The Learner Revolution

How Colleges Can Thrive in a New Skills and Competencies Marketplace

Reflections from five years of applied human-centered design at 100+ institutions

Authored by Kathleen deLaski
Foreword by Rufus Glasper

Education Design Lab

*About the **Education** Design Lab*

Education Design Lab is a national nonprofit that designs, tests and implements unique higher education models and credentials that address the rapidly changing economy and emerging technology opportunities. The Lab demonstrates where technology, rigor and design can improve opportunity for historically underserved learners to maximize their potential in the higher education system.

Education Design Lab works across disciplines and alongside schools, employers, entrepreneurs, government, foundations, nonprofits and innovators. The Lab has significant experience managing national and local learning cohorts, working with organizations such as The Michael and Susan Dell Foundation, the United Negro College Fund (UNCF), Walmart, American Council on Education and the ECMC Foundation. Learn more: **www.eddesignlab.org***.*

About the Author

Kathleen deLaski *is a social entrepreneur, having launched or co-launched three education organizations, most recently the Education Design Lab, which helps colleges, high schools and employers design education toward the future of work. As the Lab has worked with 100 institutions in their innovation design work, Kathleen has been invited to share her expertise with leaders and practitioners around the world. Kathleen also serves as the president of the deLaski Family Foundation, a grant maker in education reform and wellbeing. She founded and served as board chair for EdFuel, a national non-profit working to build a diverse talent leadership pipeline for K-12 education. Her higher education interest grew out of her eight years on the board of George Mason University, and eight years as an executive with Sallie Mae, and her founding of Sallie Mae's foundation, which focused on college access for minority students. Initially, Kathleen spent two decades in journalism and related roles. At America Online, she pioneered the first interactive tools to engage the public online in elections and helped the biggest news organizations create digital brands. Kathleen was named by President Clinton as Chief Spokesman for the Pentagon, where she oversaw the military's worldwide public information team. She spent 13 years as a TV journalist, including 5 years as an ABC News Washington correspondent.*

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We started the Education Design Lab five years ago on the belief that only education could turn the tide on the growing income gap in the United States—but that the democratic promise of higher education required new thinking and fundamental change. At the time, U.S. higher education seemed at the precipice of the massive "disruption" that completely upended other industries, like taxis, publishing, hotels and retail. In the years since, we have seen a revolution take hold that places learners' needs front and center, along with the demands of the industries looking to hire them.

In 2014, we named this shift the "Learner Revolution," as we saw a future where power would shift away from institutions that define degrees to consumers and employers who are beginning to measure learning by other yardsticks. This paper offers insights into how that revolution is picking up speed faster than we expected and will continue to change higher education. We try not to be breathless and hype the trends. Our observations and recommendations are based on our experience designing for that shift with over 100 of the most aspirational colleges and universities in the country.

At the core of that work is a focus on building the connective tissue necessary to match the potential of higher education with the dramatically changing priorities of employers and learners themselves. Rather than simply change the delivery model (e.g., online) or launch new programs and supports, we wanted to help institutions understand the pace of labor market changes and student needs as we stand on the precipice of artificial intelligence-enabled, full-on digital competency-based learning. Our idea was to use the principles of human-centered design to co-create models that put students' and employers' needs at the center. The ultimate goal, as a nonprofit, was an intentional roadmap to more equitable futures.

This paper incorporates insights from five years of the Education Design Lab's work with a goal of helping institutional leaders learn from the experiences of their peers. It is designed to support "intrapreneurs" who embrace a mindset shift as the relationship changes between buyers and sellers of post-secondary learning. Yes, we have been discouraged from using commercial terms in describing our students or the transactions we make with them. But, the increased portability, transparency and competency-based focus of learning will empower students with more choices. And if we are passionate about our offerings, we need to think like marketers to ensure students—and employers—know how to access and curate from the growing and confusing sea of options.

15+	Design Challenges
60+	Employers
50+	Organizations
100+	Institutions

5 Years

Foreword

By Rufus Glasper

President and CEO
League for Innovation in the Community College
Former Chancellor
Maricopa Community Colleges

This is a period of profound transformation in higher education. This is true for America's community colleges, where I have spent my career, and for higher education more broadly. And organizations like the Education Design Lab play a critical role in partnering with institutions and leading the way.

The need for change is clear. **Public** sentiment reflects waning confidence in higher education.[1] The reasons should not be surprising to those familiar with the rising cost of college and the higher education sector's collective outcomes. Student success rates remain low, especially for students who are more likely to attend less-selective and less-resourced institutions—older adults, students from low-income families, first-generation college-goers and underrepresented minorities. Despite increased attention, the achievement gap between **black and Latino students** and their white peers remains stubbornly large.[2] Across the board, only about half of students who start college ever graduate—and a degree is no guarantee of success in today's job market.

As a result, the Strada-Gallup Education Consumer survey, among others, suggests that just **34 percent** of college students feel prepared to enter the job market, and only half believe their major will lead to a good job. [3]

Nevertheless, a college degree remains the most powerful lever for social and economic mobility in America today. It still serves as the most powerful signal to employers of a student's preparedness to enter the workforce. Despite the growing democratization of access to educational experiences and credentials, employers still fundamentally depend on institutions to be the validators of skills and learning. However, those same employers are beginning to experiment with competency- and assessment-based hiring. Whether that move ultimately unseats the degree as the gold standard for hiring remains to be seen—but it is abundantly clear that institutions need to be thinking far more deeply about skills development, not just degree completion.

Many colleges are, indeed, looking to transform. With partners like Achieving the Dream, the League for Innovation in the Community College and the Education Design Lab, colleges are experimenting with new designs, goals and outcomes. National initiatives spearheaded by these groups and others are leading to the creation of clearer pathways for students and robust partnerships with local governments, businesses and nonprofits.

We are working hard to improve outcomes and more clearly demonstrate our role in promoting economic mobility. Important aspects of this work include expanding innovation, increasing personalization and creating new micro and macro models of higher education aimed at meeting more diverse learning needs. This starts with a deeper understanding of the needs not just of employers—who are in many ways the arbiters of institutions' success—but especially of students. That work demands that colleges and universities listen to and learn from their experiences. The Education Design Lab, in particular, is doing the hard work of building the connective tissues between stakeholders who together can redesign systems and institutions so that they center on learners. We are moving closer to a system that is driven by market demand and applied design thinking, combined with appropriate higher education curriculum, to meet the current and future needs of our workplace. As we do so, there is real value in ensuring that stakeholders are integrating, not duplicating efforts, and remaining focused on the cost of education. Organizations that not only understand the changing needs of learners but also see how to maximize their strengths are essential to helping institutions build on their own strengths to navigate the future.

The Lab understands that the forces shifting us to a more learner-centric ecosystem bring both promise and peril for higher education and those of us working for a more equitable future. This paper provides insights from five years in the vanguard of this shift, along with examples of promising new models paving the way. It provides both a broad picture of key trends and concrete steps every leader can take to embrace the changes underway—rather than simply being swept along, or worse, aside.

Executive Summary

Higher education is in the throes of a Learner Revolution that will fundamentally change the way students and institutions interact. We see the beginning of this movement now and will see all colleges and universities responding—or not, at their peril—within a decade. Trends ranging from declining numbers of traditional students, to the rise of artificial intelligence, to the shrinking half-life of job skills have conspired toward this wake-up call moment for all but the most exclusive global higher-education brands. At the same time, and partly because of the pressure, leaders are addressing the needs and goals of a changing student population. The calls for "student-centered" design can be heard throughout the ecosystem today, in a way that was just beginning when we started the Education Design Lab.

Colleges and universities must be much more deeply attuned to the twin pressures of learners' decreasing appetite for debt and employers' honing of their hiring requirements. That means, in part, an increasing focus on work-relevant skills and competencies—both technical skills and soft skills such as communication and systems thinking. Degrees as the most valuable workforce currency are beginning to give way to more nuanced competencies. At the same time, globalization and rapid technological advancements, including automation, are reshaping the nature of work, demanding that workers be more nimble, have a broader range of capabilities and regularly increase or revamp their skills. They will now need to extract learning from multiple parts of their lives to be credentialed continuously over the course of a lifetime. The liberal arts part of education, more important than ever, will need to be embedded on all fronts.

The same technology that is increasing pressure on institutions to lower tuition prices is also opening up new ways of teaching and of capturing and certifying learning. Through our work over the past five years, we have identified five major ways that savvy traditional institutions are combining both those demands and opportunities into new or revamped models:

Revamped Models

The Platform Facilitator

A few institutions will be able to fashion themselves into Netflix-style distribution curators, while others will be content providers for those platforms, licensing courses, experiences, certificates and other services.

The Experiential Curator

These institutions will double down on their role as the curators of expansive learning experiences, using advances in assessment, the maturation of online and hybrid education and the increasingly connected globe to provide, measure and certify transformative experiences outside the classroom.

The Learning Certifier

These institutions are recognizing learning across a wide range of contexts, in particular helping students codify, even gamify, their out-of-classroom learning experiences and translate them into a coherent whole that makes sense to employers and themselves.

The Workforce Integrator

These institutions are building deep connections with employers, ensuring tight connections between the competencies learners acquire through their programs and the competencies needed for employment in specific fields or jobs.

The Specializer

These institutions are taking a niche specialization or characteristic, such as religious affiliation, and reimagining it.

These models, while certainly not the only ones, capture a wide range of promising approaches for addressing the shifting demands of today's students. They provide a framework for institutions to not simply be swept along by the Learner Revolution, but rather to embrace it.[12]

Designing for the New Majority

The New Equity Lens

The residential, coming-of-age higher education experience still works for a lucky minority of students. At selective, residential colleges and universities, almost 90 percent of students graduate, and they typically earn a premium for their degrees. At institutions with a mix of residential and commuter students, such as the University of Central Florida, students who have the quintessential on-campus experience tend to graduate at higher rates. The classic experience also works for many employers, such as Google, Microsoft and Morgan Stanley, which recruit the majority of their workers from the top 200 institutions.

Yet, for the estimated three-quarters of students with at least one non-traditional characteristic,[4] higher education has been in need of serious redesign for at least two decades. Student debt continues to climb steadily, with default rates for certain segments of borrowers reaching staggering levels. Also, state funding is dropping for the public institutions that mostly serve this population. At the same time, the penalty for not earning a degree is increasing. By next year, 65 percent of jobs will require at least some postsecondary education and training, with 35 percent requiring a bachelor's degree, according to Georgetown University's Center for Education and the Workforce.[5] Based on today's enrollment numbers, and certainly population trends, these are the **new majority students.** But there has been major lag time in designing for them. Universal design principles suggest that if you design for "the extreme user," or the outlier, you actually are designing well for everyone. That has driven our work with veterans, first-generation, adults, minority, single mothers and transfer students, among others.

New majority students and the employers who would like to ultimately employ them demand new mainstream models.

Technological innovation has opened up new vehicles to deliver higher learning—from open-source textbooks to apps that bring gamified professors to students' smartphones. However, it is a myth that the needs of new majority students will be met by the upstarts that form the new cadre of faster, cheaper alternatives to college. Many bootcamps with the most promising financial models, for example, are focused on serving students who already have college degrees, at least until federal financial aid is redesigned. And while short-term training programs can help low-wage workers move into middle-skill jobs, some of those also end up being dead ends.[6] Working parents and other adults looking for additional training; students who are from low-income families or are the first generation to attend college; and underrepresented minority students want the promise and value of higher education. New majority students and the employers who would like to ultimately employ them demand new mainstream models.

Defining the Learner Revolution

The "Learner Revolution" represents an exhilarating, yet daunting deconstruction of the degree as we know it: a world where a learner will not be tethered to one institution for their degree, where in fact, earning a whole degree will be only one option on a success-focused learner's menu. Back in 2013, this all felt like a future state that was possibly two decades away. We were invited to facilitate a design session at the White House with universities and entrepreneurs on how government should prepare for this day. The U.S. Department of Education partnered with us to imagine underserved students' needs in a project called #10YearsOut. The futurists squinted and imagined.

But now, the day when the degree stops being the sine qua non for 21st-century career readiness feels much closer. While employers still rely heavily on degrees for now, only half say they are "fairly reliable

Competency: Collaboration, working in teams

Federal Financial Aid Approved Providers	Cost	Units
Google Bootcamp	$500	2
City Improvement Hackathon	$200	2
State U Research Project	$120	2
Semester at Sea Climate Change Committeee	$200	2

In the future, learning pathways will be organized by competencies. Here's an example of ways a learner might earn a college's collaboration competency requirement. The college might outsource some options and specialize in others.

representations of candidates' skills and knowledge," according to a new nationally-represented survey of employers from Northeastern University's Center for the Future of Higher Education and Talent Strategy. And a majority of employers said they have a formal effort underway, or are actively exploring one, to deemphasize degrees and prioritize skills in hiring. In a recent survey of some of the Lab's employer partners, all 20 said they need new hiring tools that recognize credentials other than or in addition to the degree. At the same time, the U.S. Department of Education is looking to overhaul the federal government's relationship to higher education—including changes that would allow a greater use of direct assessment and begin to move away from the credit-hour standard for eligibility for federal financial aid programs.

In other words, the last major bulwarks supporting the degree as the gold standard for learning may be giving way.

Competencies, Not Courses

Within the decade, *all but the most exclusive learning providers, old and new, will compete for students at the competency and experience level rather than at the degree level*. That is the principal paradigm shift of the Learner Revolution.

Learners might earn a whole degree with one provider if the institution makes a compelling case for career outcomes, but they will be just as likely to pick and choose from a menu of experiences, courses, badges, certificates and pathways from multiple providers that are potentially endorsed—or even offered—by employers or other respected validators. In the shorter term, colleges are likely to be the curators. Their goal will be to curate a compelling, seamless menu of competency-earning opportunities for learners. And, to promote an equitable future, the menus need to be available through federal financial aid.

Prior learning assessment will become integrated into the student application process, and in some cases, blockchain technology or credential "backpacks" may eliminate the need for actual assessment.

Some colleges might compete in the "coming of age, residential experience" space, while others focus on employer-sponsored pathways. The big winners, though, will be critical mass, user-friendly platforms or marketplaces, like LinkedIn or Amazon. Colleges will compete to offer learning products similarly to how NBC and HBO currently compete on other companies' distribution platforms (think Comcast and Verizon FIOS). To take these examples up the maturation curve, some of the platforms

may start to compete directly with the content providers: think Netflix and Amazon, who are changing up the streaming business as both content creators and distribution platforms.

Many proponents of student success argue that the day when colleges will compete at the competency level for students is far off. Some early studies of certificate and micro-credential holders suggest that these credentials are mainly being used to supplement, not supplant degrees. High-touch, in-person education is still the house favorite for most educators and most students, although our work at the Lab reveals that students clearly want to use technology and new learning paradigms to make their education faster, cheaper and better. Amy Laitinen, director for higher education with the Education Policy program at New America, emphasizes that institutions should be especially focused on the latter—using innovations like competency-based education to provide a better education experience. "As everyone is thinking about how they do this, they need to make sure that quality is at the center of it," Laitinen says. "Institutions need to make sure they're not looking to it as an easy way to solve a funding problem or an enrollment problem. They need to be looking to it to actually solve a learning problem."

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Ultimately, the models that flourish will depend a great deal on employers, and a small but growing proportion are experimenting with competency-based hiring and promotion. Key examples include IBM, Ernst and Young, Microsoft, Cisco and SAP. We believe that will accelerate as more employers, and not just IT and services companies, learn how to isolate and articulate their non-technical requirements. The U.S. Chamber of Commerce Foundation is leading two major initiatives focused on creating standards for hiring and education competencies. The Job Data Exchange is working to help employers communicate, or signal, key workforce competencies that allow learners and workers to see changes in requirements in real time. The T3 Innovation Network builds on that work and will use technology to better align student, workforce and credentialing data, with the ultimate goal of improving training and talent development.

"We need better alignment between the business community and our higher education system, but we also need the right set of tools to develop that alignment. Technology is going to be a big part of the solution moving forward," says Jason Tyszko, vice president of the Chamber Foundation's Center for Education and Workforce. "For employers, it starts with how they signal in-demand jobs and skills in a changing world. For higher education, it requires an openness to using the information employers provide while being responsive when that information changes."

Talent shortages are doing nothing but accelerating the demand for greater education and business alignment. Lev Gonick, CIO at Arizona State University, a Lab partner that is working closely with corporations to meet their talent needs, sees an urgency around creating proof points. Soon, in certain fields, he says learners "will not be looking for degrees; they'll be looking for very specific sets of competencies."

Life Is School: Introducing the Weave

The other big and related paradigm shift is that education, work and life are blending together. Educators are beginning to embrace the notion that 95 percent of learning happens outside the classroom and to see their students' lives as opportunities for high-impact learning and reflection. At the same time, rapid technological advancement is changing the way Americans work. Today's workers can expect to change jobs, or even entire career fields, far more frequently than those in previous generations. And along the way, they are going to need to cycle in and out of education for advanced training or retraining.

"We can anticipate that our work lives will become more turbulent. And we are going to have to figure out how we move more seamlessly between education and work," says Michelle Weise, chief innovation officer at the Strada Institute for the Future of Work. "Right now, everything is almost punitive in our systems: If you leave education, you are seen as a dropout. If you leave work, that is viewed negatively—why are you leaving a steady stream of income to return to learning?"

A famous graphic produced by the Stanford d.school several years ago suggests that the university student journey of the future would be a loop, that students might keep coming back to their alma maters throughout their lives for "top ups" of learning. We believe it's time to update
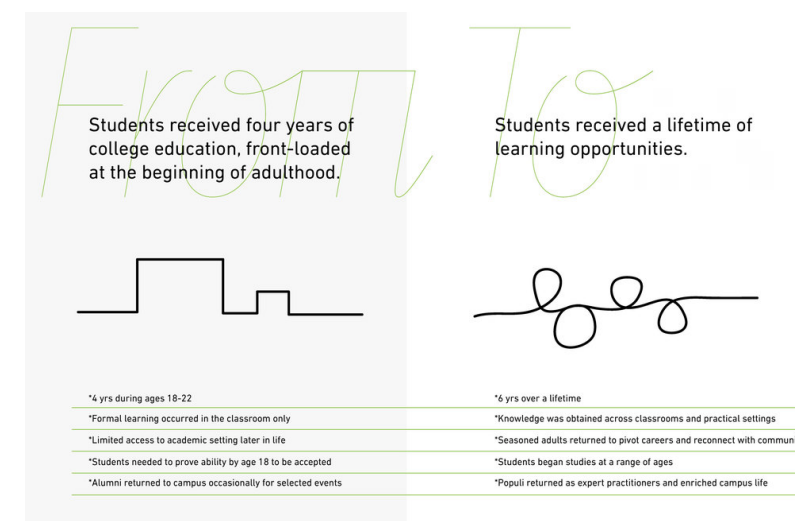
@Stanford Project. Open Loop University imagines the future of eduction as a continuing process to loop in-and-out of. Stanford2025, d.school, Stanford University, 2014, www.stanford2025.com/open-loop-university.

The Weave

Most learning happens outside of school. The future of learning is how to capture it, assess it, and credential it wherever it happens.
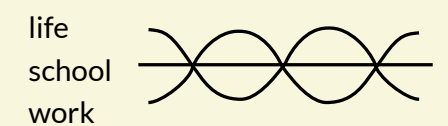
life
school
work

Education Design Lab envisions an evolution of @Stanford Project's Open Loop University, which encompasses learning as woven acrosss life, school and work.

Today's workers can expect to change jobs, or even entire career fields, far more frequently than those in previous generations. And along the way, they are going to need to cycle in and out of education for advanced training or retraining.

that thinking with a "weave" construct that brings education, work and life fully together after, or even during high school.

The challenge we face with partners that want to design this way is how to assess and credential non-classroom learning. Many educators now agree on the value of recognizing learning that happens beyond the confines of the classroom. And we at the Lab have spent several years beginning to answer the question: how?

Both competency-based education and the weave pattern of engaging with education require a fundamental rethinking of learning frameworks. Colleges must adapt, or they risk becoming as nostalgic as a Blockbuster store. And the future will require collaboration as much as competition. Four-year and two-year public institutions in a given city, for example, might get together and divide up the "jobs to be done" for learners in a way that looks very different than the current arrangement.

We see this happening in a positive way with teams in our Seamless Transfer Pathways Design Challenge, where four regions are addressing the whole postsecondary journey of students.

Designing at the market level, we can see who is leaving higher education, who is not coming and why. The "why" is the student-centered design approach we've been honing. It also puts employers at the center of the equation. Among the critical questions is whether employers will train their own workers, look to institutions to do so or hire intermediaries such as a last-mile training company to scout and train them.[7] Institutions concerned with creating high-touch learning communities will have to compete for students, employers and government resources to fund those fuller experiences in an age of "just-in-time" competency credentials.

Opportunity:
Five Models for an Institution's Role in the Learner Revolution

As we have guided teams through this Learner Revolution reset thinking, many solutions have emerged to serve specific populations, such as transfer students, working adults or single mothers (our newest design challenge). Here are five initial models we see emerging that play to the potential particular strengths of institutions. These are "jobs to be done" in the changing market, to quote Clay Christensen's model of innovation. Ultimately, human-centered design can help institutions identify and utilize their existing strengths to meet the needs of the market and the students they serve.

1. The Platform Facilitator

We list this one first because this is the mother of all models, and not many existing schools will be able to claim it. By platform, we mean that a few institutions will have the brand or the foresight to position themselves to be the Netflix-style distribution curators. Most others will be the content providers for those platforms, licensing courses, experiences, certificates and other services, like coaching and tutoring. Unlike Netflix or Uber, the difference in our industry is that, for now, institutions maintain a lock on degree-granting power and access to the federal financial aid that funds most students' postsecondary journeys.

Even so, we see that platforms are already driving down prices, even when resellers don't offer full degrees. StraighterLine was perhaps the first platform disruptor, offering a sort of gym membership model to help students get a chunk of college completed. edX and Coursera are also making plays in this arena, focusing the spotlight on name-brand university partners and paving the way in offering micro-masters that stand alone or can ladder into full graduate degree programs. "It's a new world order," says edX founder Anant Agarwal, "where each constituency will focus on what it does best,

with much better quality for the learner." edX is working on new partnerships around the world and, Agarwal says, has a particular focus on graduate-level work. But it isn't ignoring the undergraduate space. edX recently received grants from the Lumina Foundation to develop micro-bachelor's programs, and from Walmart to help the California Community College System (CCCS) build an online community college to serve workers who need to increase their skills.

Ultimately, human-centered design can help institutions identify and utilize their existing strengths to meet the needs of the market and the students they serve.

In alternative iterations of the platform play, the branding may not subsume the content. As reported in *Inside Higher Ed*, three top universities in Chile, Colombia and Mexico will be making available all of the open online courses they offer on the Coursera platform to one another's students at no charge.[8] Under the arrangement, known as La Tríada, Tec de Monterrey in Mexico, Universidad de los Andes in Colombia and Pontificia Universidad Católica de Chile will

make a combined 100 courses available for credit to their collective 150,000 on-campus students.[9]

Wayne Skipper, CEO of Concentric Sky and Badgr platform, hopes that various platforms for degrees, micro-degrees and credentials will thrive rather than having a dominant player emerge. "There should never be a commercial platform that dominates education," he says. He is encouraging diversity by creating the Open Pathways platform with a wide array of partners, including the California Community College System. His approach portends a not-too-distant future when many providers can break their learning outcomes into portable, stackable competencies and compete for slots on any institution's degree pathways.

The Lab is already in discussions with the California system to provide micro-credentials for 21st-century skills that can be plugged into a pathway built by an instructional designer. With such a model, any institution will be able to become, in effect, a platform for other institutions' online courses. A college would post a pathway, along with quality and technical standards—almost like an RFP—and competency providers would compete like vendors to be listed for those requirements. The college would control the vendor list

and the certificate or degree requirements. This could be an excellent model for under-resourced institutions that know, for example, that their students would benefit from data analytics courses but aren't in a position to compete for the limited faculty prepared to teach to the most current employer needs.

2. The Experiential Curator

Most transformative learning happens outside the classroom, and institutions are increasingly recognizing that they need to encourage and capture it. That work takes two forms. The first approach is for institutions to uncover what informal learning is already happening and where, and then how to make it more intentional, accelerate it and assess it. The goal is to help students develop greater self-awareness and help them integrate the various skills they are developing. The second approach goes a step further to credential those experiences. We discuss this trend in the next section.

There has always been a significant market—especially among selective, residential colleges and universities—for institutions to serve as curators and certifiers of broad learning experiences.[10] Advances in assessment, the maturation

of online and hybrid education and the increasingly connected and global nature of work have made opportunities in this market niche all the richer. A number of programs and institutions have embraced the potential of highly interdisciplinary education, project-based learning and guided reflection. They have made it their primary value proposition. A good example is Minerva, which splashed onto the college scene five years ago with a $10,000-a-year degree that starts with a year-long bootcamp on "habits of mind," a critical-thinking program broken into 120 micro-competencies.

After the first year of study in San Francisco, students live in seven different global cities where they take a highly-structured set of seminar courses that use a hybrid model and apply their learning in different contexts. The idea is that students are "constantly stimulated and challenged to grow."

Not many universities are at liberty to change their model so dramatically. Minerva is able to keep its costs relatively low, for example, because it does not have to maintain a physical campus. But institutions could create a version of Minerva's first-year experience, or even consider buying the first year "in a box" that the institution is now licensing.

Fewer and fewer families are willing to pay $50,000 to $75,000 a year for a four-year high-touch "coming of age" experience for their 18-year-olds. The percentage of 18- to 34-year-olds who said a college degree was worth the cost dropped from 56 percent to 39 percent in the span of just four years, between 2013 and 2017.[11] But many students and families might pay for one year of the traditional college approach, bracketed by earn-and-learn experiences in specific fields or less-expensive bridge programs. The cutting edge of programs such as study abroad, community service, even work study and co-curriculum is to use the experiences to build skills and reflective growth opportunities that can be translated to workforce-readiness and self actualization. Our friends at The Experience Institute are a good example of the specialists who will be partnering with more colleges. A number of our partners are considering how to provide the human touch at scale in each of these areas. Very soon, portable micro-credential opportunities that can be outsourced to credible providers but offered seamlessly as part of a degree or micro-degree will be in demand.

Organizations like Semester at Sea, which offers course credit through Colorado State University, are well-poised. "Unlike a place-based immersive study abroad program, successively engaging in different cultures and reflecting on experiences through

Semester at Sea builds cognitive flexibility," says Scott Marshall, vice president for academic affairs at the Institute for Shipboard Education, which runs Semester at Sea and is looking at how to best translate those learning outcomes for employers. "In today's world, learners need to continually test and adjust their mental models in a job. To this issue, Semester at Sea is optimally designed to prepare students for the modern workplace."

3. The Total Learning Certifier

While the Experiential Curator will provide beyond-the-classroom learning experiences, the Total Learning Certifier will make sense of all learning and package outcomes in ways that will be useful to learners in work and life.

As it stands today, many college students never even use Career Services, and most don't until their senior year. Recognizing this reality, more institutions are building required career development into first- and second-year experiences. The Lab, for example, is working with UNCF and 14 historically black colleges and universities to develop career pathways that start in the freshman year. Oakwood University will use student employment supervisors, including work-study, to facilitate 21st-century skills using the Lab's micro-credentials.

Increasingly popular micro-credentialing tools offer one way to capture informal skill-building, development plans and assessments. The Lab has worked with 20 universities to help them pilot a digital credentialing process for students that helps them develop 21st-century skills like creative problem solving, initiative and empathy. The badges were developed in collaboration first with George Mason University and the badging platform, Credly, then others, including Georgetown University, the University of Arizona, Makarere University in Uganda and the Tunis Business School in Tunisia. One Georgetown student described the badge she earned as "transformational … it helped me make sense of the rest of my learning." As of fall 2018, 500 higher-education institutions, as well as more than 100 K-12 schools, have signed on to a Memorandum of Understanding to consider incorporating the Lab's badges into their programs. The Lab is also working with a cohort of seven institutions and their employer partners in 2018-2019 to test the badges in a hiring environment.

A robust badging and credentialing process can easily incorporate a dashboard that is managed by a career services team and tracks students' skill development alongside their academic journeys. Even better, it could help assess and credential High Impact Practices already incorporated into the formal curriculum. Student demand is there.
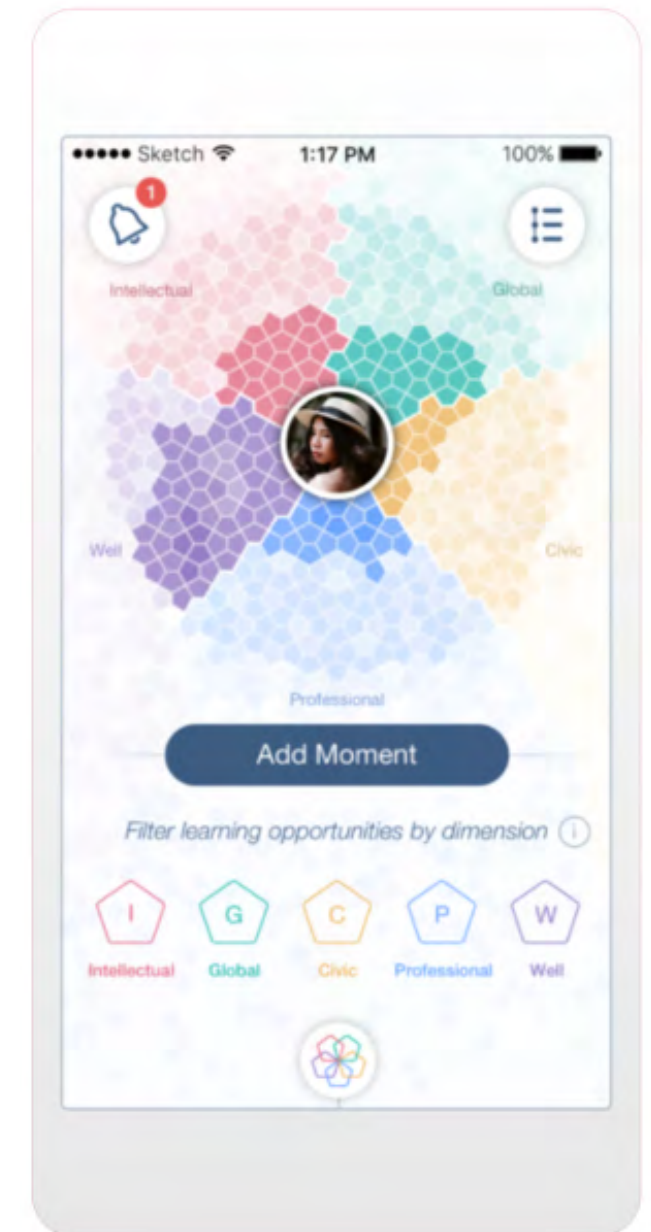
Northeastern students use a mobile app to track informal learning across five categories.

For example, Georgetown students told us they would like a "Fitbit"-type dashboard that goes beyond courses. Mobile technology makes a dashboard increasingly feasible, but few colleges have adopted learner-facing tools that evolve with students from matriculation through graduation for one simple reason: It's hard to get systems and siloed departments integrated across every aspect of the student journey. Few platforms are able to capture first- and second-year experiences, academic advising, co-curricular activities and other important milestones that prepare students to set and reach their goals for graduation and beyond. But several ed-tech players are working on it.

The institution that appears to be furthest along is Northeastern University, which is adept at capturing learning in its well-known workplace co-op experiences. The university's Self-Authored Integrated Learning (SAIL) system tracks learning across students' coursework; jobs, internships and co-ops; co-curricular experiences; and their lives more broadly. As the university's website pitches to students, the system "starts with a simple idea: Learning happens everywhere. In every imaginable context."

Students use the digital tool to create their own goals in the system, and they can track how their experiences, skills and competencies fit into a single framework. The system isn't intended to serve students just during their time in college, but for their entire lives. "SAIL is about lifelong pathways," says Cigdem Talgar, associate vice provost for teaching and learning at Northeastern.

Talgar says the university has maximized the tool by creating "a common language and discourse around SAIL." The integration of the system has also prompted faculty to think more broadly about the competencies built into their courses. Ultimately, Talgar says, "the goal of SAIL is to have the student be their own credential."

4. The Workforce Integrator

Two factors are pushing many institutions to think about closer relationships with employers. First, the vast majority of students (86 percent) now say their main reason for coming to college is to get a good job. And increasingly, the conversation centers on the skill sets students will need to be successful throughout their lives, not just in their first jobs.

Second, institutions are paying closer attention to the equity issues for students who have to work their way through college. Students who have to work a substantial number of hours are less likely to persist, and they also miss out on important internships and career exposure opportunities. A tighter connection to employers can create opportunities for students that both meet immediate demands for income and help them develop skills that will prepare them for a career. A notable recent example is the Strada Education Network investment in Paul Quinn College, which breathes life into the decades-old work colleges model.

However, an institution need not go that far. Any college or university that can draw on 10 sizeable employers to map out essential competencies is a candidate for the workforce integrator model. So too are institutions where faculty are interested in incorporating coursework on in-demand workforce competencies into the curriculum. A number of institutions, including community colleges, are already forging tighter connections between the competencies learners acquire through their programs and the ones employers are demanding.

Harper College, a large community college in Palatine, Illinois, that works with the Lab, has gained attention for its workforce integrator model, which centers on eight registered apprenticeships that lead to associate of applied science degrees. Two of the apprenticeships are in areas many would call "traditional": CNC Precision Machining and Industrial Maintenance Mechanics. Six are in less-expected fields such as Banking & Finance and Sales & Retail Management. Harper designed the apprenticeships by collaborating with regional employers to define the competencies. "By engaging employers in the community and creating work-based mentorship opportunities, Harper has seen a 98 percent completion rate," says Rebecca Lake, dean of workforce and economic development for Harper College. "That reflects not just graduates, but work-ready and hireable students."

Partner companies agree to hire graduates, and they pay apprentices a wage and cover their tuition while they are in the program. The fact that the employer covers tuition allows students to save their eligibility for federal aid if they go on to complete a bachelor's degree. The AAS degree and its credits are transferable to many four-year institutions, and Harper has transfer agreements with four institutions in its region. The apprenticeship programs, which serve a wide range of students, have a 98 percent retention and completion rate, and the average student GPA is 3.57.

However, scalability is a problem for apprenticeships programs. Not enough employers nationally have stepped up to work on developing programs to make them

a reality for all learners who might benefit from them. Employers don't necessarily lack for will; they just don't know where to start. The Lab is also working with the city of Tucson, Arizona, and local employers to think through ways to integrate learning blocks for college students into work experiences. The very successful Catholic high-school network, Cristo Rey, which has students working for pay throughout high school to help offset their tuition, is one partner in this project. The design team is looking at "gig" work, supervised to capture particular learning outcomes, as one semi-"turnkey" way for employers to give underserved students career exposure and paid skill-building opportunities.

5. The Specializer

Colleges, particularly smaller ones that are known for a niche, have an increasing opportunity to offer their special focus to a broader base of learners. Prime examples of this are the more than 850 faith-based colleges in the United States. Many face serious challenges around their sustainability as they tend to appeal to a declining demographic of traditional-aged students and are often more expensive than public institutions with similar student profiles. Also, religious affiliation appears to be declining as a top criteria for students

and families in selecting colleges. However, often those with their backs against the wall are most willing to innovate and take risks.

The Lab recently ran a design session with students and parents for a new college model at a parish in Tucson, Arizona. A sign over the door at the parish hall read "First College, then Heaven," which underscored the importance that the Catholic community placed on college attendance. With the parish priest looking on, we asked parents to rank different priorities for choosing a college, using six Cs (see chart).

We were all surprised to see that they ranked the importance of the Catholic identity of the institution as the fourth priority on the list of six. In the discussion, parents valued Catholic teaching for their children, but cost concerns and career preparation were paramount. So, what are faith-based schools to do when a religious context is their biggest differentiator?

We see an interesting model emerging at Catholic University's Busch School of Business, essentially translating Catholic doctrine in ways its leaders believe will help students succeed in the wider world. For the Busch School, this means designing a curriculum infused with the virtues it espouses.

"Every company wants to hire students schooled in integrity," says Bill Bowman, professor and former dean of the Busch School. He explains that there are four principles of social doctrine built into the program: *human dignity, solidarity, subsidiarity and common good.* For example, "The subsidiarity belief allows dignity to those who can make decisions themselves. Savvy businesses do this through delayering and lack of hierarchy." So, in a management course, subsidiarity and business ethics are incorporated into the concepts of how to manage instead of being stand-alone courses in and of themselves.

With the curriculum just in its second year, it is too early to tell if the Busch School is attracting more students and employers, but it has already attracted new "high level" faculty and funders who are energized by its approach to deconstructing and reimagining the value proposition of a private Catholic university.
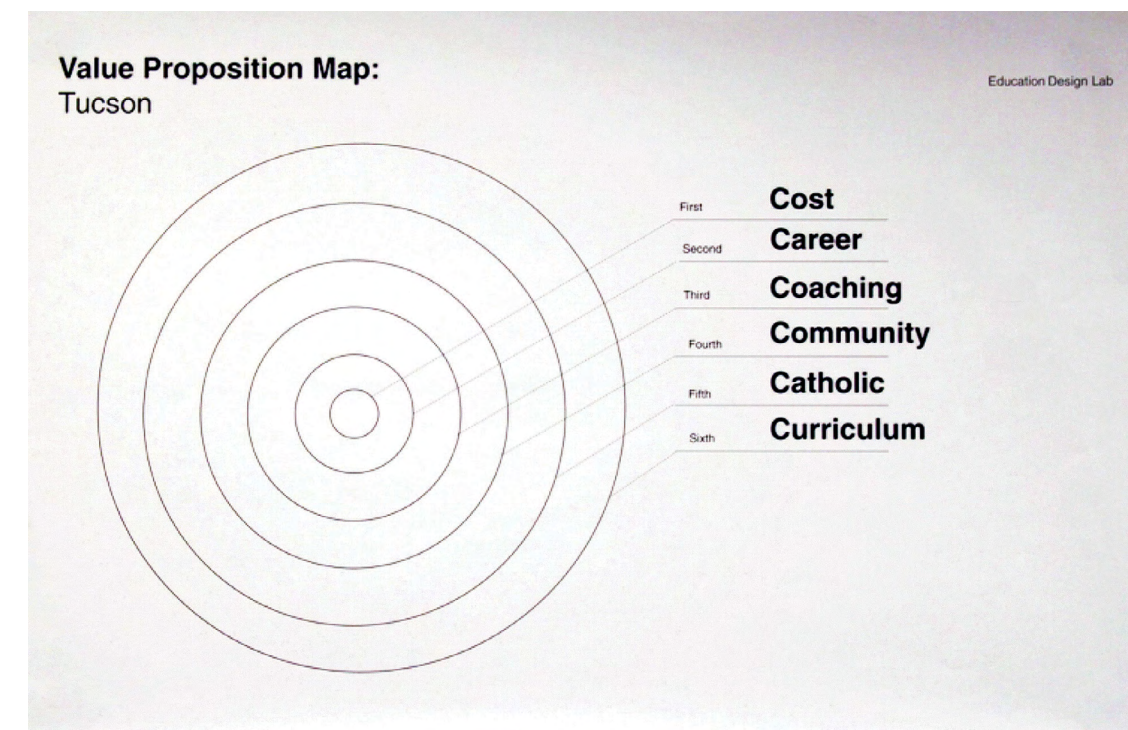
Latino Catholic high school parents in a church-based design session prioritizing what is most important to them in choosing a college.

Principles of Design

We strongly believe in the potential of human-centered design and the principles of design thinking. They can draw institutions outside of their normal—all too often, confining—framework. Individual educators, by and large, have always put the needs of students first; if they were not mission-driven, they would select other, less stressful, better-compensated careers. But most of the institutions we work for, and the centuries-old practices of compliance and incentive, create an unwieldy, multi-layer structure that serves a lot of competing stakeholders. Students figure in there, but the tools of human-centered design pull their needs to the forefront. The Lab has iterated several ways to visually differentiate those needs and co-create solutions across the silos of all the stakeholder groups.

Example: Understanding an Institution's Value Proposition

The Lab first started helping universities position themselves to be successful majority-minority environments in 2015. We found that the best starting place is an exercise that marketing departments regularly use: basic value proposition work. This exercise centers on understanding the needs of the key customer profiles or "personas" that an institution serves or wants to serve better. An institution may develop multiple value propositions, but they need to hang together as one compelling brand. And, unless a college or university can accurately be described as "elite" globally, it's probably already aware that it's getting harder to be all things to all students.

Providing unique value for different student populations on one level feels like what colleges have been doing for decades. However, we find that many institutions

Working through value propositions for underserved student segments at a Lumina design challenge session.
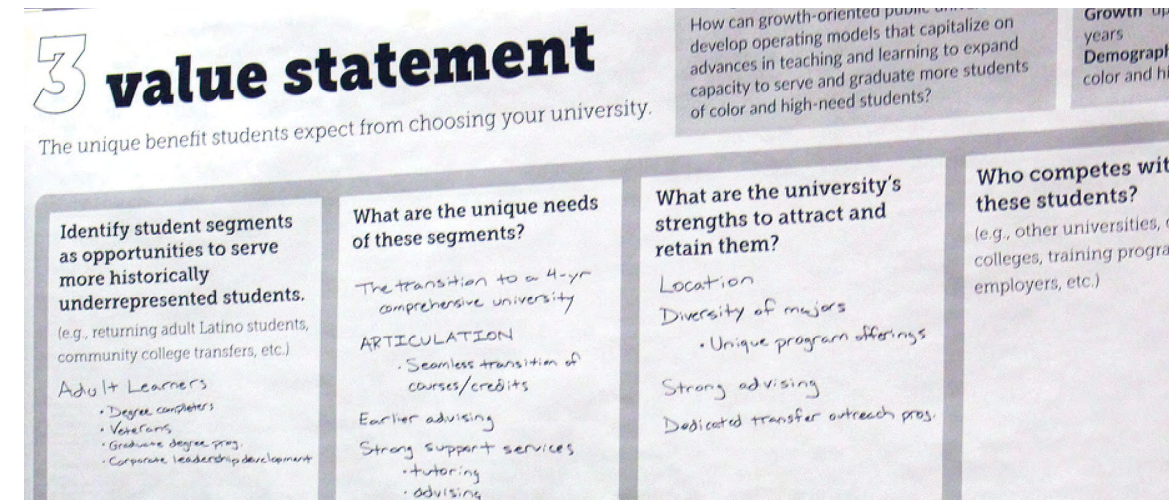
Our Value Statement

We offer students _____
(this core strength and benefit)

to help them _____
(address this core need)

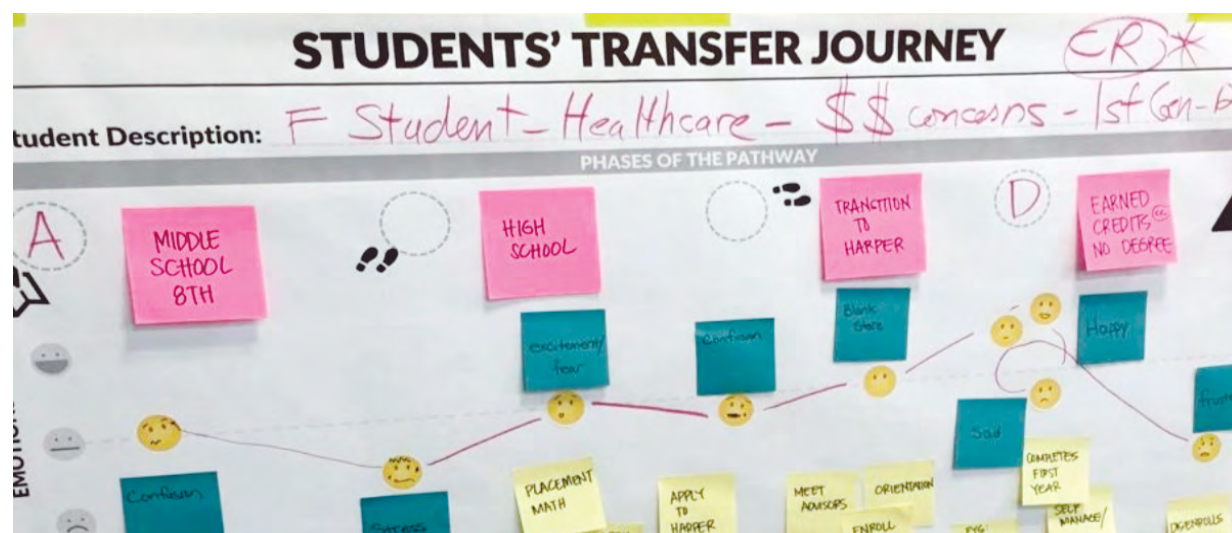and unlike _____
(these competitors)

we _____ .
(unique benefit to students)

don't have the marketing expertise to reposition themselves in a changing market. Bringing together multiple points of value into one compelling brand in a changing buyer's marketplace is especially hard for public universities and community colleges that feel a responsibility to provide all services to all comers.

To get to new or improved offerings, we often use an approach we've started calling "Big Data/Small Data." For example, in our

Seamless Transfer Pathways Challenge, we help community colleges and their four-year partners map the journeys of unsuccessful transfer students. We start by mapping out the "big data" that shows where we are losing the most students (e.g., at matriculation, gateway courses, second semester, transfer). That points to key "opportunity spaces for design." We then use "small data," which can often be far more important in staking out how to "delight your customers," to use the language of

STUDENTS' TRANSFER JOURNEY

Over the next few years, the key is to isolate the opportunities and needs in the shifting ecosystem and consider where your institution can offer unique ways to "delight the customer."

brand marketers. Tools here include empathy mapping, ethnographic research and student journey mapping with students, faculty and employers to understand student needs, motivations, perceptions and behaviors beyond what the aggregate data suggest.

How Institutions Can Use Student-Centered Design to Meet Learner Needs

The models included in this report are just five ways design thinking can help institutions consider how to add value as the marketplace shifts to a more curated and experiential model of postsecondary learning. The mindset for most of us has been the goal of "attainment"—in fact, some states that employ performance-based funding are unintentionally penalizing institutions that offer just-in-time or partial degree solutions.

Over the next few years, the key is to isolate the opportunities and needs in the shifting ecosystem and consider where your institution can offer unique ways to "delight the customer." That is at the heart of student-centered and employer-driven design. Aligning with students' changing needs, motivations and outcomes is critical to each institutions' ability to thrive in a dynamic and, at times, turbulent marketplace, particularly in the face of the downward pressures of tuition pricing and state funding. Lev Gonick, the CIO of Arizona State University, leaves us with an interesting

image of the future learning marketplace once artificial intelligence and competency-based learning are widely available. Learners will assemble outcomes with the assistance of life-based demonstrations of learning, driven by machines. "Think reverse auction," he says. In the most disruptive version, "the whole model gets turned on its head … An institution's role is to respond to these needs."

Reverse Auction

Gonick figures that artificial intelligence will allow us to make sense of learning across our lives and shop for validators to credential it. That blows the mind when you consider how savvy the learner needs to be to drive the transaction. That represents the ultimate Learner Revolution, but will it create more equitable futures? That is our design question for the next five years.
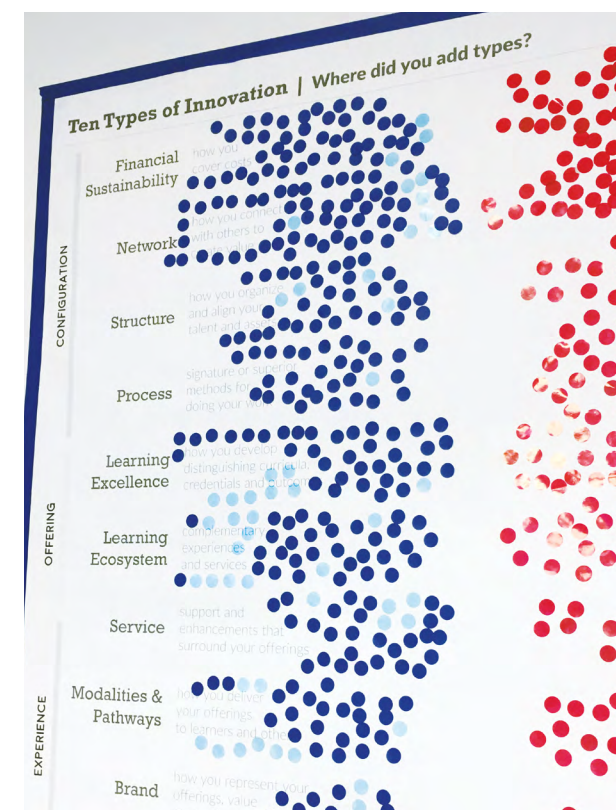
160 senior administrators from historically black colleges and universities pushed themselves to consider new areas of innovation at a UNCF summit. Blue dots captured areas of current innovation, red dots marked categories where leaders hoped to expand their thinking.

Aligning with students' changing needs, motivations, and outcomes is critical to each institutions' ability to thrive in a dynamic and, at times, turbulent marketplace, particularly in the face of the downward pressures of tuition pricing and state funding.

Considering the Role of Innovation on Your Campus

Institutions increasingly are asking us to run design challenges to assess their innovation capabilities. In other words—they want to know how they can better position themselves to keep adapting to the needs of students. As a result, the Lab now often runs "10 Types of Innovation" workshops and works with institutions on prototyping ways to "intentionalize" a campus' innovation cycle.

We've found that institutions move most quickly when they work across silos to agree on the needs of students and the incentives necessary for implementation, as well as when they set a rapid cycle for testing, iteration and evaluation of program design.

A major hurdle in all types of learning and doing is mindset. The people at the core of institutions must believe that what they are trying to achieve is possible. Institutional leaders should consider personal mindsets as they seek innovation in their institutions. Growth mindset is a muscle that can be developed, and part of the Lab's mission is to help unlock it at the leadership and institutional level. We see helpful mindsets in successful postsecondary bureaucracies, as well as individual leaders. So, our bonus section at the end of this paper is a quiz to help you think through your institution's readiness for the Learner Revolution.

Guiding Questions for Leaders to Assess Your Institutional Readiness

The following culture and capacity categories offer questions for leaders to consider in assessing your own level of institutional awareness, structure and practices and skill sets.

Branding and "Product Development"

1. Do you understand your potential student segments? Who do you attract, who do you lose, who might you attract? And why?

2. How do you delight your student segments and potential segments? What are your value propositions (very different from your mission statement, which is what you hope to offer all your segments vs. what you actually do offer them uniquely)?

3. Do you have or are you building in-house "product or program development" expertise to help your institution stay on top of trends and shift offerings as needed?

Strategic Partnership

4. Who at your institution is looking outward and assessing student outcomes beyond graduation? Who is thinking about employers as another form of customer? Do they have significant voice on campus and in the president's office?

5. Who at your institution is watching the changing landscape, both competitors and potential partners in the "Learner Revolution?"

Student Voice

6. Do all student segments have a voice on campus beyond clubs and student government? Do they have a voice in designing your offerings alongside faculty?

7. Do you have an intentional process to see how students are experiencing your offerings and projected outcomes?

Rapid Innovation

8. Do you have an "innovation engine," an iterative process for diverse voices to design, prototype and pilot for evidence-based equitable futures? Does the process have a known leader, e.g., a chief innovation officer, and transparent ways to feed in ideas from outside and inside the institution? Are incentives structured to make time for these efforts?

9. Do you have a process to identify when to end less effective initiatives as a way to alleviate "initiative fatigue?"

Talent Development

10. Finally, would you say a majority of your talent possesses a growth mindset, meaning they see a changing environment as an opportunity to improve their impact for students? If not, how might you help talent build and flex this muscle?

11. Can you imagine some staff shifting to different roles as curators and facilitators of learning in other parts of students' lives, such as work or community service?

Take the Lab's Innovation Capacity Quiz: eddesignlab.org/innovationquiz

Conclusion:
How to Move Forward

The Learner Revolution is here. First, and foremost, this demands a change in mindset. Higher education—from the president to the front-line support staff—is going to have to get more comfortable with the idea that they have "customers." That, of course, does not mean institutions should bend on education quality or standards, but it does mean they need to visibly align teaching and learning much more closely with students' goals and employers' needs, using adaptable delivery, content and staffing models.

In a learner-driven ecosystem—especially one where competencies, rather than credentials, are the ultimate currency—colleges and universities can survive as packagers and arbiters of quality education, but they will have to make their case to learners far more frequently. As Amazon-style platforms emerge for every learner type or specialty, switching costs and portability will make the market more fluid. The best strategy for navigating this Learner Revolution is to stay close to your students'

needs and motivations at every level, in every course and program. There are a number of models—we've highlighted five in this report—for doing so. More will emerge. Deciding what approach to take will require a deep understanding of your institution's mission and the ways it can evolve to meet the demands of the new majority learners. It requires an honest assessment of your institutional mindset and readiness. And of course, it requires leadership.

The winners in a revolution are always those who are willing to step out before the way forward is entirely clear. Survivors in the Learner Revolution will be the institutions that respond to the future; the winners will be those who design it.

Endnotes

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We need better alignment between the business community and our higher education system, but we also need the right set of tools to develop that alignment. Technology is going to be a big part of the solution moving forward. For employers, it starts with how they signal in-demand jobs and skills in a changing world. For higher education, it requires an openness to using the information employers provide while being responsive when that information changes.

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