

Can Ed Tech Save Universities?

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Prior to the COVID-19 outbreak, institutions of higher education were under immense pressure to live up to their value propositions. With rising tuition costs and student debt at the forefront of national news, universities and colleges were constantly being challenged to prove the worth of their ever-growing price tag. To the credit of most schools, the core educational mission has continued despite the pandemic, as faculty scramble to move courses online and attempt to push forward student learning and engagement. However, when the pandemic hit, universities rapidly shuttered their biggest selling point: the college campus. They closed dormitories, scaled back career services and suspended all student activities and athletics — putting on hold many of the operations that make costly residential university programs worth the expense. Once the initial shock of moving operations online settles, administrators will need to address not only the immediate fallout of the pandemic, but also longer term underlying tensions that have been developing for years and pose an existential threat to the financial viability of many colleges and universities.

Higher education's growing challenge

The story of college costs growing much faster than inflation is a well-known one, often played out in the press. The numbers are staggering. From 2007–2017, the price of undergraduate tuition, fees, room and board at public institutions, even adjusted for inflation, rose 31 percent, and prices at private nonprofit institutions rose 24 percent.¹ Although roughly 72 percent of undergraduate students receive some sort of aid (e.g., grants, loans, work-study), it rarely meets their full financial need.²

¹ U.S. Department of Education, National Center for Education Statistics (2019). *Digest of Education Statistics NCES 2018-070*. <https://nces.ed.gov/fastfacts/display.asp?id=76>

² U.S. Department of Education, National Center for Education Statistics (2018). *2015-16 National Postsecondary Student Aid Study*. <https://nces.ed.gov/pubs2018/2018466.pdf>

The price increase for post-secondary education is even more dramatic. In the same ten-year period, the average graduate tuition and required fees in degree-granting post-secondary institutions has increased by 37 percent in constant dollars.³

During this time, median household income adjusted for inflation barely budged — increasing by only 2.7 percent.⁴

As university administrators and policymakers address the financial stresses of attaining a college degree, they are also faced with the increasing operational costs of attracting students⁵ during a

period of decreasing enrollment.⁶ The battle for tuition has resulted in an arms race by many colleges for the nicest dorms and most exceptional dining options. Increasingly, colleges have invested more in student services and amenities than in the academic and instructional core of their institution. This has resulted in an expectation from many students and their families of concierge-type services, which resembles as much a

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³ U.S. Department of Education, National Center for Education Statistics (2018). *Digest of Education Statistics: Average graduate tuition and required fees in degree-granting postsecondary institutions, by control of institution and percentile of charges: 1989-90 through 2016-17*. https://nces.ed.gov/programs/digest/d17/tables/dt17_330.50.asp

⁴ Federal Reserve Bank of St. Louis (2019). *Real Median Household Income in the United States*. <https://fred.stlouisfed.org/series/MEHO-INUSA672N>

⁵ U.S. Department of Education, National Center for Education Statistics (2018). *Digest of Education Statistics: Total expenditures of public degree-granting postsecondary institutions, by purpose and level of institution: 2009-10 through 2016-17* https://nces.ed.gov/programs/digest/d18/tables/dt18_334.10.asp

⁶ U.S. Department of Education, National Center for Education Statistics (2018). *Digest of Education Statistics: Total fall enrollment in degree-granting postsecondary institutions, by attendance status, sex, and age: Selected years, 1970 through 2027*. https://nces.ed.gov/programs/digest/d17/tables/dt17_303.40.asp

traditional business relationship as an educational opportunity. For many public universities, competing for income from amenities like housing and meal plans is compounded by a decrease in government funding, which never fully recovered after the Great Recession.⁷

Pivoting during the pandemic or pivoting, period?

While the higher education model was already faced with significant challenges before the pandemic hit, the crisis has laid bare a broader set of challenges. As nearly all colleges move online, administrators are scrambling to figure out how long this new normal may last, as well as what will happen in the next academic year. The initial success of moving classes online has allowed current students to finish their academic year and seniors to graduate – a hard-fought victory for students and educators alike.

But the pivot has come at a tremendous cost to many institutions. Most will refund a pro rata share of room and board for the spring term, which will flow directly to the bottom line (and generate large financial losses). More importantly, there are concerns that students will not come to campus in the fall if risks of continued disruption to traditional operations continue. International students may not be allowed in the country, many freshmen will take a gap year and other existing students may seek cheaper alternatives for course credit or even degrees. This risk poses a major threat to even the most financially sound colleges and universities, which rely on the tuition and other student expenses to manage the largely fixed costs of the college campus such as facilities and faculty wages. Furthermore, the risk may be far outlast the pandemic.

Going forward, institutions may have to respond to ongoing concerns of students and families around fundamental questions about the appropriateness of high-density lecture halls and dormitory physical accommodations. Students and families are already wondering what will happen if there are future flare-ups of the pandemic. Will classes oscillate between in-person and remote? Will students have to leave campus, and if so, how and at what cost? Is the summer internship through campus career services a viable and reliable post-college employment path? Even if a cure or vaccine for COVID-19 is discovered, the pandemic has revealed risks that high-paying customers may not be willing to bear.

⁷ Mitchell, M., Leachman, M., & Masterson, K. (2017). A Lost Decade in Higher Education Funding State Cuts Have Driven up Tuition and Reduced Quality [Report]. Center on Budget and Policy Priorities. <https://vtechworks.lib.vt.edu/handle/10919/83618>

So how will colleges and universities manage the risk of students and families unwilling to consume the traditional form of higher education? A likely answer is the rapid adoption of new higher education technologies for both the classroom and the “services experience” of college. To be clear, this is not simply webcasting classes. Colleges will have to fundamentally rethink how they engage students across a variety of experiences. After all, students spend less than 10 percent of their time at college in a classroom. Most time is spent studying, socializing and interacting with other services and amenities (as well as occasionally sleeping).

To understand this massive shift for many institutions, it is useful to level-set on the current situation. Although online education has been growing steadily, a large majority of students still attend only in-person courses. In 2018, two-thirds of the United States’ 20 million college students were enrolled in no distance education courses and only 16 percent of students were enrolled exclusively in distance education courses. The remaining 18 percent were enrolled in some distance education courses.

	2018	% of 2018 Total	% Change 2016-18
All students*	20,008,434		-1.1%
No distance education courses	13,071,185	65.3%	-6.1%
Some distance education courses	3,677,689	18.4%	10.4%
Exclusively distance education courses	3,259,560	16.3%	9.4%

*Includes undergraduate and graduate students at U.S. Title IV institutions: two- or four-year, public, private nonprofit or private for-profit. Distance Education is defined as one or more technologies used to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously.⁸

To manage their current predicament, colleges will have to find a way to move a large majority of students into the ranks of some distance education in a way that provides the value of the full-cost experience. Naturally, certain courses of study are more suited to distance learning than others —taking an online economics course is more straightforward than taking an online

⁸ U.S. Department of Education, National Center for Education Statistics. *IPEDS 2019-20 Data Collection System Glossary*. Retrieved from: <https://surveys.nces.ed.gov/ipeds/VisGlossaryAll.aspx>

chemistry lab course, for instance. Nonetheless, universities will have to manage these differences as they reconfigure their operations. Likewise, the delivery of other student services will have to morph as well.

The opportunity of renewed focus and the role of technology

There are three places where universities must focus their time and resources if they are going to remain competitive in the new higher ed market place: technology infrastructure, strategies for effective online instruction and increased student services accessibility. These are all major investments, and for many schools, it is not clear how they will fund these initiatives.

Technology infrastructure

Having the right technology infrastructure will be table stakes for universities. The rapid shift to online instruction has exposed gaps in hardware and software capacities at various universities, as well as within schools. Some schools, especially research institutions, have invested more in the infrastructure to support technology-enabled learning. Others will have to rapidly expand capabilities. These investments are largely a matter of scaling existing infrastructure and technology. These technologies will need to be utilized more effectively with students on campus to refine quality and to make it feel like a more seamless educational experience when moved off-campus. A remaining challenge for universities is on the student side. Many students, especially those from underrepresented groups, may not have access to the necessary technology off-campus because of slow internet connections or the need for expensive, high-quality hardware and new software.

Strategies for effective online instruction

As most college students and faculty have learned this spring, simply moving a class lecture to Zoom is not an effective replacement for the traditional classroom experience. That said, deliberate full-scale adoption of technology solutions can provide a high-value learning experience. There are increasing numbers of examples of high-end professional programs in an online-only format, including MBA@UNC. In many of these programs, students pay premium prices (similar to on-campus tuition) and rate the overall experience on par with comparable in-person programs. Much can be learned from these programs in terms of what constitutes effective online instruction.

First, faculty need the tools and strategies to effectively engage students. The most successful programs have professionally produced asynchronous lectures. Students consume these before class, along with traditional materials like reading textbooks and articles, then join an interactive small session that

is carefully coordinated in the same way a skilled instructor manages a live lecture or recitation. However, the skillset for online engagement must be learned, and faculty will necessarily need to be given instruction on these techniques. This will require investment and, potentially, external partnership with technology providers who specialize in online classroom engagement. However, many of these tools are valuable to faculty and students regardless of whether the course is meeting in person or online.

Just as important, universities need to prepare and support teaching assistants and staff. Likewise, assignments and evaluations have to be developed that are both fair and efficient. For example, in cases where students must write out answers (in mathematics or engineering, for example), simply taking a smartphone picture of a sheet of paper and emailing it to the teaching assistant or professor is neither fair nor efficient. Platforms must allow for specialized tools, such as analytical mathematics and graphing programs, that integrate into an umbrella learning management system. Course assistance also has to shift from office visiting hours and help sessions to platforms that are robust to disruptions such as message boards, chats, well-curated FAQs and so on. Again, these systems require an investment for faculty, staff and students, but are value-enhancing regardless of class format.

Student services accessibility

Universities now have to consider carefully how students interact with broader university services, including financial aid, career services, health services and counseling, and less formal social activities (clubs, living groups and other extracurricular activities). The solutions to these problems are wide-ranging, but in many cases there already exist technologies that can be utilized. For example, some universities have already started using telehealth platforms as an extension of their in-person health services, especially for counseling and psychological services. According to a 2018 survey of 571 university counseling center directors, nearly 50 percent indicated they provided some sort of telehealth provision; however the extent of those services varies.⁹

On the other hand, consider one crucial driver of value for traditional higher education: career services. There is no doubt that college, and especially high-priced private education, is increasingly perceived as an essential part of the path to a high-paying

⁹ LeViness, P., Bershada, C., Gorman, K., Braun, L., & Murray, T. (2019). The Association for University and College Counseling Center Directors Annual Survey 2018. <https://www.aucccd.org/assets/documents/Survey/2018%20aucccd%20survey-public-revised.pdf>

career.¹⁰ The premium for college-educated workers has grown, and university career offices remain a gatekeeper to entry-level employment at many top companies. With on-campus interviews stopped and many 2020 summer internships cancelled, it is clear that the current career services process is not robust. However, there are technology solutions already in existence that colleges can adopt that will preserve the value of the career placement function. Online resumes and portfolios, including synchronous and asynchronous interview platforms, can allow for continued placement services. For example, online career services platform Handshake has grown exponentially in recent years, with more than 900 universities using the tool to help connect students to jobs and internships.¹¹

Campuses will need to work with potential employers to expand the type and timing of internships and practicums available to students with remote options that can be worked on throughout the year, either in person or at a distance. Clever

¹⁰ Federal Reserve Board (2019). *Report on the Economic Well-Being of U.S. Households in 2018- May 2019: Higher Education*. <https://www.federalreserve.gov/publications/2019-economic-well-being-of-us-households-in-2018-higher-education.htm>

¹¹ About. (n.d.). Handshake. Retrieved April 20, 2020, from <https://joinhandshake.com/about/>

colleges will utilize these platforms to better engage alumni working with employers to join proprietary university career services platforms as mentors and counselors. Again, these and other changes will benefit universities regardless of whether students are on campus or not, and can even provide a mechanism for continued development (and revenue) opportunities after graduation.

Conclusion

As the COVID-19 pandemic has upended the current spring term, universities are rapidly realizing that they are up against a bigger wall. Evidence is mounting that a permanent shift has occurred in the market for higher education that will require a massive alteration in the existing business model. The evidence presented above makes the case for a rapid shift in the structure of the student experience, but universities face large challenges in areas ranging from faculty research to athletics to alumni engagement. Adopting, and even inventing, technological solutions to solve these problems is likely a primary strategy all universities will need in order to survive. While this will require substantial investment of both money and time, universities have little choice but to accelerate the pace of change, rather than consider the current situation a temporary phenomenon that will end with life returning to the “old normal.”

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