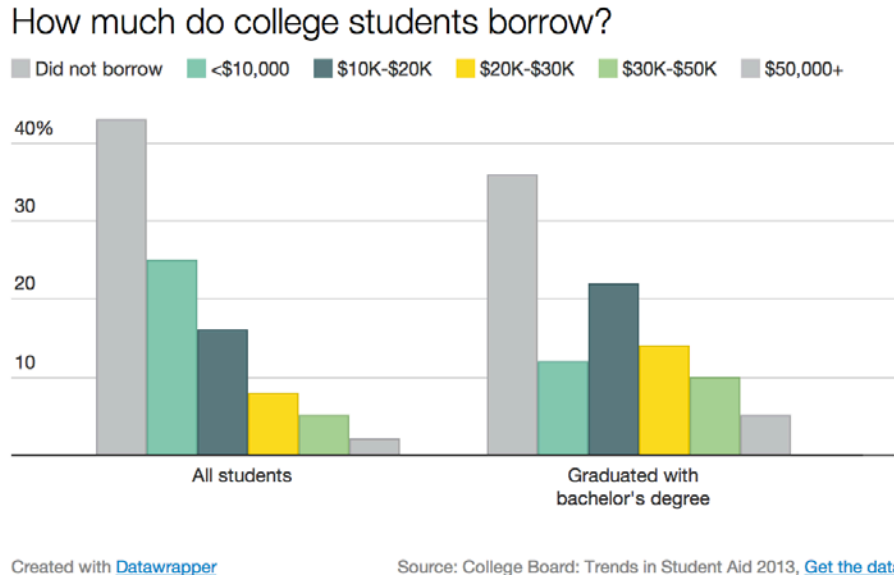


This is the trend of education spending in most States. It means that less State money will be available for high school graduates to use to attend college. It informs us that perhaps we should stop thinking that college provides the only answer and start looking at a high quality middle and high school education that leads to productive careers. The money is already allocated to secondary schools and individuals' time is already allocated to secondary school. We can divert a great deal of funds currently allocated to universities that are failing our youth and invest them in secondary education. Why not take advantage of an untapped resource? And it is indeed untapped!

What Most People Get Wrong About College Students, by Nelson, Vox, April 8, 2014.

“Seventy percent of students now borrow to get a four-year degree. That's up dramatically in the past two decades (<http://www.vox.com/cards/student-debt/why-has-student-debt-increased-so-much>): Less than half of students who started college in 1992 needed to take out loans. But most students (<http://www.vox.com/cards/student-debt/how-much-debt-does-the-average-student-have>) still borrow less than the six-figure horror stories that predominate in the media. The average student with loans borrowed \$29,400 for a four-year degree. Students with six-figure debt are a tiny minority, less than

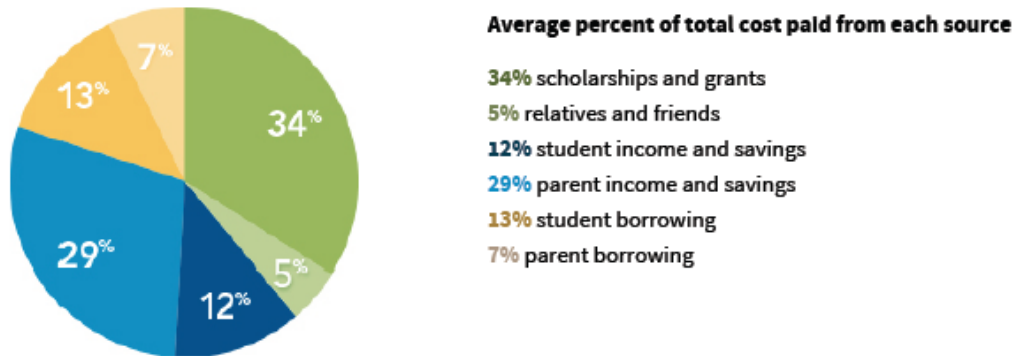
2 percent of all undergraduates who borrow.”



Two issues that are equally important to consider: 1) Those who do not earn a degree are strapped with debt that will be difficult to pay back since there will be little to no increase in income to repay it; and 2) Degrees that have little to no value also make it exceedingly difficult to repay their loans.

How America Pays for College 2016: A snapshot of the national study by Sallie Mae and Ipsos

Families pay less out of pocket for college as scholarships and grants cover more of the cost



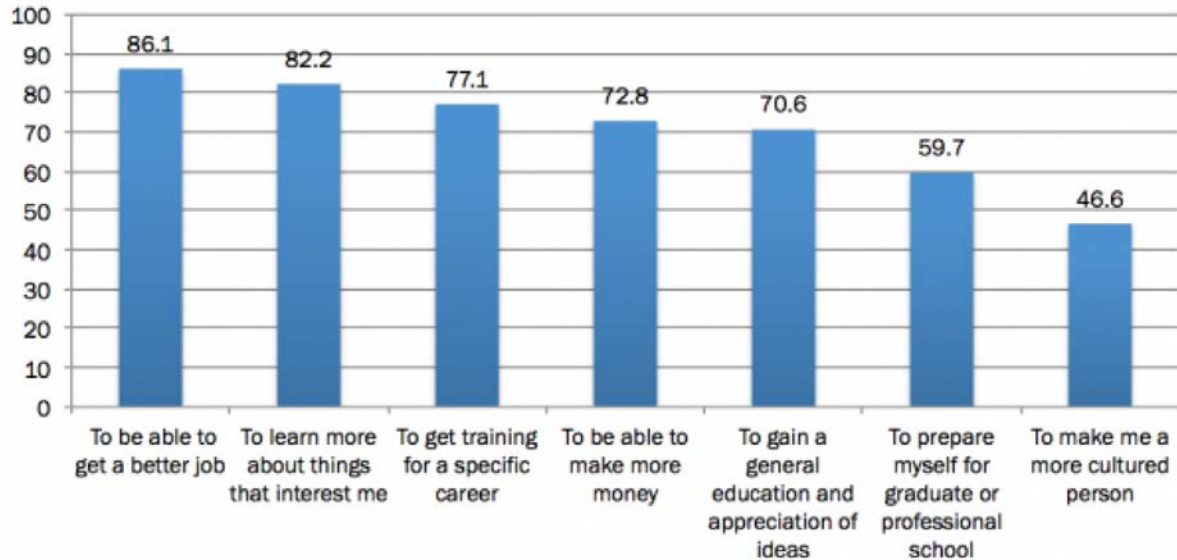
While there can be no doubt there are many who need financial assistance to pay for college, there can be no doubt that many may not need it. In addition, many individuals are not suited to the optimized academic system yet they still pursue college nonetheless. Also, there are numerous degrees where there is little to no demand in the market yet individuals pursue these degrees irrespective of the economic consequences. If individuals wish to pursue degrees that are not needed, then they should pay for them without scholarships and grants and without loans that are backed by government guarantees.

Once again this demonstrates the need for secondary education to be taken full advantage of for career development.

10. Summarizing Data

Why Do Americans Go To College? First and Foremost, They Want Better Jobs, by Rampell, The Washington Post, Feb. 17, 2015.

In deciding to go to college, how important to you was each of the following reasons?
(% of college freshmen saying "very important")



Source: *The Cooperative Institutional Research Program at the Higher Education Research Institute at U.C.L.A., 2014 Freshman Survey. Responses refer to incoming college freshmen.*

BLS Economic News Release, Mar. 31, 2015.

“The average person born in the latter years of the baby boom (1957-1964) held 11.7 jobs from age 18 to age 48, according to the U.S. Bureau of Labor Statistics. Nearly half of these jobs were held from ages 18 to 24.” <http://www.bls.gov/news.release/nlsoy.nr0.htm>

Couple this with the point that on average Americans change careers 5 times in their working life, it becomes clear that the argument used against choices being made regarding career directions – as opposed to a career decision – in middle school or high school is misguided. If it is acceptable for adults to switch careers, why do we hold young students to different standards? After all, over their lifetime, they will probably not stay with any one career they choose in their late teens or early twenties.

This is why an overall general education of economic sectors is important, followed by a focus in one economic sector – e.g. agriculture or manufacturing or trades, etc. – in the latter years of secondary education. The value of an individual’s labor is related to

accumulated knowledge and experience. Staying within an economic sector allows for the retention of one's labor value.

Gallup: Real Unemployment - Department of Labor (U-6)

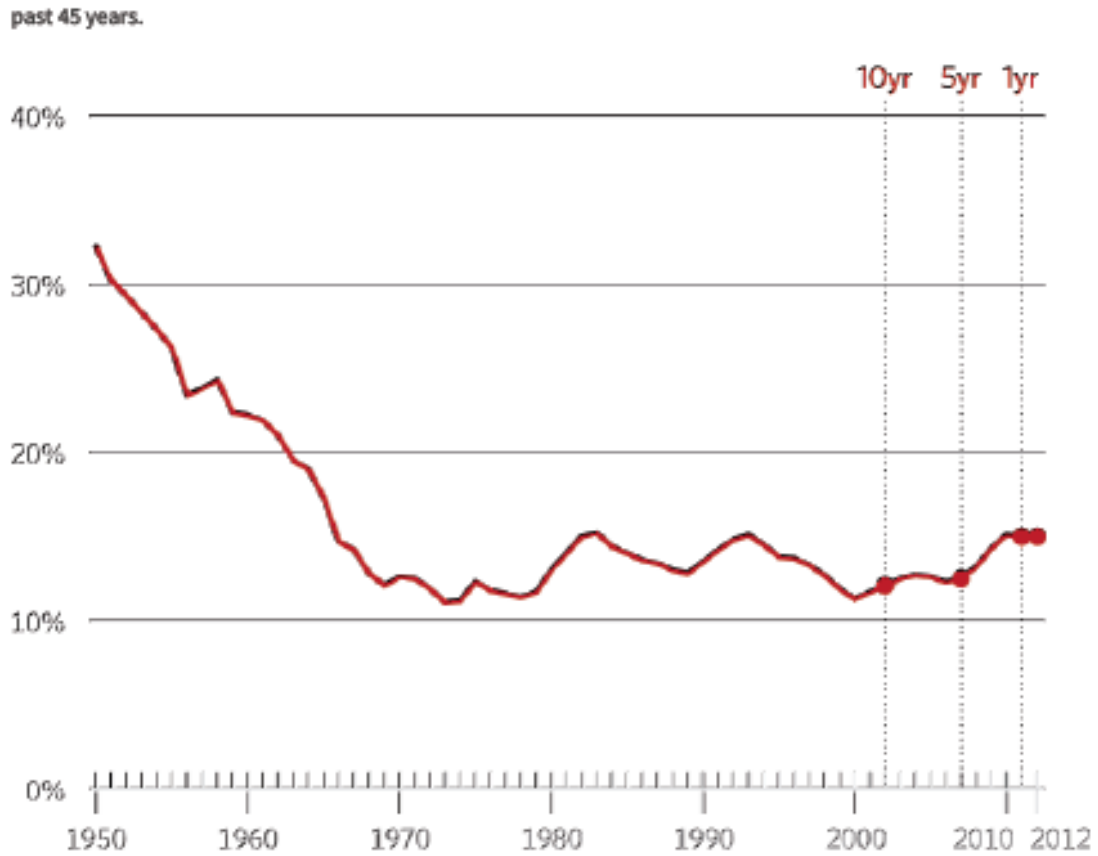
“Widely reported unemployment metrics in the U.S. do not accurately represent the reality of joblessness in America.

“For example, the U.S. Bureau of Labor Statistics (BLS) does not count a person who desires work as unemployed if he or she is not working and has stopped looking for work over the past four weeks. Similarly, the BLS does not count someone as unemployed if he or she is, for instance, an out-of-work engineer, construction worker or retail manager who performs a minimum of one hour of work a week and receives at least \$20 in compensation.

“Gallup recommends using two simple metrics to track unemployment in the U.S.: **Gallup Good Jobs (GGJ)** and what Gallup calls the "Real Unemployment" metric from the BLS -- which combines those who are unemployed, underemployed and marginally attached to the workforce.”

<http://www.gallup.com/poll/189068/bls-unemployment-seasonally-adjusted.aspx.aspx>

This Chart Proves the War on Poverty Has Been a Catastrophic Failure, by Rector, The Daily Signal, July 28, 2014.



“For the past 50 years, the government’s annual poverty rate has hardly changed at all. According to the U.S. Census Bureau, 15% of Americans still live in poverty, roughly the same rate as the mid-1960s when the War on Poverty was just starting. After adjusting for inflation, federal and state welfare spending today is 16 times greater than it was when President Johnson launched the War on Poverty. ... How can the government spend so much while poverty remains unchanged?”

“... [S]elf-sufficiency was President Johnson’s original goal in launching his War on Poverty. Johnson promised his war would remove the ‘causes not just the consequences of poverty.’ He stated, ‘Our aim is not only to relieve the symptom of poverty, but to cure it and, above all, to prevent it.’ ...”

“By this standard, the War on Poverty has been a catastrophic failure. After spending more than \$20 trillion on Johnson’s war, many Americans are less capable of self-support than when the war began. This lack of progress is, in a major part, due to the welfare system itself. Welfare breaks down the habits and norms that lead to self-reliance, especially those of marriage and work. It thereby generates a pattern of increasing inter-generational dependence. The welfare state is self-perpetuating. By undermining productive social norms, welfare creates a need for even greater assistance in the future. Reforms should focus on these programs’ incentive structure to point the way toward self-sufficiency. One step is communicating that the poverty rate is better understood as

self-sufficiency rate – that is, we should measure how many Americans can take care of themselves and their families.”

Johnson’s welfare system dealt with symptoms but not causes. An appropriate education is what’s called for. While Johnson addressed education, he did not address the failures of the system. He seems to have believed that throwing money at social issues is all that it would take to remedy mankind’s woes. His highly centralized socialistic Great Society programs have been complete failures. It’s time to close the book on his bad legislation and philosophy and develop programs that will work. Divesting the Federal government of all its influence on education is an important start. The Federal government should be responsible for collecting data, organizing it, and disseminating it for States and municipalities to use for autonomous decision making processes.

The expansion of CTE and the development of applied studies will, if done correctly, resolve the vast majority of our poverty problems by making people self-sufficient.

While the need for some form of poverty assistance will never disappear (since life dishes out pain and suffering which will effect some more than others), it can be shrunk to a level of a couple few percentage points of our country’s population. The States themselves can then handle poverty assistance, and the Federal government can be removed from involvement in such local issues.

Given the level of failure of Johnson’s Great Society and the illogical arguments used by some to continue down the same insane welfare path, one must ask the question: Is there a conspiratorial type of intent to undermine our society, or are these people just too ignorant to get it? I believe it is a combination: Some do indeed want to take down our society and rebuild it in either the statist model or a socialist model (see *The Naked Communist*, by Skousen, The Ensign Publishing Co., 1958); while others simply love to be bribed by politicians and showered with gifts from the labor of others. Therefore, the conspiratorial types have been largely successful in manipulating a large mass of the electorate. This is indeed undermining our society and will eventually take it down if there isn’t a paradigm shift in our political trajectory.

Bribing the masses with promises of theft from the productive portion of the population, is simply an unsustainable path, but it does get politicians elected. So educating the masses in civics to see how such manipulation leads to citizens’ demise must be a high priority in educational efforts.

As I provided at the beginning of this webpage with *A Nation at Risk*, the quote “We have, in effect, been committing an act of unthinking, unilateral educational disarmament” reveals the effectiveness of those who are undermining our society.