Why It's Time to Disrupt Higher Education by Separating Learning From Credentialing

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

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

There are at least two major problems with allowing colleges and universities to control through granting of degrees the primary way learning outcomes are assessed. First, these institutions usually limit students from mixing and matching various, and usually cheaper, ways of learning, such as community college courses, massively open online courses (MOOCs), or self-study, if students want to receive the "sheepskin" showing mastery. So even though information technology should be making higher education more efficient, tuition costs are rising faster than inflation, making college less affordable. Second, since each college and university has its own grading practices and degree standards, students, parents, and employers have little ability to compare the quality of education that different schools provide for a particular degree. Instead, each school is evaluated mostly on reputation and other factors such as quality of its facilities, notoriety of its graduates, and SAT scores of entering students. This lack of transparency regarding outcomes diminishes the incentives schools have to compete on how well they actually educate students, and also the need for students to work hard, because many know this will have limited bearing on their future employment prospects, as long as they do enough to simply earn a diploma. This is one explanation of why the quality of higher education in the United States is uneven, and many college graduates enter the workforce underprepared.

If we want more educational innovation and lower costs, as well as higher-quality educational outcomes, then it is time to break the legacy connection between teaching students and certifying their academic achievements and move to a model where students have alternative ways of demonstrating their knowledge and skills. But this is in part a chicken-or-egg problem, with employers still relying on degrees and students not having access to alternative accreditation systems. The federal government should solve this by fostering the creation of a national network of certified organizations that assess the learning and skills of young people before they enter the workplace. In its reauthorization of the Higher Education Act, Congress can move America's higher education system in this direction by taking the following steps:

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

KEY CHALLENGES FOR HIGHER EDUCATION

Like many other sectors, higher education increasingly faces a range of economic, social, and technological challenges—from declining government support to the increased availability of high-quality online courses. Some institutions will not survive. Those that do will likely have to change how they operate. The degree to which they change and the nature of those changes will have a large impact on the American economy. At a national

level, better higher education is essential to improve worker productivity and the country's global competitiveness, and thereby raise living standards. For individuals, the ability to obtain a high-quality education at an affordable price is a foundation of economic opportunity and the American Dream. Indeed, most college graduates will need to be better educated to achieve job security and increase their incomes.

Yet there are two major challenges with higher education today: high cost and low quality. Much of the declining performance of higher education lies in the breakdown between educating and credentialing. The standard college degree is losing its value as a signal to employers, partly because even top students from elite colleges can lack the skills they need to perform well in the workforce.[1] Perceptive students may realize that their degree, rather than their actual learning, often determines their success, at least initially, and therefore have too little incentive to work hard in college. Employers meanwhile cannot know whether a degree actually represents real mastery of knowledge and skills. At the same time, although a wave of pedagogical and institutional innovation provides students more ways to acquire valuable knowledge and skills, it is often difficult for students to obtain credit for their accomplishments in a way that prospective employers recognize and trust.

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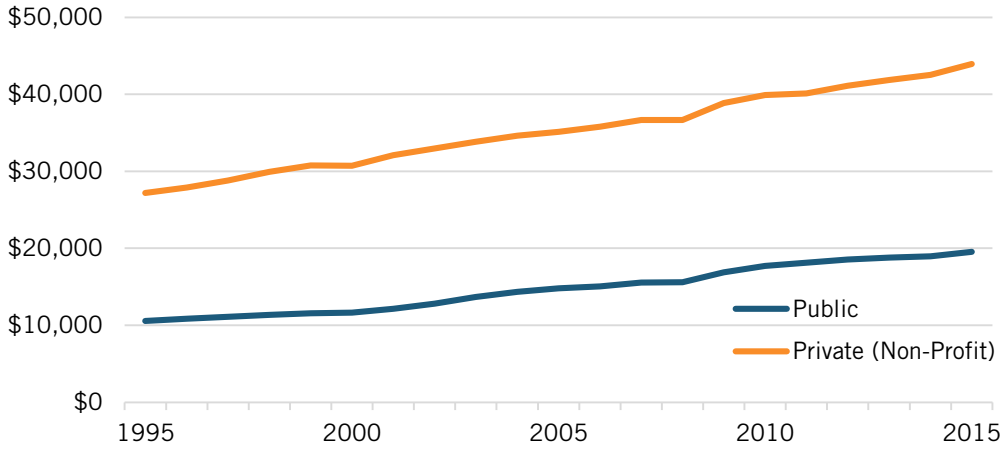
Low Productivity Growth

Productivity growth is how sectors avoid what is known as "Baumol's cost disease." Economist William Baumol claimed that when a sector's productivity stagnates compared with the rest of the economy, the inevitable result is higher prices and, in the absence of subsidies, lower demand. The former has clearly been the case with undergraduate education.

One indicator of productivity is price. Figure 1 shows the inflation-adjusted average price for tuition, room, and board at different types of four-year institutions over the last several decades. Between the 1995-96 and 2015-16 academic years, the inflation-adjusted total price for a four-year college rose by 85 percent at public colleges and 61 percent at private nonprofit and for-profit schools.[2] The inflation-adjusted cost of medical care, where the need to control costs is widely acknowledged, has been 52 percent over that same period.[3] Partly as a result, student debt has risen to $1.2 trillion.[4]

Some of this price increase for public universities is a reflection of declining state financial support for higher education.[5] But some reflects the inability to boost productivity at the same rate as the economy. One reason prices have increased at the rate they have is because higher education is what economists call a credence good, where consumers find it difficult to judge quality prior to buying it. Because there is no easily observable metric for the quality of a college education, parents and students often use cost as a proxy for the quality of the education provided by an institution.

Figure 1: Average Published and Net Prices in 2015 Dollars, Full-Time Undergraduate Students at Four-Year Institutions, 1995-96 to 2015-16.[6]



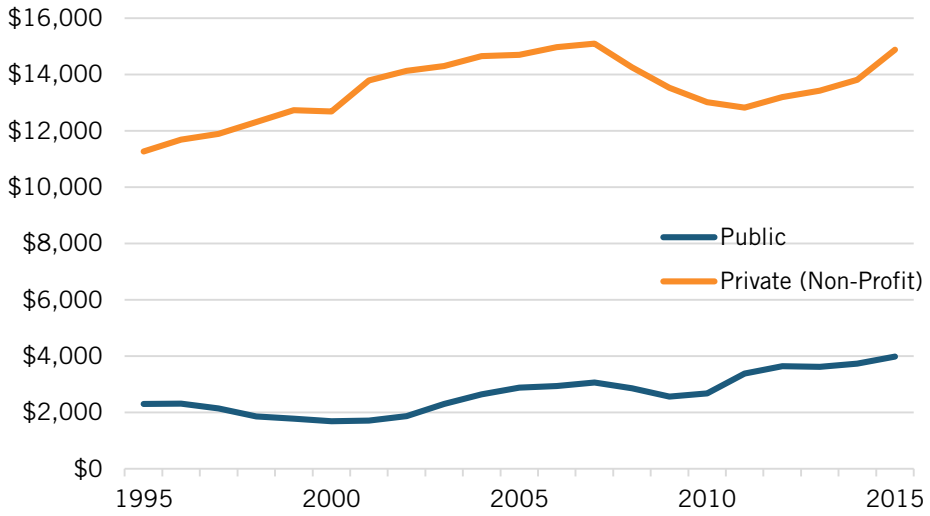
This misperception has led to perverse outcomes. For example, in 2000 Ursinus College raised its tuition and fees by 17.6 percent.[7] The college also raised student aid by nearly 20 percent, keeping the net cost of tuition roughly the same. Within four years the size of the freshman class had risen 35 percent, in part because the perceived reputation was now higher. Ursinus was not the only institution to pursue this strategy. Over the past 20 years, the average published cost for tuition and fees for private nonprofit schools has increased by over $16,000, but the net increase (i.e., taking into account student aid that does not have to be repaid) has been less than $4,000.[8]

In addition, some colleges and universities try to compete for students, and student aid dollars, based on attractive amenities and services rather than the quality of their teaching.[9] As a result, some colleges and universities are replacing their traditionally austere, but low-cost, dorms, gyms, and dining halls with new luxury condos, fancy fitness centers, and gourmet restaurants.[10] While there is nothing wrong with providing amenities such as tanning beds and climbing walls to students who can afford it, many of these extravagances are rolled into a set of fees that all students pay. Similarly, colleges and universities are increasing their fees to fund athletics programs, student organizations, and other services. For example, between 2010 and 2014 public universities provided approximately $10.3 billion in subsidies for intercollegiate athletics, with almost half of that coming from student fees.[11] The net impact is that the cost of higher education is rising due to expansion of unnecessary services.[12]

Some economists believe that it is unrealistic to expect above average productivity increases and price declines in higher education. The theory is that productivity in labor-intensive industries, such as education, health care, and government services, will improve very little because of the difficulty of automation. For example, the theory suggests that since it should take an English professor roughly the same amount of time to grade a paper today as it did 50 years ago, it is unlikely that productivity in higher education will increase much. There is some evidence for this. A recent report on the education requirements of future jobs states: “The least productive industries were private education services, leisure

and hospitality services, and personal services. This is not a surprise as these industries tend to be labor intensive and cannot effectively substitute capital for labor in any meaningful way."[13]

Figure 2: Average Net Prices in 2015 Dollars, Full-Time Undergraduate Students at Four-Year Institutions, 1995–96 to 2015–16.[14]



It would be one thing if higher education were becoming increasingly costly while education quality was increasing. However, the opposite appears to be true.

While it is more difficult to automate work processes in higher education than in industries such as manufacturing or telecommunications, that does not mean it is impossible nor that other cost savings are impossible. For example, as discussed below, the rise of MOOCs has the potential to significantly boost productivity by allowing the best professors to use the best curriculum to teach thousands if not tens of thousands of students.

So why has restructuring occurred in many industries but not education? The short answer is that education, like some other low-productivity sectors of the economy, has largely been insulated from the pressure to do more with less. Higher education lacks many of the traits of a competitive market, including ease of entry, price transparency, information about the quality of the service being purchased, and motivated customers. In fact, many in the field firmly believe that it is inappropriate to apply such concepts to education. When Texas A&M tried to evaluate the productivity of its professors based on students taught, research dollars brought in, and student evaluations, the American Association of University Professors declared that the system of "balancing revenues and costs" was "simplistic and dangerous."[15]

Poor Education Quality

It would be one thing if higher education were becoming increasingly costly while education quality was increasing. However, the opposite appears to be true. In fact, it is not clear that most students are learning a lot from the college experience. Using a variety of data sets, Philip Babcock and Mindy Marks concluded that, in 2003, full-time students only spent 27 hours a week in class and studying, down from 40 hours a week in 1961.[16] Almost one-third of all students did not take any course requiring more than 40 pages of reading a week, and the average student spent only about 12 hours per week studying.[17] As

former president of Harvard, Derek Bok, stated, "There's no question that students are studying less. I think something happened in the 1960s in the relationship between students and faculty that shifted influence much more to the students."[18]

There is evidence to suggest this decline in effort is lowering the quality of education that students receive. The National Assessment of Adult Literacy indicates that, between 1992 and 2003, average prose literacy (the ability to understand narrative texts such as newspaper articles) decreased for all levels of educational attainment, and document literacy (the ability to understand practical information such as instructions for taking medicine) decreased among those with a bachelor's degree or higher.[19]

Sociologists Richard Arum and Josipa Roksa administered the Collegiate Learning Assessment to several thousand college students at over two dozen institutions when they began college and again at the end of both their sophomore and senior years. They found that, if the test were scaled on a 0-to-100 range, 45 percent of the students would not have demonstrated gains of even one point over the first two years, and 36 percent would not have shown such gains over four years.[20]

Strikingly, among second semester seniors of four-year colleges, just 38 percent, 40 percent, and 34 percent were proficient in prose, document, and quantitative literacy, respectively.[21] And the bar for passing these tests is not that high. As the report from the Secretary of Education's Commission on the Future of Higher Education, better known as the Spellings Commission, noted several years ago, "There are...disturbing signs that many students who do earn degrees have not actually mastered the reading, writing, and thinking skills we expect of college graduates. Over the past decade, literacy among college graduates has actually declined. Unacceptable numbers of college graduates enter the workforce without the skills employers say they need in an economy in which … knowledge matters more than ever."[22]

Even elite schools seem to struggle. It used to be a given that the high price of an elite institution was justified by the better career prospects that its graduates enjoyed. For instance, several studies showed that, when students were compared with others with similar test scores, those who went to an elite school earned more than those who did not.[23] But this may not have been the right comparison, because many good students lack the confidence and determination to apply to an elite school. When economists Alan Krueger and Stacy Berg Dale compared those who had been accepted and attended an elite school with those who had declined and attended another school, they found no difference in earnings for the majority of students, indicating that students who have what it takes to get admitted to an elite institution are likely to succeed no matter where they go.[24] The study did find that attendance at an elite school made a difference for low-income students. It also found a connection between tuition and performance, indicating that devoting more resources to education still has a positive effect.

While many students are not learning enough, grades have actually been going up, making college transcripts less reliable as a proxy for relative achievement and ability.[25] At Harvard,

the most common grade is an A.[26] No doubt this is partly due to the fact that Harvard students tend to be better students than the average student in America. However, overall grade inflation has occurred as professors have become less demanding in how they grade. Many colleges and universities have begun to collect student feedback on courses, and schools often use this feedback to evaluate their professors. Students also can rate their professors publically on websites such as ratemyprofessors.com. Giving better grades is one way to lower the risk of getting a bad student rating. The result is that students have less incentive to work hard and learn, knowing that they will likely receive a good grade, or at least a passing grade, and that overall they will receive the valued diploma. For employers, the problem is that degrees and now even grade point averages are no longer adequate measures of judging student quality.

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Ideally, course evaluations should reflect how much students learned in a course.[27] However, evaluations often reflect non-learning factors such as student preferences about the personality of the professor, the course's attendance policy, the amount of homework, or the costs of the required textbooks.[28] These factors also contribute to grade inflation, as well as biases in course selection, where students have an incentive to intentionally enroll in courses with lenient grading policies because otherwise they may appear to be less qualified than their peers.[29] For example, the average grade for students enrolled in science and engineering is roughly a quarter grade lower than the grade for students enrolled in humanities and social sciences, which plays one role in limiting the number of STEM (science, technology, engineering and math) BS degrees.[30] Since professors may be punished professionally for negative course evaluations, they may simply pass students to protect their own interests. At the same time, universities increasingly compete for students, and one way to compete is to ensure that the curriculum is not overly demanding.

All of these problems stem from the inherent conflict of interest in having the entity responsible for educating students be the same one that evaluates how well they have succeeded in doing so. Not surprisingly, at most colleges and universities, there is rarely anyone held accountable for giving degrees to students who have not learned much. Failing students means fewer tuition-paying students. Indeed, this conflict is one reason for some of the most egregious scandals at universities, such as having student athletes enrolled in fake classes.[31]

Polls reveal this problem with quality. For example, according to a recent poll by Gallup and the Lumina Foundation, 34 percent of business leaders believe that higher education institutions are not graduating students with the skills and competencies needed by their firms.[32] Thus, even as the demand for highly educated workers grows, the performance of colleges and universities is not matching the need.

The Differing Meanings of Higher Education

Part of the problem with higher education reform is that different people have different ideas about what college should offer. The task of higher education is often divided into two goals that are often used to justify different methods of education. The first goal is to

provide both society and the individual with as high a rate of return as possible on their investment in human capital. This is typically measured by the higher salary that college graduates command in the workforce. If the higher income more than compensates for tuition and the opportunity costs of years in college, graduates are presumably better off for having attended. Similarly, if the total societal costs of education are more than made up for by the total societal benefits, society is also better off.

There are signs that this is still the case. In 2014 the median income for someone over 25 with a high school degree was $30,731. The median for college graduates was $51,308.[33] In addition, college graduates suffer less unemployment. In May, 2016, only 2.2 percent of workers with a bachelor's degree or higher were considered unemployed. The rate for high school graduates was 4.8 percent.[34] But it is not clear whether this effect is from education or from simple sorting, where smarter and more motivated individuals (who are also more likely to go to college) get jobs that pay more.[35]

Unfortunately, there are few objective measures other than income for how well colleges and universities prepare students to enter the workforce. Colleges widely oppose any effort to develop official rankings, with some justification.[36] There is evidence that the criteria used by private institutions, such as *U.S. News & World Report,* has led institutions to artificially improve their rankings, sometimes through fraud.[37] But the fact that no metric is perfect does not imply that performance should not be measured. Colleges are usually reluctant to say what alternative metric they should be held accountable to. And the majority refuse to allow results from a good assessment, the National Survey of Student Engagement, to be released on their institution.[38] The survey measures the amount of time and effort students put into their studies, and the institution deploys its resources and organizes its curriculum to encourage students to participate in activities that decades of research studies show are linked to student learning.[39]

The Obama administration is trying to provide prospective students, and their parents, with new data to help them compare different schools across metrics such as cost, graduation rate, loan default rate, average amount borrowed, and post-graduation employment rates.[40] The goal is to help students make more financially sound decisions about where to go to school. In addition, this transparency holds schools more accountable if graduates have poor financial outcomes and creates some competitive pressure for colleges and universities to compete on the return on investment students get from attending.

The second goal of higher education is much fuzzier. Georgetown University President John DeGioia described it as providing a place where young adults are introduced to the concept of an "authentic" life, often assisted by close contact with professors who have devoted their life to learning.[41] Proponents of this goal argue for the importance of a well-rounded education, including many courses in the liberal arts. They bemoan the focus on "practical" education and salary potential. To them the pursuit of knowledge is a dominant goal in itself, which can only be nurtured in a setting free from emphasis on economic

returns or performance goals. Support for this goal is often joined to support for academic freedom and faculty tenure.

While it is difficult to argue against the pursuit of knowledge for its own sake, a quick survey of the average university shows that a large portion of the student body does not seem very motivated by it. For them, and for students who come from low-income families, the need to justify the financial commitment to college may be more crucial. In fact, to the extent that they are unable to earn back their college expenses, poorer students will be priced out of pursuing education's higher goals. Moreover, the opposition to any attempts to measure the worth or effectiveness of higher learning often appears as a determined effort by universities to avoid any accountability for results. But given the demographic, economic, and political problems facing the United States, and especially its most disadvantaged students, the country cannot afford to spend large sums on the current system without improving its performance.

Higher education lacks many of the traits of a competitive market, including ease of entry, information about the quality of the service being purchased, and motivated customers.

Without denigrating the importance of personal growth and discovery, this report firmly argues that a central goal of higher education should be to provide every student with avenues for earning a high rate of return on any investment in education. And that rate of return is achieved by students gaining skills and knowledge that they can use in the workplace. Increases in human capital will raise productivity, enabling higher incomes and a more prosperous society. This in turn will make further investments in education more affordable.

SPURRING REFORM BY SEPARATING LEARNING FROM CREDENTIALING

In the last few years, there has been increasing attention paid to the twin problems of the high cost and low quality of higher education. A variety of solutions have been proposed. Favored solutions from the left are to increase subsidies for colleges or students, such as by making community college free (a proposal by President Obama); or, even more fundamentally, making all four-year public colleges free, as 2016 presidential candidate Bernie Sanders proposed; by reducing interest rates on student loans; or by lengthening payback terms. By definition, increased subsidies would make college more affordable, but it would likely have perverse effects on cost (i.e., productivity) while doing nothing to address the problem of quality. There is some evidence that the increased availability of financial assistance has been captured in tuition increases.[42] And quality could very well go down as more colleges seek ways to keep students enrolled in order to get public subsidies. And of course, subsidies must be paid by taxpayers, the majority of whom have never received a college degree.

In contrast, conservatives propose expanding federal support for student assistance to nontraditional institutions, such as apprenticeship programs, in an effort to bring more competition to higher education. Moreover, through the Congressional Task Force on Federal Regulation of Higher Education, they have also proposed eliminating many of the low-value regulations that unnecessarily increase both the complexity and the cost of running a college.[43]

Others have proposed more information and accountability, as the Obama administration did with its College Scorecard website, which provides information on a range of outcome indicators for higher education, including graduation rates. More open data from universities and colleges would certainly help students make better financial decisions about colleges, but these changes will not necessarily fix the underlying issues.[44]

Despite some reform proposals being put in place, restructuring has been extremely slow. One reason is that education, like some other low-productivity sectors of the economy, has largely been insulated from the pressure to do more with less. As mentioned above, higher education lacks many of the traits of a competitive market, including ease of entry, information about the quality of the service being purchased, and motivated customers. In addition, under the current system of information, it is simply impossible to assess quality. Is Harvard better than a second-tier state university because its pedagogy is better, or is it better because it accepts better students, who in turn learn more and perform better in their careers? Probably both factors play a role, although it is not possible to determine which is more important. Without this information, it is difficult for consumers (i.e., students and their parents) to have their demand for better and cheaper services effectively translated into higher quality or productivity. In addition, unlike health care or personal services, where customers have a strong motivation to consume the highest quality care (although they may not always be able to judge quality), the consumers of higher education have mixed motivations. This is because, unlike a personal service such as haircuts, education is coproduced by the faculty and the student. And as anyone who has gone to college, or who has kids who have gone, knows so well, students have mixed motivations. At least for some, their main motivation is to get the degree while putting in the least amount of work. Let's face it: Real education requires hard work, ideally combined with passion. Yet, a National Bureau of Economic Research (NBER) study found that all college students valued what they called college consumption amenities, rewarding colleges that provided them, but that the preference for academic quality was confined to high-achieving students.[45] When many students know they will get a degree even if they put in subpar work, they have less motivation to learn than if they knew their future depended on real mastery .

There are also internal forces at work that limit reform and innovation. The principal one is that, unlike most for-profit corporations, where the workforce is controlled by management, in higher education the workers (i.e., professors) largely control the means of production. In this case, management (e.g., chancellors, presidents, provosts) has limited ability to change work organization, restructure departments, change pedagogy, and make other changes. At one level this makes sense, as the delivery of higher education is a professionalized service where the professionals (i.e., the faculty) have to be able to use their own judgement and skills to provide the best service. The problem lies in the fact that the motivation to teach effectively is low for many professors. Ph.D. candidates who go on to a career in academia are seldom given instruction on how to be effective teachers. And faculty, especially in research universities, are rewarded, including in tenure decisions, largely on their research output, not their teaching.[46] Indeed, some research has found that students learn better from nontenured professors.[47] Moreover, as John Hattie and Herbert

Marsh found in a study of over half a million professors, "the relationship between teaching and research is zero."[48] In all fields and all kinds of colleges, the study showed little correlation between research productivity and teaching ratings by students and peers. Moreover, for many universities, teaching quality is in part assessed by reviewing student assessments. And there is a strong incentive for faculty to avoid bad assessments by giving better grades to students who do not deserve them or by reducing workloads.

To be sure, a number of institutions are successfully integrating many necessary reforms into how they deliver education. These include Western Governors University, the Minerva Project, the University of Wisconsin's UW Flex program, the Thomas Edison State College, and the Franklin W. Olin College of Engineering. At the University of Charleston in West Virginia, for example, the focus is on student learning instead of faculty teaching. The curriculum requires students to be proficient in six areas deemed critical to a liberal arts education: citizenship, communication, creativity, critical thinking, ethical practice, and science. Each of these institutions focuses primarily on educating students rather than supporting faculty research. Each gives students a variety of choices for pursuing a degree, including the use of MOOCs. Finally, each tries to measure the quality of education and keep costs down.

Widespread and systemic higher-ed reform has proven more difficult. This is because these are not barriers that are easily overcome with generalized calls for reform, more data, or more money.

But widespread and systemic reform has proven more difficult. This is because these are not barriers that are easily overcome with generalized calls for reform, more data, or more money. What is needed is a more radical step: breaking the ironclad link between education and certification. Without this change, real reform will be difficult for the simple reason that neither students nor schools will be motivated to change.

In other words, we need a system where a diverse set of education providers compete with each other to do the best job of teaching students (provide the best value experience where quality and cost are taken into account). Some will specialize in teaching certain types of students or certain types of programs. But evaluating what students have actually learned should not be left up to the providers. Rather, third-party organizations should be in charge of evaluating knowledge, skills, and abilities. These systems already exist for vocational occupations such as auto repair, welding, and truck driving and for some professions, such as law and medicine. We need to establish a similar system for the jobs of the future, including those requiring the skills normally associated with a college diploma.[49] And importantly, unlike the bar exam or the medical boards, assessments should not be conditioned on whether students achieve the necessary proficiency by attending a university, but also by learning on the job, taking MOOCs, studying on their own, attending community college, etc.

But for such a system to emerge, we need to overcome a chicken-or-egg dynamic. There is no national certification system for the kinds of learning and skill acquisition colleges intend to provide, in part because there is little demand for this system. But there is little demand for it because such a system does not exist. Anyone seeking to make the large investments needed to create such a system (including designing and administering the tests) would need to have some level of assurance that there would be demand for this

service. And as long as employers still rely almost solely on degrees, rather than skills' assessments, the demand for and use of such a system will remain limited.

Although designing the right tests would be difficult, the process would force a healthy discussion about exactly what knowledge and skills colleges should be teaching and what experience employers value in the job market. This would help institutions do a better job of educating and help students ensure that higher education strengthened their financial security instead of jeopardizing it. Part of this would be driven by market competition—if a particular assessment does not provide useful information to employers, then they will not use it to evaluate candidates, and students will have no reason to take it. It would also help weed out weak schools and reward good ones. Although for-profit institutions have a place in the educational system, the presence of diploma mills that rely on high- pressure sales tactics and federal loans to pay for substandard training has been a perennial problem. The Obama Administration has taken a tough line on for-profit colleges such as Trump University. But it has not applied the same standards to community colleges and universities that have equally bad records of defaults on student debt and high dropout rates. More importantly, it has not done much to expose the broader system to more competition.

A common complaint about standardized tests is that instructors will teach to the narrow confines of the test rather than impart the broader concepts needed for a deeper understanding of the subject. Although this is a concern, if pursued to its logical conclusion, it would ban all testing or grading. Yet a test of some kind is critical to measuring progress and quality. Teaching to the test is a problem if the test fails to measure the right things, but it is not a good argument for avoiding all measurement and responsibility.

A well-designed system of credentials would accomplish several things. First, it would give students a better idea of what they need to learn in order to get a good job. Students who took the tests would have an objective credential that they could show to employers. Other students could judge the quality of different colleges by comparing the scores of graduates from different schools. And it would lead more students to realize that what matters is what they actually learn in college, motivating them to work harder.

A robust system of credentials would also give students an alternative to the traditional route through college. In addition, this would give nontraditional students more flexibility to get the equivalent of a college education or make a career change later in life. Eventually, an increasing number of students may decide that formal degrees are superfluous. All of this would increase the demand for MOOCs, apprenticeships, good community colleges, and informal learning programs such as boot camps. Indeed, despite much initial enthusiasm for MOOCs, they have grown much slower than expected, in part because most universities do not want to cannibalize their own courses and therefore do not provide credit for MOOCs. MOOCs and other choices are all possible stepping-stones for acquiring at least some of the education needed for a successful career. Increased demand should lead to increased supply, further increasing the pressure on the traditional system.

Most importantly, better credentialing would give students a better sense of whether they were truly getting a competitive education. Then colleges would probably have to compete more on the actual quality of their educational offerings because students who used to get degrees but limited education would find it harder to succeed in the labor market. Moreover, assuming that comparative scores were widely reported, colleges would face more pressure to improve the quality of their education or lower their price to compensate.

Luckily, the foundations of many of these credentials already exist. The National Assessment of Adult Literacy and the Collegiate Learning Assessment both provide a baseline for measuring whether individuals have acquired a range of general educational skills. More specific testing is also available. In 2015, for example, approximately 16,000 students graduated from coding boot camps, some of which were tied to certifications.[50]

RECOMMENDATIONS

OPM should broaden current requirements for a college degree for many positions to allow individuals with acceptable scores on relevant certification exams to be eligible.

Separating education from credentialing—much less transforming higher education—cannot occur overnight, even if we started today. However, there are certain steps that the federal government can take on both the demand side (e.g., encouraging major employers to accept alternative certificate systems) and the supply side (e.g., creating a set of viable credentialing institutions). It is beyond the scope of this report to lay out a comprehensive and detailed reform plan, but the following recommendations can serve as first steps. To facilitate the emergence of this new type of higher education system, the federal government should do the following:

Establish a Process to Accredit Organizations That Provide Certifications

The Department of Education should establish a program to accredit organizations providing professional certifications, in much the same way that it provides oversight of the organizations that provide accreditation of colleges and universities. Establishing an accreditation process for these certifications will also serve as a useful indicator of quality for public and private sector organizations that want to hire individuals who pursue non-degree learning options.

Encourage Federal Agencies to Hire People With Alternative Certifications

The federal government should demonstrate to the private sector the feasibility of using alternative credentials by accepting a suitable set as a substitute for a college degree when filling federal government jobs. In other words, the Office of Personnel Management (OPM) should change current requirements for many positions to allow individuals with acceptable scores on relevant certification exams to be eligible rather than just those with a college degree.

Encourage the Private Sector to Recognize Alternative Certifications

The Department of Education should work with corporate partners to encourage the use of alternative certifications. The goal here is to develop credentials similar to the Skills Certification System that the National Association of Manufacturers' Manufacturing Institute developed with its members. The difference is that these would measure the general skills that a broader section of companies expects recent college graduates to possess when they enter the workforce.

If the top 100 employers in America were to agree that they would treat the relevant certified, outside credentialing programs as equivalent to a college degree, their actions would help create a new market for certificates and at the same time bring real competitive pressures to bear on colleges and universities. At the same time, action by major companies will encourage other employers to treat such credentials and the workers who obtain them seriously.

Allow Students to Use Federal Aid for Alternative Learning Options, Such as MOOCs

Much of the direct cost of college is tuition, but most of the rest is room, board, and other living expenses. Federal student aid covers the direct costs of college and room and board and some other expenses. Likewise, Congress should allow students pursuing non-degree educations to be eligible for federal student aid to cover the costs of enrolling in programs, such as MOOCs, as well as their living expenses. As the Department of Education has stated, "Little [federal aid] is eligible to go to low-income students seeking to attend nontraditional or noncredit programs that may be a better fit for them."[51] While the Department of Education has launched a pilot program to allow some colleges and universities to partner with non-accredited MOOC providers so that students can use their financial aid, ideally students should not have to be enrolled in a college or university to use federal student aid to pursue alternative learning options. In addition, students should be able to use financial aid to cover the costs of certain professional certifications approved by the Department of Education. Of the two presidential candidates, former secretary of state Hillary Clinton has proposed allowing students to use federal student aid for these types of non-degree programs, "as long as they are accountable and have proven track records of success."[52]

Ensure Graduate Programs Consider Applicants With Alternative Certifications

If students believe that they cannot get into graduate school unless they obtain a formal diploma, the demand for alternative certification will be more limited. As such, just as the Department of Education should work with employers to encourage them to accept alternative certifications, it also should encourage colleges and universities to accept alternative certifications for entrance to graduate schools. The federal government also should offer incentives to colleges and universities to accept more alternative learning as counting toward degrees. Interestingly, Secretary Clinton has proposed that the federal government "establish incentives for colleges and universities to accept these kinds of alternative learning programs as credit toward graduation."[53]

Conduct a Regular Survey of Employer Needs

Another ingredient needed to make this system work effectively is better information on what skills are valued by employers. For example, do managers in accounting firms prefer young workers who can quickly and accurately proofread a spreadsheet or give a persuasive slideshow presentation? One reason this information is so difficult to find is that there is no national survey on the specific skills employers desire in recent graduates. The Department of Education should launch an annual employer survey that asks such questions and make it available to the public, with individual employer information anonymized.

CONCLUSION

Dramatic reform of higher education is both necessary and possible. Separating the tasks of education and certification will increase pressure on existing institutions to hold down costs and to provide measurable improvements in education. These reforms will also give students better information about the quality of the education they can expect to get and give employers better information about the readiness of job applicants.

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