Testimony: "Eliminating Barriers to Employment: Opening Doors to Opportunity"
Daniel Pianko

Thank you to Chairman Scott and Ranking Member Foxx for the opportunity to testify. My name is Daniel Pianko and I am co-founder and Managing Director of University Ventures. University Ventures' portfolio companies reduce barriers to employment and make higher education more affordable by pioneering new approaches to learning and helping employers think differently about how and where they discover talent.

America is facing an unprecedented mismatch in the supply of and demand for talent. In a robust economy, over 40% of college graduates are still underemployed in their first job. And we know that if they're underemployed in their first job, 2/3 of the time they'll be underemployed five years later, and half the time they'll be underemployed ten years later. Even worse, tens of millions of older workers are out-of-position relative to the skills required by employers. And on the demand side of the equation, there are over 7 million unfilled jobs, most of which are high skill or middle skill positions. The labor market isn't working very well.

The skills gap is exacting a heavy toll on American families and institutions. It is impeding economic growth, promoting generational inequity, jeopardizing the American Dream, and creating real anxiety about the future of work.

Why is it worse than ever? Because the nature of work has changed, and hiring has changed, while our postsecondary education and workforce development infrastructure aren't equipped to keep up. I will address these in order.

First, the nature of work has changed. Over the past decade, businesses and organizations have transformed their internal systems, as well as their processes for interacting with stakeholders – customers, suppliers, employees, shareholders – from informal and manual to formal software-based processes. Across all sectors, most middle- and high-skill jobs now involve managing some business function through software or software-as-a-service (SaaS) platforms. According to Brookings, only 41 million American jobs still don't require significant digital skills; nearly 100 million do. Two-thirds of the jobs created in the last decade require either high or moderate digital skills.

Of course, it's inexact to generalize about a digital skills gap. The digital skills gap actually consists of thousands of micro-level or tactical digital skills gaps. For example, we don't have a shortage of C++ or Fortran coders, although there's huge unmet demand for J2EE, Microservices, and .NET developers. Depending on whom you ask, the total number of positions that require coding skills ranges from 500,000 to 1 million. But the gap extends well beyond coding to positions outside the formal technology sector. These are jobs that manage functions like supply chains, sales, marketing, customer service, finance, IT, and HR. Employers are seeking skills like Pardot (marketing), Marketo (digital marketing), Google Adwords (digital marketing), ZenDesk Plus (customer service), NetSuite (finance), Financial Force (finance), Workday (HR), and the customer relationship management (CRM) platform Salesforce – the most popular SaaS platform in American businesses. According to Burning Glass, jobs demanding Salesforce experience have quadrupled in the past five years; in 2017, more than 300,000 open positions called for Salesforce skills. In addition to these cross-sector SaaS platforms, every industry has its own SaaS platforms for specific functions. For example, insurance companies and third-party claims administrators have a range of SaaS options for claims processing.

We also have a soft skills gap. Behind digital skills, as evidenced by job descriptions, employers care a great deal about a second set of skills: soft skills like teamwork, communication, organization, creativity, adaptability, and punctuality. Employers want workers who will show up on time and focus on serving customers rather than staring at their phones. They need employees who can to get along with colleagues and take direction from supervisors. The combination of digital skills and soft skills appears to be the killer app, particularly for entry-level jobs. We have coined the phrase “Last-Mile Training” to represent the combination of these missing digital and soft skills.

Meanwhile, Millennials (and now Generation Z) have less exposure to paid work than prior generations – the best environment to develop these skills. When older Americans were in high school, even if they weren’t working during the school years, they probably took summer jobs. Some worked in restaurants or painted houses, others mowed lawns or scooped ice cream. But in the summer of 2017, only 43% of 16-19 year-olds were working or seeking work – down from nearly 70% a generation ago. The Bureau of Labor Statistics forecasts teen workforce participation will drop below 27% by 2024.

Ironically, colleges encouraging unpaid internships and travel programs – at the expense of paid part-time work – may be handicapping students by denying them the soft skill development that they’ll need to land a good first full-time job. As a society, we have unfairly and improperly devalued dishwasher and busboy jobs as useful steps on the road to successful careers.

Second, the nature of hiring has changed, which has over-indexed digital skills in job postings. First, nearly every good job is posted online and generates hundreds of résumés, employers utilize keyword-based filters called Applicant Tracking Systems to determine which résumés are actually seen by a human. If you don’t have sufficient keyword density, you’re not visible. Faced with the deluge of résumés over the past decade, HR and hiring managers have sought to tighten the screen and have done so by adding skills to job descriptions. Which skills have they added? Unfortunately, there are only so many ways to say “critical thinking,” or “problem solving.” So the skills that have been added to job descriptions are digital and software skills. Across virtually every industry, technical skills now outnumber all other skills in job descriptions, particularly for entry-level jobs. Without the digital skills employers are increasingly listing in entry-level job descriptions, too many college graduates are invisible for exactly the positions they want (and need in order to make student loan payments).

More fundamentally with regard to hiring, American employers have moved the goalposts, increasingly requiring candidates who’ve already done the job rather than making a bet on unproven talent. Two reasons explain why. First is the increasing cost of bad hires; experts estimate that the cost of a bad hire now exceeds six months of that employee’s salary, which means companies are increasingly reluctant to take the leap with employees about whom they’re not confident can do the job. The second reason companies are demanding better-qualified candidates upfront is the higher rate of churn for entry-level employees. Whereas a generation ago, employers viewed entry-level hire skill development as an investment in their own future, today it’s seen through the lens of the free-rider problem: investing in entry-level education is more likely a gift to a company’s competitors, and hence, for suckers. It is this thinking that has produced the new status quo of “do the job before getting the job,” which has led to rampant degree inflation and experience inflation in job descriptions. The result is that candidates who would have been snatched up a generation ago are now left sitting on the sidelines.

Colleges and universities launching new degree programs and certificate programs have struggled to keep up. Too few of them are expert at understanding exactly what digital skills employers need, further complicated by the fact that employers aren't particularly adept at engaging with dozens or hundreds of postsecondary institutions' faculties simultaneously. And the cycle time on multi-year degree programs may not be the right speed for a digital age. But perhaps most fundamentally, colleges and universities aren't evaluated based on placement or employment outcomes, and faculty have little incentive to align curricula to perceived employer needs.

Higher education's interface of choice to employers is career services. But not only is career services well outside the academic chain-of-command, the concept of "career services" as a separate office, distinct from every other part of the institution, conveys to students that they aren't expected to think about employment until senior year. Not surprisingly, only half of all students ever visit career services. When they do, they're not meeting with professionals in their fields of interest (with relevant experience and networks), but rather with career services lifers, who may be best positioned to help students get jobs working in career services.

We believe the skills gap is a function of two distinct frictions in the labor market. On the candidate side, there is what we call "Education Friction." Education Friction means that because of the time, the cost and – most important – the uncertainty of a positive employment outcome, many individuals fail to upskill themselves. If we could eliminate Education Friction, millions of candidates would immediately equip themselves with the digital skills, industry and business process knowledge, and soft skills that employers are seeking.

On the employer side, there's what we call "Hiring Friction." Hiring Friction encapsulates the growing reluctance of employers to hire candidates who haven't already proven they can do the job. Hiring Friction helps to explain all the unfilled good jobs, and why employers are increasingly requiring years of relevant experience for positions that should be (and once were) entry level.

We believe solutions to eliminating barriers to employment must address both Education Friction and Hiring Friction and must scale to help tens of millions of Americans who are victims of the skills gap.

Take free college, for example. Free college would go some way to reducing Education Friction, but it wouldn't eliminate it. Students would still be required to pay for (or borrow for) their living expenses. Furthermore, free college doesn't guarantee employment. So there's still significant Education Friction. And free college also completely fails to address Hiring Friction.

We believe many of the barriers to employment we're seeing are inherent in our current "Education-Up" paradigm. What do I mean by "Education-Up"? It's the model for every school and skill development program in America. Educators develop curriculum, recruit students, deliver the program, graduate students, and then hope and pray they find work. But because the hardest part of the skills gap to bridge is the connection to the employer, "Education-Up" models are hard to scale.

We believe a big part of the solution are what we call "Employer-Pay" models in which established intermediaries of scale, with strong connections to dozens or hundreds of employers, add "Last-Mile Training" and become frictionless pathways to good jobs and careers for millions of Americans.

Think about staffing companies. They're in the business of having their fingers on the pulse of their clients' talent needs. They have relationships with hundreds or thousands of clients – most importantly with hiring managers – often at very large employers. Equally important, they're accustomed to taking risk: hiring the talent themselves and staffing the talent out to clients. Our experience – and the rapid growth we've seen from adding "Last-Mile Training" to staffing – has provided convincing evidence that the best way to eliminate Hiring Friction is for intermediaries like staffing companies to provide employers with the opportunity to "try before they buy." We believe what was previously a tough hiring decision for employers becomes an easier decision. Moreover, because the initial employer decision is not a hiring decision, these new pathways typically circumvent the formal HR function (which increasingly has become a compliance/risk management gatekeeper, rather than a talent management role) by working directly with hiring managers and business units. HR only gets involved later on, at the time of the hiring decision, after the talent has proven they can do the job – a much easier decision.

As a bonus, because these models are paid by the employer, they also eliminate Education Friction by not only refraining from charging tuition, but hiring candidates from day one, thereby guaranteeing an employment outcome. We have been involved in Employer-Down models like this that are educating and through-putting thousands of new workers into high-skill jobs every year.

There are a remarkable number of relatively simple solutions to start bridging the gap between education and employment. I will lay out three solutions that should receive bipartisan support and could be included in the next reauthorization of the Higher Education Act.

First, some solutions for higher education have been developed in the marketplace. The average company spends $30,000 to recruit a software engineer, but bootcamps, which charge approximately $15,000, can effectively prepare a recent college graduate to fill such a role and then move that graduate into a job where they can immediately earn a high wage. For example, Talent Path works with colleges to identify high potential recruits and then creates a direct pathway to employment with free software education provided. Non-profit groups like Merit America are providing technical and soft skills to students without a bachelor's degree who are underemployed but in the workforce. Employers are effectively exchanging in-house spending on recruiting for paying full stack last mile programs that recruit, teach, and place students in good first jobs. We call these employer pay models and believe they will grow dramatically to fill the gap between education and employment.

Congress should encourage such behavior by allowing companies that prepare and subsequently hire workers to be eligible for federal funding from programs like Pell Grants and Workforce Innovation and Opportunity Act (WIOA) funds to offset the education investment dollars spent.

Second, existing funding mechanisms should be tweaked in ways that encourage work. While well-intentioned, the current Federal Work Study program fails to incentivize colleges and universities to reach out to real employers. In fact, the work study program's structure makes it much easier for schools to employ students to clean toilets on campus than to connect them with private sector jobs that could result in full-time work upon graduation and is, in effect, crowding out private sector employment for college students.

There are three reasons for this. First, the standards for private sector jobs' connection to students' program of study are much higher; there are no standards for on-campus work. Second, while on-campus jobs receive a subsidy of 75%, "for off-campus FWS jobs with private

for-profit organizations, the federal share of wages paid to students is limited to 50%." Third, "a school may use no more than 25% of its total current year initial allocations to pay wages to students employed with private for-profit organizations."

The result of these skewed rules is entirely predictable. According to the Department of Education, of the $1.085 billion spent on FWS during the 2016-17 school year, $996 million – or 92% – went to subsidizing on-campus jobs. Nearly all the rest went to off-campus jobs at not-for-profit or community service organizations. Of the $1.085 billion spend, only $726,208 – or less than 0.1% – helped students gain work experience at "private for-profit organizations" AKA the United States economy.

There are easy fixes here. We should protect students to make sure they're not being taken advantage of by private employers, but at the same time equalize the subsidy, remove the 25% cap, and require participating institutions to place a much higher percentage – I humbly suggest a majority – of students in real, off-campus jobs. If colleges can't make that work, they shouldn't receive FWS funds, and remaining dollars could be added to the Pell program to directly help the nation's neediest students.

Third, Congress should use the Higher Education Act as a tool to encourage the introduction of work experience into academic programs through the work college designation. For example, work colleges such as Paul Quinn and Berea have proven that work, when integrated into the curriculum, radically reduces the cost of education while improving job outcomes. Congress should encourage more institutions to seek a work college designation.

Finally, Congress should look to dramatically reform the federal financial aid system, particularly when it comes to graduate education. For decades, the Higher Education Act has provided access to postsecondary education for millions of Americans. However, in recent years, the GRAD Plus Loan program has shifted resources from access to undergraduate education to supporting graduates who seek to transition into professional fields. Each year the federal government funds $67 billion of GRAD Plus without any direct connection between that investment and employment. Understanding that the pursuit of post-graduate programs remains vital to the growth of talent in many high-need fields such as healthcare, Congress should have some assurance that the federal investment in GRAD Plus is tied to employment outcomes for graduates in career-aligned fields.

Congress has spent decades incentivizing and providing access to postsecondary education. Yet the chasm between employers and educators creates a huge barrier to employment. Over the last ten years, stakeholders across the ecosystem have focused on ensuring students have the tools and resources to actually complete their program and earn a high-quality credential. Today, it is more important than ever to ensure that completion of a credential connects a graduate to employment and future success.

Thank you for your time and I look forward to answering your questions.

https://thehill.com/opinion/finance/436350-the-dangers-of-skills-gap-skepticism

THE HILL

The dangers of skills-gap skepticism

BY WILL MARSHALL AND RYAN CRAIG, OPINION CONTRIBUTOR — 03/29/19 02:30 PM EDT

Was America's skills gap based on a lie? Some prominent progressives have referred to the idea of a national skills shortage as an "incredible cop out."

Others have claimed that the skills gap "was the consequence of high unemployment rather than its cause … With workers plentiful, employers got choosier. Rather than investing in training workers, they demanded lots of experience and educational credentials."

Skills-gap skepticism is increasingly persistent among U.S. pundits and policy wonks. Skeptics claim the country's record number of unfilled jobs (6.9 million as of early January, according to BLS data) are the fault of employers because there are candidates with potential but not experience who are being passed by.

They argue that these unfilled positions are not skilled jobs but rather low-skill jobs, making the case that while the engine of America's dynamic economy is humming along, the millions of unfilled jobs are in agriculture, hospitality and custodial services.

Those who haven't ever worked in the private sector might be forgiven for being skeptical about the existence of a skills shortage. But employers know that America has a significant skills gap — one that is growing with each passing month. And you won't find many skill-gap skeptics among underemployed workers, particularly millennials.

There are two primary reasons why so many middle- and high-skill positions are left unfilled. The first is a lack of workers with digital skills. The World Economic Forum found that only 27 percent of small companies and 29 percent of large companies believe they have the digital talent they require.

Three quarters of Business Roundtable CEOs say they can't find workers to fill jobs in science, technology, engineering and mathematics (STEM)-related fields.

For the first time in recent memory, in May, August and September 2018, the TechServe Alliance, the national trade association of technology staffing and services companies, reported no tech job growth in the U.S.

According to TechServe Alliance CEO Mark Roberts, "[T]his is totally a supply side phenomenon. There are simply not enough qualified workers to meet demand."

It's a sentiment shared by the newest generation to enter the workforce: Most Gen Z workers (the successors to millennials) believe that the hard skills needed for the workplace are changing faster than ever.

The second reason for the skills gap is that employers care a great deal about a second set of skills: soft, or so-called "human" skills like teamwork, communication, organization, creativity, adaptability and punctuality.

Employers want workers who will show up on time and focus on serving customers rather than staring at their phones. They need employees who are able to get along with colleagues and take direction from supervisors: a particular challenge for some headstrong millennials.

In a LinkedIn study of hiring managers, 59 percent said soft skills were difficult to find, and this skill gap was limiting their productivity. A 2015 Wall Street Journal survey of 900 executives found that 89 percent have a very or somewhat difficult time finding candidates with the requisite soft skills.

Why do these gaps exist, and why do they persist? As America's economy has digitized over the past decade, our legacy infrastructure — postsecondary education institutions and workforce development boards — has not come close to keeping up.

College is increasingly unaffordable; the average student who borrows to attend college graduates with nearly $40,000 in student loan debt.

Because life tends to "get in the way" of any multi-year task — particularly for students most in need of the social mobility that postsecondary education is supposed to provide — nearly half of all students who undertake degree programs fail to complete (and many drop out with debt — the worst of both worlds).

But higher education leaders typically aren't incentivized to align curricula to employer needs. Few are interested in what employers are seeking, particularly for entry-level positions.

Moreover, the digitization of the economy has also changed hiring practices, with real implications for our workforce. Faced with the deluge of résumés over the past decade, hiring managers have sought to tighten the screen and have done so by adding skills to job descriptions. But the skills that have been added to job descriptions are overwhelmingly digital and software skills.

Across virtually every industry, technical skills now outnumber all other skills in job descriptions, particularly for entry-level jobs. Without the digital skills employers are increasingly listing in entry-level job descriptions, too many college graduates are invisible for exactly the positions they want (and need in order to make student loan payments).

Perhaps taking inspiration from the growing "deficits don't matter" crowd, skeptics continue to shrug their shoulders at the skills gap. But that's a dangerous approach.

In a recent survey of U.S. hiring managers, 90 percent reported it difficult to find and hire the right tech talent, and 83 percent said the shortage of tech talent is slowing company revenue growth.

Another survey found that three-quarters of hiring decision-makers fail to see much connection between a worker's education and their job performance.

Perhaps the biggest casualties of the skills shortage are the 10 million workers who have stopped seeking work and dropped out of the workforce in the last decade — many because they didn't have the skills employers were seeking.

There are few challenges more consequential to America's future than the skills gap. It is impeding economic growth, promoting generational inequity and destroying the American Dream.

Skeptics be warned: The skills gap is real, it matters, and it won't close unless America's employers and higher education institutions do something about it.

Will Marshall is co-founder and president of the Progressive Policy Institute. Ryan Craig is managing director of University Ventures and a frequent commentator on higher education and workforce issues; his most recent book is "A New U: Faster + Cheaper Alternatives to College." This piece is based upon a report released by the Progressive Policy Institute.

https://www.insidehighered.com/news/2018/05/23/college-graduates-whose-first-job-doesnt-require-bachelors-degree-often-stay

INSIDE HIGHER ED

The Bad First Job's Lingering Impact

> New report finds that bachelor's degree recipients whose first job does not require degree are more likely to remain "underemployed" five years later -- and women fare worse than men.

By

Doug Lederman

May 23, 2018

The image of the recent college graduate working as a Starbucks barista or a rental car clerk has become a cliché in the national debate over student loan debt. Studies of the underlying validity of the stereotype over time have offered mixed results, with various methodologies counting anywhere from single digit percentages to 45 percent of recent graduates as "underemployed." But most have found that some people will always be what economists call "underemployed," and that the proportion of Americans in that position stays relatively constant over time.

For students and parents, having a graduate take a job that might appear beneath his or her qualifications might beat the alternative in an especially tight job market.

But a study released today by the labor market analytics firm Burning Glass Technologies suggests that graduates who take such jobs pay a lasting price.

Bachelor's degree graduates whose first job does not require a bachelor's degree (which is how the study defines the underemployed) are significantly likelier than those whose first job did require such a degree to still be underemployed five years later. (Many of those workers remain underemployed by this definition 10 years after leaving college.)

As is true of so many overarching statistics like this, enormous variation occurs among the graduates. Degree holders in many science and technology are less likely to be underemployed – and notably, women are quite a bit *more likely* than men to face that fate: 47 percent of them are underemployed, versus 37 percent of male graduates, found the report, "The Permanent Detour: Underemployment's Long-Term Effects on the Careers of College Grads."

The data in the Burning Glass report, which was done in conjunction with the Strada Institute for the Future of Work, are likely to be seized on by the growing number of people questioning the value of a bachelor's degree, and by extension the wisdom of college-going generally. (Some analysts said they believe the data and the report's conclusions from them overstate the extent of the problem and the reasons for it -- more on that below.)

Matt Sigelman, Burning Glass's chief executive officer, says the data suggest that "there are too many schools producing bachelor's degrees that are not taking into account the last-mile skills graduates need to get a good job, and too many graduates getting bachelor's degrees that aren't aligned with the job market."

But the report's findings do not suggest a "throw the baby out with the bathwater" problem, Sigelman said, because the difference in the capabilities and skills of "the employed and the underemployed is not necessarily a big gap."

By being "a bit more mindful about" how to prepare their graduates for a first job, many colleges and universities should be able to "layer more preparation on top of the traditional education they offer," he said, preparing their graduates better for today's workforce.

Defining Underemployment

Everyone knows what unemployment means, and why it's a problem for the individuals involved. But *under*employment is a murky term.

The federal government doesn't formally calculate underemployment in its regular surveys of Americans' working lives, largely "[b]ecause of the difficulty of developing an objective set of criteria which could be readily used in a monthly household survey," the Labor Department explains. (In other words, underemployment is too hard to measure accurately.) But scholars have typically mined federal and other data to try to define underemployment as being in the labor force but employed either at less-than-full-time jobs or at positions that don't match workers' skills and training or meet their economic needs.

Estimates of underemployment for recent graduates are often pegged at between a third and 45 percent, although a 2015 study by the Georgetown University Center on Education and Workforce -- defining underemployment as "those who want a job but don't have one as well as those who want a full-time job but only have a part-time job" -- found rates much lower, even in the single digits.

Burning Glass mined its distinctive database of online job advertisements and résumés to define underemployment according to how employers hire workers. The company analyzed job postings and defined as a "college-level job" any position for which more than half of job postings requested a bachelor's degree. Using that measure, it added dozens of job types (such as insurance adjustor, radiation therapist and paralegal) to the standard job lists used by the Labor Department, and excluded some others. (Burning Glass acknowledges that these shifts in employer expectations, known as "upcredentialing," could inflate the amount of underemployment revealed by the report.)

Using that definition, Burning Glass found that 43 percent of recent graduates had jobs that did not request a bachelor's degree, while 57 percent held positions for which employers sought workers with a bachelor's. The 43 percent who the company deemed as underemployed earned an average salary of $37,330, compared to the $47,470 earned by the majority who were appropriately employed.

The initial hole was tough to climb out of. Two-thirds of the 43 percent were still underemployed, by Burning Glass's definition, five years after graduating. And almost three-quarters of those were unemployed 10 years after they began their first job, as seen in the graphic below.

By comparison, the vast majority of the 57 percent whose first jobs were deemed "college-level" positions were in such jobs 5 and 10 years later.

Significant differences surfaced by major and choice of professional field. No surprise, but engineers (29 percent) and computer scientists (30 percent) were least likely to be underemployed in their first job, followed at a significant distance by communication majors (39 percent) and mathematics majors (39 percent). More than half of graduates in nine categories of graduates (including those majoring in psychology, general studies, biology and education) were underemployed right out of college. There was a similarly wide range of outcomes by job fields.

And strikingly, Burning Glass's analysis finds a large gender gap in underemployment. Nearly half of women (47 percent) are underemployed in their first job by its definition, compared to 37 percent of men.

These findings, the report says, "undercut a long-held assumption, that female underemployment is the result of work-life tradeoffs often expected of women.... While women are more likely than men to later slip into underemployment, what is most concerning is that women fall behind at the very outset of their careers, in their first jobs -- at the very point when, presumably, they have the fewest familial obligations."

"The initial job a younger worker takes can profoundly influence the direction of a long-term career," the report concludes. "Graduates who accept or are forced into subbachelor's-level jobs early in their careers suffer significant long-term consequences; they may be consigned to underemployment for years to come. The first job is a high-stakes decision, and both educators and graduates should treat it accordingly."

Questions and Critiques

Joseph Fuller, a professor of management practice and co-leader of the Managing the Future of Work project at Harvard Business School, said via email that the Burning Glass report "explodes the myth [that] a college degree is a golden ticket. The aptitudes and specific skills that students develop in a college program influence the arc of one’s degree, not merely degree attainment."

He also noted that while the so-called STEM fields rise to "the top of the heap" in Burning Glass's findings, "other skills, like communications, that employers often find in short supply are also rewarded."

Not everyone is convinced that the situation is as dire for recent graduates as Burning Glass portrays it to be.

Nicole Smith, a Research Professor and chief economist at the Georgetown University Center on Education and the Workforce, questions Burning Glass's decision to judge which jobs are "college-level" based purely on the fact that many employers are asking for (not even requiring) a bachelor's degree. "Employers can ask for everything under the sun, especially in an employer’s market," she said. "They assume that employers are actually going to hire based on that.... I care about what the person has who actually gets the job, who actually seals the deal."

Letting employers' desires dictate which positions get characterized as "college level" -- and treating as "underemployed" everyone who doesn't get one of those elevated jobs -- "would by definition result in higher levels of underemployment," Smith said.

In addition, she says, the analysis fails to account for the "voluntary" nature of some of what Burning Glass paints as forced underemployment. Some of the workers the analysis assumes to lack skills or preparation for the workforce may just lack the motivation; others may choose to work in a lower-stress position, in a "caring" profession, or to sacrifice a better job to stay near family or a loved one.

And even right out of the gate, she said, "women still bear the burden of child rearing," so for the age 22-27 group in the Burning Glass analysis, some may be choosing one job over another for that reason.

A 2016 study by economists at the Federal Reserve Bank of New York found roughly similar levels of recent graduates to be underemployed, even though it defined jobs as "bachelor's level" based not on whether at least half of employers asked for candidates to have that degree, but because at least half of people in the positions said the degree was necessary to do the job.

But as Smith suggests, the New York Fed researchers concluded that many of the 40-some percent of recent bachelor's degree graduates who took jobs typically done by people without such degrees actually fared quite well.

"[C]ontrary to popular perception, our work reveals that most of these newly underemployed workers were not forced into low-skilled service jobs. In fact, many of the jobs such graduates took, while clearly not equivalent to jobs that require a college degree, appeared to be more oriented toward knowledge and skill when compared to the distribution of jobs held by young workers without a college degree," wrote Jaison R. Abel and Richard Deitz.

Abel's and Deitz's analysis also found that while some number of recent graduates did stay "stuck" in true underemployment, many others moved into jobs they were satisfied with, especially over time. Their assessment might challenge the use of the word "permanent" in the Burning Glass report's title to describe the impact of graduates' early stumbles.

https://techcrunch.com/2017/06/25/the-last-mile-in-education-and-training/

The 'last mile' in education and training

Ryan Craig@ryancraiguv / 2 years ago

After graduating from college in 1994, I spent a few years at McKinsey & Co. — a young kid in an ill-fitting suit naively but energetically attempting to convince experienced and jaded managers to do their jobs differently.

One question that kept coming up for a number of clients was "who was likely to win the war to bring broadband access to homes: telephone companies or cable companies?" While we know the answer now (cable), I recall spending a lot of time studying the technical specifications of cable and telephony "last mile" connectivity.

The concept of the last mile — the final leg of the connection to each home — originated in telecom, but is now a primary focus for supply chain management and e-commerce, in particular.

The general principle applicable to all contexts is that the last mile is the most difficult and expensive to build, but equally the most valuable: Dominating the last mile can provide a nearly unassailable competitive position. In telecom and other utilities, the cost of building the last mile is what results in natural monopolies, thereby requiring regulation.

We are now seeing the emergence of the last-mile phenomenon in an unlikely setting: education. There are three reasons for this.

I. The hiring process has changed drastically

Today, more than 85 percent of all job openings (and nearly all positions in growing sectors of the economy) are posted online. As a result, the typical job posting receives approximately 200 applications — too many resumes and CVs for any hiring manager to seriously look at. So all large employers and most mid-size firms have resorted to utilizing Applicant Tracking Systems to manage their hiring processes. These systems, like Oracle's Taleo, the market leader, filter applicants based on a keyword match.

What are Applicant Tracking Systems matching to? Increasingly, it's technical skills. Over the past decade, technical skills have come to outnumber cognitive and non-cognitive skills combined in job descriptions across nearly all industries. While this is undoubtedly a product of the fact that, for any given job, it's easier to come up with 10 different technical skill requirements than 10 different ways of saying "problem solving" or "critical thinking," that is of no matter to the inexorable keyword matching logic of Applicant Tracking Systems, which filter out candidates without a

sufficient level of keyword match. This means that most candidates with few technical skills are invisible to human hiring managers.

The prevalence of technical skills in job descriptions is particularly acute for entry-level positions, many of which now involve utilizing SaaS platforms to manage functions like supply chain, sales, marketing, customer service, finance, IT and HR. So candidates who don't have keywords like **Salesforce** (sales), Pardot (marketing), **Marketo** (digital marketing), Google AdWords (digital marketing), ZenDesk Plus (customer service), NetSuite (finance), Financial Force (finance) and Workday (HR) on their resumes are unlikely to be considered.

II. Students really, really care about getting a good first job

The single biggest change in higher education over the past decade is the percentage of students who say they're enrolling for job, career or income reasons. Today, more than 90 percent of students provide this as the sole or primary reason for going to college.

Some of this undoubtedly stems from the poor employment outcomes experienced by college graduates during the Great Recession. Most students have older siblings or friends who were underemployed — often significantly — for many years. Another cause is that today's students have much less experience with paid work, which creates additional anxiety about getting a good first job. And finally, concerns about getting a good first job are real: There are simply fewer jobs that require college degrees without specifying experience requirements, perhaps because employers have given up hoping that new college graduates have the requisite technical skills, and so have begun imposing experience requirements. As a result, whereas a decade ago entry-level sales positions had few if any technical skill requirements, the same positions today are likely to specify two years' experience with Salesforce.

III. Colleges and universities have not adjusted

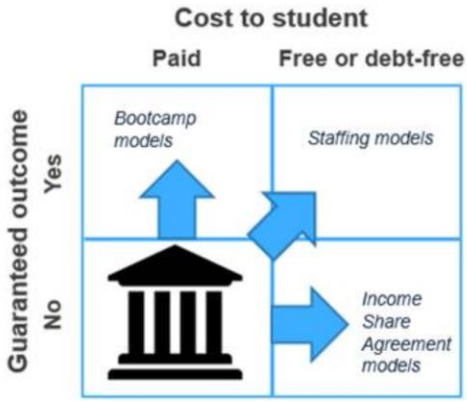
Even though today's students no longer buy it, the vast majority of colleges and universities continue to abide by the old adage: "we prepare you for your fifth job, not necessarily your first." So despite increasing recognition that students are increasingly unlikely to get a good fifth job if they don't get a good first job, there's been little in the way of adjusting curriculum to reflect employer needs and job-market realities. Lower-level course curriculum hasn't changed; most departments offer the same lower-level courses they offered 20 or 30 years ago. Meanwhile, upper-level courses continue to be dictated by faculty research priorities, which operate independently of labor-market demands.

Last-mile training providers

This growing gap — often referred to as the skills gap — has given rise to the emergence of last-mile training providers. These providers are focused on exactly the technical skills employers need (as demonstrated in job descriptions), but which colleges and universities don't teach. Coding is the most obvious example; while all schools teach Java, few computer science programs actually expose students to how coding projects work in practice (e.g. using struts: existing code that developers call upon for common functions). But last-mile training providers are emerging in almost every sector. In addition to coding, my firm has already made investments in last-mile training providers in sales, medical devices and insurance.

Last-mile training provider models fall into three categories, each of which represents an advance over the traditional higher education value proposition. Viewing higher education through a 2×2 matrix, where the X axis shows cost to the student (paid or free) and the Y axis shows outcomes

(no guarantee or some guaranteed outcome), traditional colleges and universities have always been and continue to sit in the bottom-left quadrant: pay your money upfront for no guaranteed outcome.



But given employer demand for the technical skills they are imparting to students, last-mile training providers are able to improve upon this value proposition. We are seeing bootcamp models where students pay tuition upfront and receive an explicit or implicit guarantee of employment; most student-pay bootcamps show placement rates of close to 90 percent into relevant, well-paid jobs.

We are also seeing income-share agreement models where students don't pay anything upfront, but where the last-mile training provider is so confident of a positive employment outcome that it is happy to take payment as a percentage of graduates' income for several years — typically only once students have begun making $50,000 or more. Finally, we are seeing staffing and placement models, where the last-mile training provider can truly guarantee an employment outcome because it hires graduates and staffs them out to clients. This revenue model allows providers to offer the last-mile training for free — further enhancing the value proposition for students.

As all three types of last-mile training providers further their engagement with employers, it will become increasingly difficult for traditional colleges and universities to keep up; their last-mile connectivity through antiquated career services offices will not be competitive with last-mile training providers whose business depends on having their fingers on the pulse of the technical skills employers need right now.

As last-mile training providers proliferate across every industry and enrollment flows and tuition dollars begin to shift, don't be surprised if colleges and universities resort to the same tool that losers of last-mile competitions have always used to attempt to rein in the resulting natural monopolies: regulation.

https://thehill.com/opinion/white-house/418934-how-to-train-2-million-americans-for-high-skilled-jobs-for-free

How to train 2 million Americans for high-skilled jobs for free
BY DANIEL PIANKO, OPINION CONTRIBUTOR — 11/29/18 02:30 PM EST

According to recently released Labor Department data, job openings in the United States topped 7 million for the first time in history. Nursing and tech jobs remain, according to the report, among the most difficult for US employers to fill. Companies are, in turn, spending extravagantly to attract the relatively few Americans with in-demand skills.

Tech firms spend $30,000 to find a new developer. Finding a new nurse costs $82,000 on average. Employers, in aggregate, spend billions on advertising and recruiting firms that charge up to 30 percent of an employee's salary to find people with the right technical skills.

Economists would classify the $200 billion job search-industrial complex as an economic dead-weight loss to the economy — one that, if fixed, has the potential to dramatically improve the nation's productivity.
But a growing number of firms are investing in a new and more benevolent corporate paradigm that will result in training millions of Americans for good first jobs, for free. Because as the costs of recruiting and churn continue to rise, it is actually becoming cheaper for employers to train a generation of Americans to fill these jobs. And the relationship between education and work is evolving to meet the needs of this changing training landscape.

So-called "coding bootcamps" have now trained more than 50,000software developers at an average cost of just over $11,000. Next-generation staffing firms are not only placing, but training college grads within in-demand tech jobs at companies like Walmart and Capital One.

The advent of online and competency-based learning now allows institutions like Western Governors University to train a nurse for much less than $40,000: just a fraction of what it costs a hospital to retrain their replacement.

Employers often believe they can only hire workers that already have the skill set that they require — such as the ability to use a software package like Tableau, a common data visualization tool. But as the pace of technological change continues to increase, such workers will be harder to find. There are only so many Tableau developers. And the problem is going to get worse before it gets better, with the Trump administration working overtime to eliminate some 500,000 H-1B visa holders.

The idea of employer-provided training is, of course, not an entirely new concept. Up until the late 1990s, most large employers recruited entry-level talent and trained them throughout the course of their careers.

Over time, though, those programs became too expensive and the percentage of workers receiving on-the-job training fell 42 percentbetween 1996 and 2008. But as the labor market tightens, employers are under increasing pressure to retain skilled workers — and as a result, investment in training has been on a steady rise, with both per-employee expenditures and number of learning hours reaching new highs in 2017.

As they work to integrate ongoing education and skills training more deeply into the employee experience, employers are, in turn, looking to a new generation of intermediaries who source qualified labor and then provide job-specific, last-mile training. These intermediaries recruit from within high schools, colleges and workforce boards, providing career-focused training in the most in-demand skills. They look to find those of the 40+ million underemployed Americans that have strong cognitive skills, but may lack the technical skills required for employment — in order to both solve employers' costly retention problem and create new pathways to economic opportunity for job-seekers.

The future of work is here. If just a few major employers began to repurpose their $200 billion recruiting budget on purpose-training a new generation of American workers, we'd solve the future of work challenge.

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https://www.forbes.com/sites/ryancraig/2018/09/06/employers-seeking-to-try-before-they-buy-will-change-career-paths-for-college-grads/#6b18891b2834

Forbes

Employers Seeking To 'Try Before They Buy' Will Change Career Paths For College Grads

Ryan Craig
Contributor
Sep 6, 2018, 09:00am

Those of us who attended college in the Paleolithic, pre-Internet, pre-smartphone era will recall that there was a way to contact other students: call the landline phone in the dorm room. At my school, every other student was five digits away; we'd dial 6, followed by the dorm room number. While this was convenient, it meant that some rooms were riskier than others.

Junior year, I wrote an article about a medical school student who received dozens of calls each day from other students attempting to order pizza from Domino's. Why? Because instead of first dialing 9, then the Domino's number (624-3317), hungry pizza seekers would often forget to punch 9, dial 62433, and reach Mina Chung in room 2433. "They leave messages on my answering machine with their pizza orders," complained Mina. "Sometimes they call in the middle of the night. I suffer from sleep deprivation." She said she was so frustrated by calls from strangers craving pepperoni, sausage, mushroom, and double cheese that she was considering pretending to take the orders herself.

Mina's story, which ran under the headline, "No, This Isn't Domino's, Jerk," demonstrates the value of trying before you buy; Mina should have spent some time in that dorm room before selecting it. Trying before you buy is common across a range of consumer products – from cars to ice cream. Even colleges and universities invite admitted students to campus every spring, allowing them to try before they buy a four-year degree. But a new "try before you buy" trend is about to impact colleges and universities as never before: employers seeking and expecting to try new and recent college graduates before they hire them into entry-level positions.

The crisis of employability facing America's college graduates is a component of the broader skills gap: 7 million unfilled jobs – many of which are the high-skill and middle-skill jobs sought by millions of underemployed new and recent grads, as well as tens of millions of Americans working in declining or stagnant sectors of the economy.

There are two reasons why the skills gap persists in a full-employment economy. On the student or candidate side, there is "Education Friction." Education Friction is why individuals fail to upskill themselves with the skills demanded by employers. This is a result of the time required to upskill, the cost, and – most important – the uncertainty of a positive employment outcome. The second and often overlooked contributor to the skills gap is "Hiring Friction" on the part of

employers; employers are increasingly reluctant to hire candidates without exact relevant experience. The cost of a bad hire is higher than ever, as is employee churn, as is the cost of replacing terminated employees – all of which have contributed to an increase in experience requirements for positions that should be (and once were) entry level. A recent analysis of over 95,000 job postings by job-matching software firm TalentWorks revealed how difficult it can be for newly minted grads to find an entry-level job. The research found that 61 percent of all full-time jobs seeking entry-level employees required at least three years or more of experience. Many employers have become so risk averse in hiring for entry-level positions that candidates who haven't done the job before don't have a shot; for many employers, the concept of a good entry-level job has collapsed under its own tautological weight.

From time immemorial, all serious education, training, and workforce efforts to close the skills gap have started by identifying missing skills, developing curriculum, and delivering programs. These "Education Up" models are logical, but also easy. The hardest part of the skills gap is not identifying skills or skill building, but rather building the bridge to employers. Few employers alter their hiring practices to account for Education Up programs that graduate a few dozen graduates each year, let alone guarantee employment. Few are organized to even have a conversation about it. The rare conversations that do occur are typically with a philanthropic or external-facing arm of the employer – not with anyone directly involved in hiring at scale. Most important, Education Up models ignore Hiring Friction.

Reducing Hiring Friction means proving to employers that candidates for entry-level positions can do the job. One obvious way do this is to utilize cognitive, behavioral, and situational judgment tests at the top of the hiring funnel. Unfortunately, employing such assessments risks running afoul of 1970s-era labor law if they have an adverse impact on a legally protected group. To avoid adverse impact actions from the Equal Employment Opportunity Commission (EEOC) or – increasingly under the Obama Administration – the Office of Federal Contract Compliance Programs (OFCCP), employers must demonstrate content validity, construct validity, and criterion validity for each assessment-job pairing. This means conclusively showing that each assessment is predictive of performance for each position where it is used. Doing so is so time- and resource-intensive that only a handful of U.S. employers are willing to make the effort.

The urgent need to reduce Hiring Friction, coupled with the regulatory barrier to utilizing assessments at the top of the hiring funnel, is giving rise to new models that are the antithesis of "Education Up." These new "Employer Down" models start with employers and the entry-level positions they need to fill, and eliminate Hiring Friction by allowing employers to try before they buy. Staffing and business services companies are hiring candidates themselves, providing Last-Mile Training, and placing newly-trained talent at the service of employers so they can try before they buy. Some Employer Down models add a new "emerging talent" product to an existing talent business (i.e., staffing or placement). Others establish outsourced apprenticeship programs to add a talent dimension to an existing business service (i.e., providing not only digital marketing services, but a pipeline of purpose-trained, proven digital marketing talent), which can boost pricing power, increase market share, and accelerate growth. What they have in common is that candidates are hired and trained by the provider and then, while remaining employed by the provider, perform work for clients; clients convert candidates to full-time employees only when they're good and ready. Here's what else they have in common: scalable business models built around the provision of proven entry-level talent.

By allowing clients to try before they buy, Employer Down models absorb and eliminate Hiring Friction. But they also absorb and eliminate Education Friction by not charging candidates for training, and by hiring candidates from day one of training, thereby guaranteeing an employment outcome. The result is the first frictionless pathways to employment for both candidates and employers.

Another advantage of an Employer Down approach to closing the skills gap is by not demanding an immediate hiring decision, Employer Down providers often circumvent the formal human resources (HR) function, which increasingly has become a compliance/risk management gatekeeper rather than a talent management role. Employer Down means working directly with hiring managers and business units. HR only gets involved later on, at the time of the hiring decision, after the talent has proven they can do the job – a much easier decision. As a result, Employer Down models are scaling faster than it takes to order a Domino's pizza.

The power of frictionless pathways to good first jobs will soon be felt by America's colleges and universities. A value proposition that guarantees a good entry-level job at no cost or financial risk is the polar opposite of traditional higher education's "you pays your money, you takes your chances." Braving Hiring Friction by hiring directly from college campuses will continue to make sense for many employers, particularly recruiting from selective universities where the caliber of talent is consistently high. But as employers are given the option to try before they buy, many will opt for Employer Down over having to make immediate, uninformed hiring decisions. American employers lead the world in outsourcing non-core functions, or functions they don't perform as well as specialists. Entry-level hiring is widely perceived to be broken and, as Employer Down models emerge, will be the next major business function to be outsourced.

"Education Up" colleges and universities are ill-prepared for the coming of Employer Down. While many staffing and business services companies that add entry-level talent provision to their value propositions will recruit from the pool of new and recent college graduates – where the most talented and motivated candidates are unquestionably found today – some will supplant traditional college by providing a complete, faster + cheaper pathway to employment. Colleges facing declining enrollment may seek to build their own Employer Down models. But Employer Down can't be built out of thin air. Employer Down builds on the staffing company or business service provider's *a priori* relationships with employers and hiring managers – the relationships that traditional Education Up models have such difficulty establishing. These relationships – built over years around the provision of a service to the employer, whether experienced talent (staffing) or another service – are much deeper than the superficial relationships established by higher education's poor interface to the labor market (i.e., career services).

But whether by partnering with these new providers, or somehow absorbing Hiring Friction themselves, colleges and universities – and all Education Up programs – will need to get a handle on Employer Down. Unless they can figure out how to allow employers to try before they buy, more and more of their graduates will end up delivering pizza for Domino's.