A Nation Upside Down

A NEW VISION FOR THE FUTURE OF LEARNING

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ABOUT US

Jamai Blivin is Founder and CEO of Innovate+Educate, a nonprofit she started in 2009 with a vision for an industry-led board focused on education and workforce strategies to address the significant gaps between supply/demand in both education and workforce.

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Dr. Parminder K. Jassal leads the Work+Learn Futures research at the Institute for the Future. Parminder investigates the future through three intersecting lenses: the innovations of open economies; the changing role of people in their environments; and the relationship between learning and working. Through new research and prototyping, Parminder applies insights from the fringes to promote positive culture shifts and solutions by getting ahead of inequities.

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# Table of Contents

- Executive Summary 3
- The Challenge 4
- The Data 7
- Shifting to a Work+Learn Future 18
- Points of View 23
Executive Summary

Several billions of dollars have been invested into increasing the number of students who complete high school and pursue a college education in the United States. While high school completion rates have improved, college completion rates have not, and yet the number of jobs requiring a college degree continues to rise. At Innovate+Educate, we have conducted research that indicates the United States is at full capacity for college completion—at least the way higher education is currently delivered. Every American who has the academic ability, financial stability, and time to complete a college degree is doing so. This leaves the 35 million incumbent workers who attempted college, but left without a degree, as the largest—and perhaps only—latent talent reservoir available for vacant bachelor’s degree-level jobs. Employers hold the key: about seventy percent (24.5 million) of these 35 million workers found college-level coursework completely doable, but had to abandon their degree in order to hold down their current jobs. The only way to expand our employability pipeline will be to access this cohort, which means rethinking the utility of a college degree as a hiring and advancement filter. Inevitably, the degree-before-work paradigm will need to give way. Skills-based hiring, competency-based credentialing, earn-and-learn pathways, formal apprenticeships, and other innovations that rely on demonstrated performance rather than degree proxy signaling for advancement, will become integral to national economic expansion. An work+learn economy will result.

“...rules are made to be broken. Be bold enough to live life on your terms, and never, ever apologize for it. Go against the grain, refuse to conform, take the road less traveled instead of the well-beaten path.”

– The Road Less Traveled
A Nation Upside Down: The Challenge

A Nation at Risk was released 34 years ago, and our nation remains at risk. Published in 1983, A Nation at Risk brought attention to the need for assuring that students would have rigor in the classroom, that teachers were prepared, and that the U.S. would remain competitive. A Nation at Risk put forth a vision for what the future could be:

All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competently guided, can hope to attain the mature and informed judgment needed to secure gainful employment, and to manage their own lives, thereby serving not only their own interests but also the progress of society itself.

The call to action from A Nation at Risk drove decades of philanthropic and government investment, pouring billions of dollars into reforming education. Some progress was indeed made, but the vision that all would receive a high-quality education from kindergarten through a 4 year college degree never has become a reality. In The Class of 2016, the Economic Policy Institute pointed out only 34% of people age 24–29 have a college degree; 66% do not. Our own analysis shows, that expanding the age range to include all Americans of working age (25-64), leads to a higher degree completion rate, but still less than half. Approximately 44% of all Americans aged 25-64 have an associate’s or bachelor’s degree. More importantly, 36% of working-age Americans have attempted college but left without a degree. This equates to 35 million Americans who have enrolled in college but who left without a degree, the one credential required on many job postings in the U.S.

For this cohort of 35 million Americans, education reform via the traditional delivery method will not help. The system just doesn’t work for them. Interviews of students who leave without degrees show 54%–77% are leaving in order keep their existing jobs. For this cohort, job opportunity is upside down. Meanwhile, encouraging those who have not yet attempted college, to begin doing so, seems fruitless. Our calculations show this slice of working age adults – those that did not attempt college – are too deeply under-resourced to even make the attempt. These individuals will reach age 40 before they can afford to live at the poverty line, work at a full-time job, and go to a 4 year institution. In an ideal scenario, all who choose to pursue a college degree, would have enough money and time, but this is not the reality for most Americans.

Americans are now faced with a dilemma. Most need to have a high-paying job in order to be able to afford a college degree, yet they need to have a college degree before they can obtain a high-paying job. Employers are faced with a similar dilemma: the demand for bachelor’s degrees in particular is rising, yet everyone who can attempt college on their own, has already done so. Unless a massive economic improvement lifts the fortunes of the 37% who have not yet attempted college, no new college-degree workers are forthcoming. Higher education, as it stands today, cannot fulfill employers’ needs.

New strategies surrounding hiring and credentialing need to be less expensive and far more compatible with working lives. The existing working population is where all the potential growth in U.S. high-skilled labor lies. One option is to adopt performance-based measures for credentialing, hiring and promotion. These tend to be far less expensive to satisfy than conventional degrees and are well-suited to individuals who have learned through work, the military, or other experiences outside of formal education. Another option is to develop integrated work and learn career ladders. In these, employers give promotions based on certificates/courses they help design and which their employees can complete online in their own time, or with dedicated workday time set aside for study. Yet another option is formal apprenticeship, a system of paid and mentored learning that has enjoyed much success in Germany but is encouraged by only a dozen or so states in the U.S. The options are abundant, but adoption during recession was slow.

Resolving the mismatch between needing to work, and obtaining a better life through education, is a core component of Innovate-Educate’s mission. We know this requires partnerships across the U.S. focusing on credential completion, industry recognized certifications, and strategies that meet the learners where they are. There are steps both higher education and employers need to take. We believe in higher education. We believe in lifelong learning. We believe in strategies that support individuals working while learning. But, the way the education system is set up right now is just not working. A shift in assessment, training, hiring, and advancement is required.

This report begins our 2018 journey to explore the education-employment mismatch and its implications for our traditional model of degree-before-job. Over the next seven months, we will issue a series of in-depth reports to continue this discussion, with statistics at the state level for all 50 states.

We hope you will join us.

The main point of entry to a living wage job in the United States is a four-year degree. The data shown on the facing page argue that the degree-before-job model is not working, and that we therefore need to create more pathways to both job entry and advancement. In this report, we show the current gap between supply and demand at the bachelor’s degree level. We then explain why bachelor’s degrees have become a default prerequisite for such a large proportion of jobs. We will demonstrate why reforming the current education system or encouraging more students to go to college will not result in higher numbers of bachelor’s degree-holding candidates available to employers. To conclude, we will offer a glimpse of the future system that is likely to replace the current one.

Known: Job Supply and Demand are out of Balance at the Bachelor’s Degree Level

Job supply and demand are mismatched at both ends of the education spectrum. As Figure 1 shows, there are 300% too many individuals with less than high school degrees compared to jobs available, 42% too few bachelors’ degree individuals compared to jobs available, and 45% too many graduate degree individuals compared to jobs available. Only in the middle of the education spectrum (high school through associate’s degree) is the U.S. in balance.

6 The average salary for a high school graduate age 25-64 in 2016 was $25,432, while the average salary for a 4 year college graduate of the same age in that same year was $56,953 (US Census American Community Survey, 2016). The living wage in 2016 was $30,668 for a parent who is part of a two income family supporting two children (Amy Glasmeier, http://livingwage.mit.edu/articles/15-minimum-wage-can-an-individual-or-a-family-live-on-it).

7 Job posting data from the first 11 months of 2017 online job advertisements as analyzed by Burning Glass. Census data are from the U.S. Census’ American Community Survey, 2016, using its Dataferret tool to query the degrees attained by individuals aged 25-65.

8 Data from John E. Hunter and Ronda F. Hunter, “Validity and Utility of Alternative Predictors of Job Performance,” Psychological Bulletin, vol. 96, pp. 72-98, 1984. The study shows an r=0.1 correlation between job performance and years of education. Squaring this number gives the estimate of 0.1² or 0.01 (1%) of job performance explained by years of education.

This mismatch persists because higher education has had a near monopoly on routes to a job. Why did this come to be? Why is a bachelor’s degree the default requirement for so many jobs?

Though college degrees are required, they do not predict job performance.

The skills needed for many jobs may be getting more complex, but whether one has appropriate skills is not captured well by the presence or absence of a degree. A major review of different methodologies for predicting job performance showed that years of education predict just .1% of total job performance.

The reason degrees are a poor proxy for job performance originates from the extremely large variation in ability between people with nominally similar degrees. Additionally, increasing one’s skill level through education is a very slow process. It takes 12+ years of education to obtain an employment-worthy credential. Consequently, an additional 1-3 years’ increment in skill is actually a small change, completely overwhelmed by the large intrinsic variation in people’s skills. For example, as shown in Figure 2, the scores of people aged 16-24 on a workplace literacy test increase with level of education at the rate of about 0.7 scale points a year. Meanwhile, the range of such scores between...
Figure 2
Graduation ACT® WorkKeys® Reading for Information scores, by completed years of education. The tested population was New Mexicans aged 16-24. The increase in students’ average score is very slow, for each year of education achieved (see line). Meanwhile, the variation in student scores within a given year of education is enormous. Note that many data points that appear to be single, are actually multiple data points stacked on top of each other.
greater income percentage

MEDIAN INCOME DIFFERENTIAL, COLLEGE VS. HIGH SCHOOL EDUCATED
Male Workers 25+ Years Old

within Figure 2, the careful reader will note that the population with college degrees seems to be missing the lower scores. Because scores at the high end seem unaffected, the absence of low scores most likely represents the use of a filter (e.g., not accepting students with low test scores) rather than a sudden improvement of students’ skill levels. The John William Pope Center for Higher Education Policy (now the James G. Martin Center for Academic Renewal) also pointed out that the very year the government enacted regulations to limit the use of test scores as an easy pre-hire sorting tool, the value of the degree took off. In 1978, the Uniform Guidelines on Employee Selection were enacted by the Equal Employment Opportunity Commission (EEOC), in response to a 1971 Supreme Court case, Griggs v. Duke Power. The now well-known wage separation between 4 year college graduates and high school graduates began at the same time (Figure 3). Thus, it seems that the college degree became valuable primarily because it replaced test scores as a resume sorting tool.

Employers require degrees for jobs that appear not to need them

As two recent studies have demonstrated, job advertisements appear to be demanding degrees even for jobs that don’t need them. To determine the extent of this practice, Innovate+Educate partnered with Burning Glass Technologies to match online job advertisements’ stated educational requirements against the Department of Labor’s O*Net “Zone” classification for those same jobs. The O*Net Zone levels are organized by the amount of education that should be required for that job, based on 1) an analysis of job responsibilities and 2) the proportion of degree holders at each level already working in that occupation, see Table 1 on the next page.

In total, about 14% of all job advertisements are asking for education beyond what one would imply from the job title. Across the US, this represents about 10 million jobs. Looking just at jobs where employers specified a bachelor’s degree as a requirement, 13
about 76% appear to legitimately require education at that level and 30% do not. The greatest mismatch occurs at what should nominally be associate’s degree level occupations where employers were asking for degrees both higher and lower. The fact that employers do not feel comfortable requesting an associate’s degree, relative to other degrees they are more familiar with, considerably devalues the associate’s degree. It also inflates the apparent demand for bachelor’s degrees.

Burning Glass Technologies (burning-glass.com), which tracks job demand through online ad counts (and provided the raw data for the table facing), comments that this insistence on bachelor’s degrees doesn’t always make sense, even for the employer: “In some roles, employers prefer bachelor’s credentials even when that makes the position harder to fill. For example, Construction Supervisor positions that require a B.A. take 61 days to fill on average, compared to 28 days for postings that don’t require a bachelor’s degree.”

Another contributor to bachelor’s degrees being a default credential is the trend of professionalizing a discipline by requiring a licensing test – but then requiring a degree as a prerequisite to take the test.

Over the 20th century, several professions – nursing, teaching, and social work, for example – which sought to professionalize by requiring licenses for those seeking to enter the profession. Gradually, the licensing boards began to require degree completion as a prerequisite for taking the test. This fundamentally does not make sense: doesn’t passing the test itself guarantee competency? And if it doesn’t, why have the test at all? The trend has persisted, and today the combined occupations of elementary and secondary school teachers, registered nurses, and social workers represent 5% of the job openings requiring bachelor’s degrees. Individuals lacking college credentials are not permitted to perform these occupations even if they are able to pass the licensing test and have significant work experience (e.g., from another country or military).

A major conclusion of this report is that it is not possible to generate more bachelor’s-degreed individuals by “fixing” the education system or increasing the desire of people to obtain a degree. The rationale follows.

Encouraging more people to go to college will not close the degree shortfall, for a surprising reason: nearly everyone who could possibly have gone to college has already attempted it. For the minority that hasn’t, their draconian economic situation precludes the attempt.

The message that “you need to get a degree to get a good job” has been heard, loud and clear. Sixty-three percent of Americans aged 25-64 have at least attempted college. Some 33% obtained a bachelor’s degree or higher. An additional nine percent received an associate’s degree. However, 21% of the U.S. population aged 25-64 attempted college but left before obtaining either degree. The supply-demand gap in bachelor’s degree recipients could be more than completely filled by this 21%.

These individuals have heard the message. They haven’t, their draconian economic situation precludes the attempt. Their comments that this insistence on bachelor’s degrees doesn’t always make sense, even for the employer: “In some roles, employers prefer bachelor’s credentials even when that makes the position harder to fill. For example, Construction Supervisor positions that require a B.A. take 61 days to fill on average, compared to 28 days for postings that don’t require a bachelor’s degree.”

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These individuals have heard the message. They gained entry to college and, as shall be seen, 66-
Figure 4. Reasons why students drop out of college and solutions favored by the dropouts. The data above are taken from a 2009 report issued by Public Agenda and the Gates Foundation: Jean Johnson, Jon Rochkind, Amber N. Ott, and Samantha Dupont, “With Their Whole Lives Ahead of Them,” Public Agenda, New York, 2009. These figures are reprinted with permission via a Creative Commons Attribution-Noncommercial-Share Alike 3.0 license.

REASONS FOR LEAVING COLLEGE:
Having to work is the top reason young adults gave for why they left school. Percent who say the following is a reason why they did not complete their program:

<table>
<thead>
<tr>
<th>Reason</th>
<th>Total</th>
<th>Minor Reason</th>
<th>Minor Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>I needed to go to work and make money</td>
<td>71%</td>
<td>71%</td>
<td>64%</td>
</tr>
<tr>
<td>I just couldn’t afford the tuition and fees</td>
<td>52%</td>
<td>21%</td>
<td>31%</td>
</tr>
<tr>
<td>I needed a break from school</td>
<td>54%</td>
<td>27%</td>
<td>41%</td>
</tr>
<tr>
<td>I had to take too many classes that I did not think were useful</td>
<td>43%</td>
<td>27%</td>
<td>16%</td>
</tr>
<tr>
<td>I didn’t have enough time for my family</td>
<td>41%</td>
<td>25%</td>
<td>16%</td>
</tr>
<tr>
<td>I thought many of the classes were boring</td>
<td>45%</td>
<td>31%</td>
<td>14%</td>
</tr>
<tr>
<td>All things considered, it just didn’t seem to be worth the money I was paying</td>
<td>35%</td>
<td>21%</td>
<td>14%</td>
</tr>
<tr>
<td>I didn’t like sitting in class</td>
<td>38%</td>
<td>27%</td>
<td>11%</td>
</tr>
<tr>
<td>Some of the classes were too difficult</td>
<td>54%</td>
<td>34%</td>
<td>10%</td>
</tr>
</tbody>
</table>

SOLUTIONS FAVORED BY THOSE WHO LEFT COLLEGE (did not graduate):

<table>
<thead>
<tr>
<th>Solution</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow part-time students to qualify for financial aid</td>
<td>81%</td>
</tr>
<tr>
<td>Offer more courses in the evenings, on weekends or in the summer so people can work while attending school</td>
<td>78%</td>
</tr>
<tr>
<td>Cut the cost of attending college by 25 percent</td>
<td>78%</td>
</tr>
<tr>
<td>Have the government offer more college loans</td>
<td>76%</td>
</tr>
<tr>
<td>Provide day care for students who need it</td>
<td>76%</td>
</tr>
<tr>
<td>Make sure students learn good study habits in high school so they’re prepared for college work</td>
<td>73%</td>
</tr>
<tr>
<td>Have more programs for students who are interested in hands-on learning, apprenticeships and nonclassroom work</td>
<td>69%</td>
</tr>
<tr>
<td>Provide health insurance to all students, even those taking classes part-time</td>
<td>69%</td>
</tr>
<tr>
<td>The opportunity to talk with advisers who know all about the different college and job-training programs so you can make a good choice</td>
<td>68%</td>
</tr>
<tr>
<td>Improve teaching so the classes are more interesting and relevant</td>
<td>67%</td>
</tr>
<tr>
<td>Put more classes online</td>
<td>57%</td>
</tr>
<tr>
<td>Make the college application process easier</td>
<td>50%</td>
</tr>
</tbody>
</table>

Paid apprenticeships are a sure pathway to a job for those who have some college but less than a bachelor’s degree. However, only 11 states encourage employers to offer apprenticeships. And, even then, the overall numbers are incredibly small.
work-related credentials do not provide a pathway out of poverty because even work-related-credentials are inaccessible to non-college goers.

The Table 2 shows that for those with less than a high school degree, only 2% will ever get a license or certificate in a useful trade. Ironically, it requires some exposure to college before a trade-related credential is accessible. This is in part because two-year college itself offers many work-related experiences and credentials in collaboration with local employers (e.g., one-year certificates in trades), which one can discover once one is in college, but also because – as stated earlier – many externally-issued licenses and certifications now require a college degree prior to taking the certification test or licensing exam.

Paid apprenticeships are a sure pathway to a job for those who have some college but less than a bachelor’s degree. However, only 11 states encourage employers to offer apprenticeships. And, even then, the overall numbers are incredibly small.

For would-be electricians, plumbers, construction workers and others, apprenticeships have been a proven path to a job. For example, an Indiana Department of Workforce Development study of 4,917 Ivy Tech Community College apprenticeship participants showed 61% employed overall 5 years later, with salary gains of about 100% for the younger individuals who had no prior work experience coming into the apprenticeship. 

Unfortunately, apprenticeships are not easily scaled. They cost money and time on all sides to implement: money for tuition at the college providing instruction, money for the salary of the individual in training, money for the insurance and benefits the employer must legally provide, and, finally, money to replace the salaried time of a senior employee mentoring a new unproven one. Currently only 11 states provide tax incentives for employers to take on the costs of an apprenticeship program and 24 offer tuition assistance for registered apprentices. 

Burning Glass Technologies’ recent report on apprenticeships echoes the frustration of having a potential solution remain largely unimplemented. The report states, “many employers are asking for bachelor’s degrees for these otherwise middle-skill jobs. Yet employers are still open to those with alternative credentials. For example, roughly 60% of IT help desk jobs ask for a bachelor’s degree, yet the specific skills requested are the same whether a degree is requested or not.” The report calls for consideration of more apprenticeships, but also references the “great deal of work that must be done” to make apprenticeships viable.

Table 2: Rate at which work-related credentials are attained at each level of education. Note that the bottom row is not equal to the sum of the top two rows because individuals who have both types of credential are not double-counted in the total. Data for this table was compiled from Stephanie Cronen, Meghan McGuigan, Emily Isenberg and Sarah Grady, “Adult Training and Education: Results from the National Household Education Surveys Program of 2016 - First Look,” (NCES 2017-103), Washington, DC: U.S. Institute for Education Sciences, Department of Education, 2017.

<table>
<thead>
<tr>
<th></th>
<th>Less than a High School Degree</th>
<th>High School Degree</th>
<th>Some College No Degree</th>
<th>Associate’s Degree</th>
<th>Bachelor’s Degree or Higher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals having a work-related license or certification not issued by a college or university</td>
<td>5%</td>
<td>11%</td>
<td>18%</td>
<td>30%</td>
<td>34%</td>
</tr>
<tr>
<td>Individuals having a work-related postsecondary (i.e., issued by a college or university) certificate that is not a formal degree.</td>
<td>2%</td>
<td>7%</td>
<td>15%</td>
<td>17%</td>
<td>4%</td>
</tr>
<tr>
<td>Individuals having any type of work-related credential (not quite the sum of the above because some individuals have both)</td>
<td>7%</td>
<td>17%</td>
<td>29%</td>
<td>31%</td>
<td>49%</td>
</tr>
</tbody>
</table>

90% did not struggle with coursework. They left because they had to hold down their present jobs. A 2009 report issued by the Bill and Melinda Gates Foundation and Public Agenda demonstrated that 71% of students leave school primarily, or in part, to keep their jobs. These data are reproduced in Figure 4. Only 10% (primarily) to 34% (partially) claim academic rigor caused them to leave. The financial stress, driven by the need to pay for school and living expenses simultaneously, is clearly mirrored in dropouts’ recommendations on how to improve their chances of success in college. Their top recommendation is allowing financial aid to be given to part-time students – i.e., students who work. For the remaining 37% of the population, those who never attempted college, simple survival ends up taking precedence for most of their lives. At age 25, this demographic has an income of $8,069/yr.79 Income rises slowly with age as these individuals become more fully employed. However, only by age 40 does this demographic have enough income ($12,980/yr79) to finally survive at the poverty level ($12,060/yr), work, and attend a 4-year college ($14,379/yr79), after subtracting the more generous financial aid packages given to those earning less than $30,000/yr. These individuals desperately need a new route to good jobs. While workforce agencies and others could theoretically teach the skills required, employers continue to fall back on the bachelor’s degree requirement.

For those who cannot afford college,

20 U.S. Census, American Community Survey, 2016. Average income vs. age for those whose education levels are less than “some college, but less than 1 year.”
21 Ibid.
22 HHS definition of poverty level, 2017.
23 Median U.S. cost of a 4-year college for families earning less than $30,000/year. This number includes tuition, room, and board and subtracts financial aid. Department of Education, College Scorecard Data for 2015-2016. [Online]. https://collegescorecard.ed.gov/data/
This report, *A Nation Upside Down*, offers data that suggest—not surprisingly, and not for the first time—that the current education and employability pipeline is not working for the majority of Americans. Credential-based requirements for work and the ability of individuals to obtain those credentials are at an impasse. However, there is evidence that employers are beginning to forge a new path into a future that values performance above everything else, discretizes performance into individual skills for measurement purposes, and creates interoperable work-education systems to upgrade skills as needed, eventually replacing the existing model of degree-before-job. Individuals’ ability to navigate this new work-learn future will depend critically on their ability to learn how to learn.

As the science fiction author William Gibson said, “The future has arrived — it's just not evenly distributed yet.” Examples of new approaches to job attainment can already be found. For example, Tufts Medical Center has substituted a healthcare-oriented assessment, rather than degree or prior work experience, as a first filter for 22 different job titles, about 25% of its workforce. The result has been a far more diverse pool of vetted new hires. In addition, candidates’ reactions to assessment feedback were very positive. The assessment was short but provided a “teachable moment” on healthcare-related knowledge and skills. Even rejected applicants leave with something of value.

In another example, CVS and Dallas Area Rapid Transit in the Dallas market both worked with Innovate+Educate and Earn Dallas, a project of the Walmart Foundation, to embrace the work-learn paradigm with Supervisory Certificates tied to advancement opportunities within the company. The certificates are offered by a local community college via online, competency-based courses but are informed by industry standards and used as currency for within-company promotions. In this case, the credential is obtainable part time in off-work hours, it requires little monetary investment, and its ROI is neither vague nor distant nor uncertain (as it often is with a degree). The certificate ties directly to within-company promotion opportunities. Because employers are beginning to value learned skills more than seat time in a formal academic setting, the many varieties of learning capable of producing higher performance are beginning to count towards obtaining a job or promotion. This is the work-learn future.

The work-learn future will come sooner than later, due to pressure from both supply and demand.

From the supply side, there is already tremendous political and economic pressure from the 67% who do not have a 4-year degree, to find pathways to a well-paying job. The crisis of college unaffordability has led to a crisis of job unobtainability for a large portion of the American public. The resulting pressure has already boiled over, very visibly, into national political dissatisfaction with the U.S.’s status quo. Meanwhile, the stakes for completing a college degree — as demonstrated by the percentage of job ads demanding them — keep rising. The degree demand is unsatisfiable by any current means. If the economy keeps expanding, employers will be under tremendous pressure to find skilled labor.
employees somewhere. The closest and most qualified pool are the 35 million individuals, already present within companies, who attempted college but dropped out because of their need to work. Sixty-six to 90% percent of these employees have college-level motivation and skill (when interviewed, they said they had no difficulty with their college-level studies28), but they badly needed learning opportunities compatible with work.

Colleges, likewise, will need different strategies to satisfy this demographic’s need for learning-with-job. The rise of the massively online open courses (Udacity, Coursera, edX) has demonstrated the scale of unmet demand but is still struggling to make a consistent last mile connection to job entry or advancement. Without such a connection, and without the four years of time and money needed for more formal education, many individuals have fled to workplaces that rely solely on performance-based measures: TaskRabbit, Upwork, TopTal. In so doing, they have demonstrated that client ratings or scores on rigorous skills tests can also be a currency for job entry. The last mile connection to a job has historically been the degree, but it is starting to shift to something slightly different.  Meanwhile, a profusion of learning and education pathways is likely to place a premium on individuals who have learned how to learn, making that one skill the most necessary attribute of future college graduates.

Formal preparations for the work+learn Future are underway

A number of events, national discussions, and papers are starting to guide thinking about pathways into the work+learn future. As far back as March of 2016, the Work+Learn Futures project within the Institute for the Future hosted an interactive forecasting game: “The event at which A Nation Upside Down is being released, Future Skills (Palo Alto, CA: Feb 21-25, 2018) is putting forth an overall framework for navigating the shift. Another gathering, the Close-It Summit (Brooklyn, NY: Oct. 17-18, 2018) will delve into new technologies and tactical approaches companies and colleges can use in their shift to the new model. Scholarly papers are also beginning to emerge29,30, and can be found referenced below. Keeping the conversation alive, Innovate+Educate has also committed to issuing state-level analyses in stages throughout 2018.

The first demonstration partnerships are also beginning to emerge. These are coalitions of willing employers designed to escalate innovations up the adoption chain by:

- field testing innovative approaches amongst early-adopter companies. These are companies whose leadership is willing to risk-manage potential failure in exchange for early returns in the areas of employee attraction, selection, development and/or advancement;
- sharing early adopters’ pilot results with other members of the partnership, who in turn pilot the “now-more-proven” strategies in larger scale trials.
- disseminating findings and best practices proven through the scaled field tests with the wider public through editorials, media appearances, etc.

Formal demonstration partnerships generally have, as a prerequisite for entry, a commitment letter stating the company will take on at least one demonstration during its tenure with the partnership. This ensures the focus remains on implementation rather than discussion. Informal demonstration partnerships are less strict. In the work+learn space, these include such organizations as Grads of Life and the Innovative Business Hiring Council 2020 (a joint partnership launched in January 2018).

Conclusion

In the future, employers will no longer be a separate entity from the education establishment. Pressures from both the supply and demand side are so large, employers will end up – through default if not desire – co-designing novel pathways to credentials, certifications, employment, and promotion in order to access skilled labor. A work+learn economy is emerging all around us. Among the first work+learn shifts are being faced employers themselves, having to create dynamic work+learn pathways into our future.
POINT OF VIEW:

Breaking Education’s Problematic (Counter)Cycle

BY FRANK BRITT

Conventional wisdom suggests that investments in education are countercyclical. But that long-standing trend is beginning to change. And it’s good news for both employers in search of talent — and individuals pursuing opportunities in our complex, modern economy.

Savvy business leaders are breaking the cycle by investing in new pathways to emergent skills that enable individuals to work throughout their career — not just in between jobs. They are challenging dated perspectives about employee loyalty, doubling down on education investments with the potential to improve retention, and make it easier for individuals to go back to school while still keeping their jobs.

Competency-based learning and hiring have fueled what I like to think of as “talent fracking,” as HR leaders tap the potential of machine readable digital credentials and predictive analytics to discover new talent in unconventional places. Even traditional education and training providers are focusing less on the when and where of education and distance based corporate training is the fastest growing approach to skills development. Together, they’re beginning to value learning that fuses on-demand digital training and skills developed on the job — and not just in the classroom.

As the traditional feast and famine approach to employee educational investment shifts to consistent and steady, we’re doing away with an all or nothing approach to education that is at odds with the demands of today’s dynamic labor market. Individuals are beginning to embrace a “renewable” approach to learning. Employers are also challenging the relationship between traditional academic credential proxies and workplace ready skills, as the half-life of degrees is measured in months not years.

Innovate + Educate was early to recognize that providing individuals with access to a more diverse array of educational and training options is both an economic — and moral — imperative. This paper builds on a body of work and tectonic shifts happening in the workplace centered on developing and promoting strategies that can move employers and job-seekers toward education and hiring practices that reflect potential more than pedigree. A Nation Upside Down puts that vision within the powerful, historic context of K-12 education reform and uses data-driven insights to issue a critical call to action.

Frank Britt is CEO of Penn Foster, a leader in career-focused online and blended education. Students, employers and organizations rely on Penn Foster to build the skills and knowledge to power the 21st century workforce. For over 125 years, we have been dedicated to helping people lead more meaningful and productive lives and improving social outcomes through education.
POINT OF VIEW:
America Has to Change How It Keeps Score on Education, Jobs

BY BRANDON BUSTEED

American high school graduation rates are at an all-time high and unemployment is at a nearly historical low, according to current metrics. Because this country has been obsessed with these two indicators of education and job success for decades, you’d think we’d be declaring victory. But for some reason, we’re not.

Anxiety over the performance of our education system and economy remains significant, despite improvement in these indicators. Yet many of us can’t quite put our finger on why.

Maybe America needs to change how it keeps score on these critical aspects of our nation. Perhaps we also need to rethink success and reconsider how we go about achieving it.

Here’s why. Even amid elevated high school graduation rates and lower officially recorded unemployment:

- Students in lower grades are much more engaged at school than students in higher grades.
- Enrollment in colleges and universities in the U.S. has declined for six straight years, while more than half a million current college students are in remedial education courses.
- Leading economists estimate that almost all (94%) new jobs created between 2005 and 2015 were contract, temporary or on-call work.
- Nearly a third of all working U.S. adults (34%) have gone backward in their overall income compared with five years ago; that is, they report making the same or less total income than they did five years ago.
- Only 12% of working U.S. adults say they have the “best imaginable job” for them, which tells us there is a lot of room to improve on the quality of work and workers’ talent fit to jobs in the U.S.

Although it will remain valuable to continue quantifying school in terms of graduation rates and jobs in terms of hours worked, these metrics alone are incomplete and misleading. Simply put, when we dig deeper into the data and measure more qualitative aspects of education and jobs, the story of success and the path to it start to change dramatically.

Americans love to keep score. That’s fine, but we need to keep score differently. And “differently” means more qualitative — or behavioral economic -- indicators of success in addition to the quantitative — or classic economic -- indicators.

Let me offer a non-education illustration from recent events. At a country level, Gallup’s monitoring of behavioral economic indicators such as life evaluation — how people rate and evaluate their lives — has proven to be a much better predictor of social unrest than classic economic indicators. In the five years before the Arab uprisings, for instance, a classic economic indicator such as gross domestic product (GDP) was steadily increasing in both Egypt and Tunisia. Based on that, most observers would have -- and did -- conclude that things were going fine in both countries.

But Gallup’s measures of life evaluation in both countries were plummeting in the five years preceding the Arab uprisings — and those indicators proved to be one of the most critical parts of the story. Certainly,
there are cases in which both behavioral and classic economic indicators move together, but they also often diverge as they did in this instance.

If you apply this example to education and job preparedness, it shows how it’s one thing if graduation rates are high, but it’s another thing entirely whether graduates are prepared for work and college.

The fact that 2.4 million fewer students are going to college in the U.S. now than at the peak in 2011 — and well over half a million college students are enrolled in remedial courses — points to a serious blind spot in our current metrics.

So does the fact that only 14% of C-level business executives strongly agree that college graduates have the skills they are looking for.

So does the fact that Google — one of the world’s most admired employers — is no longer asking about job applicants’ grades or test scores because the company has found no correlation between them and success in jobs at Google.

All of this makes you wonder whether we are measuring all of the aspects of success -- and the paths to it -- that we ought to be.

The hard fact is that we have built an education system measured almost entirely by grades, test scores and graduation rates. In doing so, we have created a system that is engaging and inspiring only to those students who thrive on classic academic measures of success. Those who do well studying, who are very smart, who are good at memorization and who do well taking standardized tests are doing just fine in America’s schools today.

But this system misses myriad talents and paths to success in the U.S. It underappreciates the massive performance debt that students from poor families and districts face as a result of hunger, health issues and more; devalues vocational and technical pathways; discourages nonlinear paths to success such as entrepreneurship; and convinces countless numbers of students that they aren’t “college material.”

We could be measuring many qualitative aspects of education in America. For example, when students work on long-term projects that take a semester or more to complete or have internships where they are able to apply what they are learning in the classroom, it doubles their odds of being engaged in their work later in life. Yet we aren’t systematically measuring things like this.

We have also come to value a very narrow definition of what it means to have a “great job.” Current employment data focus more on the number of hours worked than the quality of work such as what employees do in their jobs and whether their roles align with our skills, talents or interests.

What would happen if along with reporting the percentage of U.S. adults who are unemployed each month, we also reported how many people have great jobs and the factors that define “great jobs”? As an example, Gallup has learned that factors such as having flexibility and control over the hours you work and what you do at work — such as being expected to be creative or think of new ways to do things in your job — are critical dimensions of whether you feel you have a great job.

A more nuanced, qualitative scorecard on education and jobs is mission critical for America to fulfill its promise and potential. If we can add a behavioral economic set of indicators to our definition and tracking of education and job success, everything changes. If America doesn’t change how it keeps score, we’ll simply be winning in ways that don’t really matter.

Brandon Busteed is Executive Director, Education and Workforce Development, at Gallup.
POINT OF VIEW:

Skillful: What We Need to Truly Move to a Skills-Based Labor Market

BY BETH COBERT

Every day, my team and I work with multiple partners to transform our U.S. labor market to a skills-based model, one in which people can acquire or hone the skills they need to obtain good digital economy jobs in a rapidly changing economy. Launched in 2016 by the Markle Foundation, in partnership with the state of Colorado, Microsoft, and LinkedIn, Skillful helps employers, job seekers, and educators transition to this new labor market. Along with other initiatives, Skillful’s work is a critical input to the Markle Foundation’s Rework America Task Force, a coalition of influential leaders who have joined together in service of modernizing the nation’s outdated labor market.

I am encouraged by the progress I’ve seen toward this skills-based world. That being said, I will be the first to admit we’ve got our work cut out for us. Innovate+Educate’s report “A Nation Upside Down” explores the many obstacles we face as we try to transition to a 21st century labor market. In addition to the many solutions it proposes, I believe we’d move faster toward a skills-based labor market if everyone working toward this goal embraced the following three points:

1. We need to stop reinventing the wheel and collaborate more.
   
   Rather than try to build everything from scratch, organizations need to know who’s in their field and what they’re working on. This knowledge, coupled with strategic partnerships, can help organizations achieve their goals more quickly. At Skillful, for instance, we have launched the Skillful State Network, a bi-partisan group of governors who have made workforce development a state priority. The network is supported by the Skillful State Playbook, a free and public resource that lays out the steps needed to create a skills-based labor market. The free and public availability of the Skillful State Playbook establishes a model for the open sharing of best practices; Skillful State Network members may tailor or enhance tools in the Playbook and add their own tools and resources to the Network’s portfolio.

2. People and institutions need data to make the most informed decisions.
   
   In 2018, it should go without saying that data transparency and accessibility is critical to driving change. With the goal of helping students find training programs that suit them best, Skillful has launched the Training Provider Outcomes Toolkit (TPO), a data transparency pilot that provides historical wage and employment data on graduates from five participating training providers in Colorado. Every organization should commit to sharing their data; students benefit by choosing programs that best suit their needs, while educators are able to improve their curricula to better serve students. Initiatives such as these will help everyone improve.

3. New technology alone won’t save us.
   
   There are myriad tools and technologies available that have drastically changed the way we work, often for the better. While it’s tempting to see new technology as the panacea to everyone’s workforce woes, it’s not enough on its own. At Skillful, we believe that the labor market will thrive when humans work in concert with and aided by new technology. That’s why we created the Governor’s Coaching Corps and the Coaching Community of Practice, programs designed to help career coaches build their coaching skills, share resources, and create a supportive cohort.

“A Nation Upside Down” ends with a short discussion of solutions to the country’s most pressing workforce issues. I urge you to be testing these solutions and do so through partnerships that will help us move toward a world in which skills are the labor market’s most valued currency.
Clayton Christensen’s seminal 1997 work *The Innovator’s Dilemma* introduced the concept of disruptive technologies: “cheaper, simpler, smaller, and, frequently, more convenient to use.” And while they may “underperform established products in mainstream markets... they have other features that a few fringe (and generally new) customers value.” Defining technology broadly as the process by which organizations make products and services, Christensen noted that the “most profitable customers generally don’t want, and indeed initially can’t use, products based on disruptive technologies. But disruptive technologies emerge because, “in their efforts to provide better products than their competitors and earn higher prices and margins, suppliers often ‘overshoot’ their market: They give customers more than they need or ultimately are willing to pay for.”

Replace “customers” with “students,” “products” with “degrees,” and “suppliers” with “colleges” and you get what’s happening in higher education: disruptors are emerging because the college and university product is more than some students need or are willing to pay for. Except it’s not only a “few fringe” customers. Millions of young Americans are dislocated, disgruntled, and burdened by a mountain of student loan debt. A high percentage of Millennial graduates are unhappy with their college and post-college employment experiences. One recent survey found that only 27 percent of Millennial college graduates agreed with the statement that “higher education leaders put students first, while 66 percent disagreed, saying they put the interests of their schools first.

Meanwhile, millions more have experienced career Armageddon by trying and failing to get over the bar of four years and 120 credits. Degree-less twenty-somethings who have wasted money and valuable time without attaining any credential of value are what kept former Secretary of Education Arne Duncan up at night: “If you have inordinate debt and no degree, you’re in a worse situation than where you started,” he said. Unfortunately, this describes nearly half of all students who undertake degree programs. America has by far the lowest rate of college completion as a percentage of students who matriculate. And adding dropouts to graduates working in jobs that don’t require a college degree yields a majority, which is proving dangerous to the social fabric of our country.

We are in the early days of a faster + cheaper revolution that will upend the traditional college route as America falls out of love with bachelor’s degrees, particularly from non-selective schools. Alternative pathways are sprouting up everywhere in the form of bootcamps, income share programs, apprenticeship, staffing and placement models – all with “last-mile” training on the key digital skills that employers increasingly require for entry-level jobs, and that colleges and universities don’t teach. As these “disruptive technologies” proliferate, employers are undergoing simultaneous changes in their approaches to sourcing talent and hiring. These trends will snowball as more and more talented and motivated Millennials and Gen Z-ers opt out of a system that is unnecessarily lengthy and costly, at least to get a good first job.

All students must have a good chance at achieving positive outcomes from postsecondary education. Make no mistake: every shred of evidence tells us that some form of postsecondary education is more important than ever. Failure to do so will mean relegation to a lifetime of menial work and will also limit one’s ability to take full advantage of the blessings of American citizenship. And as a nation in today’s global knowledge economy, any reduction in postsecondary education in aggregate or per capita would be tantamount to economic suicide.

But it doesn’t have to be “traditional” postsecondary education; it doesn’t have to be college. Fostering the development of a diverse set of faster, less expensive, and respected pathways to high-value employment is the calling of our time. Let’s hope we get the job and do it well. America’s future depends on it.

BY RYAN CRAIG

Ryan Craig is Managing Director of University Ventures, a firm reimagining the future of higher education and creating new pathways from education to employment. He is the author of the upcoming “A New U: Faster + Cheaper Alternatives to College.”
BY THE HONORABLE CARI M. DOMINGUEZ

In his book, “Excellence, Can We Be Equal and Excellent Too?” John W. Gardner, one of our Nation’s greatest thought leaders, makes a strong case for institutional and leadership diversity. He wrote, “Today, attendance at college has become virtually a prerequisite of high attainment in the world’s eyes, so that it becomes, in the false value framework we have created, the only passport to a meaningful life. The crowding in our colleges is less regrettable than the confusion in our values.” Gardner continues, “An excellent plumber is infinitely more admirable than an incompetent philosopher. The society which scorns excellence in plumbing because plumbing is a humble activity and tolerates shoddiness in philosophy because it is an exalted activity will have neither good plumbing nor good philosophy. Neither its pipes nor its theories will hold water.” These words were written in 1961, yet we continue to tout the prestige of a college degree and associate it as the pathway to upward mobility, and to market and personal value.

Clearly, such biased thinking has had a detrimental effect on the opportunities of those who, by circumstances of birth or any other condition, may lack the access to or interest in pursuing this pathway, yet can contribute their dedication, skills and competencies toward a highly productive, high performing society. This is our challenge, to level the playing field by removing attitudinal biases, cultural, and social barriers that stymie the pursuit of learn and work, of growth and opportunity. Continuous skills development is the currency of today’s workplace, and the means to remain employable throughout one’s working life. How we, collectively, address this whole new world of employment possibilities that underscores the value of human talent and the intrinsic dignity of work in all fields, will determine our success in achieving an inclusive, equitable, and flourishing society.

The report, A Nation Upside Down, highlights the challenges we face, yet offers encouraging solutions that call for a greater focus on and broader acceptance of competency-based, skills-based hiring practices. The growing diversity in our Nation, the shifts in business needs, the technological transformations taking place, and our societal commitment to equality and fairness demand a fresher look at the talent we have available and a reassessment of our attitudes to ensure that one’s competencies are not overlooked for reasons as irrelevant as race, gender, national origin, disability or any other irrelevant personal characteristic. The success of our Nation and the aspirations of all who call America home depend on it.

POINT OF VIEW:

Removing Attitudinal Biases as a Barrier to Access and Inclusion

BY THE HONORABLE CARI M. DOMINGUEZ

The case that is made for the work+learn economy in “A Nation Upside Down” resonates strongly for what we grapple with in workforce development for healthcare. In an industry notable for highly credentialed clinicians, practitioners and researchers, there is also a range of frontline and entry level positions that do not require degrees. Absent degree requirements, there is wide variation in what to consider in matching talent to open jobs and then developing those people once in the jobs. While noble work is being done by many individual institutions and through partnerships they’ve forged with community based organizations, it strikes me that the opportunity exists for broader impact by those same institutions reaching out to one another to identify some training and assessment standards for some of the most common frontline needs.

POINT OF VIEW:

Healthcare Employer Leading Innovation

BY SEAN T. SULLIVAN

Sean Sullivan is Vice President in charge of Human Resources at Tufts Medical Center.