TAKING EDUCATION TO STUDENTS:

How Public Universities Have Lagged Online and What They Can Do to Catch Up

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Executive Summary

Fewer than half of working-age adults hold a credential beyond a high school diploma. As the economy increasingly moves from an industrial base to a knowledge base, this population will need access to high-quality degree programs in relevant fields. Fortunately, online learning has made this achievable.

The challenge of serving this population with online programs is a fitting task for America's public universities; however, to date, they have largely failed to meet it. Public universities have ceded market share to private providers, failed to achieve meaningful scale, and generally underperformed relative to the market opportunity and the imperative of their missions. This failure is not one of pedagogy or course design or quality. Rather, it is primarily a failure of market awareness, as well as business and legislative design.

In the following report, we describe how changes in approaches to student recruitment and enrollment, as well as rethinking some common legislative mechanisms for funding higher education, can make a big difference in allowing public institutions to reclaim market share and even expand the market of online learners in their home states and beyond.

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Introduction

A common image of the college student is an 18-year-old who arrives on campus in the last week of August, settles into a dorm room, and heads to class each morning at 9:30 A.M., textbooks in arms. He or she might work 10–15 hours a week at the circulation desk of the campus library, or as a waitress at a local restaurant after classes are over. But the primary focus is completing their studies.

Now consider a different student entirely: a 35-year-old with a full-time job and two children to look after. She has a handful of credits from the health studies program she began in her youth, but life intervened and she was not able to finish her degree. She would like to go back to school, but between the job, the family, and the 90-minute commute to the nearest four-year university, returning to the classroom is impractical, if not impossible. She could, however, finish her degree if allowed to do so from her own home, and on her own time.

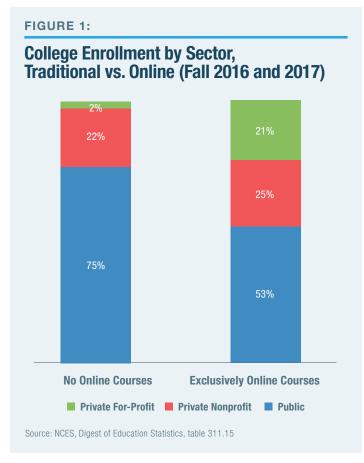
America's public colleges and universities dominate the market for the first sort of student: 75% of students who attend college in person go to a public university, while another 22% go to a private nonprofit and just 2% attend a for-profit college.

But increasingly, students are choosing not to attend in person. In autumn 2017, 16% of postsecondary students were enrolled in exclusively online courses, and another 18% were taking at least some of their courses online. Large portions of the population are in a position to benefit from online education. Today, 36 million Americans have some college credits but no degree, and 72% of those are over the age of 30.2 Millions more never went to college but would benefit from a degree that enhances their employment and earnings potential.

However, public universities' market dominance in on-campus education has not been replicated in the online program market. Of America's 3 million exclusively online learners, 53% are enrolled in a program at a public institution (**Figure 1**). While that's still a majority, it falls far short of public universities' performance in the brick-and-mortar sphere. Public institutions have lost ground to their private nonprofit counterparts, which account for 25% of the online market. For-profit institutions, despite a sharp decline in recent years due to reputational and regulatory issues, still enroll more than 20% of exclusively online students.

Though we often think of the private benefits associated with universities—preparing young people to enter the adult world—public colleges and universities have a long and explicit tradition as engines of economic development. Since the expansion of public colleges and universities following the enactment of the Civil War—era Morrill Land-Grant College Act, which promoted the establishment of public colleges to provide training in the "agricultural and mechanical arts," the provision of practical education has been at the core of these schools' missions.

Today, this mission ought to extend well beyond the type of instruction that can be offered on the physical campus. Those institutions, meant to be "accessible to all, but especially to the sons of toil," have a duty to provide robust educational options for the millions of active and potential adult learners for whom returning to a classroom does not make sense.



This report will explain why public institutions have failed to lead in online education and will discuss the barriers—structural and psychological—that decision makers at public schools must overcome if they are to realize the full potential of the online model. Our diagnosis is based on publicly reported data, conversations with online education experts, and our own experiences in the sector. We will also provide recommendations for how public institutions can adapt their market approach and bring their online offerings to scale.

The focus of our analysis will be undergraduate credentials, as public institutions' failures and opportunities in that sector are more acute. Public universities have made more progress developing their online graduate programs, though they may still be able to draw lessons from this report. However, at the undergraduate level, where market disruption is commonplace and programs are only cost-effective at scale, public institutions have failed to appreciate the urgency of private-sector competition.

Online education can be innovative and convenient, but it is not a panacea for the quality issues endemic to higher education, such as low completion rates, high prices, and value that doesn't always align with cost. If not designed properly, online programs may even exacerbate these problems. It is beyond the scope of this report to discuss how to define, measure, and ensure quality in online higher education; for the purposes of this analysis, we will trust crafting quality curricula to the instructional expertise of America's public universities. Rather, we focus on how public universities can develop, promote, and operate online programs that can more effectively reach those whom they are intended to benefit.

Fully embracing an effective online business model will help public universities fulfill their missions to their home states. Moreover, developing and expanding online programs will help universities achieve the necessary scale to bring down per-student costs and prices. To begin, we discuss why public institutions have so far failed to realize the full potential of online education.

Why Public Universities Have Fallen Behind

The Morrill Act apportioned federal land to the states to endow public colleges "to teach such branches of learning as are related to agriculture and the mechanic arts... in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." Though decades have passed, the primary mission of public colleges is still to provide access to training in economically valuable skills to meet the needs of the labor market. Such education should not only result in upward mobility for individuals but also in broad economic growth for the region in which the colleges are based.

Yet since the latter half of the 20th century, many public universities have emulated elite private institutions, with a greater emphasis on selective admissions and a reputation for enrolling America's best and brightest. Naturally, such a direction caused public institutions to focus on competing for students who were already determined to go to college rather than enticing potential, but not committed, students to try for a college degree.

While public colleges lavished attention on younger, full-time undergraduates, adult learners were often treated as an afterthought. So-called night schools, aimed at working adults, operated on odd schedules and were often staffed with junior faculty, leading to a lack of interest from their target students.

The gap in public universities' focus left room for the rise of for-profit colleges, many of which targeted



TABLE 1.

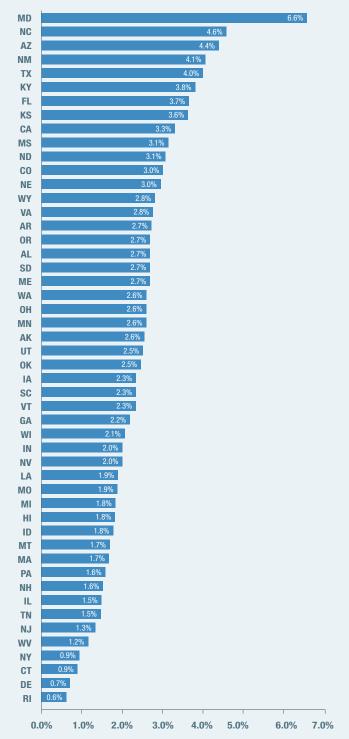
20 Largest Universities by Online Enrollment (2017)

Institution name	State	Institution sector	Students enrolled exclusively in distance education
University of Phoenix	AZ	Private for-profit	101,938
Western Governors University	UT	Private nonprofit	98,627
Southern New Hampshire University	NH	Private nonprofit	83,919
Grand Canyon University	AZ	Private for-profit	64,551
Liberty University	VA	Private nonprofit	59,840
Walden University	MN	Private for-profit	49,680
University of Maryland Global Campus	MD	Public	46,736
American Public University System	WV	Private for-profit	46,420
Ashford University	CA	Private for-profit	36,452
Capella University	MN	Private for-profit	36,284
Excelsior College	NY	Private nonprofit	34,022
Purdue University Global	IA	Private for-profit	33,158
Brigham Young University	ID	Private nonprofit	31,554
Arizona State University	AZ	Public	30,141
Chamberlain University	IL	Private for-profit	24,524
Colorado Technical University	CO	Private for-profit	24,238
Columbia Southern University	AL	Private for-profit	20,818
Ultimate Medical Academy	FL	Private nonprofit	18,345
University of Texas at Arlington	TX	Public	16,532
DeVry University	IL	Private for-profit	14,896

Source: Integrated Postsecondary Education Data System (IPEDS). Figures reflect undergraduate and graduate enrollment as of fall 2017, the most recent year of data available. As enrollment levels can change rapidly in online education, enrollments today may differ substantially from those reported in the table.

FIGURE 2.

Public Institutions' Online Enrollment Relative to Adults Without a College Degree, by State (2017–2018)



Source: Integrated Postsecondary Education Data System and Current Population Survey. Percentages shown are equal to the number of undergraduate, degree-seeking students enrolled online at in-state public institutions divided by the number of adults aged 25–44 in each state with at least a high school diploma but no college degree.

their programs at adult learners. In 1976, John Sperling founded the University of Phoenix, which aimed to eliminate "the inefficiencies of traditional colleges" and "optimize course schedules for working adults." In fact, in its early days, Phoenix required students to be over the age of 23 and have some college credit, though this policy was later changed.

In 1989, the university launched its first online program. Phoenix's parent company became publicly traded in 1994, as enrollment continued to grow at an unprecedented rate. Enrollment has dropped significantly since the end of the Great Recession; but as of 2017, the University of Phoenix still enrolled more online learners than any other university in the country (see **Table 1**). The nation's largest online *public* university, the University of Maryland Global Campus (formerly the University of Maryland University College), is less than half the size.

In 1992, Congress adopted a rule restricting federal financial-aid eligibility for institutions where more than 50% of students study at a distance. This included then-nascent online programs. But by 1998, online education had grown so much that Congress created a pilot program to exempt certain schools from the 50 Percent Rule. In 2006, Congress scrapped the distance-education limitations entirely.⁷

Between 1998 and 2006, leaders of for-profit colleges anticipated the rule's repeal and invested accordingly. Many also secured waivers under the pilot program. But public universities were more risk-averse and did not take online education seriously until the rule was repealed in 2006. By that time, private institutions had already established a formidable presence in the online market.

The accelerated growth of the for-profit sector in the immediate aftermath of the 2006 repeal caught traditional institutions, particularly the public ones, by surprise. But some managed to keep pace—notably, University of Maryland's Global Campus (UMGC) (see **Figure 2**). Formed in 1947, UMGC began offering in-person instruction to American military members overseas in 1949. It is now one of the largest online-serving institutions in the world but still operates on more than 100 overseas military bases. Having established itself as an adult-serving institution long before the advent of online education, it was a natural leader in this market. It would be politically challenging for another university within a state system to operate on such a scale and with such independence today, though the University of Massachusetts seems to be moving in that direction.

Others are working toward a larger market share. Penn State Global Campus was founded in 1998 but has roots in a rich tradition of distance education for Pennsylvania farmers that began in 1892. Independently accredited, the Global Campus enrolls more than 13,000 students, of which 8,000 are undergraduates, making it the largest online provider in Pennsylvania. As Penn State shows, one key for success in online education is a well-developed recruiting apparatus. The Global Campus handles all online recruiting for the Penn State system but leaves it to the system's ground campuses' admissions officers to accept students into the relevant fields of study. The system benefits from a single online brand and avoids dysfunctional intra-system rivalry between campuses, but it still allows individual schools to do what they do best: educate students.

However, many public university systems have been less effective in competition with private providers. Some 91% of the online students at private, nonprofit Southern New Hampshire University are not from New Hampshire. In particular, the school enrolls 15,000 Massachusetts residents. The UMass system has failed to recruit these students, even though a recent survey indicated that more than half of Massachusetts residents enrolled at out-of-state online institutions would have preferred to enroll at UMass Online. There may be no better example of a strong state system brand with weak online enrollment. To address the disconnect, UMass plans to launch a stand-alone online institution in the style of Penn State Global Campus, University of Maryland Global Campus, and others.

It's one thing to capitalize on the power of a system brand within your home state; it's quite another to expand beyond state borders. Private providers, forprofit as well as nonprofit, draw 74% of their online students from outside their home states; the figure is just 16% for public colleges. Even public colleges that have achieved scale in their online programs have largely failed to expand outside their home states. At UMGC, 84% of the 47,000 online students live in Maryland.

Nationally, private institutions enroll nearly a million online students outside their home states. Public institutions—despite their dominance of the brick-and-mortar market—have just 226,000 online out-of-state students. The implication is clear: a prospective online student in a state where the public university system lacks a well-developed online presence is poised to turn to a better-promoted private provider.

This phenomenon is even more remarkable considering the natural preferences of students for local institutions. A longitudinal study published by online services provider Learning House⁹ indicated that students are increasingly choosing online programs offered by schools nearer where they live. In the 2012 survey, 44% of online students chose a school within 50 miles of their home; in 2019, that proportion rose to 67%.¹⁰ Public universities continue to cede market share to out-of-state institutions, even in the face of strong student preferences.

We don't believe that public universities have to surrender the online market to private or out-of-state institutions. But there are barriers to becoming fullfledged participants in online education that public schools must recognize and break down. We turn to these in the next section.

How Public Universities Can Catch Up

The vast number of adults with some college credits but no degree, along with the success of private providers in the online education space, suggests that public university systems are leaving many students underserved by not fully developing and promoting their online programs. The obstacles to fully realizing the potential of online programs are not necessarily born of a lack of ability to do so but rather from a lack of awareness and, we suspect, a lack of will.

Designing online programs is not the main barrier. Development costs for online courses are similar to those for brick-and-mortar courses. Indeed, the cost of developing an entire program may be lower, since undergraduate online students typically enter with some credits. Establishing and maintaining an online platform does entail some fixed costs, but commercial vendors generally license all the needed components, meaning that the institution rarely needs to start from scratch.

The bigger challenge arises after development, when it comes time to market the programs. Public institutions, which have a narrow focus on campus-based students, have not promoted their online courses in a manner well suited to the model and its target audience. Their marketing techniques, even those aimed at nontraditional students, are focused almost exclusively on those already in the buying market.

Many traditional college-track students have little doubt that they will apply to college. To entice these students, a public university needs only show that it is better than its competitors. Impersonal advertisements in subways and airports, or glossy direct-mail brochures extolling generous financial aid and vibrant student life, often do the trick. And a student at a large public university might very well apply, be accepted, and matriculate without ever speaking directly to an admissions representative.

But that model doesn't work for online programs, where a typical potential student might be considering returning to school after many years but is intimidated by perceived obstacles and everyday distractions. Recruiting that student requires persistent and outreach, followed sophisticated by personal interaction. A potential student may have questions on everything from the nature of the workload and the appropriate area of study, to how to obtain financing and the expected return on investment, which are best handled in person. This requires a different approach to marketing—and more money.

Advertising for online programs should be designed not to make impressions or even to invite applications, but to generate leads for an enrollment counselor to engage. This means digital marketing, the techniques and best practices of which evolve almost daily, and in which most public university marketing departments are poorly versed.

Of course, once a lead is generated, effective follow-up is necessary. Private universities—nonprofit and for-profit—have figured this out. A potential student who expresses interest through an institution's website may receive a call within seconds. According to *Inside Higher Ed*, Southern New Hampshire University calls 98% of prospective students within three minutes of their requesting information online. "They don't have time to click away from the website," notes the report.¹¹

What some see as efficient marketing, others view as predatory. Many public universities are reluctant to adopt the marketing tactics of the for-profit sector, out of a genuine desire to avoid aggressive approaches but also because of an aesthetic revulsion to something they consider undignified or commercial.

All universities, public and private, should distinguish between potential students who would genuinely benefit from their online programs but need information and outreach to get over the hurdle of applying, and those who are simply not prepared for college. This is a distinction that some for-profit institutions have either failed to grasp or refused to acknowledge. But many public universities have gone too far in the other direction. Their desire to avoid more aggressive marketing practices has left their online programs under-promoted, effectively ceding market share to the private sector.

Many in public higher education associate a large marketing budget with a low-quality program, and they insist on limiting spending for marketing to a certain fraction of that spent on education. A full treatment of this issue is beyond the scope of this report, but this view fails to account for the ability of institutions to spread fixed costs over a large student body. Spending more up-front to acquire online students could reduce per-student costs once the program reaches a certain scale, with no consequences for the quality of instruction on offer.

The up-front investment required for an effective marketing apparatus is often more than public universities, as well as the state legislatures that oversee them, are willing to commit. But without effective promotion on the front end, online programs at public universities may not achieve the scale that they need to reduce costs and lower end prices for students. More important, these public universities will fail to achieve their mission to serve adult learners in their states.

Examples of ineffective marketing abound among public institutions. In 2011, the governor of Arkansas announced a plan to boost economic growth by increasing the number of adults with an undergraduate degree (in 2018, 41% of the population aged 25–44 had an associate's degree or higher, compared with 50% nationally). To address this challenge, he charged the state university system with doubling the number of Arkansans with an undergraduate degree by 2025.

The system launched the University of Arkansas eVersity in 2015, as a stand-alone online institution with its own accreditation, separate from the online programs offered by the system's individual campuses. It charges \$175 per credit hour, which is relatively low, compared with \$320 at Southern New Hampshire University and \$398 at the University of Phoenix. Full-time faculty from one of the state's existing public institutions staff all its programs. eVersity wisely decided to operate outside its existing institutional structure, allowing it to modify its academic calendar to suit online learners, among other things. Despite these seeming advantages, the initiative hasn't lived up to expectations. In spring 2019, eVersity had 648 students enrolled, with another 300 taking a free trial course. 13 This represents roughly 3% of all Arkansans enrolled in distance-only degree programs and trails the roughly 3,000 students enrolled in the top five private institutions, which are all based out of state.14

Underinvestment is the clear culprit: eVersity began with \$7 million in seed investment, with some funds granted by the governor and some borrowed from the system. This figure was insufficient to build courses,

secure accreditation, and adequately staff and promote the program to hundreds of thousands of Arkansans. With a dozen or more private providers actively advertising to prospective students in the state, as well as competition from its sister institutions in the system, eVersity, despite several structural strengths, simply cannot gain a foothold.

Remaining Barriers to Online Growth

In general, geography determines enrollment patterns within a public university system. Most in-person college students, even at four-year institutions, go to a school in their immediate area. ¹⁵ This has led to an implicit understanding between public universities that they will respect one another's geographic "territories" in their advertising and promotion. For instance, while the University of Virginia dominates the central part of the state, George Mason University serves its northern counties.

But this framework doesn't make sense for online education. Currently, three campuses in a state university network may offer three versions of the same academic program, with no single campus able to achieve the market share and scale necessary to bring down costs. This enables private institutions, many located out of state, to enter the market with a stronger recruiting apparatus and capture a significant share of the potential student body.

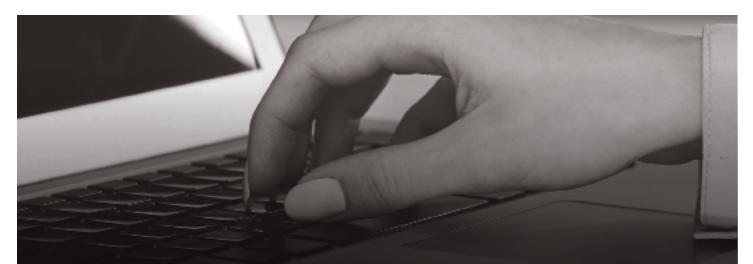
Though students may be drawn to an institution in their home state because of familiarity and resident tuition discounts, fragmenting online enrollment within a relatively finite geography prevents individual schools within a state system from achieving scale. There is no need for each campus in a public university system to offer a wide variety of online programs; rather, we believe that campuses would be better served by focusing individually on their strengths—a school with a strong health sciences program should concentrate on that and forget about offering an online education degree, for instance. But this requires different campuses—and sometimes different systems in the same state—to coordinate their efforts.

Intra-system politics, as well as long-standing governance protocols, can present other obstacles. In many states, the system "brand" may be closely associated with a single flagship that may be wary about using it to promote less selective programs directed to working adults. Naturally risk-averse, a flagship may worry that real or perceived failures in those online programs could reflect poorly on the system's reputation and, consequently, on its own. One way a system can navigate this challenge is to set up a separately branded marketing arm, such as Penn State's Global Campus, that feeds students into existing programs at individual schools.

At a more structural level, most public universities currently rely on a semester-based academic calendar, around which process, staffing, and technological decisions are based. However, the optimal online model begins courses on many different dates throughout the year. Southern New Hampshire University, for instance, has six undergraduate term starts per year. ¹⁶

Adult learners who have made the decision to return to school can't plan their life around a university's seasonal academic calendar; they want a course schedule that is convenient to all the other obligations that they juggle. Online programs must offer several start dates, in order to fit the needs of potential students at all stages of life.

This relatively simple change is far from trivial. It allows for greater marketing efficiency and faster scale,



and it may do more than any other single reform to make online education convenient for adult students. But it would require a massive restructuring of faculty, enrollment, financial aid, and nearly every other university process that touches the student.

Finally, some state university systems enroll so few online students that it might seem that they are not taking this market seriously. Some public colleges and universities may not know how much untapped potential there is in the online market. This is reinforced by a perception that the student base of the four-year for-profit sector—that is, mostly online students—is somehow different. But if public universities truly believe that they will do a better job of educating adult learners than the for-profit sector, it's up to them to develop their online programs enough to effectively compete with private institutions for students in the virtual classroom.

Recommendations for Schools and Policymakers

We offer three recommendations to public institutions that wish to further develop their online programs. First, they should increase their awareness of the online markets and competitors operating in their state. How large are relevant target populations, such as people with college credits but no degree? Are there established private providers, in-state or out-of-state, that enroll lots of adult learners whom public institutions could target? Though rarer, are there out-of-state public institutions with an online presence in their state?

Second, public institutions should not be afraid to invest in promoting their online programs. Specifically, institutions should focus more on personal outreach to potential students rather than broad brand-building campaigns. Though we sympathize with concerns about predatory marketing, ethical promotion is possible. Additionally, public schools should use these interactions to learn what potential adult students want—for instance, several starts throughout the year.

Third, individual campuses within university systems should become more deliberate about how they construct their online programs. While each campus likes to think of itself as having a separate brand, the reality is that the system brand is far more powerful in the online space. Different campuses have different strengths and consequently should stay out of one

another's lanes. There is no need for three or four versions of the same online program, simply because they are managed by different campuses. Implementing this lesson will make branding easier, allow individual programs to achieve scale, and lower costs to deliver the programs, which can either shore up institution finances or reduce end prices for students.

Policymakers have a role to play, too. At the state level, governments should be open to startup funding requests for up-front investments in scaling online programs. Funding for public institutions frequently relies on seasonal formulas, so governments should ensure that these do not penalize efforts to grow year-round online enrollments.

Finally, and most important, lawmakers should consider relaxing specific rules around tuition rates for online instruction. In-state credit-hour rates are often capped below market rate, which could create a disincentive to growth; conversely, rates for out-of-state students are often set above market rate, which can artificially restrict an institution's ability to grow and compete at scale.

For example, North Carolina's state system has an attractive higher-education brand that could compete effectively throughout the Southeast if not constrained by legislative rules that mandate out-of-state prices well above those offered by private school competitors. UNC's Kenan-Flagler online MBA program (MBA@UNC) received an exemption from this requirement. The North Carolina legislature would do well to extend this exemption to all its online offerings.

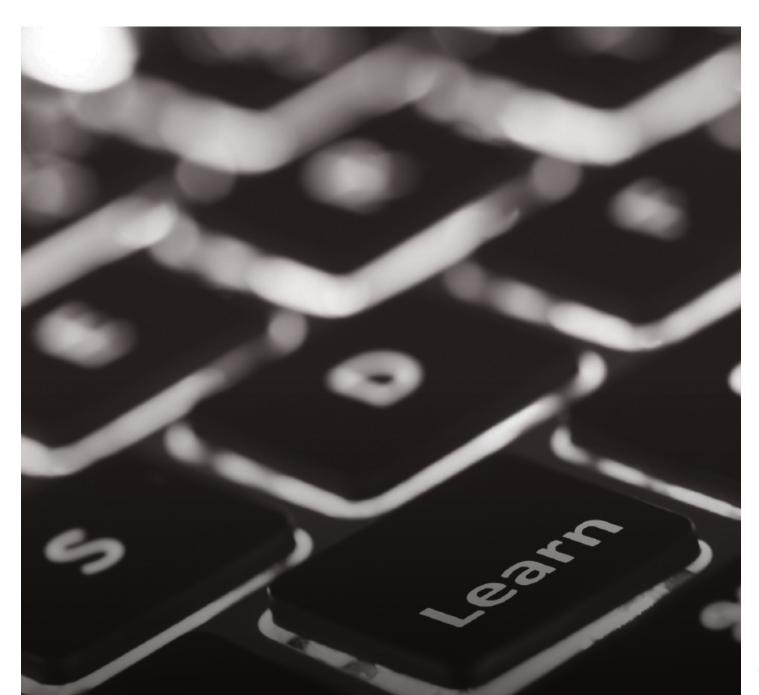
The federal government's main role is to oversee the billions of dollars in federal student aid disbursed every year, a significant chunk of which goes to online programs. Congress should ensure that it does not unduly discriminate against online programs relative to brick-and-mortar education, in particular by placing restrictions on marketing spending, as some have proposed.

We support a robust accountability regime to ensure quality when taxpayer dollars are at stake. However, such rules should focus on the outcomes of education (such as graduate earnings and student loan repayment rates) rather than inputs (such as whether a program is offered in-person or online). The federal government should ensure that the programs that it funds get results for students, but it should be mostly agnostic as to *how* the programs get those results. If an online program can serve its students just as well as a traditional one, there's no reason that federal policy should treat it any differently.

Conclusion

Despite enrolling 75% of traditional brick-and-mortar college students, public colleges and universities account for barely 50% of the online education marketplace. Public institutions were slow to develop online programs as regulatory and technological barriers to virtual education fell, and they remain sluggish today because of a ground-based paradigm, the high fixed costs of marketing, and a reluctance to compete on the same plane and in the same style as the for-profit sector.

Policymakers can clear the road for online education; but ultimately, public universities must take the lead if they want to develop robust online programs to serve adult learners in their states. Fundamental to every public university's mission is equipping students from all walks of life with the skills they need to secure well-paying jobs and drive the economy forward. Public institutions cannot forget adult learners—and consequently, they cannot forget online education.



Endnotes

- National Center for Education Statistics (NCES), Digest of Education Statistics, table 311.15, Number and Percentage of Students Enrolled in Degree-Granting Postsecondary Institutions, by Distance Education Participation, Location of Student, Level of Enrollment, and Control and Level of Institution: Fall 2016 and Fall 2017.
- ² Doug Shapiro et al., "Some College, No Degree: A 2019 Snapshot for the Nation and 50 States," National Student Clearinghouse Research Center, Signature Report no. 17 (October 2019).
- ³ "Morrill Act of 1890," Alabama A&M University.
- ⁴ 7 U.S. Code § 304, Investment of Proceeds of Sale of Land or Scrip.
- ⁵ University of Phoenix, "About Us."
- ⁶ Amy Tikkanen, "University of Phoenix," Encyclopædia Britannica, Aug. 16, 2018.
- ⁷ David Whitman, "The Cautionary Tale of Correspondence Schools," New America, Dec. 11, 2018.
- ⁸ Mark Lieberman, "Another State Plans Online College," *Inside Higher Ed*, Mar. 6, 2019.
- ⁹ Learning House merged with Wiley Education Services in 2018.
- 10 Carol B. Aslanian, David L. Clinefelter, and Andrew J. Magda, "Online College Students 2019: Comprehensive Data on Demands and Preferences," Learning House, Aslanian Market Research, and Wiley Education Services, June 2019.
- ¹¹ Lindsay McKenzie, "Marketing for a Massive Online University," *Inside Higher Ed*, Oct. 8, 2019.
- ¹² Current Population Survey, 2018.
- ¹³ Mark Lieberman, "Steady, Slow Growth for a State Online University," *Inside Higher Ed*, Mar. 20, 2019.
- ¹⁴ National Council for State Authorization Reciprocity Agreements, "Reporting."
- ¹⁵ Brian A. Sponsler and Nicholas Hillman, "Where You Live Rather than What You Know? The Problem with Education Deserts," Brookings Institution, Apr. 11, 2016.
- ¹⁶ Southern New Hampshire University, Term Start Dates.



