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A series of big ideas and policy concepts designed to foster conversation and debate within the policy community.

College 2020 Vance H. Fried

Abstract

College in America will look very different in just a few years, thanks to remarkable innovations taking place in technology and business models in higher education. The advance of Online 2.0 will trigger structural changes in what we mean by a "college education." Students in the future will be more likely to pursue their studies in an "unbundled" system in which different institutions provide different parts of a student's higher education experience. Students will be more likely to learn through a blend of online coursework and a residential experience and will likely assemble a guided and rounded transcript of courses and experiences that are independently credentialed, allowing future employers to have a better measure of their skills.

This paper, in its entirety, can be found at http://report.heritage.org/cpi_dp10

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lege in the not too distant future will look substantially different from college today. It will be better and drastically cheaper. While existing colleges and universities will fight against it (particularly the drastically cheaper part), change is coming. This change is driven by what we could call "Online 2.0," a truly disruptive innovation.¹ Online 2.0 takes today's version of online education to another level by making the whole curriculum competencybased and using self-paced courses that eliminate the need for a course instructor.

Today, much attention is focused on the new concept of MOOCs (massively open online courses) like Coursera and EdX. However, a more important development is that the colleges are beginning to offer accredited degrees through Online 2.0. The earliest version of Online 2.0 has already been introduced successfully to the market by Western Governors University. WGU was founded by 19 governors who were frustrated by the slow pace of innovation in their state systems. They created WGU to foster education innovation. WGU is a regionally accredited private institution that receives no state subsidies and is tuition-financed.

WGU is purely an Online 2.0 institution. The average time needed to complete a degree is 30 months with a total tuition of about \$17,000. This compares quite favorably with the over \$56,000 cost to state and student for four years at a public regional college.² This huge cost advantage, coupled with the acceptance of WGU degrees by employers, has led to rapid growth for WGU,³ which today has 30,000 students and is growing at a capped rate of 30 percent annually.

Driven in part by the technology of online education and in part by creative new business models, American higher education is encountering a remarkable period of "disruptive innovation." So what will college look like in 2020? The Center for Policy Innovation invited Vance Fried, Riata Professor of Entrepreneurship at Oklahoma State University, to offer his predictions. Other institutions are following in WGU's footsteps. In summer 2012, a venture capital–financed company acquired financially distressed Patten University and received regulatory approval to convert it to a for-profit Online 2.0 provider. Southern New Hampshire University, a private nonprofit, is also launching an Online 2.0 degree. These new Online 2.0 programs are technologically more sophisticated than WGU and are priced at under \$2,500 a year.⁴ The \$10,000 degree (without state subsidy) is already with us today—and without any government subsidy.

BECAUSE IT MAKES EDUCATION BOTH HIGHER IN QUALITY AND DRASTICALLY CHEAPER, ONLINE 2.0 WILL BECOME THE DOMINANT APPROACH TO DELIVERING COURSE CONTENT.

Because it makes education both higher in quality and drastically cheaper, Online 2.0 will become the dominant approach to delivering course content. However, the rise of Online 2.0 does not mean the demise of the residential college experience. While some students will pursue an education that is purely Online 2.0 for convenience reasons, most traditional students will combine Online 2.0 with a residential education. These students will get the best of both worlds.

Online 2.0

Online 1.0 simply took correspondence study and converted it to the Web. Communication was done electronically rather than in writing through the mail. Over time, online education has improved significantly. The current version, Online 1.3,⁵ takes the traditional campus-based

class and converts it to an online format. Courses follow a set schedule with exams and papers. Lectures are delivered by means of videos, and interaction between students and faculty happens on a regular basis through threaded discussions.

Online 1.3 is widely accepted. As with traditional campus-based education, the quality and level of difficulty of Online 1.3 courses vary radically, depending on instructor and institution. Pedagogically, Online 1.3 instruction is as good as—many say better than—campus-based courses built along the traditional lecture/limited Q&A/individual written paper/exam format. Online 1.3 is better for courses that stress learning the application of algorithms (so-called drill-and-skill classes).

Online 1.3 is generally seen as a viable though secondbest delivery mechanism in courses requiring a significant level of student-to-student interaction (e.g., a business case or a humanities discussion class). A weakness of Online 1.3 is limited informal learning (e.g., learning from out-of-class conversations with classmates). In addition, Online 1.3 requires motivated and disciplined students.

Many colleges today are making significant improvements in Online 1.3. Some add live discussion sections through video-conferencing or periodically have students spend a short time on campus. They are also working on a variety of ways to build online communities. These approaches are proving particularly successful in graduate professional education.⁶ However, they represent a newer version of Online 1.0. The real change in the industry is coming from Online 2.0.

Technologically, Online 2.0 builds on the many improvements over Online 1.0 during the past decade, but it drastically changes the nature of college's basic component: the college course. This change is what

- Stuart M. Butler, "The Coming Higher-Ed Revolution," National Affairs, Issue No. 10 (Winter 2012), pp. 22–40, http://www.nationalaffairs.com/publications/ detail/the-coming-higher-ed-revolution (accessed February 2, 2013); Clayton M. Christensen, Michael B. Horn, Louis Caldera, and Louis Soares, Disrupting College: How Disruptive Innovation Can Deliver Quality and Affordability to Postsecondary Education, Center for American Progress and Innosight Institute, February 2011, http://www.americanprogress.org/wp-content/uploads/issues/2011/02/pdf/disrupting_college.pdf (accessed February 4, 2013).
- D. M. Desrochers and J. V. Wellman, *Trends in College Spending:* 1999–2009, Delta Project on Postsecondary Education Costs, Productivity, and Accountability, 2011, http://www.deltacostproject.org/resources/pdf/Trends2011_Final_090711.pdf (accessed February 4, 2013).
- 3. In a 2011 Harris interactive survey of employers, 98 percent ranked WGU graduates as equal to or better than graduates of other universities. See Western Governors University, "Student Success and Performance Data," http://www.wgu.edu/about_WGU/student_success_data (accessed November 1, 2012).
- 4. Vance H. Fried, "Venturing to Affordability," American Enterprise Institute, August 2, 2012, http://www.aei.org/files/2012/08/01/-venturing-to-affordability_184801832255.pdf (accessed February 4, 2013); Paul LeBlanc, "Making Sense of Disruptive Technologies and Higher Education: A Theory of Change, the Growth of Online programs, and the Next Generation of Delivery Models," American Enterprise Institute, August 2, 2012, http://www.aei.org/files/2012/08/01/-making-sense-of-disruptive-technologies-and-higher-education-a-theory-of-change-the-growth-of-online-programs-and-the-next-generation-of-delivery-models_184547664799.pdf (accessed February 4, 2013).
- 5. I picked Online 1.3 to indicate that the original version has been improved by the addition of online testing, discussion boards, and online videos.
- 6. Karen D. McKeown, "Can Online Learning Reproduce the Full College Experience?" Heritage Foundation *Center for Policy Innovation Discussion Paper* No. 3, March 13, 2012, http://www.heritage.org/research/reports/2012/03/can-online-learning-reproduce-the-full-college-experience.

makes increased quality and drastically lower cost possible.

Online 2.0 is a technological improvement over Online 1.3. It continues 1.3's extensive use of video lectures but integrates them with rich media: online textbooks, interactive graphics, games, etc. This use of rich media is a natural extension of Online 1.3.

The real technological change from Online 1.3 is the use of data mining to create an adaptive learning platform. As a student uses the rich media content, various programs run behind it. These programs include "automated monitoring (the injection of small questions to assure learners are progressing with the content), assessment (quizzes that assure a minimum level of retention and understanding), and remediation (the additional content assigned to learners to make up for any shortcomings in that understanding and retention)."⁷

The adaptive learning platform makes possible two major changes:

- 1. Course pacing goes from synchronous to self-paced.
- 2. Curriculum goes from being a somewhat random combination of discrete disciplinary courses to a coordinated set of competencies.

Self-paced means that students proceed through the course at their own pace. There is no schedule that the student must follow. Self-paced makes college learningbased, not time-based. It benefits the academic star student who can complete courses quickly. Further, the student does not have to wait for everybody else before starting new courses. On the other hand, self-paced also benefits weaker students by letting them take more time if necessary to learn and by giving built-in and personalized remediation as necessary. Self-paced substantially benefits students of all types by providing total scheduling flexibility.

Schedule flexibility is very helpful for mature students, but it can pose a problem for immature students who might need structure to succeed. To deal with this, Online 2.0 colleges provide more academic advising than traditional colleges provide. In Online 2.0, the adviser's role is not just to advise in picking courses, but also to provide emotional support and accountability to lower-division students and career advice to upper-division students.

Besides being self-paced, Online 2.0 is competencybased. Traditionally, a college education is built using three- or four-credit-hour courses as the primary components. Generally, these courses are designed so that the student acquires knowledge about a specific academic discipline. Instead, Online 2.0 is built around students' acquiring various competencies that are then aggregated into course equivalents.⁸

Competency-based is a much more efficient use of the student's time and the college's resources. Classwork that does not directly aid in the achievement of a competency is eliminated. This is particularly beneficial in general education. Rather than taking a hodgepodge of courses that include a heavy dose of academic esoterica and political-correctness indoctrination, the student instead acquires competencies that can be used in later life. This includes competencies for career, personal, and civic life. Curriculum is designed so that students gain necessary content knowledge (e.g., Western civilization, American government, and psychology); foundational technical skills (e.g., writing, critical thinking, applied finite math, and simple accounting); and personal skills (e.g., managing self and managing others). By designing around competencies, gaps in the curriculum are easily identifiable and plugged.

COMPETENCY-BASED EDUCATION DOES NOT FORCE STUDENTS TO DO ADVANCED-LEVEL WORK UNTIL THEY HAVE MASTERED THE NECESSARY FOUNDATION. AS A RESULT, WEAKER STUDENTS ARE MORE LIKELY TO PERSIST AND LEARN.

Competency-based is particularly helpful for weaker students. It breaks courses down into much smaller, more achievable steps. It does not force students to do advanced-level work until they have mastered the necessary foundation. As a result, weaker students are more likely to persist and learn.

Competency-based education stresses ongoing assessment. Students must demonstrate that they have achieved a competency. Further, to graduate, students must demonstrate that they can perform tasks that require the

Michael Staton, "Disaggregating the Components of a College Degree," American Enterprise Institute, August 2, 2012, http://www.aei.org/ files/2012/08/01/-disaggregating-the-components-of-a-college-degree_184521175818.pdf (accessed February 4, 2013).

^{8.} LeBlanc, "Making Sense of Disruptive Technologies and Higher Education."

use of multiple competencies simultaneously. Often, the assessment can be made through external testing (e.g., Educational Testing Service) or internally administered automated tests. In other cases (e.g., report writing), it is done by assessment specialists using clear scoring rubrics. Assessments are more reliable than under a course system because the person (or machine) doing the assessment has no personal interest in the outcome. Grade inflation and the gentleman's C become things of the past.

Competency-based education makes a degree more valuable. Potential employers understand what students should be able to do (as spelled out in the competencies) and the extent to which they can actually do it (their performance on assessments). In fact, students can easily provide a full competency portfolio to potential employers.

Campus-based Education in College 2020

Overall, Online 2.0 provides higher quality, full flexibility, and drastically lower cost. However, the campusbased college will not disappear. Live discussion among students and faculty can be very useful to students in gaining an understanding of higher order concepts and their advanced applications. From both a quality and a cost standpoint, live discussion works best in a campusbased setting.

Currently, the "flipped" classroom concept is gaining ground in campus-based education. In a flipped-classroom course, the student is introduced to concept and skills online and then participates in a live discussion. For many courses, the flipped classroom is better than either pure online or pure live. However, it requires that classes be semi-synchronous. As a result, the flipped-classroom course does not provide the major benefits of self-paced courses.

The solution is the flipped curriculum. While most courses in the college of the future will be self-paced, some will be fully synchronous. Students will do selfpaced online work focused on acquiring several different competencies and then take a synchronous class (or mini-class) aimed at integrating and applying multiple concepts through discussion or projects.

In addition to their direct impact on learning, a limited number of campus-based classes foster learning communities among students. Once they get to know each other through campus-based classes, students help each other work through the self-paced online curriculum and serve as an informal peer accountability and support group.

Personal coaching and mentoring can be provided more effectively if they are campus-based. Perhaps more important, over time many campus-based colleges have created a deep social network that is helpful both in attracting students and in placing them in jobs upon graduation.

Further campus-based education is necessary for students who want a "college experience." This is a broad concept, somewhat hard to define. To most, it includes elements of the following:⁹

- A rite of passage performed with a group of peers,
- A time for personal exploration,
- A laboratory to develop leadership and personal relationship skills,
- A supervised coming of age, and
- Fun.

The college experience cannot be delivered well over the Internet, so the residential college will remain an important part of education for traditional undergraduate students. However, it will be different because of Online 2.0. Students will need to spend fewer years in residence.¹⁰ In addition, while in residence, they will take many of their courses online.

Online 2.0 also makes it easier for a student to take courses from multiple universities. For example, a student could attend a big public research university to get an engineering degree and simultaneously take general education humanities courses from a private Christian college.

With Online 2.0, the college experience can be unbundled from instruction.¹¹ An organization can provide a college experience without being an accredited college. The student participates in an independent "experience community" while at the same time getting instruction through an accredited college. Upon completion, the student will have both a bachelor's degree from the

^{9.} Staton, "Disaggregating the Components of a College Degree," and McKeown, "Can Online Learning Reproduce the Full College Experience?"

^{10.} Butler, "The Coming Higher-Ed Revolution."

^{11.} Staton, "Disaggregating the Components of a College Degree."

accredited college and alumni status from the experience community.

Unbundling opens the door to creating new versions of the college experience. For example, a church creates a local experience community. It provides community-related activities for its students. Rather than have intercollegiate athletics, student teams participate in city league sports. Periodically, the experience community takes students on field trips. In addition to serving students living with their parents, it also has a small boarding house for students from out of town. While being part of the experience community, students attend a nearby public college. Most of their instruction is Online 2.0, but they also attend some campus-based classes. Since the experience community is church-affiliated, humanities courses are taken from a Christian college.

Or perhaps an organization creates a network of miniexperience communities around the world with students moving from one campus to another. Another version might be an intensive two-year leadership experience community. Students start in a military-style boot camp and then both manage and do the manual labor necessary for community living, run small businesses, and perform service activities. While in the leadership experience community, they complete all their general education courses and earn an associate's degree. Students then leave the experience community and finish their bachelor's degrees elsewhere.

Unbundled college is analogous to putting together your own vacation to Europe or asking a travel agent to do it for you rather than buying an all-inclusive, prepackaged tour. You or the agent picks the airline, ground transportation, hotels, restaurants, and tours, but the schedule and experience are in your hands. While most students will likely continue to bundle their instruction and college experience, the ability to unbundle opens up many options.

College 2020 Costs

Table 1 shows average cost per student, subsidy per student, and cost paid by student for the average public research university, public regional college, and private bachelor's college (often referred to as a liberal arts college), as well as for WGU, the early adopter of Online 2.0. Costs show what a school pays for education and related activities. This is the cost of instruction and all costs necessary to provide it, including classrooms and a portion of institutional overhead. It does not include spending for research or public service. It also does not include spending for auxiliary operations like dorms or Division I athletics.¹²

These are the costs to the school, not the cost to the student. Students at public schools pay much less because the state subsidizes about half of the cost. Private colleges do not receive a state subsidy, but many are subsidized through donations and endowment income. The amount of subsidization varies widely between private schools and often varies significantly between students at the same private school. Many private schools quote a sticker tuition that is above their costs. They then give students varying levels of price discounts (euphemistically referred to as scholarships).

WGU is by far the best deal for students in this comparison, which is stunning because it is not subsidized. WGU is cheaper to the student because its costs are much lower due to Online 2.0. To some extent, this is because WGU does not provide a college experience. However, the biggest saving is in direct instructional costs. Online 2.0 is much cheaper because the combination of rich media and an adaptive learning platform takes the place of the instructor.¹³

In fact, the newer versions of Online 2.0 from Patten and Southern New Hampshire drop direct instruction costs close to \$30 per credit hour¹⁴ with the potential to fall well under \$10 with scale. As a result, these schools are launching their version of Online 2.0 at tuitions of \$100 to \$75 a credit hour. With experience effects and competition, tuition of \$50 per credit hour for Online 2.0 is quite possible in a few years.

Adding campus-based courses requires about \$80 per credit hour of additional costs to cover instructor salary and classroom facility costs. This increases the cost to \$130 a credit hour for campus-based courses. However, from an educational quality standpoint, the student is better off if most of the degree is taken in Online 2.0. If the online/campus mix was 80/20, the average cost to the

12. Intercollegiate activities at big sports colleges are funded primarily out of revenues generated by football and basketball.

^{13.} Costs are also lower because Online 2.0 does not require classrooms. Additionally, the cost of support functions is generally lower.

^{14.} Estimated by the author as follows: \$150,000 to develop a three-credit-hours course. Course should have a life span of at least five years, so course development averages \$30,000 per year. In addition, ongoing update costs are under \$50,000 per year. So the average three-hour course cost \$80,000 per year, or \$27,000 per credit hour per year. If 1,000 students use the course, then instructional cost per student credit hour is \$27. If 100,000 students use the course, it is \$.27 per student credit hour.

student would be \$66 per credit hour. This price would buy the best quality, non-residential education possible.

A residential component means the need for housing plus additional spending for a variety of items that fall under the category of student life (e.g., speakers' series, cultural events, student clubs, recreation, and intercollegiate athletics). The cost of the residential component varies based on time in residence, not credit hours. It could be as low as \$500 per year at a large university, where intercollegiate athletics are funded by athletic revenues, to \$3,000 at a small college with a full range of intercollegiate athletics that are internally funded. Posh private schools will spend more than this, but the educational value of this additional spending is minimal.

Financing College 2020

The main ways college is financed are:

- Current income of student and/or parent,
- Subsidies from both state and federal government,
- Loans to student and/or parent, and
- Philanthropy.

The low cost of college in the future will make it possible for many to finance college out of current income. Assume that John's parents allow him to live at home rent-free. (They have been able to afford this for 18 years, so why not four more?) As a commuter student, he does not need to pay for the residential component of college. His only cost is tuition, which is \$2,112 per year (\$66 x 32).

With most of his courses through Online 2.0, John is able to spread his classwork out over the year and work half time. If John has a minimum-wage job, this means \$7,100 in income. He can pay his tuition and still have \$5,000 left to cover transportation, incidentals, and perhaps a cheap trip to Cancun.

As John's case illustrates, just about anybody can finance tuition out of current income. It takes only seven weeks of minimum wage to cover tuition. The real issue is paying living costs while pursuing an education. Let us look, for example, at George, a single student who is fully self-supporting. At a minimum-wage job, he needs to work about 30 hours a week to pay tuition and support himself at a modest level. If George is a good student and willing to forgo a busy social life, he still should be able to graduate in four years. However, he might opt to stretch it out to five or six years in the interest of a social life and a more comfortable lifestyle.

With Online 2.0, just about everybody will be able to work their way to a quality commuter education. The financing challenge comes when a residential component is added. Jane, for example, is a residential college student. With the flexibility offered by Online 2.0, she takes a year's worth of courses while still in high school and during the summers. As a result, she spends three academic years in residence. Her total cost is about \$34,000 spread out over three years. (See text box, "Total Cost of Jane's College Education.") While some parents can finance that much out of current income, a middle-income family cannot.

The residential experience is adding \$27,000 to the cost of Jane's education. How can this \$27,000 be financed? In addition to current income, savings and loans can be used. With good planning, saving the whole amount should be relatively painless for middle-class parents. Whatever cannot be paid from current income or savings can be financed with a loan.

WITH ONLINE 2.0, JUST ABOUT EVERYBODY WILL BE ABLE TO WORK THEIR WAY TO A QUALITY COMMUTER EDUCATION.

Many financial advisers say that a graduate should be able to pay off a student loan of under \$30,000 comfortably,¹⁵ so Jane should be able to use loans to finance the whole college experience (including housing). Of course, Jane can make it easier on herself by doing only two years in residence. Or maybe she and her parents can save up at least part of the cost. Or perhaps a donor might provide some scholarship support.

State Subsidy. Historically, state governments have subsidized college tuition for all state residents at their public colleges and universities. Many have questioned the rationale for the public subsidization of tuition, even referring to it as an entitlement for the rich and middle class. These critics point out that education is not a public good since the direct economic payoff to the graduate is greater than the cost.

Further, the equality argument behind public financing of education is much weaker for college than it is for K–12. First, much of the population does not get a college degree. Second, 20-year-old students are much more capable of

TABLE 1

Costs of College

	Public Research	Public Regional	Private Bachelor's	Western Governors University (WGU)
Cost per credit hour	\$532	\$408	\$704	\$134
Subsidy per credit hour	\$234	\$196	\$190	\$0
Student pays per credit hour	\$298	\$216	\$514	\$134
Cost per academic year	\$15,951	\$12,240	\$21,126	\$4,020
Subsidy per academic year	\$7,018	\$5,753	\$5,704	\$0
Student pays per academic year	\$8,933	\$6,487	\$15,442	\$4,020

Source: Public research, public regional, and private bachelor's: Steven Hurlburt and Rita J. Kirshstein, "Spending: Where Does the Money Go? A Delta Data Update 2000-2010," American Institutes for Research, 2012, http://www.deltacostproject.org/resources/pdf/Delta-Spending-Trends-Production.pdf (accessed March 5, 2013), and Steven Hurlburt and Rita J. Kirshstein, "Spending, Subsidies, and Tuition: Why Are Prices Going Up? What Are Tuitions Going to Pay For? A Delta Data Update 2000-2010," American Institutes for Research, 2012, http://www.deltacostproject.org/resources/pdf/Delta-Subsidy-Trends-Production.pdf (accessed March 5, 2013). WGU: Estimated by the author from information available in the Integrated Postsecondary Education Data System (IPEDS) data base.

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arranging their own financing than 10-year-old students are. With the ability to finance a quality commuter education out of current income, the argument for a public subsidy on equality grounds will be weaker in the future.

On the other hand, state-subsidized tuition has enjoyed broad political support for over a hundred years. Today, states subsidize about half of the cost of public schools; given the drastically low cost in the future, they will be able to continue funding at 50 percent and still spend significantly less than they now do per day. States could go a step further and finance 100 percent of tuition. Because future costs are so much lower, there would still be big savings over what states pay now: 100 percent of \$66 is a lot less than 50 percent of \$532.

Federal Subsidy. Historically, the federal government has financed low-income students through the Pell Grant program, but if students with no external support can work their way through college, will we need any federal subsidy in the future? Perhaps for Jessica?

Jessica is a single mother with two children. She does not receive any support from her family or from the father of her children. Even if the state fully subsidizes tuition, she still has to work full time to pay living expenses. So how much can she really go to school?

Jessica's problem is not financing her education, but paying her family's living expenses while she goes to school and cannot work full time. Online 2.0 makes managing the work/school/family triangle easier, but it is still a major problem for the low-income single mom. The government may want to provide Jessica with means-tested assistance for living expenses. In fact, Jessica is likely already getting a significant amount of means-tested assistance. Her status as a student should be considered in determining the amount of means-tested living assistance she receives, but the education subsidy should be used only for education.

Philanthropy. Given the low cost of providing undergraduate instruction, the need for donor support is limited. When it is provided, donors should focus on developing new curricula and programs of special interest to the donor.

Donors might fund research and public service activities. While not part of undergraduate education, these activities are undertaken by many colleges and universities today. Currently, these activities are heavily subsidized by "profits" from undergraduate instruction.¹⁶ As tuition drops, so will these "profits." In the future, most universities will not be able to continue subsidizing research and public service out of "profits" from undergraduate education, so some donors may switch their funding focus from undergraduate education to research and public service.

Vance H. Fried, "Federal Higher Education Policy and the Profitable Nonprofits," Cato Institute Policy Analysis No. 668, June 15, 2011, http://www.cato.org/sites/ cato.org/files/pubs/pdf/PA678.pdf (accessed February 4, 2013); Vance H. Fried, Better/Cheaper College: An Entrepreneur's Guide to Rescuing the Undergraduate Education Industry (Washington: Center for College Affordability and Productivity, 2010).

While some donors may move away from undergraduate education, many will continue to focus on it. If so, they should look at ways to reduce the costs of the college experience. Online 2.0 radically reduces the cost of instruction, not the cost of the college experience. The cost of the college experience is still significant for most students.

Traditionally, donors have played a major role in funding major student life facilities like stadiums and student unions. Attractive campuses, famous buildings, and nice public facilities are a part of the college experience for many students. Donations to support them will continue to be important to many donors.

However, the biggest cost of the college experience for a student is housing. Donors may increase their giving toward the students' housing needs. The unbundling of instruction from housing gives donors the ability to subsidize experience communities directly. For example, a donor provides the student with room and board for a year in a mini-campus in a poor country. While there, the student goes to school and works part time on service projects of interest to the donor.

What Needs to Be Done

Aggressively encourage the voluntary spread of College 2020. With an average of 11.3 percent of a state's budget going to higher education,¹⁷ eliminating or significantly reducing the undergraduate tuition subsidy would have a huge positive impact. But big cuts would be hard to accomplish today. Existing colleges are not designed to operate at low cost, and it will take a while to get them to change to College 2020 business models. The current capacity of Online 2.0 institutions is not great enough to handle a large and rapid influx of new students.

Further, most students and voters are not familiar with Online 2.0. It will take a few years for its quality and flexibility benefits to become well known. So today, from a political standpoint, a major cut in tuition subsidy is unlikely except for the most cash-strapped of states.

Instead of forcing major cuts today, states should move as quickly as possible to make College 2020 widely available to their students. A state could do that with a public college. The University of Wisconsin, for example, is creating a new Online 2.0 college to focus on non-traditional students.

Another approach would be an Online 2.0 college that provides lower-division general education courses for

Total Cost of Jane's College Education

Tuition: 120 hours at \$66 per hour	\$7,920
Room and board: three years at \$8,000 per year:	\$24,000
College experience fee: three years at \$1,000 per year:	\$3,000
	Total: \$34,290

both traditional and non-traditional students. While students could earn an associate's degree for the Online2.0 College, most would apply their Online 2.0 credits toward a bachelor's degree at one of the state's public research universities or regional colleges. In fact, students could take Online 2.0 courses while in residence at a campusbased school. The campus-based school would provide the college experience while the Online 2.0 College provided most of the lower division instruction.

A state might also try to attract low-cost private colleges. This is a way to build capacity quickly at no cost to the state. WGU, for example, brought Online 2.0 to Indiana, Texas, and Washington without any state financial support. Instead, these states made it easier for WGU to operate by letting WGU articulate their courses with the state system.¹⁸

INSTEAD OF FORCING MAJOR CUTS TODAY, STATES SHOULD MOVE AS QUICKLY AS POSSIBLE TO MAKE COLLEGE 2020 WIDELY AVAILABLE TO THEIR STUDENTS.

As these pioneer colleges become known in their markets, they will drive change throughout the whole industry. Existing colleges and universities will have to change or risk losing large numbers of students. While most existing institutions will make changes grudgingly, widespread change will happen eventually, and the overall industry will become radically cheaper in stages.

Privatize and regulate student loans. For many years, the federal government has tightly controlled the student loan market. Until 2010, this was done both through a program guaranteeing private loans (Federal

18. Fried, "Venturing to Affordability."

^{17.} National Association of State Budget Officers, *State Expenditure Report: Examining 2010–2012 State Spending*, 2012, p. 22, http://www.nasbo.org/sites/default/files/State%20Expenditure%20Report_1.pdf (accessed February 6, 2013).

Family Education Loans, or FFELs) and through direct loans. In 2010, the guarantee program was eliminated and direct lending was expanded. Federal involvement in the student loan market has proved expensive for the taxpayer, has driven up tuition costs for everyone, and has left many students owing large student loans incurred to finance an overpriced education. This needs to stop immediately.

In the future, nobody will need a loan unless they want the experience aspect of college. In fact, that is true today. Today's high-principal-balance loans are a result of students (1) paying expensive private school tuition, (2) "living large" while in school, (3) spending on graduate education that has no economic value, and/or (4) not graduating. Big loans are completely avoidable if the student makes intelligent decisions.¹⁹

Borrowing the necessary money for college is not a problem for most students, but loans are harder to come by for students who are not creditworthy under traditional lending standards. Students who are personally irresponsible should not get loans, but what about responsible students from low-income families? Perhaps it would be wiser for them to take the commuter student route and graduate without any debt. Some, however, may think this is worth the added cost. For these students, some type of guaranteed loan program is needed.

The old FFEL guarantee program was poorly designed. A new guarantee program should let multiple private groups, either for-profit or nonprofit, operate competing guarantee entities. The federal government does not need to provide any financial support to these groups.

Rather, the guarantee can be made by the private entity pooling risk and charging a modest guarantee fee. As long as the amount of debt is reasonable and loans are not made to the clearly irresponsible, loans are a good investment. This is true even for loans made to students who have no assets or current income. The fact that student loans are non-dischargeable in bankruptcy makes unsecured lending to students feasible.

The federal government does need to maintain a modest regulatory role in student lending to guard against abuse by lenders. The non-dischargability feature gives lenders an edge that they do not get on other types of loans. To avoid abuse, the government needs first to ensure that the loans are truly going to students. This can be done by directly tying the amount that can be borrowed to credit hours completed.

Second, the amount that is non-dischargeable should be capped. Today, there is no cap. This has resulted in many institutions, both nonprofit and for-profit, aggressively overselling high-priced courses, collecting the tuition, and then leaving the student owing a lot of money for an overpriced education. To correct this problem on future loans, the amount that is non-dischargeable should be capped at a reasonable level—say at \$40,000 for now but dropping in the future as Online 2.0 takes hold.

Reform federal income taxes. In the future, savings will play a greater role than loans. Currently, the tax code makes earnings on college savings accounts tax-free until they are withdrawn. However, it does not allow for deduction of the amount saved from income. This should change to encourage savings. Additions to college savings accounts should be deductible when made and then taxable when spent.

RATHER THAN JUST FOCUS ON SAVING FOR COLLEGE, IT WOULD BE BETTER TO REFORM THE WHOLE TAX CODE AWAY FROM ITS CURRENT BIAS AGAINST SAVINGS. THE HERITAGE FOUNDATION'S PROPOSED NEW FLAT TAX ALLOWS A FULL TAX DEDUCTION FOR ANY INVESTMENT IN A SAVINGS ACCOUNT FOLLOWED BY A TAX AT THE FULL RATE WHEN MONEY IS WITHDRAWN.

However, rather than just focus on saving for college, it would be better to reform the whole tax code away from its current bias against savings. For example, The Heritage Foundation's proposed New Flat Tax allows a full tax deduction for any investment in a savings account followed by a tax at the full rate when money is withdrawn.²⁰

An issue often raised in discussions of tax reform is whether college costs should be a deduction in a flattened tax system. Proponents of deductibility argue that it is an investment in the taxpayer's human capital and should be deductible like capital expenditures for business equipment. Opponents argue that it is consumption spending, so no deduction should be allowed.

^{19.} Fried, "Federal Higher Education Policy and the Profitable Nonprofits."

^{20.} J. D. Foster, "The New Flat Tax: Easy as One, Two, Three," Heritage Foundation Backgrounder No. 2631, December 12,2011, http://report.heritage.org/bg2631.

A reasonable compromise is proposed in Heritage's *Saving the American Dream*.²¹ It proposes a full deduction for college tuition paid but caps the deduction at the average rate for public four-year colleges.

Tighten eligibility requirements and restructure Pell Grants. Started as a program for the truly lowincome, Pell has radically expanded to the point that 40 percent of today's college students receive grants. That is far too many. The program should be tightly focused on lower-income students. However, it should not be used by them as a way to pay living expenses. Means-tested assistance for living expenses should come from programs specifically designed for that purpose.

Pell should be totally restructured. Currently, accountability for those who receive Pell Grants is weak. As a result, the system is often gamed by students. For example, a student can get full Pell support for six years (\$33,000 total) and still be far short of graduating. Further, for those with legitimate needs, the current system is extremely inefficient and burdensome.

The Pell Grant program should be changed to a refundable tax credit that should be available only to low-income students. It should be based on tuition actually paid and capped at the hourly in-state tuition rate. Students should not be reimbursed for credit hours in excess of the amount necessary for a bachelor's degree. This tax-credit approach is much more consumer-friendly than the current needlessly complex system, in addition to which it provides a more effective use of tax dollars.

Conclusion

College in America will look very different in just a few years, thanks to remarkable innovations taking place in technology and business models in higher education. The advance of Online 2.0 will trigger structural changes in what we mean by a "college education."

Students in the future will be more likely to pursue their studies in an "unbundled" system in which different institutions provide different parts of a student's higher education experience. They will be more likely to learn through a blend of online coursework and a residential experience and will likely assemble a guided and rounded transcript of courses and experiences that are independently credentialed, allowing future employers to have a better measure of their skills.

The college of tomorrow will be, in short, a far more effective vehicle for upward economic mobility for all Americans.

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21. Stuart M. Butler, Alison Acosta Fraser, and William W. Beach, Saving the American Dream: The Heritage Plan to Fix the Debt, Cut Spending, and Restore Prosperity, The Heritage Foundation, 2011, http://savingthedream.org/about-the-plan/plan-details/.